Article

Assessing the Impact of a College Service-Learning Course Focused on the United Nations Sustainable Development Goals

Anna Krift, Antonella Regueiro, Patrick J. Cooper [ID] and Alanna L. Lecher *[ID]

College of Arts and Sciences, Lynn University, Boca Raton, FL 33431, USA; akrift@lynn.edu (A.K.); aregueiro@lynn.edu (A.R.); pcooper@lynn.edu (P.J.C.)
* Correspondence: alecher@lynn.edu

Abstract: Liberal arts education in the United States seeks not only to prepare students for a specific career but also to develop well-rounded citizens. As part of the core liberal arts curriculum at Lynn University, all students must complete a service-learning course known as the Citizenship Project. A core component of the course is a student-designed service-learning project executed each year. In 2019, the Citizenship Project was revised to align with the United Nations Sustainable Development Goals (SDGs), ensuring that each project would seek to contribute to one of these goals. The purpose of this study is to examine which SDGs the service-learning projects addressed and summarize how the projects contributed to the SDGs.

Keywords: UNSDGs; assessment; quality enhancement plan; curriculum; service learning

1. Introduction

The United Nations (UN) 2030 Agenda is a global agreement that outlines how countries and institutions can collaborate to create a better world by focusing on the five Ps of sustainability: people, planet, prosperity, peace, and partnerships. As a result, the UN developed 17 Sustainable Development Goals (SDGs), with an emphasis on education and communication [1]. Consequently, the UN Educational, Scientific, and Cultural Organization (UNESCO) created Education for Sustainable Development (ESD) to educate new generations on how to make more conscious choices about participation in sustainability initiatives. The purpose of ESD is to give "learners of all ages the knowledge, skills, values, and agency to address interconnected global challenges" [2]. ESD focuses its efforts to include motivating individual action, providing structural guidance for various and often disparate societies, and using technology effectively [3].

Across countries, research suggests that ESD contributes to quality education by facilitating the knowledge, skills, perspectives, and values necessary to build sustainable societies [4]. Furthermore, ESD makes concerted efforts to refrain from being prescriptive, especially in higher education contexts. According to Uggla and Soneryd [5], ESD must be open to the unique needs of individual cultures and contexts and avoid prescribing behaviors that might not be suitable in all situations. Thus, ESD must be flexible enough to explore sustainable development concepts across various fields of study.

One common method of teaching sustainability concepts is service learning. Service learning has been used to teach sustainability concepts for decades, e.g., [6,7]. More recently, service learning has been adapted to specifically teach about the SDGs and has been shown to effectively increase knowledge about the SDGs [8,9]. Solving issues of sustainability requires critical thinking, interdisciplinary work, soft skills, and an understanding of environmental, social, cultural, and economic systems. As service learning requires practice of these skills and applying theory to real world situations, it has been repeatedly argued and demonstrated that service learning is optimal for teaching sustainability [6,8,10]. Service learning to teach sustainability is most common in environmentally

focused majors, e.g, [7,11,12], but it has also been integrated into other degree programs, including entrepreneurship [13], education/teaching [9], and construction management [14]. However, stand-alone courses with a specific aim relevant to sustainability and open to all majors at a university also exist, although these courses tend to have low enrollment ($15 \geq n$), e.g., [8,15]. As effective as service learning has been in integrating ESD into the curriculum in many of these cases, in many of these reports, service learning for ESD was only integrated into a single program or course, with only a small number of students completing it. One way to ensure all students at an institution experience service learning for ESD is to integrate it into a university's quality enhancement plan.

1.1. Quality Enhancement Plans (QEP) and Sustainability

In the southeastern United States (US), colleges and universities attain accreditation by the Southern Association of Colleges and Schools Commission on Colleges (SACS-COC). One component of accreditation is a Quality Enhancement Plan (QEP) [16–18]. The primary goal of a QEP is for an institution's stakeholders to collaboratively identify a significant issue related to student learning or success and develop a strategic initiative to address it. This multi-year process requires the concerted effort of various institutional members. It must include clearly defined, measurable outcomes and allocate sufficient resources to support the initiative. A well-executed QEP demonstrates an institution's commitment to enhancing its students' educational experiences and its dedication to ongoing improvement and accountability. This commitment is integral to maintaining accreditation standards and fostering educational excellence.

QEPs can involve sustainability issues. For example, Eastern Mennonite University's QEP integrated sustainability education throughout its undergraduate curriculum [19]. Since sustainability education was part of their "Peace with Creation" QEP, it provided much needed leverage to integrate sustainability across multiple forms on campus. Similarly, Florida Gulf Coast University integrated student learning outcomes focused on (1) ecological perspective and (2) community awareness and involvement, collectively called Sustainability Across the Curriculum [20]. As part of this QEP, the faculty integrated readings, lectures, and assignments related to these two student learning outcomes across multiple required courses for all students. More specifically related to the SDGs, the University of South Florida's QEP, called the Global Citizens Project, promoted learning about the SDGs both inside and outside the classroom [21]. More specifically, the Global Citizens Project integrated SDGs into both course content and into sustainability-themed campus events.

1.2. Lynn University's QEP: The Citizenship Project

In its 2011 QEP, Lynn University, a small private liberal arts college in Boca Raton, FL, added a service-learning course called DJCP 100—The Citizenship Project [22]. This course was required for all first-year students and had four student-learning outcomes:

1. To evaluate a civic issue from multiple perspectives;
2. To identify and describe examples of civic engagement and articulate the relationship between service and citizenship;
3. To demonstrate a positive shift in attitude toward the value of citizenship by discussing their experience;
4. To show an increased desire to be engaged in the political processes that shape the larger community by constructing a creative class project.

To emphasize the importance of involvement in local and global communities, all students read academic literature related to citizenship (e.g., "Preparation for Citizenship" [23] and excerpts from "Soul of a Citizen" [24]). These texts are required for all classes, and the instructors supplement them with other readings specific to their classes' service projects. Furthermore, common activities across all classes bring students and faculty together to build a sense of community. For example, they attend guest lectures about committing to one's community and the importance of civic engagement and participate

in on-campus service-learning activities, such as the comfort cases packing party, where every year students fill backpacks with personal items to be distributed to children in foster care, in partnership with the non-profit organization Comfort Cases [25]. The last shared experience is the Lynn University Citizenship Celebration, which takes place on the last day of class. Each class has a table and shares their journey from their respective courses. This event allows students to reflect on their experiences and communicate what they have learned in their courses.

Initially, instructors of the Citizenship Project designed the course theme and service projects. For example, a course with the theme of marine science and policy participated in beach cleanups [26]. However, in 2019, the course structure was changed to have students design their class service projects focused on a specific SDG. Specifically, instructors guide their classes through structured brainstorming sessions where the service projects are designed and planned similarly to the approach used by Waity et al. [27]. The brainstorming session occurs in a paired course the previous semester, 4 months prior. The service projects are then executed in a four-week term the following semester. The gap between the brainstorming sessions and the execution semester allows instructors to order the materials needed, arrange for transportation (if going off site), and design activities and assignments about the chosen SDG. A series of common assignments used to prompt students to learn more about their chosen UN SDG are provided to each instructor. The syllabus also shows what types of assignments are used to facilitate learning about the SDGs and sustainability in general. A copy of the master syllabus and discussion board assignments common across all class sections are provided to instructors in Supplementary Materials. Additionally, activities crafted by each instructor and specific to their class's service project include worksheets about sustainability, reflections on how participation in their service projects impacts them, and viewing documentaries relevant to the service projects.

Classes often elect to work with community partners organizations (CPOs), such as non-profit organizations or governmental agencies, to enact their projects. CPOs may be chosen by the classes during the brainstorming sessions, or faculty may contact relevant CPOs during the break between brainstorming sessions and class execution, based on the service project designed by the class. For example, if a class designed a food drive as their service project, the faculty may reach out to local relevant CPOs to find one able to accept and distribute the food. Through this revised system, the Citizenship Project allows students to actively participate in shaping the solutions landscape. It ensures that students gain the skills to examine and address contemporary societal problems. In this way, Lynn University aligns with UNESCO's roadmap to ensure that new generations of students can make the positive changes needed to succeed in the UN 2030 Agenda.

Building on the principles of Education for Sustainable Development (ESD) and the United Nations Sustainable Development Goals (SDGs), this study examines the impact of the Citizenship Project on the UN 2030 Agenda. Since its inception, the Citizenship Project has aimed to foster civic engagement and develop well-rounded citizens through service-learning projects. With the 2019 curricular revision, the Citizenship Project integrated the SDGs into its framework, allowing students to design and implement projects focused on specific goals.

This study aims to assess the effectiveness of this revised structure in meeting the SDGs, while enhancing student engagement in sustainability initiatives. By evaluating the selection of SDGs by students, the methods used to contribute to these goals, and the involvement of community partner organizations, this research seeks to understand the broader impact of sustainability-focused service-learning in the university setting. Specifically, this study addresses the following research questions:

1. How frequently were UN SDGs selected by students?
2. By what means did classes contribute towards an SDG?
3. How did classes collaborate with CPOs to contribute to their chosen SDG?

By answering these questions, this research will provide insights into the alignment of the Citizenship Project with the UN 2030 Agenda and the effectiveness of student-driven

service-learning projects in fostering sustainable development and civic engagement. This study will also contribute to the broader discourse on integrating ESD into higher education and the role of service-learning in achieving the global sustainability goals.

2. Materials and Methods

Data for this study were collected each year as part of ongoing record keeping by the Director of the Citizenship Project at the College of Arts and Sciences at Lynn University. Each year, the director reached out to the faculty teaching each class section to ascertain the following information about their classes:

1. UN SDG(s) each Citizenship Project class earmarked as their target goal;
2. Description of the service project for each Citizenship Project class;
3. Name of the CPO associated with each class (if used).

For this study, the director shared these data with the research team from the academic years from 2019–2020 through 2023–2024. The research team conducted a thorough data cleaning process to ensure accuracy and completeness. This involved checking for missing or inconsistent entries and standardizing the format of the data. Microsoft Excel was used to analyze the frequency of SDG selection for each academic year. A qualitative analysis was performed to examine the involvement of community partner organizations and to develop narrative descriptions of how each class contributed to their selected SDG. This analysis included the following:

1. Identifying which CPOs were associated with each SDG: mapping the collaboration between Citizenship Project classes and CPOs to specific SDGs;
2. Describing class contributions to SDGs: analyzing the descriptions of service projects to understand the methods and impact of student initiatives.

For the first point, the researchers referred to the data provided by the director. For each course that included a CPO, the CPO was noted, along with which the SDG the class was targeting, and the description of the actual service project completed by the students in collaboration with the CPO. These data were organized into a table, which is provided in the results. If multiple classes utilized the same CPO to address different SDGs, the SDG most commonly associated with the CPO was assigned to that CPO. This analysis focused solely on which CPOs classes worked with to achieve their service projects.

For the second point, the researchers created a list of project descriptions associated with each UN SDG, which was summarized into paragraph form in the results. This step was necessary, in addition to the CPO analysis, as not all student projects had an associated CPO or occurred entirely on campus. This analysis gives an overall picture of how various classes contributed to their chosen SDG, whether they utilized a CPO or not.

3. Results

The frequency results of the UN SDGs chosen by classes over the 5-year period are shown in Figure 1, while the CPOs and their associated SDGs and service projects are shown in Table 1. Descriptions of how each class contributed to each UN SDGs are provided following. SDGs 7 (Affordable and Clean Energy), 9 (Industry, Innovation, and Infrastructure), and 17 (Partnerships for the Goals) were not chosen by any class over the course of the study.
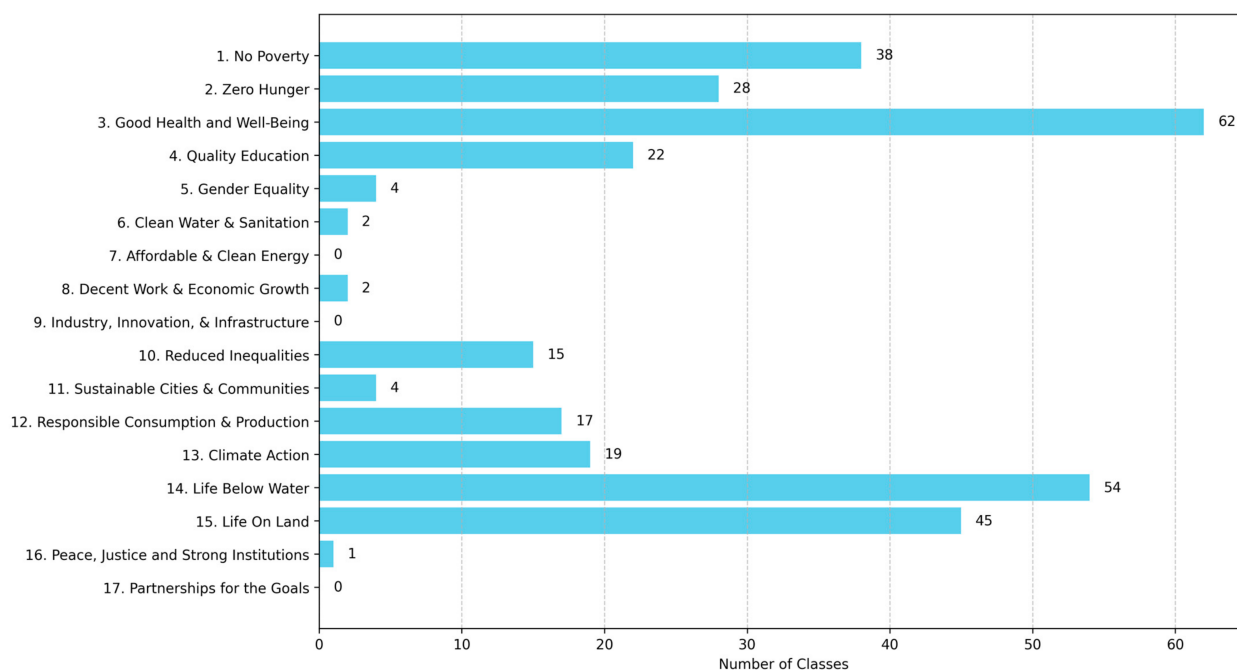
Figure 1. Frequency of UN SDGs chosen by classes.

Table 1. Community partner organizations the classes collaborated with to achieve their projects, organized by SDG. The table is organized by the SDG each community partner was most closely associated with.

SDG	Community Partner Organization	Activities
1: No Poverty	Be Like Brit	Funding orphanage in Haiti
	Sweet Dream Makers	Raising awareness about bedlessness
2: Zero Hunger	Boca Helping Hands	Food bank distribution
	CROS Ministries	Gleaning activities
	The Guatemalan-Mayan Center	Food bank distribution
	Feeding South Florida	Food bank distribution
3: Good Health and Wellbeing	Big Dog Ranch Rescue	Pet adoptions
	Peggy Adams Animal Rescue League	Pet adoptions
	Justin Bartlett Animal Rescue	Pet adoptions
	Tri-County Animal Rescue	Pet adoptions
	West Boca Medical Center	Arts for child patients
	St. Mary's Medical Center	Arts for child patients
	Palm Beach Children's Hospital	Care packages for sick children
	Brighton Gardens	Elderly care
	Vietnam Veterans of America	Elderly care
	Lynn Cancer Institute	Supply drive
	Special Spaces Florida	Special needs support
	Gift of Life	Fundraising for organ transplants
	Quell Foundation	Raising awareness about mental health
	Wellington Police Department	Safety kits for children
	Jupiter Police Department	Safety kits for children
	Inlet Grove High School	Reducing student stress

Table 1. *Cont.*

SDG	Community Partner Organization	Activities
	Florence Fuller Developmental Center	Creating stimulating rooms
	Palm Beach County School District	Creating learning materials
	Best Foot Forward	Support for foster children
4: Quality Education	Jefferson County Parish Schools	School supply drive
	Best Buddies	Support for the disabled
	Christine's Hope for Kids	Fundraiser for underserved kids
	Hagen Road Elementary School	Creating sensory walls for students
5: Gender Equality	Place of Hope	Marketing campaign for maternity care
	Miracle League	Sports games for disabled children
10: Reduced Inequalities	Local Homeless Shelters	Personal care products drive
	Milagro Center	Created materials about resilience
11: Sustainable Cities and Communities	Paint Your Heart Out PBC	Painting derelict homes
12: Responsible Consumption and Production	The Reef Institute	Promoting sustainable products
	Earthday.org	Promoting sustainable fashion
	Gumbo Limbo Nature Center	Beach cleanup
	Jupiter Inlet Lighthouse Outstanding Natural Area	Beach cleanup
14: Life Below Water	Boca Save Our Beaches	Educational materials
	Loggerhead Marine Life Center	Raising awareness for sea turtles
	Friends of Jupiter Beach	Beach cleanup
	Palm Beach County Environmental Resources Management	Natural area cleanup
15: Life on Land	Institute for Regional Conservation	Butterfly garden maintenance
	National Forest Foundation	Butterfly garden maintenance
	Tradewinds Park	Natural area cleanup
16: Peace Justice and Strong Institutions	Exchange for Change	Writing program with incarcerated individuals

Note: SDGS 6, 7, 8, and 13 did not have relevant community partner organizations for projects.

3.1. SDG 1: No Poverty

SDG 1 was chosen 38 times by classes over the study period. For this goal, students collaborated with partner organizations to host supply drives and distribute supplies to individuals in the South Florida community. The projects included a social media campaign and a walk-a-thon on Lynn University campus to raise awareness about bedlessness in South Florida for the Sweet Dream Makers organization. Another class organized efforts to provide supplies to children at Be Like Brit in Grand-Goâve, Haiti, supporting an orphanage and school. Additionally, some classes participated in Paint Your Heart Out Palm Beach County, which primarily falls under SDG 11 but also addresses target 1.2 (reducing poverty). Collectively, these projects worked towards targets 1.1 (eradicating extreme poverty) and 1.2 (by 2030, reduce at least by half the proportion of men, women, and children of all ages living in poverty in all its dimensions according to national definitions).

3.2. SDG 2: Zero Hunger

SDG 2 was chosen 28 times throughout the study period. Students worked with partner organizations such as Boca Helping Hands, Feeding South Florida, and the Guatemalan-Maya Center to organize food pantries and distribute food supplies. They also prepared meals for community members. Students collaborated with CROS Ministries to glean local farms, collecting thousands of pounds of vegetables each year for distribution to local food banks and Veterans Affairs centers. These projects contributed to target 2.1 (by 2030, end hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants, to safe, nutritious, and sufficient food all year round).

3.3. SDG 3: Good Health and Wellbeing

SDG 3 was chosen 62 times throughout the study period, focusing on the well-being of at-risk groups. Activities included organizing supply drives for the Lynn Cancer Institute, volunteering at elderly care facilities, and developing activities for local children's hospitals. Additionally, students organized stress-reduction activities for local schools and volunteered for the Quell Foundation, which focuses on mental health for first responders. These efforts contributed to target 3.4 (by 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being).

3.4. SDG 4: Quality Education

SDG 4 was chosen 22 times throughout the study period. Students partnered with organizations such as the Florence Fuller Development Center, the Palm Beach County School District, and Best Foot Forward. The projects included creating learning materials, organizing school supply drives, writing inspirational messages to youth in foster care, and fundraising for underserved schools. These projects worked towards targets 4.2 (by 2023, ensure that all girls and boys have access to quality early childhood development, care, and pre-primary education so that they are ready for primary education) and 4.a (building and upgrading education facilities that are child, disability, and gender sensitive and provide safe, non-violent, inclusive, and effective learning environments for all).

3.5. SDG 5: Gender Equality

SDG 5 was chosen once throughout the study period. Students worked with Place of Hope to create a marketing and social media campaign for maternity care support. This project worked towards target 5.b (enhancing the use of enabling technology, mainly information and communications technology, to promote women's empowerment).

3.6. SDG 6: Clean Water and Sanitation

SDG 6 was chosen twice throughout the study period. Students worked on the Lynn University campus to clean debris from canals and nearby natural waterways. These projects contributed to targets 6.3 (by 2030, improve water quality by reducing pollution, eliminating dumping, and minimizing the release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally) and 6.6 (by 2030, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers, and lakes).

3.7. SDG 7: Affordable and Clean Energy

SDG 7 was not chosen by any class throughout this study.

3.8. SDG 8: Decent Work and Economic Growth

SDG 8 was chosen twice throughout the study period. Students organized events to help youth find gainful employment, contributing to target 8.5 (by 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value).

3.9. SDG 9: Industry, Innovation, and Infrastructure

SDG 9 was not chosen by any class throughout this study.

3.10. SDG 10: Reduced Inequalities

SDG 10 was chosen 15 times throughout the study period. Students worked with partners such as Miracle League, Milagro Center, and local shelters to organize sports games for children with disabilities, create resilience materials for underserved children, and organize personal product drives. These projects worked towards target 10.2 (by 2023,

empower and promote the social, economic and political inclusion for all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status).

3.11. SDG 11: Sustainable Cities and Communities

SDG 11 was chosen four times throughout the study period. Students partnered with Paint Your Heart Out—Palm Beach County to paint homes of financially struggling residents using recycled paint. These projects contributed to target 11.1 (by 2030, ensure access for all to adequate, safe and affordable housing, and basic services and upgrade slums).

3.12. SDG 12: Responsible Consumption and Production

SDG 12 was chosen 17 times throughout the study period. The projects included promoting sustainable products, creating educational campaigns about recycling, and encouraging meatless Mondays through the creation of an educational video. These efforts addressed targets 12.5 (by 2030, substantially reduce waste generation through prevention, reduction, recycling, and reuse) and 12.8 (by 2030, ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature). Although the classes that conducted gleaning primarily fell under SDG 2 (Zero Hunger), those projects also addressed target 12.3 (by 2030, halve per-capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses), by continuing to remove food from the fields after the harvest was complete.

3.13. SDG 13: Climate Action

SDG 13 was chosen 19 times throughout the study period. Students created awareness campaigns about global climate issues and painted murals to raise awareness of climate change. These projects contributed to target 13.3 (improve education, awareness-raising, and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning).

3.14. SDG 14: Life below Water

SDG 14 was chosen 54 times throughout the study period. Students worked at the Gumbo Limbo Nature Center, the Loggerhead Marine Life Center, and other local environmental organizations to create educational murals for sea turtle rehabilitation, generate educational materials about marine plastic pollution, and remove trash from beaches. These projects addressed target 14.1 (by 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution).

3.15. SDG 15: Life on Land

SDG 15 was chosen 45 times throughout the study period. Students collaborated with organizations such as the Palm Beach County Environmental Resource Management and the Institute for Regional Conservation. Activities included natural area clean-ups, invasive species removal, and butterfly garden maintenance. These projects contributed to target 15.1 (by 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements).

3.16. SDG 16: Peace, Justice, and Strong Institutions

SDG 16 was chosen once throughout the study period. For SDG 16, students partnered with Exchange for Change. Students wrote letters to inmates in Everglades Correctional Institution and took part in a class at the correctional facility where they invited incarcerated individuals to join. During the class, they discussed topics related to mindfulness and also read their letters. This project worked towards target 16.3 (promote the rule of law at the national and international levels and ensure equal access to justice for all).

3.17. SDG 17: Partnerships for the Goals

SDG 17 was not chosen by any class throughout this study.

4. Discussion

This study aimed to assess the impact of the Citizenship Project (CP) at Lynn University, which integrates the United Nations Sustainable Development Goals (SDGs) into its service-learning curriculum. The primary objective was to evaluate which SDGs students chose, how classes contributed towards these goals, and the role of community partner organizations (CPOs) in achieving the projects. The research questions guiding this study were the following: (1) How frequently did students select SDGs? (2) By what means did classes contribute towards an SDG? and (3) How did classes collaborate with community partner organizations to contribute to their chosen SDG?

Classes showed clear preferences for some SDGs over others. The most popular SDGs seem to be anthropocentric or are associated with charismatic megafauna (large animals that have popular appeal, such as sea turtles). The SDGs 1 (No Poverty), 2 (Zero Hunger), 3 (Good Health and Wellbeing), and 10 (Reduced Inequalities) all have a human focus that is easy to conceptualize, including how to conceptualize a solution. For example, organizing a food drive to address hunger or creating education materials to improve education are both simple and easy-to-achieve goals within a short time period. Likewise, the appeal of helping animals through SDGs 14 (Life Under Water) and 15 (Life on Land) also allows for easy-to-conceptualize solutions, such as beach and natural area cleanups. The scope of the projects utilized to contribute towards these SDGs was broad and expansive, indicating a substantial impact of the Citizenship Project course towards these UN SDGs locally.

Furthermore, several of the CPOs returned each year to work with Lynn classes repeatedly, which is a testament to the value the partner organizations found in the projects and work supplied by the students. For example, through years of collaboration with the CPO Cros Ministries students gleaned thousands of pounds of peppers, cucumbers, and tomatoes each year, which were distributed to families in need. Likewise, through annual collaborations with the Gumbo Limbo Nature Center and Friends of Jupiter Beach, the students have removed thousands of pounds of trash from local beaches and mangrove ecosystems. Additionally, via collaboration with the Miracle League, at least one class each year organized and hosted a sports game for children with disabilities who are typically unable to participate in such sports. Other CPOs which returned to partner with classes every year during this study included Boca Helping Hands, Feeding South Florida, Big Dog Ranch Rescue, and Paint Your Heart Out. Clearly, so many CPOs would not have returned annually to partner with classes if they did not perceive a benefit in doing so.

The CPOs were vital in the success of some class projects. While it could be feasible for a class to complete a beach cleanup without a community partner, distributing supplies to persons in need from a drive or gaining access to the pediatric care wing of a hospital would not have been possible without a community partner with already established systems in place for such endeavors.

4.1. Reviewing the Impact of a Service-Learning Class on the SDGs

In terms of the scope of the SDGs pursued, this model of Citizenship Project has benefits and drawbacks. This service-learning class offers numerous benefits for advancing the SDGs:

1. It provides a quick and effective way to impact the SDGs, allowing projects to yield tangible results within a short time frame.
2. The structured classroom setting facilitates the coordination of efforts where groups of students can contribute to specific goals, ensuring that projects are well-organized and strategically aligned with the SDGs.
3. The classroom service model aligns with goals put forth by UNESCO's ESD initiative.

The purpose of ESD is to give "learners of all ages the knowledge, skills, values, and agency to address interconnected global challenges" [2]. By engaging in hands-on projects,

participants gain a deeper understanding of global challenges and practice strategies to address them. Education at a young age lays the foundation for a broader commitment to the SDGs.

Finally, a significant benefit of the service-learning course is its role in fostering collaboration at an individual and organizational level, which is critical for achieving SDG 17 (Partnerships for the Goals). It enhances civic engagement, allowing students to apply academic concepts to real-world societal problems, bridging the gap between theoretical knowledge and practical implementation. These projects often involve diverse communities and organizations, promoting cross-cultural understanding and empathy. Additionally, the collaborative nature of these projects drives innovation and problem-solving, further advancing progress towards the goals. By working with community partners, the service-learning class also builds strong networks and partnerships that are vital for the sustained effort required to meet the SDGs.

However, there are some critiques of this model of Citizenship Project in terms of the scope of SDGs pursued. In contrast to the easy-to-understand SDGs, students in this course may need help conceptualizing how to make meaningful changes in some SDGs with a broad, institutional-level focus. This would include SDGs 7 (Affordable and Clean Energy), 8 (Decent Work and Economic Growth), 9 (Industry, Innovation, and Infrastructure), 11 (Sustainable Cities and Communities), 16 (Peace, Justice, and Strong Institutions), and 17 (Partnerships for the Goals). This issue may be further exacerbated by the fact that there are several CPOs in the local area with a focus on the more anthropocentric or animal-focused SDGs (e.g., the number of CPOs utilized for SDG 3 in Table 1), but fewer that aim to address the larger institutional-level SDGs. Both of these issues may explain why these SDGs were rarely chosen, if at all.

At Lynn University, our course lasted only four weeks, and even in more traditional semester or trimester courses, implementing the institutional-level goals discussed previously can be challenging. This time constraint may explain why students choose more actionable goals that can be achieved quickly. Even though Lynn University expanded the Citizenship Project course to include activities from the previous semester, the amount of time students can dedicate to working together each day still needs to be improved. A typical college class lasts anywhere from one to three hours a day, often meeting only two to three days a week, inhibiting the potential for large-scale change.

Possibly, a more problematic critique is that some of the service projects designed do not align closely with their associated SDG. For example, several classes decided to volunteer at animal shelters under the premise that owning a pet is associated with better health outcomes. However, these classes did not work directly with placing those pets in the homes of people who would benefit from owning a pet. The sole benefit was to the animals themselves, and since domesticated animal welfare does not fall under any SDG, the link to SDG 3 (Good Health and Well-Being) is weak. Another example is that some classes decided to complete beach cleanups as their SDG and chose SDG 6 (Clean Water and Sanitation) as their associated SDG. However, SDG 6 only applies to freshwater systems, not marine environments. A better fit for beach cleanup service projects is SDG 14 (Life Under Water).

4.2. Recommendations for Implementing the Service-Learning Course Model

4.2.1. Educate Students on the Nuances of the SDGs

Because it takes time to connect classes with community partner organizations (CPOs) that align with a class's chosen SDG, the current process in the Citizenship Project encourages students to (1) choose a desired SDG, (2) identify and connect with a local CPO, and (3) then become fully educated on the SDG of choice. This sequence increases the risk of misaligning a service project with an SDG because students need more education about the SDGs before designing their service projects. Detailed education about the SDGs often occurs later in the course, which means classes may be selecting SDGs and designing projects based on the title of the SDG alone rather than on the specific targets and nuances

of their chosen goal. To mitigate this issue, we recommend implementing a more structured approach, where thorough education on the SDGs is provided before students select their CPOs. This could include dedicated workshops or modules during the brainstorming sessions that cover the detailed targets, indicators, and real-world applications of each SDG. By doing so, students would be better equipped to understand the specific requirements and goals of their chosen SDG, leading to more aligned and impactful projects.

Lynn University has effectively scaffolded students' sustainable education by providing resources such as case studies of successful SDG-related projects, guest lectures from experts in various SDGs, and guided discussions on the challenges and strategies for achieving these goals, which could further enhance students' understanding. Allowing time for collaborative brainstorming sessions, where students can share insights and develop project ideas collectively, might also help refine their approach to selecting and working with CPOs.

4.2.2. Align Student Interests with Faculty Expertise

Most higher education institutions have plenty of faculty capable of teaching the less-chosen SDGs. For example, several faculty from the Lynn University College of Business and Management teach sections of the course and are more than qualified to guide classes towards projects that address SDG 9 (Industry, Innovation, and Infrastructure). Similarly, several lawyers are employed as Lynn faculty, teach sections of this course, and would be valuable in guiding classes towards designing projects around SGD 16 (Peace, Justice, and Strong Institutions). Therefore, the shift towards the easier to understand/anthropocentric/animal-centric SDGs must be student-driven. Whether it is important to address all of the SDGs via this course is not necessarily the point of this paper, but if that is a goal of the university, then a different approach to selecting the SDGs is clearly needed.

Additionally, suppose a class selects an SDG outside of the instructor's area of expertise, such as an environmental science instructor leading a course on SDG 3 (Good Health and Well-Being) or a psychology instructor leading a course on SDG 15 (Life on Land). In that case, they may need help to adequately educate and guide their students in designing a project directly related to the targets of their chosen SDG. One possible solution to this issue is to have the instructors select the SDG their class will focus on, educate that class about their specific SDG, and then have the class design a service project around that SDG. Students would still have ownership in how they design their service project, but the instructors would be able to choose an SDG they are knowledgeable about. This means the instructors can better educate the students about that particular SDG and better guide the students to design a service project that actually addresses the targets of their chosen SDG. Additionally, this may broaden the number of SDGs addressed to include those that have not been previously chosen by classes, shown in Figure 1. For example, we believe it is likely the archaeology faculty at Lynn would likely choose UN SDG 11 (Sustainable Cities and Communities), which includes targets related to archaeology and cultural heritage. Additionally, of the multiple business faculty who teach the course, it seems plausible that at least some of them would choose SDGs related to business, such as SDG 8 (Decent Work and Economic Growth) or 9 (Industry, Innovation, and Infrastructure). With the idea that ESD curricula should supply sufficient knowledge to learners yet be flexible enough to allow for exploration, this system of instructor-specific SDGs, yet student-designed projects may be the balance needed to meet those ESD requirements.

4.2.3. Embrace Local Community Strengths

When implementing the service-learning model, it is crucial to embrace and leverage the local community's strengths. For instance, in South Florida, where Lynn University is located, there was a strong emphasis on SDG 13 (Climate Action), SDG 14 (Life Below Water), and SDG 15 (Life on Land) due to the region's rich natural environments and existing conservation efforts. Conversely, projects related to SDG 8 (Decent Work and

Economic Growth) were less prevalent, possibly reflecting the high affluence of Palm Beach County.

To maximize the impact of service-learning projects, it is recommended that institutions align their efforts with local conditions and strengths. Students can tap into established resources and partnerships to achieve more significant outcomes by choosing SDGs that resonate with existing infrastructure and priorities. Collaborating with community partner organizations with the expertise and capacity to support specific SDG goals can enhance the effectiveness and sustainability of student projects. This approach ensures that projects are feasible and impactful, foster stronger community ties, and reinforce local efforts toward sustainable development. Embracing the local context and utilizing the available resources allows for a more tailored and effective implementation of the SDG-focused service-learning model.

5. Conclusions

The purpose of this study was to assess if and how the Citizenship Project courses collectively contribute towards the achievement of the SDGs. In term of ESD, UNESCO states that its objective is to "To fully integrate ESD and the 17 SDGs into policies, learning environments, capacity-building of educators, the empowerment and mobilization of young people, and local level action" [3]. By nature of its design, each Citizenship Project integrates education about the SDGs into its educational environment, empowers and mobilizes youth (via the students) to design and implement projects related to the SDGs, and focuses on local-level action through its implementation of projects in South Florida. Although the course is designed to meet the objectives of ESD, there are still weaknesses in its current approach.

This system of project design is clearly skewed towards anthropocentric and animal-centric SDGs. However, a few shifts in the design of the course could induce a more uniform distribution of the UN SDGs addressed each year. Most, but not all, classes chose to utilize a CPO in their projects. Generally, the practice of utilizing CPOs seems to work well and benefit both the students and the CPOs in achieving impactful projects towards an SDG. Thus, the practice of working with CPOs should continue. It is important to note that although QEPs related to sustainability are required to complete subsequent evaluations of the QEPs, those evaluations are largely focused on the impact on the students rather than the impact of the QEP on sustainability issues or problems. Therefore, this paper presents a unique perspective of actually evaluating the impact of a sustainability QEP on sustainability issues.

Conflicts of Interest: The authors declare no conflicts of interest.

References

1. General Assembly. *Transforming Our World: The 2030 Agenda for Sustainable Development*; General Assembly: New York, NY, USA, 2015.
2. UNESCO. What You Need to Know about Education for Sustainable Development. Available online: https://www.unesco.org/en/education-sustainable-development/need-know (accessed on 20 May 2024).
3. UNESCO. *Education for Sustainable Development: A Roadmap*; UNESCO: Paris, France, 2020; ISBN 978-92-3-100394-3.
4. Laurie, R.; Nonoyama-Tarumi, Y.; Mckeown, R.; Hopkins, C. Contributions of Education for Sustainable Development (ESD) to Quality Education: A Synthesis of Research. *J. Educ. Sustain. Dev.* **2016**, *10*, 226–242. [CrossRef]
5. Uggla, Y.; Soneyrd, L. Possibilities and Challenges in Education for Sustainable Development: The Case of Higher Education. *J. Educ. Sustain. Dev.* **2023**, *17*, 63–77. [CrossRef]
6. Brundiers, K.; Wiek, A.; Redman, C.L. Real-world learning opportunities in sustainability: From classroom into the real world. *Int. J. Sustain. High. Educ.* **2010**, *11*, 308–324. [CrossRef]
7. Helicke, N.A. Learning and promoting urban sustainability: Environmental service learning in an undergraduate environmental studies curriculum. *J. Environ. Stud. Sci.* **2014**, *4*, 294–300. [CrossRef]
8. Ribeiro, L.M.; Miranda, F.; Themundo, C.; Goncalves, H.; Bringle, R.G.; Rosario, P.; Aramburuzabala, P. Educating for the sustainable development goals through service-learning: University students' perspectives about the competences developed. *Front. Educ.* **2023**, *8*, 1144134. [CrossRef]
9. Martinez-Sanchez, A.; Gonzalez-Gomez, D.; Jeong, J.S. Service Learning as an Education for Sustainable Development (ESD) Teaching Strategy: Design, Implementation, and Evaluation in a STEM University Course. *Sustainability* **2022**, *14*, 6956. [CrossRef]
10. Aramburuzabala, P.; Cerrillo, R. Serivce-Learning as an Approach to Educating for Sustainable Development. *Sustainability* **2023**, *15*, 11231. [CrossRef]
11. Coleman, K.; Muroch, J.; Rayback, S.; Seidl, A.; Wallin, K. Students' Understanding of Sustainability and Climate Change Across Linked Service-Learning Courses. *J. Geosci. Educ.* **2017**, *65*, 158–167. [CrossRef]
12. Hernandez-Barco, M.; Sanchez-Martin, J.; Blanco-Salas, J.; Ruiz-Tellez, T. Teaching Down to Earth—Service-Learning Methodology for Science Education and Sustainability at the University Level: A Practical Approach. *Sustainability* **2020**, *12*, 542. [CrossRef]
13. Halberstadt, J.; Schank, C.; Euler, M.; Harms, R. Learning Sustainability Entrepreneurship by Doing: Providing a Lecturer-Oriented Service Learning Framework. *Sustainability* **2019**, *11*, 1217. [CrossRef]
14. Clevenger, C.M.; Ozbek, M.E. Service-Learning Assessment: Sustainability Competencies in Construction Education. *J. Constr. Eng. Manag.* **2013**, *139*, A4013010. [CrossRef]
15. Burns, H. Meaningful Sustainability Learning: A Study of Sustainability Pedagogy in Two University Courses. *Int. J. Teach. Learn. High. Educ.* **2013**, *25*, 166–175.
16. Hermann, J.R. Creating Successful Student Learning Outcomes: The Case of Trinity University's Quality Enhancement Plan Entitled "Starting Strong". *Sustainability* **2020**, *12*, 8197. [CrossRef]
17. Jackson, R.S.; Davis, J.H.; Jackson, F.R. Redesigning Regional Accreditation. *Plan. High. Educ.* **2010**, *38*, 9.
18. Strawn, A.; Littlepage, B. The Impact of the QEP Process on Advising Culture. *Educ. Res. Q.* **2021**, *45*, 3–20.
19. Yoder, J.; Miller, B.J. Using accreditation to foster education for sustainability in higher education: The implementation of the peace with creation project at Eastern Mennonite University. In *Handbook of Research on Pedagogical Innovations for Sustainable Development*; IGI Global: Hershey, PA, USA, 2014; pp. 494–509.
20. Bevins, S.; Wilkinson, N. Sustainability across the curriculum. *J. Educ. Sustain. Dev.* **2009**, *3*, 221–225. [CrossRef]
21. Hansen, B.; Stiling, P.; Whitney, F.U. Innovations and challenges in SDG integration and reporting in higher education: A case study from the University of South Florida. *J. Sustain. High. Educ.* **2021**, *22*, 1002–1021. [CrossRef]
22. Lynn University. DJCP 100: Citizenship Project. Available online: https://www.lynn.edu/academics/catalog/courses/djcp-100 (accessed on 25 May 2024).
23. Bok, D. Preparation for Citizenship. In *Our Underachieving Colleges: A Candid Look at How Much Students Learn and Why They Should Be Learning More*; Princeton University Press: Princeton, NJ, USA, 2008; pp. 177–193.
24. Loeb, P. *Soul of a Citizen: Living with Convistion in Challenging Times*, 2nd ed.; St. Martin's Griffin: New York, NY, USA, 2010; ISBN 0312595379.
25. Comfort Cases. Available online: https://comfortcases.org/ (accessed on 3 July 2024).
26. Lecher, A.L. Helping geoscience students thrive in graduate school. *Eos* **2018**, *99*, 1–8. [CrossRef]
27. Waity, J.; Sellon, A.; Williams, B. Using Design Thinking to Solve Real-World Problems: A Pedagogical Approach to Encourage Student Growth. *J. Eff. Teach. High. Educ.* **2023**, *6*, 17–34. [CrossRef]