WHITE PAPER
Findings from Wave 1

Projects That Work

Research to Guide the Implementation of School-Based Service Learning Projects

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SUMMARY

Service learning is a form of experiential education where students participate in real-world projects to address community needs and practice active citizenship while also learning academic content. While there is general agreement on what constitutes quality practice – the field of service learning lacks data-driven information on what projects are actually feasible for teachers and students to plan and do, as well as what factors support or inhibit implementation. **The *Projects That Work* study tracks what service learning projects are being done across a national sample of middle and high schools as well as how these projects are implemented. By examining *what happens, how well it happens, and what factors inhibit or optimize it happening,* the study seeks to identify "what works" in the efficient and effective design and implementation of new projects.**

This White Paper presents descriptive findings from Wave 1 of the *Projects That Work* study, and includes data on 41 projects from 39 teachers, 873 students, and 20 community partners. All projects had received $5,000 grants from *Youth Service America (YSA)* and *State Farm*. While all projects were implemented using a stage-based model, each project (even when the same type) included different components and activities. Main findings from Wave 1 revealed that teacher and student ratings differed by variations in the components and activities used to implement projects.

For example:
- Projects were *most feasible to plan and do* when teachers provided students detailed information on implementation, and when an adult from a community partner joined the project.
- Students indicated they *learned more* and *made a greater difference in addressing the issue* when an adult from a community partner organization joined the project.
- Students indicated they learned more when projects were more closely aligned to academic standards - yet projects more aligned to standards were also *less feasible to plan and do*.
- Students indicated they *learned more* and *made a greater difference in addressing the issue* when the project included reflection activities such as reading academic content, classroom discussions, and disseminating project results. It is noted the quantity of reflection activities <u>did not </u>relate to higher ratings, as participant ratings across projects did not differ with more or fewer activities.

The long-term goal of the *Projects That Work* study is to generate data-driven information practitioners and students can use to guide and improve decision making in service learning practice. It is hypothesized that more schools and teachers will employ service learning if information is available on *what* project types have successfully been done dozens of times in a course, with information on *how* these projects were *implemented*. The White Paper is intended to demonstrate the potential of the *Projects That Work* model and to serve as a foundation for additional ongoing research. In Wave 2 of the study in the spring of 2017, the researchers are collecting data from an additional 100 projects being performed in schools around the country.

INTRODUCTION

Service learning is a form of experiential education where students participate in real-world projects to address community needs and practice active citizenship while also learning academic content. Examples of school-based service learning projects include students analyzing polluted river water to learn ecology, charting drivers texting at intersections to practice research methods and statistics, or designing a webpage for a homeless shelter to apply design and computer science skills.

In the past two decades the science regarding high quality service learning has improved significantly (Furco, 2013; Goethem et al., 2014). A large body of research demonstrates projects are most potent when implemented with a common set of components or activities, and a series of defined stages from start to finish. For example, in the 'gold-standard' model for service learning a class of students (led by a teacher-facilitator) collaboratively: investigate a community need that aligns to curricular content; select, design, and prepare for a project; perform sustained service to address the need; and reflect on and disseminate findings through writing, discussions, and presentations to detail what was accomplished.

Despite its potential and what is known about effective practice, most middle and high schools in the United States do not presently offer service learning.[1] And where it is offered, service learning can be a complex academic intervention to implement. For example, teachers need time, resources, and expertise to efficiently and effectively design and integrate multi-day experiential projects within standard instructional practices, all while still covering required learning standards. And students need guidance and support to participate in projects outside of classrooms in communities, yet also opportunities to independently plan and do the projects themselves.

In schools where service learning is employed as an intervention, research demonstrates that the quality of the project experience can vary depending on how implementation occurs (van Goethem et al., 2014; Youniss & Yates, 1997; Eyler & Giles, 1999). This is meaningful because if projects are not feasible to implement or are missing key components theoretical aligned to yielding key outcomes – students will be less likely to benefit from or make the desired impact during the service experience.

Although the research literature points to implementation as a key reason why more schools and teachers do not try service learning and as main challenge to effective and sustainable practice where it is offered (Furco, 2013), research has not systematically examined how implementation actually occurs across a large national sample of projects. The field also lacks data-driven information on what types of service learning

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[1] In 2008, 24% of all U.S. schools offered service learning, a decrease from 32% in 1999 (Spring,

projects are effective under what circumstances. Along these lines, more research is needed on *what project types can feasibly be implemented* and *what project components and activities are most likely to lead to successful implementation*. Research is also needed to generate usable information from past projects that new groups of teachers and students can use to inform decision-making to use service learning flexibly and in ways that work.

The *Projects That Work* Study
The *Projects That Work* study tracks what service learning projects are being done across a naturally occurring national sample of middle and high schools, as well as how these projects are implemented. The study examines *what happens*, *how well it happens*, *and what factors inhibit or optimize it happening* in order to identify "what works" in the effective and efficient project design and implementation of new projects. The long-term goals of the study are to: (1) generate user-generated data-driven information on the key components that undergird efficient and effective implementation across all projects and (2) identify project types that consistently work well regardless of variations in how implementation occurs and projects that work well only when implemented in a specific way. It is anticipated that over time crowd-source knowledge collected by this study will be used by teachers and students to inform project selection and implementation.

This White Paper presents findings from Wave 1 of the study, which included 41 projects done in middle and high schools around the United States. This paper describes the goals of the projects, how projects were implemented, and trends in how participants reported experiencing service learning given variations in implementation across all and within specific project types. The White Paper is intended to demonstrate the potential of the *Projects That Work* model and to serve as a foundation for additional ongoing research.

METHOD

Procedure and Sample
All study procedures were approved by the Internal Review Board at the Catholic University of America in Washington D.C., in January, 2014. Data were provided by schools that received a grant from *YSA* and *State Farm* through the *Good Neighbor Impact School Program*. Through this program, K-12 public school superintendents and principals applied for $5,000 grants to employ service learning to create a culture of service in their schools. A portion of the grant funding was used to pay for the expenses of projects in Wave 1. In addition to the funding, YSA provided an average of 20 hours of technical assistance to the administrators at each of the schools receiving a grant. This assistance followed a "train-the-trainer" approach whereby administrators trained their teachers on how to implement a high quality service-learning project in their classroom. YSA also supported the service-learning teams at each school with ongoing technical assistance opportunities throughout the year, including an online course, webinars and networking calls, and one-on-one consultation.

In 2014, 2015, and 2016, teachers, students, and community partners were invited to complete an online survey (using Survey Monkey) at the conclusion of their class project. No participant names or identifiable information was provided in any surveys. Usable data was provided for 28% of the projects (41 of the 140). Across the 41 projects included in the study, 873 students, 41 teachers, and 20 individuals from a community partner provided a survey. (Note: Community partners were not included in the 2014 survey.) Across the 41 projects, an average of 51% of students per project completed the survey. All of the projects in the study included responses from 8 or more students. Projects with fewer than 8 participants were not included for further analysis. On average, the survey took teachers 7 minutes to complete, students 3 minutes to complete, and community partners 2 minutes to complete.

Measures
The study measures are researcher-generated and are listed in Appendix A. Measures were designed to collect ***project information*** on design and implementation and to generate ***participant ratings*** on the extent to which project implementation was feasible and aligned to outcomes of interest in key areas.

Project Information: Through open-ended and forced-choice questions in the Teacher Survey, teachers were asked to provide *Information on Project Implementation*. The items included:
- the purpose and goals of the project;
- contextual components of the project (*grade level, duration, cost, learning standards covered, number of participants, project placement during the school day, where a community partner joined to project*);

- pre-project activities (e.g., *reading content on the topic, presentations on the topic, research on the topic, discussions on the learning goals, discussions on implementation*);
- project activities (*e.g., the action performed during the project and the recipient of the project*); and
- post-project activities, (e.g., *assessment or evaluation of learning outcomes, classroom discussions, student-led presentations, reading content on the topic, students creating products to showcase what was accomplished, reflective writing, advocacy to make a change*).

Through one forced-choice item in the Student Survey, students provided a rating for the extent to which they *were involved in planning their project,* from 1=very little to 5=did everything.

Participant Ratings*:* The Teacher, Student, and Community Partner Surveys included items asking for a series of ratings (from 1=least to 5=greatest) in key areas of implementation related to project components and activities. The items include:

- *Feasibility to Plan and Do the Project* as an indicator of the extent to which participants were able to design and implement the project – the most basic prerequisite for any service learning project (provided by Teachers, Students, and Partners)
- *Alignment to Learning Goals* as an indicator of the extent to which the project addressed the intended learning goals it set out to cover (provided by the Teacher)
- *How Much Students Perceived They Learned* as an indicator of the extent to which the project provided learning opportunities for students, a principle objective of all service learning projects (provided by Students)
- *How much of a Difference the Project Made In Addressing the Issue* as an indicator to which the project provided opportunities for students to make the desired impact in the community, with making a difference on a relevant community issue a principle objective of all service learning projects (provided by Students and Partners)
- *Overall Rating* as an indicator of participants' impression of the project on a whole (provided by Teachers, Students, and Partners).

Average ratings for all items are presented in Table 1. Ratings were above average (3.49 out of 5) for all study items, with ratings by Community Partner the highest, followed by Teacher ratings, and Student ratings.

Of note – projects were well-liked, as more than 800 students provided an *Overall Rating* of their project a 4.17 out of 5, 39 teachers who responded provided a 4.38 out of 5, and 16 partners who responded provided 4.67 out of 5. When examining ratings by each class project, 30 of 41 class projects and 36 of 39 teachers provided ratings of 4 (very good) or 5 (excellent). Teacher Ratings were highly correlated to Student Ratings,

as more than half of students with a score above 4 had a teacher who scored the project a 5. This compares to only one case where a teacher scored the project a 5 with students providing a rating in the high 3's. There were no projects where students rated a project a 2 and teachers rated the same project a 5, or vice-a-versa.

Students' average ratings for *Feasibility to Plan and Do* projects was inversely correlated with average *Overall Ratings* – students with lower average scores on *Feasibility* were more likely to provide higher *Overall Ratings.* Alternatively, Teacher's average rating for *Feasibility* correlated with *Overall Ratings* – teachers were more likely to provide higher *Overall Ratings* when projects were more *Feasible.* These findings suggest that students enjoyed projects more when they were challenged to plan and do their project.

On average, Teachers provided a score of 4.38 out of 5 for *Alignment to Learning Standards*, indicating a high level of agreement among teachers that projects covered learning goals.

Across all students in the study, students average score for *involvement in planning their project* was 3.49 out of 5. *(NOTE: this item was added to the survey in 2016, hence data is only available from 14 projects.)*

NOTE: Due to low number of community partners who participated in projects and provided responses to the questionnaire, data from community partner participants are not included in the findings. Future Projects That Work research will more fully examine whether and how Community Partner ratings relate to student and teacher ratings, and will seek to triangulate findings across the three groups of projects participants, including students, teachers, and partners.

Table 1. Participant Average Ratings for Key Measures

	Feasibility of Planning and Doing	Made a Difference	Perceived Learning	Overall Rating	Alignment to Learning Goals	Involved in Planned the Project
Students (n=872)	3.82	3.72	3.80	4.17	--	3.49
Teachers (n=39)	4.15	-	-	4.38	4.38	--
Partners (n=16)	4.67	4.28	-	4.64	--	--

Analytic Strategy and Research Questions
The 41 school-based service learning projects included in Wave 1 were implemented around the country in middle and high schools during core classes, supplemental classes, or through after-school clubs. The projects all followed a stage-based model from start to finish, and engaged students in an array of activities addressing many issues in communities and schools. Certain types of projects were done multiple times, such as school garden projects or collect/donate for a cause projects, while others were done only one or two times.

With a study focus to determine variation in project experiences based on implementation, student ratings are aggregated at the <u>individual class project type level.</u> In each section, ratings for items related to implementation are examined by the presence or absence of project components and activities. The overarching research questions in Wave 1 and addressed in this White Paper focused on the following:

- *What are some of the service learning projects being done in schools around the country? What are components and activities of these projects and how did implementation occur?*
- *What project components and activities relate to key ratings for implementation, including feasibility to plan and do projects, for perceived learning, and for making a difference in addressing the issue?*

<u>Findings from Wave 1 are descriptive and are presented as trends</u> by assessing the relationship between participant ratings by the variations in the components and activities used to implement projects. **<u>Due to the low number of projects on which data were collected, no analyses were conducted to examine statistically meaningful differences</u>** in participant ratings by variations in the implementation of service learning projects.

Data in the Findings section below are arranged to examine questions about the implementation of service learning projects as follows. Section 1 presents information about the 41 service learning projects. Section 2 examines trends in project implementation across all 41 projects aggregated together. Section 3 examines differences in project implementation between students engaged in one project activity (collect/donate for a cause) and all other projects. And, Section 4 examines differences in project implementation within only 14 projects where students engaged in one activity (collect/donate for a cause). Within each section, findings are presented by how service learning projects were implemented in four areas, including: a) contextual components, b) pre-project activities, c) project activities, and d) post-project activities.

FINDINGS

SECTION 1

Overview of Projects

In Wave 1, all 41 projects were done in middle and high schools within academic courses (e.g., math, science, language arts), elective or specialty courses (e.g., leadership, service learning), or as after-school activities. All projects followed a stage-based model of implementation. Teachers (and students[2]) selected a project, engaged in activities to design and prepare for the project, performed service to address a need in the community or within the school, and conducted post-service reflection and dissemination activities. Although all projects included defined stages, there was wide variability in the types of projects that were done (see Table 1) and in the components and activities used to implement projects from start to finish (see Section 2).

Table 1. Overview of service learning projects, including the grade level and course, and duration

#	Project Description	Grade Level (MS or HS) and Course	Duration (Days)
1	Students raised threatened animals (green abalone, white-sea bass) to be tagged and released into the wild, in order to restore the population.	MS Environmental Engineering	180
2	Students designed and made greenhouses from recycled bottles, fundraised, and conducted awareness campaign.	HS Exploring Global Issues	80
3	Students used a hydroponics system to create vegetables and fish, with produce to address hunger in the local community and to promote sustainable farming.	MS Agriculture	6
4	Students researched and then built raised garden beds for their school, which future classes adopting portions to maintain.	MS After school STEM club	22
5	Students ran an awareness campaign to promote teen driving safety to avoid the deadly behaviors.	HS Leadership / Service Learning	40
6	Students built a school garden and grew plants.	MS Science	N/A
7	Students grew a community garden at school, and provided the plants to community members and to the local food bank.	N/A	N/A
8	Students researched and planted trees, and conducted an awareness campaign.	MS Life Science	
9	Students' learned about and then promoted organ donation.	HS Health	80
10	Students conducted research and educational outreach on war.	HS English	30
11	Students researched and led a recycling project, including awareness on environmental sustainability.	HS Aquaponics and Sustainability	40
12	Students grew plants in a community garden, and learned	HS Science	45

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[2] Information was not provided on whether students were involved in selecting the project. Future Projects That Work research will examine how involved students were in selecting their project.

	about growing food and healthy eating.		
13	Students researched and presented on social issues.	HS Social Studies	19
14	Students ran a sports clinic to teach and mentor elementary school students to be active and healthy.	HS Leadership	
15	Students designed and built a school garden, and planned for its sustainability.	MS Science	100
16	Students tutored younger elementary school children in reading.	MS Language Arts	10
17	Students created and mailed care packages to members of the military.	MS English	25
18	Students led a pantry for food insecure students, and led a carwash fundraiser to support the pantry.	HS	40
19	Students interviewed and videotaped of veterans and conducted educational outreach on conflict resolution.	HS Cross-curricular: ELA, Life skills, Social Studies	54
20	Students raised threatened animals (green abalone, white-sea bass) to tag and release into the wild to restore their habitat.	MS Life Science	160
21	Students conducted research, raised awareness, and fundraised on the issue of climate change.	HS Biology	160
22	Students conducted research, raised awareness on the topic of bullying.	HS Sociology	5
23	Students raised chickens to produce fresh eggs, which were then donated to members of the community.	MS Agriculture	90
24	Students maintained a natural habitat for birds and created a documentary to raise awareness.	HS Environmental science	120
25	Students created a photography exhibit featuring veterans with substance abuse difficulties.	HS Photography	14
26	Students led a collection to donate for the needy.	HS Leadership	2
27	Students helped stray animals by collecting donations. Students also made cat toys.	MS Mathematics	100
28	Students addressed hunger by packing supplies and distributing to schools with needy students; and raised money for hunger organizing fun-runs at Thanksgiving and Easter.	MS School Club	36
29	Students created "welcome" care packages for Coast Guard members and their families who newly moved to their community.	MS Technology Integration	180
30	Students created clothing (mittens, scarves, hats, and lined ponchos) and then donated to homeless.	HS Fiber and Fabric Design	35
31	Students researched the water crisis in Flint, Michigan, and collected/donated water to the cause.	MS ELA	20
32	Students assisted third grade struggling readers with reaching proficiency by introducing them to the importance of text selection and engaging them in a Positive Based Intervention Strategy that included an incentivized reading initiative to assist them with reaching their reading goals.	MS After School Book Club	80
33	Students raised awareness about the dangers of distracted driving.	HS Service learning	30
34	Students raised awareness about the dangers of distracted driving.	HS Service learning	30
35	Students organized a community fun-run to raise money for an international charity.	HS Leadership	30

36	Students assist teachers with technology and other tasks in classrooms.	MS Exploring IT Careers	5
37	Students working on building class-wide Public Service Announcement on machines to spread the message about healthy eating and the consequences of eating fast food and/or processed food; as well as exercise.	HS Cross-disciplinary, English and Physics	
38	Students led an education campaign about rights and a collection/donation for the needy.	MS ELA	5
39	Students collected and donated clothes for those in need at local missions and social service organizations.	MS Semester of service	60
40	Students collected and donated clothes for those in need at local missions and social service organizations.	MS Semester of service	60
41	Students raised money for International organization by organizing a 5K walk, an organization that brings clean water to less developed nations.	HS School and Community Leadership	20

SECTION 2

TRENDS IN IMPLEMENTATION ACROSS ALL 41 PROJECTS
Section 2 presents findings aggregated across all 41 projects to examine trends in how implementation occurred, and to understand how the presence or absence of components and activities related to participant ratings.

Contextual Components

Grade Level
Of the 41 projects, 22 were done in High School settings and 19 were done in Middle School settings.

Trends When Examining Participant Ratings by Grade Level
- ✓ Teachers provided higher ratings for *feasibility to plan and do projects* with High School students when compared to Middle School Students (4.21 v 4.08).
- ✓ When comparing by grade levels, students in Middle School provided higher ratings *Overall (4.25 v 4.10)* and for *Making a Difference (3.84 v 3.60)* compared to high school.

Table 2. Project grade level by ratings

	Teacher Feasibility	Student Feasibility	Overall Rating	Learn	Difference
Middle School (n=19 projects)	4.08	3.84	4.25	3.76	3.84
High School (n=21 projects)	4.21	3.80	4.10	3.82	3.60

Project Participants
Teachers participated in 100% of projects (41 of 41). 85% of students reported doing their project with fellow classmates, whereas 15% reported doing the project alone. (*Note: All of the projects were done within a class or after school club, hence it was not anticipated that students would report doing projects alone*). Individuals from community organizations participated in 78% of the projects (28[3] of 36[4]). Such individuals often provided expertise and content knowledge to the project on the issue being addressed and as well a recognized name of a community organization.

Trends When Examining Participant Ratings by Project Participants
- ✓ Teachers provided higher scores for *feasibility to plan and do* the project when a community partner joined the project compared to when a partner did not join (*4.21 v 3.81*).
- ✓ Students who did a project with classmates _and a_ community partner had higher ratings on all items compared to students who did a project with just classmates

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[3] 16 of 28 partners provided Questionnaires.
[4] Data was not provided for all projects on whether a partner participated.

or alone. Along those lines, students who did the project with classmates (and no community partner) had higher ratings for all of the items (except *perceived learning)* when compared to students who reported doing the project alone.

Table 3: Ratings by whether students reported doing their project alone, with classmates, or with classmates and community partners

	Student Feasibility	Overall Rating	Difference	Learn
Alone (n=124 students)	3.72	3.80	3.31	3.82
With Just Classmates (n=112 students)	3.80	4.14	3.51	3.77
With Classmates and Partner (n=634 students)	3.88	4.26	3.88	4.02

Project Placement during the Day
Projects were implemented through different courses and at different times of the school day. More specifically, 56% of projects (22 of 41) were done in a *core course* (e.g., Math, Science, History, English Language Arts); 36% (14 of 41) were done in an *elective or specialty course* (e.g., courses such as Leadership, Service learning, Innovation, Technology), and 8% were done through an *after school club* (e.g., Book Club, Key Club).

Trends When Examining Participant Ratings by Project Placement During the Day:
- ✓ Students who did projects in an *elective or specialty course* provided higher ratings on *making a difference (3.82 v 3.54)* and *overall rating (4.21 v 4.09)* when compared to students who did projects during a *core course.*
- ✓ At the same time, students who participated in projects in a *core course* provided higher ratings for *perceived learning (3.83 v 3.71)* when compared to students who did projects in an *elective or specialty course.*
- ✓ Teachers and students provided higher ratings for *feasibility to plan and do* when doing a project in an *elective or specialty course* than in a *core course*. In other words, service learning was more difficult to integrate within core courses.

Table 3. Participant ratings by when project was employed

	Teacher Feasibility	Student Feasibility	Overall Rating	Learning	Difference
Core Course (n=22)	3.95	3.75	4.09	3.83	3.54
Specialty Courses (n=14)	4.30	3.89	4.21	3.71	3.82
After School (n=3)	4.72	3.99	4.68	3.78	4.47

Intended Learning Goals
Teachers reported that the *intended learning goals* of service learning projects aligned to *core academic learning standards* (e.g., Common Core or Next Generation Science Standards) in 47% of the projects (18 of 38); *21st Century Skills* (e.g., creativity, cooperation, career skills) in 39% of the projects (14 of 38); and to *other or no outcomes* in 14% of the projects (6 of 38).

Further, of the 21 teachers who employed projects during a *core course*, 63% (13 of 21) reported that that the learning goals aligned to *academic learning standards*; 33% (7 of 21) reported that the learning goals aligned outcomes to *21st Century Skills*, and (4%) 1 of 21 reported that the project aligned to *no or other* standards. Across the 13 projects done in Specialty Courses, 30% (4 of 13) of projects were aligned to *academic learning standards*, 47% (6 of 13) aligned to *21st Century* learning goals, and 22% (3 of 13) aligned to other or no standards.

Trends When Examining Intended Learning Goals By Participant Ratings
- ✓ Teachers and students provided higher ratings for *feasibility to plan and do* projects that <u>did not</u> align to *academic learning standards* compared to projects that did align to standards.
- ✓ Students who participated in projects that aligned to *academic learning standards* provided higher ratings *overall,* for *difference,* and for *perceived learning,* compared to projects that <u>did not</u> align to academic standards.

In other words, participants reported that projects that covered academic learning content and that were in a core course were more difficult to plan and do. However, students reported learning more and making a greater difference during projects that aligned to academic standards compared to projects that did not align to standards.

Table 4: Ratings by learning goals to which the project aligned

	Teacher Feasibility	Student Feasibility	Overall Rating	Learn	Difference
Align Academic Standards (n=18)	3.88	3.72	4.24	3.88	3.81
Align to 21st Century Skills (n=14)	4.26	3.95	4.14	3.79	3.60
No Alignment (n=6)	4.70	4.00	4.11	3.58	3.86

Project Duration
The projects varied in duration, with 17% (6 of 36) less than 5 days; 28% (10 of 36) between 6 and 20 days, and 56% (20 of 36) more than 21 days, with some lasting all school year.

Trends When Examining Participant Ratings By Project Duration
- ✓ Students who performed *mid- and long-term* projects had higher ratings for *perceived learning* and *making a difference* than students who performed *Short-term* projects.
- ✓ Students and Teachers involved in Shorter-term projects provided higher ratings for *feasibility to plan and do.*

Table 5: Ratings by project duration

	Teacher Feasibility	Student Feasibility	Overall Rating	Learn	Difference
Short-term, 5 days or less (n=6)	4.08	4.01	4.16	3.61	3.63
Mid-term, 20 days or less (n=10)	4.15	3.73	4.12	3.71	3.84
Long-term, more than 20 (n=20)	4.21	3.86	4.20	3.79	3.81

Project Cost

The cost ($) of the projects varied, with about a third less than $800, a third between $800 and $2000, and a third above $2000. With an average cost of $883 and many projects spent below $300, very few projects in this study reported using the full $5,000 for project costs.

There were no trends to report in participant ratings by the cost of the project.

Pre-Project Components

Student Involvement in Planning the Project

All students were asked *how much they were involved in planning their project* on a scale from 1= no planning to 5=did everything. 20% of students reported they were *a little* involved; 50% indicated they were involved *a moderate amount*, and 25% reported *doing everything* to plan the project. There was variability among students in the same class doing the same project when responding to this question – some students reported *doing everything* while others doing the same project reported doing only *a little*.

Trends When Examining Participant Ratings By Student Involvement In Planning:
- ✓ When students provided higher ratings for being involved in *Planning the Project,* they provided higher ratings for *Feasibility of Planning and Doing*, *Overall*, for *Learning*, and for *Making a Difference*.

Pre-Project Activities

All teachers reported that their projects included one or more form of *pre-project activity*, as listed in Table 6. Of the 7 pre-project activities listed in Table 6, the average number of activities per project was 5.15 out of 7. Looking at the data another way, 70% (27 of 39) of teachers who responded to this set of questions indicated that their project employed 5 or more of these pre-project activities. Of note, 85% of projects each did *research on the topic*, *discussed learning goals*, and *discussed implementation*.

Table 6. Activities prior to the service activity beginning

Students conducted research on the topic	85% (33 of 39)
Student read content	72% (28 of 39)
Teacher presented on the topic	72% (28 of 39)
Community partner presented on the topic	49% (19 of 39)
Students presented on the topic	64% (25 of 39)
Learning goals were discussed	85% (33 of 39)
Project implementation was discussed	85% (33 of 39)

Trends When Examining Participant Ratings By Pre-Project Planning Activities
Overall, there were few trends to report when comparing projects that employed more pre-project activities to those that employed less.
- ✓ Among trends to note – class projects that included *reading content on the issue* prior to the project provided higher ratings for *perceived learning* when compared to students who did not prepare by reading (3.86 v 3.59).

Table 7: Ratings by pre-project reading content aligned to the project

	Teacher Feasibility	Student Feasibility	Overall Rating	Learn	Difference
Yes (n=28)	4.12	3.86	4.17	3.86	3.72
No (n=11)	4.29	3.73	4.20	3.59	3.68

Steps Taken to Implement Projects
Through an open-ended question in the Teacher Survey, teachers detailed the *steps taken to plan and do the project.* After all study data was collected, the researcher categorized each teacher's written response by whether the response: (a) provided *very detailed* information on the steps taken to implement a project or (b) provided *less detailed* information. In all, 30 teachers provided *very detailed* information and 11 of teachers provided *less detailed* information.

Trends When Examining Participant Ratings By More or Less Details on Implementation:
- ✓ When teachers provided *more detailed* information compared to *less detailed* information on *steps to implement* the project, both teachers (4.21 v 4.00) and students (3.86 v 3.69) provided higher ratings for *feasibility of planning and doing* the project.

Table 8. Ratings for when teachers provided more detailed information on implementation

	Teacher Feasibility	Student Feasibility	Overall Rating	Learn	Difference
Less Implementation Details (n=11)	4.00	3.69	4.08	3.77	3.67
More Implementation Details (n=18)	4.21	3.86	4.20	3.81	3.74

Project Components

Students Engaged in Service Activities
The central component of all service learning projects is students engaging in an activity to address a need and integrating the experience within an academic context. As detailed below, 100% of projects (41 of 41) included an *activity (e.g.,* serving, collecting and donating, building, planting*)* with a defined goal to address a need of a *recipien*t (e.g. young student, individual in need) or a *cause* (e.g., the environment, collecting clothes for the homeless or a collection for military families). All of the projects were integrated within an academic setting within a course or as an after-school activity.

Main Areas & Project Type
A coding scheme was created to categorize the *Main Area of Focus* for each the 41 projects. The most common *Main Areas* included *Environmental* (10 of 41, 24%), *Social Service* (8 of 41; 20%), *School Garden* (6 of 41; 15%), and *Public Health* (6 of 41; 15%). To further identify the nature of the service learning experience, the researcher determined that students engaged in 22 different *Project Types.* The most common project type was to *Collect/Donate for a Cause*.

Table 9. Project areas and types

Areas of Focus	N=	Project Types
Environment	10	habitat restoration (1); sustainable farming (4); recycling (1); climate change (1); planning trees (1); cause for the environment (2)
Social Service	9	serving dinner to food insecure at a soup kitchen (1); collecting and donating for those in need (8);
School Garden	6	Building and growing a school garden
Public Health	6	Safe driving awareness (3); bullying prevention (1); healthy eating (1); organ donation (1)
Educational	3	Reading tutor to younger children (2); coaching young children on sports and physical health (1)
Veteran/Military	3	interviewing of veterans (2); care packages for veterans (1);
General	2	helping stray animals (1); rights campaign (1);
Peace Studies	1	conflict resolution training (1);
Functional	1	teacher assistant (1)

Trends in Participant Ratings by Areas of Focus
✓ Teachers and students provided lower ratings for *feasibility to plan and do School Garden* projects, perhaps reflecting the challenge of building a garden, and growing and distributing plants within an instructional context.
✓ Students who participated in projects in the area of *Public Health* (such as bullying prevention and driving awareness) had the highest *overall rating,* and higher than average scores for *perceived learning* and *difference.*
✓ Students who participated in project areas that directly served those in need (such as by serving the homeless or veterans) provided higher ratings *Overall* and for *difference*, but not for *perceived learning.*

✓ Students who participated in projects that focused on the *Environment* reported lower ratings *overall,* for *perceived learning,* and for how much *difference* the project made.
✓ Students in Middle School and High School engaged in similar project types with one exception – six High School projects focused on Public Health issues (e.g., safe driving, bullying) compared to zero Middle School projects.

Table 10. Student ratings by area of focus

	Teacher Feasibility	Students Feasibility	Rating	Learn	Difference
Environment (n=10)	4.31	3.76	3.98	3.75	3.51
School Garden (n=6)	3.80	3.54	4.24	3.93	3.95
Public Health (n=6)	4.25	3.86	4.28	3.95	3.82
Peace Studies (n=1)	3.50	3.56	4.11	4.05	2.95
Education (n=3)	4.33	3.96	4.35	3.92	3.96
Veterans/Military (n=3)	4.08	4.26	4.49	4.10	4.04
Social Service (n=6)	4.27	3.93	4.27	3.70	3.93
Other (n=3)	4.00	3.50	3.63	3.40	3.06
Functional (n=1)	4.00	3.82	4.17	3.79	3.72

Main Activity During Project

A coding scheme categorized a *Main Activity* for each of the projects through which students engaged. In all, there were nine different Main Activities across the 41 projects, with the highest number of projects including the main activity to *Collect/Donate* followed by *Educational Awareness Campaigns*.

Table 11. Main activity during the project

Collecting/Donating	34% (14 of 41)
Educational Awareness Campaign	22% (9 of 41)
Raising animals (fish, chickens)	12% (5 of 41)
Build structure and grew plants	10% (4 of 41)
Tutor, Coach, Mentor	7% (3 of 41)
Growing plants	5% (2 of 41)
Direct service to others in need	5% (2 of 41)
Teacher assistance	2% (1 of 41)
Habitat restoration	2% (1 of 41)

Project Recipient

A coding scheme categorized the *Recipient* for each of the projects through which students engaged. In all, there were 9 different types of *Recipients* across the 41 projects, with the highest number of projects for *School community members* (e.g., classmates), *Those in need*, and the *Environment*.

Table 12. Main recipient of the project

School community members (e.g., peers)	22% (9 of 41)
Those in need	22% (9 of 41)
Environment	22% (9 of 41)
Community in general	12% (5 of 41)
Veterans/Military	10% (4 of 41)
Children	7% (3 of 41)
International Charity	4% (2 of 41)
Animals	2% (1 of 41)
Teachers	2% (1 of 41)

Post-Project Components

Post-Project Activities
100% of projects (41 of 41) included one or more form of post-service activity, during which students reflected on the experience or disseminated information. Highlights from post-project activities include: 95% of the classes and after school clubs discussed the project; 71% of projects included a post-project assessment to determine if learning goals were met; and 50% of projects included presentation or activity where students led outreach to school or community members. On average across all projects, teacher's reported that the project employed 3.89 of these activities out of 8.

Table 13. Post-project reflection activities

Class discussed/assessed what was learned	71% (27 of 38)
Class discussed the project	95% (36 of 38)
Students presented to the class	47% (18 of 38)
Students presented to members of the school	43% (16 of 37)
Students presented to members of the community	38% (14 of 37)
Students read content	24% (9 of 38)
Students did reflective writing	42% (16 of 38)
Students conducted advocacy on the issue	32% (12 of 38)

Trends When Examining Participant Ratings By Post-Project Activities:
- ✓ Students in classes that included an activity with a *class-wide discussion* and that *assessed and evaluated the project* reported higher scores for *overall rating, perceived learning,* and *difference,* compared to projects that did not include a discussion.

Table 14. Ratings by post-project class discussion and assessment

	Teacher Feasibility	Student Feasibility	Overall Rating	Learn	Difference
None (n=11)	4.16	3.92	4.06	3.67	3.58
Yes (n=27)	4.09	3.80	4.21	3.83	3.77

- ✓ Students in classes that concluded the project by *reading* content related to the issue reported higher *overall ratings*, *perceived learning*, and *difference*, than

students who did not conclude by *reading*.

Table 15: Ratings by post-project reading content that related to the issue

	Teacher Feasibility	Student Feasibility	Rating	Learn	Difference
None (n=29)	3.81	3.81	4.13	3.74	3.62
Yes (n=9)	3.93	3.93	4.30	3.95	4.03

Creating a Post-Project Product and Doing Outreach
The researcher created a coding scheme to determine projects that included a post-project activity of creating a product (e.g., article, presentation, video) that students then disseminated to the school or community to raise awareness. 44% of projects (18 of 41) included this type of activity.

Trends When Examining Educational Awareness Campaigns by Participant Ratings
- ✓ For projects which included an Educational Awareness Campaign, students provided higher ratings *overall* and for *perceived learning* compared to projects that did not.
- ✓ It is noted that there were no differences in teacher or student ratings for *feasibility to plan or do* these projects.

Table 16. Scores for post-project educational awareness activities

	Teacher Feasibility	Student Feasibility	Rating	Learn	Difference
No Educational Awareness (n=23)	4.18	3.80	4.12	3.67	3.75
Yes Educational Awareness (n=18)	4.12	3.84	4.25	3.96	3.68

SECTION 3

Trends in Implementation When Comparing One Type of Project (Collect/Donate) with All Others

Section 3 of this report compares the implementation between 14 projects where students engaged in the same activity, to *Collect/Donate for a Cause* – and all other project activities. In Collect/Donate projects, students collected food or clothes or money for those in need, raised money for the environment (to provide water in developing countries), or donated care packages for veterans and members of the military overseas. In Collect/Donate projects, students were less likely to have a direct face-to-face interaction with the recipient of the service.

The purpose of comparing collect/donate projects versus all others is to determine if there are differences in the components and activities used to implement one type of project versus other projects at the aggregate level.

Contextual Components

Grade Level
- ✓ Projects done in Middle School settings were more likely to do Collect/Donate projects than projects done in High School. Specifically, 43% of projects (8 of 19) in Middle Schools were to Collect/Donate compared to 28% (6 or 21) of High School projects where Collect/Donate was done.

Participants
- ✓ 75% (9 of 12) of Collect/Donate projects involved a Community Partner Expert - a similar percentage to all other projects.

Project Placement
- ✓ Collect/Donate projects were more likely to be done in elective or specialty classes and were less likely to be done in core courses, compared to all other projects. More specifically, 50% (7 of 14) of projects done in elective or specialty courses were to Collect/Donate, compared to 27% (6 of 22) of projects done in core courses.

Intended Learning Goals
- ✓ Collect/Donate projects were less likely to align to *academic learning standards* compared to all other projects. More specifically, 36% of (5 of 14) of Collect/Donate projects aligned to *academic learning standards*, compared to all other projects where 54% (13 of 24 projects) aligned to standards.

Duration

✓ There were few differences between Collect/Donate projects compared to others for project duration. More specifically, 14% (2 of 14) of Collect / Donate projects were *short-term*, 29% (4 or 14) were *middle length*, and 57% (8 of 14) were *long-term*.

Cost

✓ There were no trends to report related to cost.

Pre-Project Activities

✓ Collect/Donate projects included fewer pre-project activities than all other projects (see Table 17). Specifically, Collect/Donate projects averaged 4.64 activities out of 7; compared to all other projects that averaged 5.92 activities out of 7. Looking at the data another way, 50% (7 of 14) of Collect/Donate projects included 5 or more activities to prepare for the project, whereas 82% (20 of 24) of all other projects included more than 5 activities.

✓ Collect/Donate projects were less likely to include students *reading content related to the issue* and were less likely to *discuss implementation* compared to all other projects.

Table 17. Activities prior to the project beginning

	Collect/Donate	*Other Activities*
Students conducted research on the topic	93% (1 of 13)	80% (20 of 25)
Student read content	64% (9 of 14)	84% (21 of 25)
Teacher presented on the topic	50% (7 of 14)	84% (21 of 25)
Community partner presented on the topic	36% (5 of 14)	56% (14 of 25)
Students presented on the topic	71% (10 of 14)	60% (15 of 25)
Learning goals were discussed	79% (11 of 14)	88% (22 of 25)
Project implementation was discussed	72% (10 of 14)	92% (23 of 25)

Implementation Planning

✓ Teachers that led Collect/Donate projects were less likely (57%; 8 of 14) to provide *more detailed* implementation plans compared to teachers who led projects with other activities, of whom 81% (22 or 27) of provided *more detailed* implementation plans.

Student Planning

✓ Students who engaged in Collect/Donate projects were less involved in planning their project compared to students who performed all other projects. Specifically, students' average score for *level of involvement in planning* for Collect/Donate Projects was 3.37 out of 5, compared to students providing a 3.76 out of 5 for all other projects.

Project Activities

✓ Table 18 lists the areas of focus for projects where students engaged in Collect/Donate activities. Collect/Donate projects were more likely to focus on Social Service issues compared to all other projects.

Table 18. Areas of focus for collect /donate projects and all other projects

Areas of Focus	All Projects N=27	Collect Donate Projects N=14
Environment	10	3
Social Service	9	6
School Garden	6	0
Public Health	6	0
Educational	3	0
Veteran/Military	3	2
General	2	3
Peace Studies	1	0
Functional	1	0

Post-Project Activities
✓ Collect/Donate projects included fewer post-project activities than all other projects (see Table 19). Specifically, when aggregating all Post Project Activities, teachers reported that projects where students did Collect/Donate activities conducted an average of 3.64 of the 8 activities, compared to all other projects that conducted an average of 4.04 out of 8 activities.
✓ 14% (2 or 14) Collect/Donate projects included dissemination activities through awareness campaigns that included publications, videos, or formal presentations, compared to 67% (16 of 24) of all other projects that included such activities.

Table 19. Post-project activities for classes that performed collect /donate projects and all other projects

	Collect Donate	All Other Projects
Class discussed/assessed what was learned	64% (9 of 14)	75% (18 of 24)
Class discussed the project	86% (12 of 14)	100% (24 of 24)
Students presented to the class	42% (6 of 14)	50% (12 of 24)
Students presented to members of the school	36% (5 of 13)	48% (11 of 24)
Students presented to members of the community	21% (3 of 14)	48% (11 of 24)
Students read content	29% (4 of 14)	21% (5 of 24)
Students did reflective writing	64% (9 of 14)	29% (7 of 24)
Students conducted advocacy on the issue	21% (3 of 14)	38% (9 of 24)

Trends in Participant Ratings Between Collect/Donate and All Other Types of Projects
✓ Teacher and students who participated in Collect/Donate projects reported higher rating for *feasibility to plan and do* the project than teachers and students who did other projects.
✓ Students who participated in Collect/Donate projects reported lower ratings for *perceived learning* than students who did other projects.

Table 20. Ratings for projects where students collect /donate versus all other projects

	Teacher Feasibility	Student Feasibility	Overall Rating	Learning	Difference
Collecting/ Donating (n=14)	4.28	3.94	4.09	3.64	3.67
Other Projects (n=27)	4.08	3.82	4.17	3.79	3.72

SECTION 4

Trends Within Collect/Donate Projects

Section 4 of this White Paper examines differences in implementation within only the 14 projects where students engaged in the same activity, to *Collect/Donate*.

NOTE: Due to the low sample size, Section 4 includes a limited number of items and comparisons. Findings are intended to demonstrate the potential of examining within project differences related to project components and activities in implementation.

Contextual Activities

Grade Level:
- ✓ Middle School classes were more likely to conduct Collect/Donate projects than High School classes.
- ✓ Middle School classes who participated in Collect/Donate projects had higher scores *overall,* for *perceived learning, and difference,* compared to High School classes.

Table 21: Scores for projects that involved collecting/donating by grade level of the participants

	Teacher	Student	Overall Rating	Learning	Difference
Middle School (n=8)	4.24	3.98	4.31	3.72	3.88
High School (n=6)	4.33	3.90	3.79	3.55	3.40

Courses
- ✓ Teachers reported that *Collect/Donate* projects were more *feasible to plan and do* in Elective or Specialty courses compared to core courses.
- ✓ Students who engaged in Collect/Donate activities in a Core Course had higher ratings for *perceived learning*, but lower rating for *making a difference* compared to students who did projects as an Elective or Specialty Course.

Table 22: Scores for collect/donate project by the course the project was done through

	Teacher Feasibility	Student Feasibility	Overall Rating	Learning	Difference
Core Course (n=6)	4.08	3.94	4.05	3.84	3.40
Elective or Specialty Course (n=8)	4.39	3.89	4.02	3.52	3.78

Project Participants

- ✓ Teachers reported Collect/Donate projects were more *feasible to plan and do* when a community partner participated compared to when partners do not participate.
- ✓ Projects where students engaged in activities to Collect/Donate with a community partner had higher ratings for all of the measures.

Table 23: Scores for projects to collect/donate by whether a partner joined the project

	Teacher Feasibility	Student Feasibility	Overall Rating	Difference	Learn
No Partner (n=5)	3.66	3.90	3.95	3.46	3.67
Yes Partner (n=9)	4.32	4.03	4.28	3.70	3.86

Pre-Project Activities
Student Planning
- ✓ Students who provided higher scores for being *involved in planning their project* had higher *overall ratings* and higher *perceived learning* than students who provided lower scores for planning.

Project Activities
- ✓ Projects where students performed Collect/Donate projects for Veterans or Social Service (e.g., homeless, hungry) had higher *overall ratings* and for *difference* compared to projects for the Environment or General Causes.

Table 24: Scores for projects that involved collecting and donating by the recipient of the cause

Projects to Collect / Donate for a cause (n=14)	Teacher Feasibility	Student Feasibility	Rating	Learn	Difference
Environment (n=3)	3.76	3.89	3.88	3.61	3.32
Veterans (n=2)	3.62	4.23	4.24	3.81	3.87
Social Service (n=6)	4.36	3.99	4.30	3.62	3.93
General (n=3)	3.92	3.42	3.52	3.31	3.06

Post-Project Components

Reading Post-Project
- ✓ Students who did Collect/Donate projects and concluded the projects by *reading content related to the issue* reported higher *overall ratings*, *perceived learning*, and *making a difference* than students who did not conclude by *reading.*

Table 25: Scores for collect/donate projects by ratings and post-project reading

Post Project Reading	Teacher Feasibility	Student Feasibility	Rating	Learn	Difference
No (n=9)	4.24	3.96	3.99	3.55	3.55
Yes (n=4)	4.37	3.90	4.33	3.87	3.99

<u>**CONCLUSION**</u>

The vast majority of research on school-based service learning has traditionally focused on measuring the relationship between the experience and outcomes derived from the experience by student participants. *Projects That Work* offers a new model of service learning research. By systematically tracking implementation in a naturally occurring sample of schools, the study examines whether participant ratings vary based on the presence or absence of components and activities used to implement projects. The longer-term goal of the study is to generate findings that practitioners can use to inform practice in new projects. It is hypothesized service learning will gain traction as a more viable and regularly used education intervention if data-driven information is available on project types that can be feasibly carried out in a specific course, with information on *how these projects were implemented*.

Wave 1 findings revealed that all 41 projects were - by definition – "service learning." In these projects, classes designed and prepared for the project in an academic course or after school club, performed service to address a community or school issue, and conducted post-service reflection and dissemination activities. While all projects included defined stages, as anticipated there was meaningful variability in the implementation from start to finish. A few different examples include: classes performed many types of projects addressing many issues, different and varying degrees of activities were employed to prepare for and conclude projects, some projects explicitly addressed academic learning outcomes whereas others did not, and students were involved in activities to plan and conclude projects at different levels. (Future *Projects That Work* research will examine the role of students in selecting the project.)

Beyond differences in how projects were planned and carried out, **the major finding from Wave 1 is that student and teacher ratings on key indicators of implementation varied based on the presence or absence of most components and activities used to implement projects.** This was the case when comparing ratings across all projects aggregated together, between one type of project type and all others, and when examining within one type of project activity. The finding is congruent with the past studies showing that specific project components and activities, such as the type, duration, reflection, explicit alignment to learning goals, defined roles, and the involvement of a community partner – affect implementation and outcomes derived from experience (van Goethem et al., 2014; Youniss & Yates, 1997; Eyler & Giles, 1999). The finding is meaningful because if projects are not feasible to implement or are missing components or activities theoretical aligned to yielding key outcomes – students will be less likely to benefit from or make the desired impact during the service learning experience.

Feasibility to Plan and Do Projects
Focusing on feasibility to plan and do projects first, research to date has not systematically examined the degree to which teachers and students are able to feasibly

implement service learning projects, and what components relate to improved or worsened feasibility (Furco, 2013). Simply stated, if projects are not feasible to plan and do, service learning cannot be successful.

Findings revealed that with only a few exceptions, teachers and students reported their projects were *mostly or highly* feasible to plan and carry out. Along these lines as, it is likely these findings were a reflection (at least in part) of the study sample, grantees of *YSA* and *State Farm* who already possessed the resources, support, and expertise to feasibly implement projects. Further research is needed to examine feasibility for implementing service learning among school and teacher samples with less experience and fewer financial resources.

While feasibility ratings were generally high, several noteworthy trends emerged related to differences in planning and doing projects. Projects were more feasible when *teachers provided students more detailed information on implementation*, when students *read content on the issue prior to the project,* and when *a community partner organization joined the project*. Further, students who were *more involved in planning the project* provided higher ratings for *feasibility*, *perceived learning*, and *making a difference*. From a programmatic standpoint, these trends all support prior research that projects are more likely to be successful when students are prepared with key information on the issue, provided details for what is needed to be done, provided support from adult experts – but also given explicit opportunities to lead themselves (Youniss & Yates, 1997; Eyler & Giles, 1999). It is also noted that on average projects included more pre-project activities than post-project activities, possibly reflecting a lack of time at the conclusion of the project for full reflection and dissemination activities.

The type of project also related to feasibility ratings. Students and teachers who engaged in collect/donate projects reported greater levels of feasibility for planning and doing projects. This result was likely a function that collect/donate projects included fewer pre- and post-project activities than other types of projects. For example, only 14% of collect/donate projects included dissemination activities whereas 67% of all other projects included such activities. Further, students reported being less involved in planning collect/donate projects compared to others– indicating that these projects were easier for students to do. For teachers, fewer collect/donate projects aligned to academic learning standards than other projects and included fewer steps to implement, likely resulting in higher rating for teacher feasibility.

It is important to note that students who provided higher rating for feasibility provided lower ratings for the project overall. In other words, when students reported that projects were easier to plan and do – they reported liking the project less. These findings did not hold for teachers – as projects that were the highest rated for feasibility related to higher overall teacher ratings. Coupled with the finding that students provided higher ratings for projects that they reporting being more involved in planning and doing, the trends suggest that students liked to be challenged and provided explicit

roles in planning and doing their projects. In designing projects, this finding supports prior research demonstrating the importance of a balance between challenging but realistic tasks for student participants (Eyler & Giles, 1999).

Perceived Learning and Making a Difference
Beyond the feasibility of implementing a project, the main goal of all service learning projects is twofold – to provide students opportunities to learn academic content and critical skills while also making a difference in addressing important community issues. Across all projects, student ratings for *perceived learning* and *making a difference in addressing the issue* varied based on the presence or absence of many components and activities which the prior literature point to as important for the experience to be impactful.

Prior research supports the essential role of reflection activities in across the project, including preparing for, during the activity, and recapping the experience. Reflection focuses students on ideas and frames their experience in light of stated learning objectives (van Goethem et al., 2014; Billig, 2009; Hatcher, Bringle, & Muthiah, 2004). Across all projects and when looking only at collect/donate types of projects, students provided highest ratings for *perceived learning* and for *making a difference* when pre- and post-project activities included *reading content related to the issue*, when the class *discussed and evaluated* the project afterward, and when students *created products and disseminated* information to peers and members of the community.

For project design purposes, **it is important that the quantity of reflection activities did not relate to higher ratings,** as students who participated in projects with more activities did not perceive learning more or making a greater difference than those who did projects with less activities. **Rather it was the precise form of reflection activity** (e.g., reading academic content, classroom discussions) that likely exposed and engaged students in content and developmental opportunities that mattered most (Youniss & Yates, 1997; Billig & Weah, 2008; Eyler & Giles, 1999). As well, the combination of private reflection (through reading content), classroom discussions with peers and adults, and dissemination and outreach of ideas may have influenced student perceptions of learning and in making a difference through the experience.

Along with the role of reflection, when projects *aligned to academic standard*s during *a core course* student provided higher ratings perceived learning. In these cases, because the service activity overlapped with course content teachers may have explicitly applied learning opportunities through pre- and post-project discussions and readings (Dymond et al., 2007). It is important to note that projects that aligned to *academic learning standards* for elective or specialty projects did not relate to higher levels of *perceived learning* – demonstrating that merely aligning a project to non-academic standards was not enough to increase students' level of perceived learning.

Several other trends emerged relating implementation to student ratings for *perceived learning* and *making a difference*. Students provided differing ratings for *perceived learning* for *project duration*, supporting prior research that longer projects allow for greater opportunity for reflection and connections to coursework (Melchior & Bailis, 2002; Billig, Root, & Jesse, 2005). (Future *Projects That Work* research intends to examine if specific types of shorter-term projects that closely align to academic standards provide learning opportunities while also being feasible to implement.)

Students provided higher ratings for *perceived learning* and *making a difference* when an adult from a community organization participated. Such individuals provided practical expertise in explaining issues and supporting the service activities. These individuals also likely provided students the opportunity to integrate school projects with the mission of the organization in which they work (Allahyari, 2000). Raskoff and Sundeen (2000) call such organizations ports of entry in because young people service under the auspice of a specific value system, and are given a sense that they are making a difference as part of that organization.

Students also provided higher ratings for perceived learning when they were *more involved in planning the project*, supporting prior research that explicit opportunities for active and engaged learning may come both from instruction but also from self-directed learning (Bradley, 2003).

The type of service also related to differences in student ratings. When students did types of service that put them directly in touch with the recipient of the service (e.g., serving at a homeless shelter or working with Veterans) they provided higher rating for *making a difference in addressing* the issue. This finding likely results from the face-to-face interactions that permitted students a deeper and more personally meaningful connection in working to address problems faced by recipients (Metz, Youniss, & McLellan, 2003; Root & Billig, 2008). Students who participated in projects in the area of *Public Health* (such as bullying prevention and driving awareness) had higher than average scores for *perceived learning* and *difference.* Key components of most public health projects included students doing research on an issue and developing and conducting presentations on issues facing peers, once more pointing to a conclusion that this experience may have been more personally relevant and meaningful for students.

Contributions, Limitations, and Future Directions

The *Projects That Work* study offers several contributions as a new methodology in research on school-based service learning.

1) The study includes a naturally occurring national sample of service learning projects, providing the opportunity for a snap-shot of what projects are being done now and how implementation is occurring in schools and classrooms

around the country.

2) With increased sample sizes, statistical analyses will be employed to estimate the relationships among variables to determine the components and activities that predict feasible and effective project implementation. The research will also detail how different types of service learning projects are implemented, and component and activities that optimize certain projects but not others.

3) The study shifts the focus of traditional service learning research *from* measuring the impact of the experience on student outcomes *to* examining project implementation in order to inform and optimize practice, building capacity for future impact evaluations. For example, the study systemically collects data on key program components and activities across the same type of project done many times. With this information, specific types of projects will eventually be in better position for outcome studies wherein that components and activities of that type can be held constant to allow for a more precise assessment of impact of the project itself, and not some other factor (Bailis & Melchior, 2003).

4) The study collects data from three groups of participants (teachers, students, partners), thus permitting for multiple perspectives and for "triangulation of data" to draw more firm conclusions from the data. Initial results from Wave 1 provide support for this approach. For example, projects that included fewer components or activities were reported by teachers and students as easier to implement than projects with more components. Or, students provided higher ratings for perceived learning for projects that teachers reported aligned to learning standards done in core courses.

5) The study will permit for different ways to test hypotheses (Furco, 2003), including data aggregated across all projects to understand broad themes for what components predict stronger implementation across the board, between one activity and all others to isolate differences in implementation between particular types of projects, and within the one activity to identify critical components to optimize implementation for just that type. For example, results from Wave 1 demonstrated potentially significant differences within individual class projects related to how much students were involved in planning the project – with some students doing a lot and others less. Such differences could be more fully examined and could provide practitioners valuable insight on how to design projects to benefit all students, not just those who are most highly motivated.

6) Longer-term, this study intends to generate lists of types of projects that have been replicated successfully across settings. With lists of project types that have been done many times across many settings, teachers and students could assess and understand the specific project components that predict higher or lower

ratings across implementations in different locations. Projects could then be designed and implemented to include (or exclude) components, driving continuous quality improvement of projects through the process.

7) The *Projects That Work* research model could be employed by students, teachers, and partners as a final step of a service learning project as a form of self-assessment and program evaluation (Billig, 2011). Through the process of rating projects and viewing results in real time, class participants could look at peer ratings, discuss why the project was feasible to implement or not, and how the project components and activities related to the why the project met the desired goals for learning and making a difference.

8) Lastly, the *Projects That Work* model could be employed to examine feasible and effective school-based program implementation in disciplines beyond the field of service learning, such as project based learning or citizen science-based interventions.

Limitations

It is necessary to reiterate the exploratory and preliminary nature of the Wave 1 data presented in this White Paper. Additional research is needed with a larger overall sample of projects and with increased response rates within projects. With a larger sample, analyses will be performed to examine statistically meaningful differences, as well as isolate patterns and trajectories of the factors that relate to improved implementation, and that predict better or lower-rated projects. An increased response rate within projects will also introduce greater variability among students who were potentially less motivated to enjoy, fully participate, and potentially benefit from service learning. Additional research is also needed to more fully examine whether and how teacher and partner ratings for implementation feasibility relate to student ratings for feasibility, perceived learning, and making a difference.

Additional research is also needed to extend the generalizability of the model and the findings. All projects in the current study received small grants and technical assistance on service learning from *YSA* and *State Farm*. The sample of projects and participants was self-selected with a bias toward service learning. This group included administrators and teachers motivated to do service learning and with prior experience planning and implementing projects. It is likely that the funding provided the necessary resources for supplies and transportation, and the additional technical assistance enabled the projects to be mostly or highly feasible and to connect to key goals (e.g. learning and making a difference) for most projects. Future research is needed to increase generalizability with a sample of schools and teachers doing service learning who had not received funding or technical assistance, and with groups who are new to using service learning. Future research could also isolate the impact of the YSA and State Farm program by comparing implementation in schools that received grants versus those that did not.

Future Directions

In the spring of 2017 during Wave 2 the researchers aim to collect data from an additional 100 service learning projects, including from schools and classrooms from the *YSA* and *State Farm* as well as from outside the grants program. With an increased sample size in Wave 2, statistical analyses will be employed to measure differences between groups and identify the strongest predictors of successful project implementation. Further, a goal of the Wave 2 study is to more fully explore patterns in types of projects that can feasibly be implemented and that consistently work well regardless of variations in how implementation occurs and projects that work well only when implemented in a specific way.

Despite low response rates overall and within projects, and while the sample in Wave 1 included a self-selected group of projects and students, many of the students in this sample themselves were likely no different than many students in schools where there is less capacity and motivation for service learning. Wave 1 findings revealed that these students were highly engaged by service learning and produced positive results from many types of service learning projects. Many of the findings in this study echo prior research demonstrating the role of well-designed programs that include specific activities to prepare students with a clear and compelling rationale for the project and with specific roles and responsibilities. The key to replication in schools with less expertise in service learning is likely related to the capacity for implementing strong programs (Metz & Youniss, 2005).

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Appendix A: Study Measures

I. Student Survey Items

1. With whom did you do the project? (Check any that apply)
☐ Alone, by yourself
☐ With your classmates
☐ With members of a community organization
☐ With members of your community
☐ With your teacher
Other (please specify) ▢

2. How feasible (or easy) was it for you to plan and do this project?
(1 to 5 scale)

3. Overall, how would you rate this project?
(1 to 5 scale)

4. Overall from start to finish, how much did you learn during this project?
(1 to 5 scale)

5. Overall, how much difference did this project make in solving the problem or issue?
(1 to 5 scale)

6. What is your gender?
(1 to 5 scale)

7. Write a review of this project. As well, provide a recommendation for students who are about to do the same project.
Open Response

II. Teacher Survey Items

1. Provide the name of the course in which the project was done.

2. Indicate the grade level of the students.

3. Indicate the number of students who participated in the project.

4. Did any individuals from community organizations or expert mentors participate in

the project? If yes, provide the number of adults, the name of the organization/s, and their role in the project. Indicate whether students knew the role of the organization/s.

5. Describe the project. Detail the key steps in doing the project. Describe the recipient of and/or the issue being addressed by the project.

6. How long did the project take from start to finish? (Please specify the number of days or classes.)

7. What key activities were done to prepare students to do the project?
- ☐ Students did research on the topic
- ☐ Students read content on the topic
- ☐ Presentations by the teacher
- ☐ Presentations by a community agency or expert mentor
- ☐ Presentations by students
- ☐ Discussions on the learning goals of the project
- ☐ Discussions on the steps for implementing the project

8. List each of the educational learning standards and other goals intended to be covered by the project.

9. List all of the costs associated with this project, for materials, tools, transportation, or other:

10. What key reflection activities were done to conclude the project?
- ☐ Post-project assessment or evaluation of learning outcomes
- ☐ Classroom discussions
- ☐ Student-led presentations
- ☐ Reading content
- ☐ Reflective writing (blogs, journals, letter, editorials, reports)
- ☐ Advocacy to make a change
- ☐ Generating videos

11. Overall, how would you rate this project?
(1 to 5 scale)

12. How feasible (i.e., easy) was it for you to plan and do this project?
(1 to 5 scale)

13. How much did the project actually cover the education learning standards or other goals?
(1 to 5 scale)

14. Write a review of this project. As well, provide any recommendations to future teachers who do the same project.
(1 to 5 scale)

III. Partner Survey Items

1. How feasible (or easy) was it for you to do this project?
(1 to 5 scale)

2. Overall, how would you rate this project?
(1 to 5 scale)

3. Overall, how much difference did this project make in solving the problem or issue?
(1 to 5 scale)

4. Write a review of this project. As well, provide any recommendations to future individuals who do the same project.
(1 to 5 scale)