

THE CORE & NYIT 2030 2.0

Meeting the Challenge!



Selected Highlights

1. High-Impact Educational Practices
2. High-Quality Teaching and Learning
3. Career-Oriented Education

High-Impact Educational Practices

FCIQ 101 and FCSC 101

The Office of Experiential Education (within Career Services) has been working with faculty in the first-year FCIQ 101 and FCSC 101 courses to develop service-learning opportunities.

Undergraduates in service-learning sections participate in community partnerships that deepen learning for the community and themselves.

Over the past two years the number of students in service-learning FCIQ and FCSC sections has consistently grown under the guidance of Assistant Dean Amy Bravo and Assistant Professor James Martinez (SOE).

During the 2015 and 2016 Spring semesters Career Services staff placed 117 students in three public schools. During these two semesters four different faculty members taught FCIQ 101 (Foundations of Inquiry) or FCSC 101 (Foundations of Scientific Process) sections.

The students completed over 1,170 hours of service across all three schools. Their activities included participating in classroom instruction, maintenance and repair of instructional technologies and specialized equipment such as 3D printers, and documenting the experience for community sharing events.

The majority of NYIT student service-learning participants in exit surveys reported that 1) they felt a wider sense of responsibility for their communities and 2) had been challenged to think about things in new ways.

The FCIQ and FCSC courses are thus contributing to the expansion of high-impact practices called for in the NYIT 2030 2.0 report.

In light of the continuing success the number of service-learning sections of FCIQ and FCSC will double to eight in the 2016-2017 year (approximately 200 students). Service-Learning for first-year students can become a “value added” element of an NYIT education that helps differentiate NYIT from its competitors in the New York region.



2. High-Quality Teaching and Learning

Core Course Evaluations (2015)

	Course Dept.	N	Tot	PCT	Inst. clearly stated objectives	Responsive	Consultation	Exams	Technology	Academic Integrity	Recommend
Fall 2015	FCIQ	267	578	46%	4.4	4.4	4.3	4.3	4.3	4.5	4.1
	FCSC	206	442	47%	4.3	4.2	4.1	4.3	4.4	4.4	4
OW & MA	Total:	473	1020	47%	4.35	4.3	4.2	4.3	4.4	4.45	4.1
	FCSP	139	320	43%	4.5	4.4	4.4	4.5	4.2	4.5	4.3
	FCWR	350	776	45%	4.5	4.5	4.5	4.5	4.6	4.6	4.4
	ICLT	168	377	45%	4.7	4.7	4.6	4.6	4.7	4.7	4.5
	WRIT	31	68	50%	4.7	4.3	4.6	4.6	4.5	4.6	4.5
OW Only	Total:	688	1541	46%	4.6	4.5	4.5	4.6	4.5	4.6	4.4
	ICBS	43	144	30%	4.6	4.6	4.6	4.5	4.5	4.7	4.4
MA Only	Total:	43	144	30%	4.6	4.6	4.6	4.5	4.5	4.7	4.4
	ICPH	195	424	46%	4.5	4.6	4.6	4.6	4.5	4.7	4.5
	ICSS	147	326	45%	4.5	4.5	4.4	4.3	4.5	4.4	4.4
MA Only	Total:	342	750	46%	4.5	4.6	4.5	4.5	4.5	4.6	4.5
	FCIQ	108	262	41%	4.1	4.2	3.9	3.9	4.2	4.2	3.8
	FCSC	203	404	50%	4.5	4.4	4.5	4.4	4.5	4.5	4.3
OW & MA	Total:	346	747	46%	4.3	4.3	4.2	4.2	4.4	4.4	4.1
	FCSP	83	152	55%	4.7	4.6	4.6	4.7	4.6	4.6	4.6
	FCWR	264	604	44%	4.5	4.6	4.5	4.5	4.6	4.6	4.5
	ICLT	167	300	56%	4.5	4.6	4.6	4.6	4.7	4.6	4.6
	WRIT	21	34	62%	4.6	4.6	4.5	4.7	4.7	4.6	4.6
OW Only	Total:	535	1090	54%	4.6	4.6	4.6	4.6	4.7	4.6	4.6
	ICBS	123	261	47%	4.5	4.5	4.4	4.5	4.5	4.6	4.4
OW Only	Total:	123	261	47%	4.5	4.5	4.4	4.5	4.5	4.6	4.4
	ICBS	97	180	54%	4.4	4.5	4.4	4.4	4.4	4.4	4.5
MA Only	Total:	97	180	54%	4.4	4.5	4.4	4.4	4.4	4.4	4.5
	ICPH	134	394	34%	4.5	4.4	4.4	4.3	4.5	4.4	4.5
	ICSS	165	385	43%	4.5	4.4	4.5	4.4	4.5	4.5	4.4
MA Only	Total:	299	779	39%	4.5	4.4	4.5	4.4	4.5	4.5	4.5

These results indicate a high degree of student satisfaction.

Core courses are also evaluated and updated as part of the assessment process at the institutional and departmental levels.

Institutional Core Assessment:

http://www.nyit.edu/planning/core_learning_outcome_assessment

Departmental Assessment:

http://www.nyit.edu/planning/plans_reports_coas

3. Career-Oriented Education

Blue: Department Choice/Professional Relevance

(3) FCIQ 101

(3) FCSC 101

(3) FCWR 101/111

(3) FCWR 151/161

(3) FCSP 101

FCIQ 101, FCSC 101, the FCWR series, and FCSP 101 collectively build professional skills in areas such as critical thinking, writing, speaking, and research.

(3) FCWR (301-304) Departments choose from Communications for Business, Health Care, Arts and Design, Technical Professions

(3) Math: Department Choice

(3) Science: Department Choice

(Selected) Seminars with Professional Relevance

(3) ICLT: Literature Seminar

Literature and Medicine

Science Fiction

New York Literature

Global Literature and Human Rights

Literary Journalism of the 1960s

All core seminars build skills in critical thinking, writing, and research.

Many seminars, some of which are listed here, introduce students to themes and content that will prove relevant in their chosen professions.

(3) ICPH: Philosophy Seminar

Bioethics

Ethics and Social Philosophy

Beauty and Philosophy of Art

(3) ICBS: Behavioral Science Seminar

Anthropology of Health

Beyond Shelter: Housing and Social Processes

Intergroup Relations

Real New York: Sociology and the City

Culture, Technology, and Human Relationships

(3) ICSS: Social Science Seminar

Great City History

Economics of Sustainability/Economic Crisis

Modern New York

IENG 400/Technology and Global Issues

Global Environmental History (Alternative Spring Break to Nicaragua)

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NYIT Service-learning in Public Elementary Schools 2016 REPORT

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Faculty analysis of the data in the report was made possible with support from an NYIT ISRC Grant

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Table of Contents

Overview	3
Service-learning Assessment and Evaluation	4
Undergraduate reflections on service-learning.....	8
Public School Responses to service-learning with NYIT	9
Faculty responses to service-learning with NYIT.....	10
Recommendations	11
Conclusion	12
Appendix	13
Modification of the service-learning pre and post surveys.....	13
Post - Service-learning course survey for undergraduate students	14

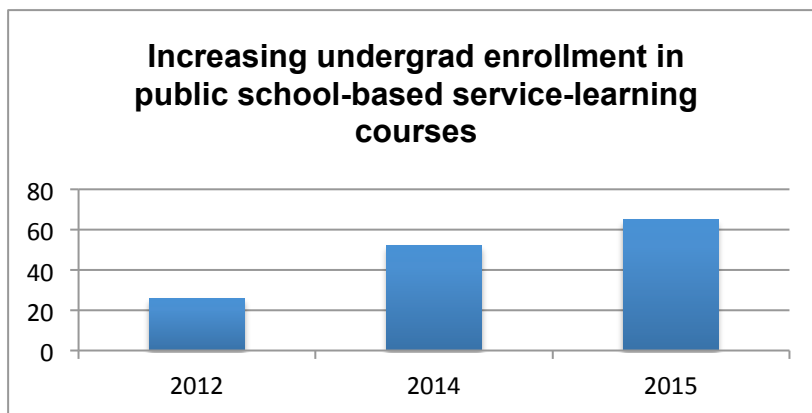
Overview

New York Institute of Technology's Office of Experiential Education, within Career Services works with faculty in to develop service-learning courses to create opportunities for undergraduate students to participate in sustaining community partnerships, take part civic engagement projects and deepen learning for the community and themselves. This report focuses on service-learning courses where students perform 10 hours of service over the course of a semester at public elementary schools.

Service-learning is a type of experiential learning that uses civic engagement as a context to engage students in real world experiences while performing service for communities or community groups. Students learn about the challenges that groups and communities face to provide context for their service and academic course work. Students demonstrate their learning through community projects and structured presentations and reflections.

During the 2015 and 2016 Spring semesters Career Services staff worked to support **118 students (66 Spring 2016 and 52 Spring 2015) and 3 faculty members in each semester to place the students in 3 public schools** to work with a total of 36 different teachers. **Approximately 1000 elementary students in grades pre K – 5 have participated in a variety of STEM learning experiences with NYIT undergraduates.** During these 2 semesters 4 different faculty members taught **FCIQ 101 Foundations of Inquiry** or **FCSC 101 Foundations of Science Process** in the College of Arts and Sciences.

The undergraduate students completed approximately **1,180 hours (based on a weekly 1 hour requirement across 10 weeks)** of service across all 3 schools. Their activities included participating in classroom instruction, attending to the maintenance and repair of instructional technologies and specialized equipment such as 3D printers, and documenting the experience for community events. The estimated net worth of these student service hours is approximately **\$31,694.80¹**. The number of students participating in public school-based service-learning has increased each semester since NYIT began service-learning partnerships with public schools in the Fall semester of 2012 with **26 students** in the **ETCS 101 Career Discovery Course** in the School of Engineering and Computing Sciences.

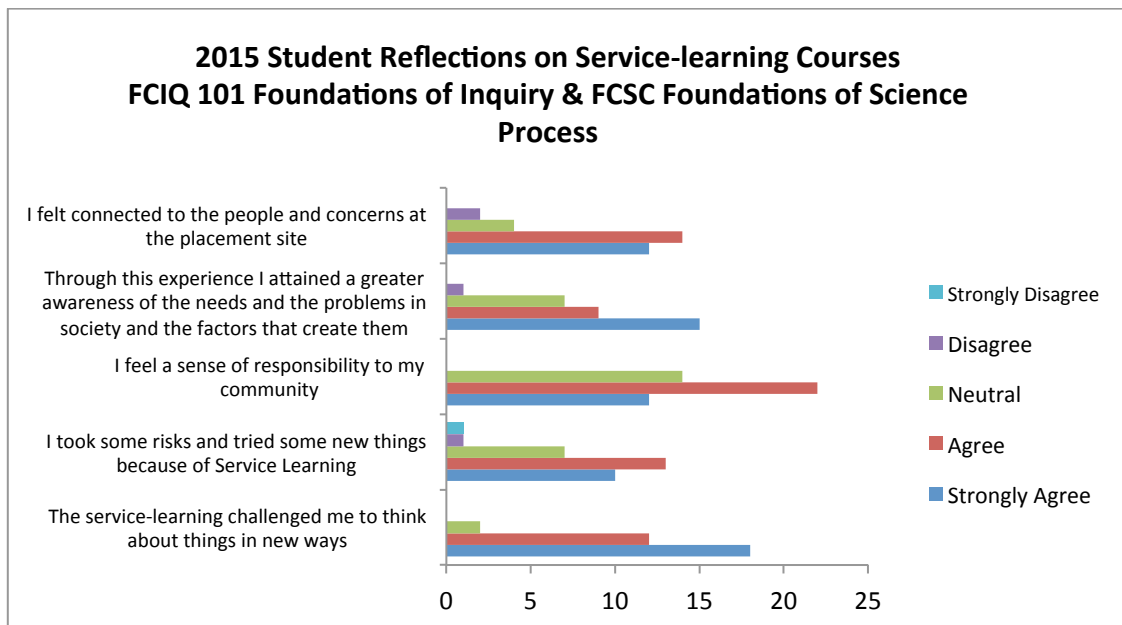
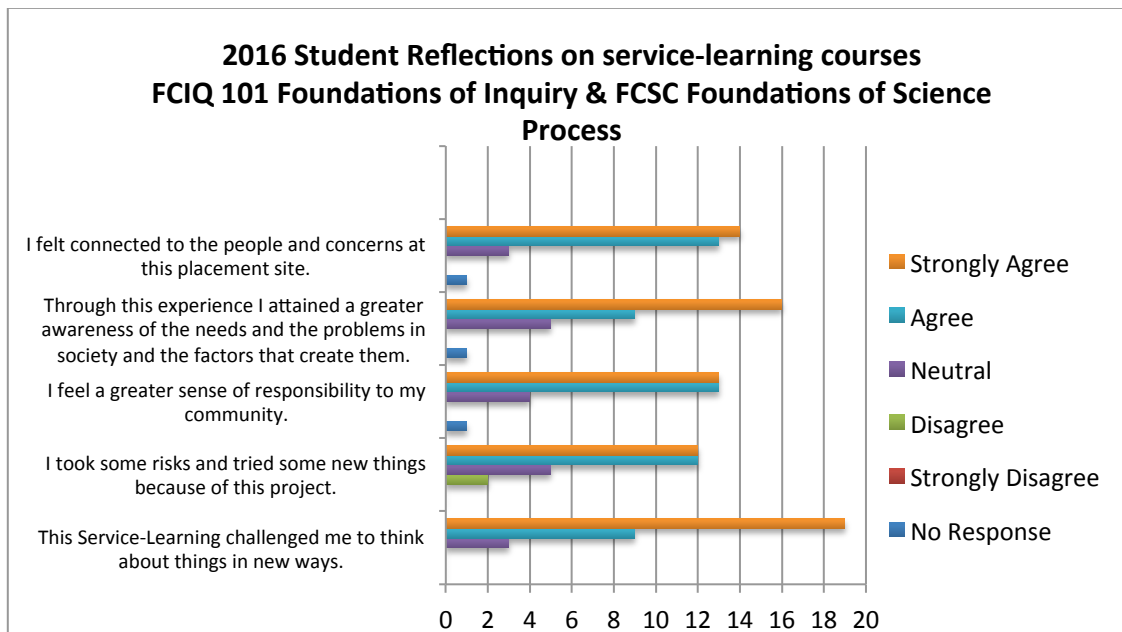


¹ Independent Sector estimated an hour of volunteer service in New York State to be worth \$26.86 in 2014 as reported in April 2015 (https://www.independentsector.org/volunteer_time)

Service-learning Assessment and Evaluation

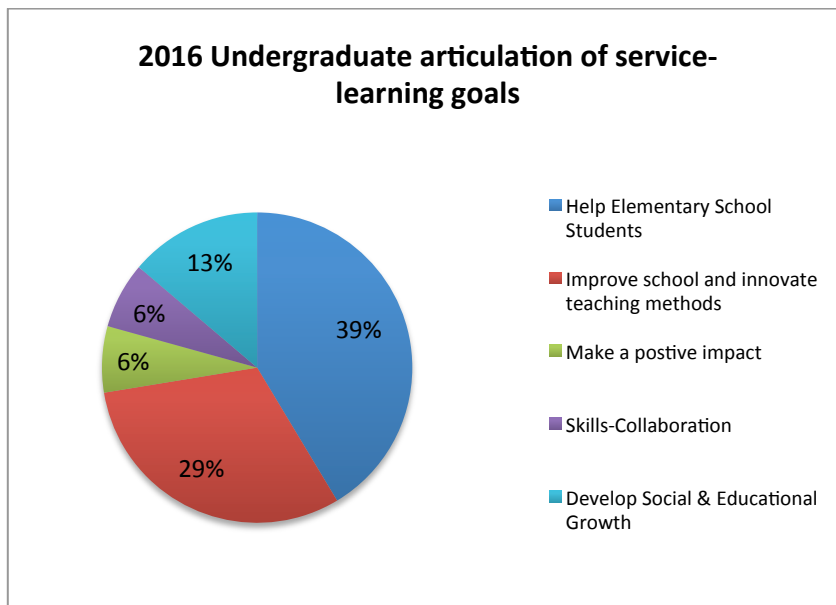
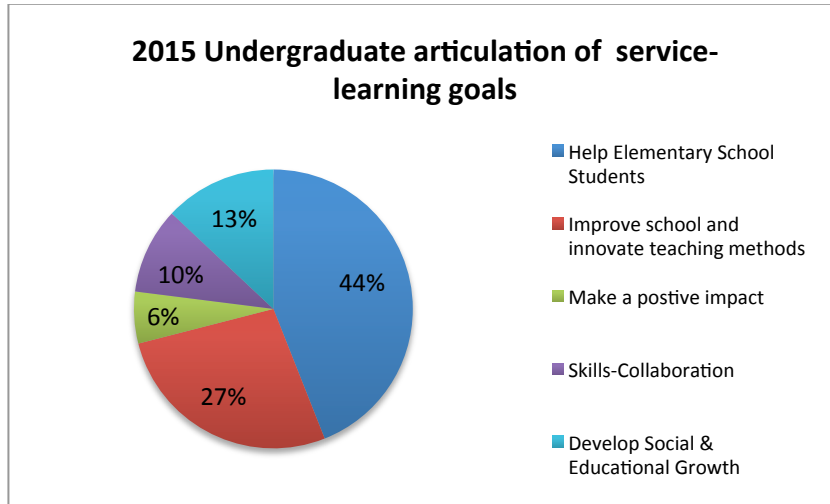
As part of the ongoing effort to improve instructional practices, student experiences and partner experiences, the Office of Experiential Education administers survey at the start of the service-learning engagement and a post engagement survey at the end of the semester.

The response rate to the Spring 2016 post course survey is 46% with 66 students completing the courses and 33 responding to post-survey. The response rate to the Spring 2015 post course survey is 69% with 52 students completing the courses and 36 responses to the post course survey. Participation in service-learning courses causes students to think about their relationships to the world and broader community.

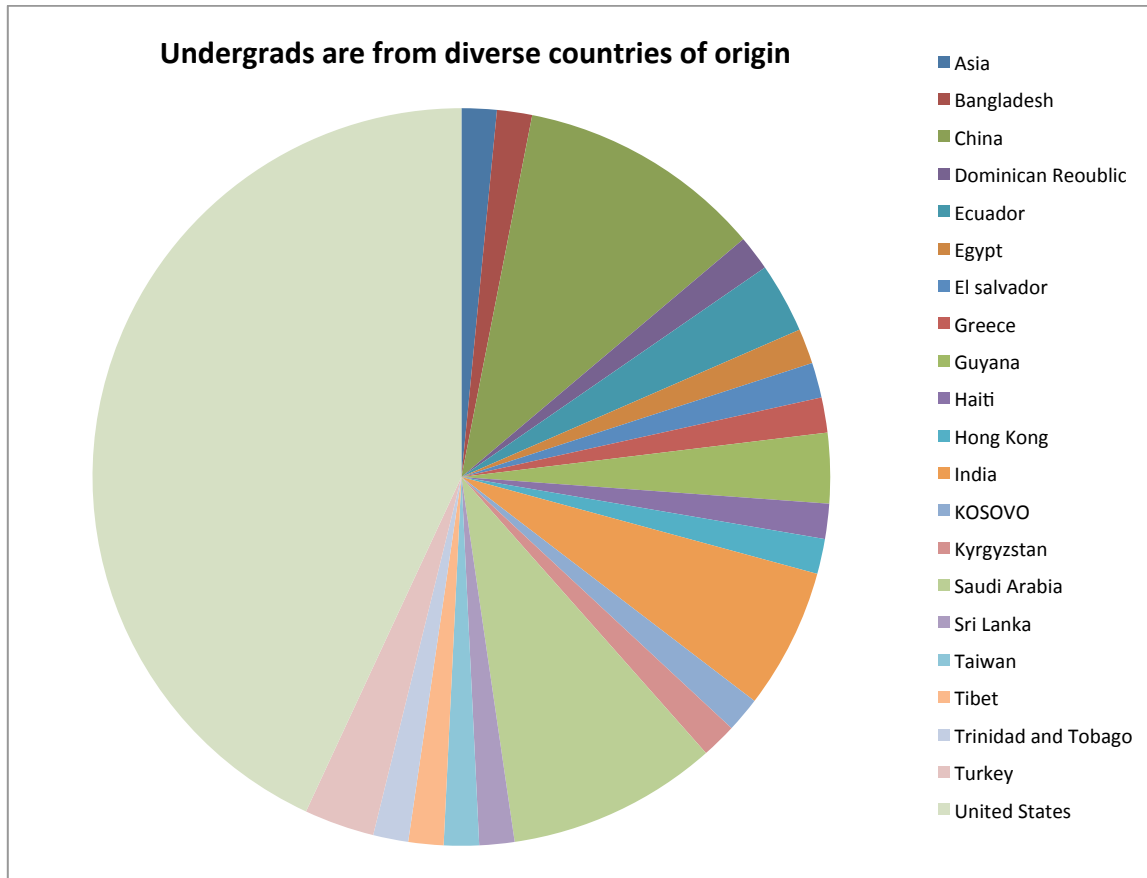


There is a consistently high level of agreement that service-learning encourages new thinking, risk taking, consciousness raising and relationship building.

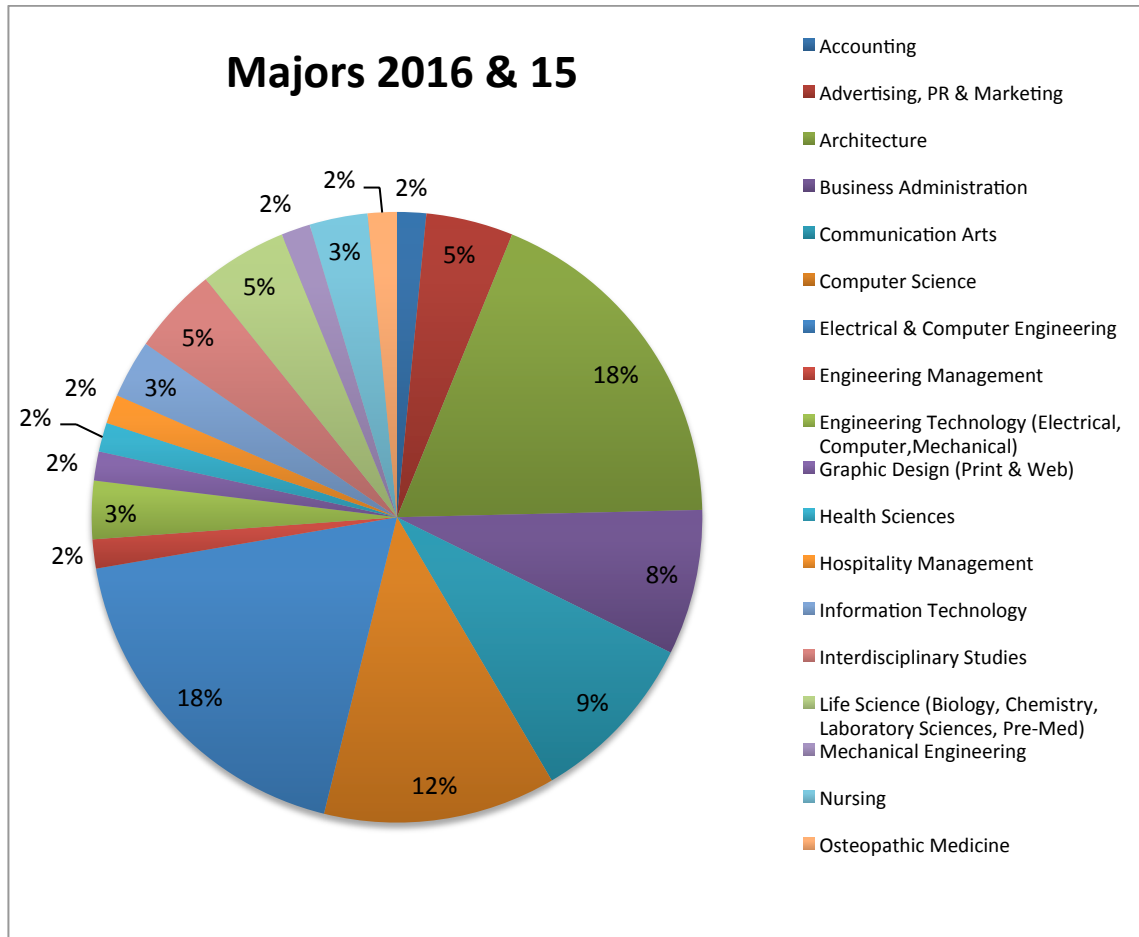
Across two semesters undergraduates have identified 5 general goals in service-learning that in fairly consistent percentages.



Diverse students in diverse majors participate in service-learning courses when the data are combined from 2015 and 2016. It is clear that different worldviews and different disciplinary perspectives are achieved in service-learning.



Based on self-reported data from post- course surveys undergraduates participating service-learning are diverse. This data does not include all students enrolled in the course.



Undergraduate reflections on service-learning



“I think it’s really important to continue [service-learning] because kids really look up to you. They always ask questions. The first question they asked me is where are you coming from and I told them NYIT and that it was a college. They were like ‘Oh, wow she’s in college.’ They really look up to you and want to be somehow like you in the future ...”

“What I really liked about this whole experience is that you didn’t really know what to expect, which I thought was very good. It wasn’t just like a rote, same thing over and over same procedure, same technique. It gets everyone out of his or her comfort zone. I like the semi-unpredictability of it.”

“I realized that perspective was very important. Even the first week we went in, we were trying to talk to them about what we do. We talked about how we do anatomy and study elements. They didn’t know what any of that is. We had to explain to them what everything was.”

“I was satisfied because the teacher that I worked with kind of let me and my partner take over the class and teach the kids ourselves. We did different projects geared towards engineering. We had them create paper towers and see how the structure can affect how long it can stand up [under stress]. The students were really excited. I felt like I actually inspired other kids and I’m happy about it.”

“The only thing I want to add to get the point across, it was such a lovely connection that each person had with students in the class. This project brings that to the forefront. There were many-to-many interactions. Not just one-on-one.”

“...one girl asked me are you going to be an engineer when you grow up and I said yes. I was surprised that that girl really was interested in what an engineer does. I told her I was going to be a software engineer and it was a chance for me to explain what that is.” From a female student.

Public School Responses to service-learning with NYIT

The principal of PS 354 one of our partner schools offered the following comments on her perceptions of service-learning with NYIT:

“... [It’s] very powerful to see your school through the eyes of a non-educator... I definitely think the outcomes were very clear. I think your [NYIT] students walked away with a greater idea of what it means to work with children in an inner city who maybe didn’t have the same experiences as they do. And they walk away with a much greater sense of compassion for children and how different [education in] the city is. I think that was the big take away for me. Clearly these are intelligent students. They are working with abstract thoughts and they talk about just trying to explain some of the simplest things to young children, and it made them really pause and slow down...this is a powerful opportunity because it helps change humanity. If you’re sitting next to a child who may comment that they didn’t eat breakfast that morning or sitting next to a child who they really had to explain multiplying 3 digits by 2 digits. I think that [resonated] for them more than what their course objectives could have been. I feel like your students walked away with a sense of pride knowing that they spent time with these children and they were able to give them a piece of who they were and they really enjoyed talking about being in college and what that means to children who developmentally just haven’t gone that far yet. I think having college kids in the classroom helping them with a project is really powerful. The objectives, of having young adults who are beginning their careers and having to explain it relative to younger children, were very powerful. I’m confident that whatever they walked in the building hoping to learn or get out of it...they walked out with so much more. I think one or two people said I never thought about being teacher but I could be a teacher. Or I don’t think teaching is for me but I respect what happens in these classrooms. Especially in NYC, this is a culture that bashes teachers or bashes public schools This opens the door to having dialogue from a different point of view. I think it’s beneficial [to have an opportunity] to look at the children in a different light and look at certain communities differently. “

The Magnet schools project manager offered the following comments that are excerpts from a collective reflection document.

“As we begin to write new grant proposals, I see more and more the emphasis on schools to reach beyond the walls of their classrooms to provide students with new experiences, create partnerships, learn about other cultures and communities, and help their students to become real-world problem solvers and agents of change...in other words, there is a great emphasis for schools to ENGAGE with the people, institutions and resources around them.

I agree with Jim’s March 15th assessment that our project cannot “fix what is wrong with public education”, but one thing I already see this project doing is helping very different groups of people and very different institutions to connect and engage on many different levels. We connect with **each other**, sharing a variety of experiences, talents, skill sets, and points of view, but we are also given an opportunity to connect to **ourselves and our communities** in a new way. Through goal setting, outreach, self reflection, and by getting a glimpse into how others see us, this project provides an opportunity for educators and students to practice breaking through some of the walls that divide us from each other and from different aspects of ourselves...

[A teacher] recalled how the NYIT students were working with this child on a hands-on STEM activity--I don’t know whether it involved computers, or robotics, or coding, or design, or what--but the activity was something that the teacher was very new to. The teacher went on to say that the NYIT

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students noticed that this child had done something particularly elegant and sophisticated in this STEM activity. During the wrap-up at the end of the lesson the NYIT students had complimented the boy and shared his work with the class, pointing out his skill and talent to the other children and to her.

The NYIT students could not have known the impact that this small recognition had on that child, but it was profound. The teacher said---and this is what I find most moving---that she would NEVER have recognized this child's ability on her own because she was not very "techno savvy" and only had a basic, layperson's understanding of the STEM activity they were working on. She was so thankful that the NYIT students had been in the classroom to recognize the little boy's talent and to encourage him and help him to see himself in a different way! She conveyed that this experience made her question how many other students might have talents that she is unaware of, but that might be recognized and nurtured if there are people around who have the experience and knowledge to see them. This event helped her understand in a much deeper way the importance of exposing her students to people and experiences outside of the classroom and the school community. This is only one example of the type of feedback teachers are reporting to us."

Faculty responses to service-learning with NYIT

During the spring semester service-learning faculty met regularly on Friday afternoons to coordinate efforts on administrative and logistical fronts. During this time faculty also had the opportunity to discuss issues that students raised in the courses and to reflect on what was being raised. In general faculty felt that the issues provided excellent material to situate learning and to apply concepts and theory to real world contexts. There was general agreement that service-learning was more demanding than traditional approaches to the courses but that it was also much more interesting to teach and produce opportunities deeper learning.

Recommendations

The following recommendations are based on 5 years of a close working relationship between School of Education (Martinez) and Career Services (Bravo) and are intended to contribute to the support and sustainability of NYIT partnership efforts with New York City public schools.

1. Continue to develop Civic Engagement concepts with community partners through workshops prior to a service-learning engagement and focus groups after a service-learning engagement.
2. Operationalize public sharing of service-learning projects as a course requirement for undergraduates and a requirement for public school partners
3. Operationalize community-wide reflection (using digital media) as a condition of partnerships with public schools that public school teachers must fulfill.
4. Operationalize pre-service learning planning activities between undergraduates and participating public school teachers
5. Coordinate required undergraduate volunteer fingerprinting with the Director of Field Placement and Certification (Luz Minaya) in the School of Education
6. Modification of the service-learning pre and post surveys. (See Appendix)
7. Raise of awareness for course sections designated for service-learning at the Institution level
 - a. Students often don't know that they have registered for a course with a service-learning requirement until they are sitting in the course. Clearer indicators should be presented in the course catalogue.
 - b. Service-learning courses could be promoted to students by faculty and departments hosting the courses.
8. Create an internal funding mechanism to match external funding to build capacity in the form of internal faculty training, faculty incentives for creating service-learning courses and administrative support.
9. Establish an open community forum (a regularly scheduled meeting) for sharing among faculty and staff who are participating in service-learning and experiential learning initiatives to support broader participation in the NYIT community.
10. Create cross-listed interdisciplinary service-learning courses to be offered in all NYIT Schools and Colleges.

Conclusion

Based on the evidence, service-learning in public elementary schools heightens student investment in course content and engages undergraduate students cognitively, emotionally and socially. It is a rare that an intervention in public schools by “outsiders” (university faculty and undergraduates) is universally well-received by the “outsiders”, public school students, public school teachers, administrators, and other New York City Department of Education stakeholders. It is even more rare for a university to be invited to engage public schools without the promise of specific student achievement outcomes for public school students.

Despite the fact that New York City Department of Education stakeholders (New York City Magnet Schools Program administrators) necessarily take a top-down approach to securing school buy-in to the service-learning program, the Director of Experiential Learning and her cooperating faculty have been successful in creating inclusive and collaborative partnerships with each of the schools that they have partnered with. This speaks to the high quality of the service-learning program and the commitment to civic engagement and experiential learning of the program director and faculty.

Students who have participated in service-learning courses report that there is a great deal of uncertainty related to their participation in the courses. There demands requiring time, travel and interactions with New York City communities that are being placed on them during the course. Despite the uncertainty and demands, they report high levels of satisfaction with the course and identify learning experiences that are unique to service-learning and that count as significant, memorable, and in some cases, transformative experiences in their college careers.

Undergraduate students come out of the service-learning courses with a sense of pride, they have contributed positively to the learning of children. They are also aware that they have contributed to an NYIT legacy project that adds to the contributions of those who came before them and supports the contributions of those who will follow. Finally, students who participate in service-learning have gained valuable work and community service experience that reflects favorably on them when they attend job fairs and interview with potential employers. This is particularly important to international students who benefit from low risk opportunities to develop language skills and cultural competency as well as being immersed in the broader culture of New York City.

Appendix

Modification of the service-learning pre and post surveys

Demographic data (gender, race, ethnicity, country of origin) is collected in the pre-survey but not in the post-survey

1. Additional questions are suggested to develop the uncertainty construct in the pre and post-survey:
 - a. Pre-survey
 1. I am uncertain about my ability to complete requirements
 2. I am uncertain about course requirements
 3. I am uncertain about what would happen at the service-learning site
 4. I believe that more instructions would help me become less uncertain
 5. I believe that more class discussions would help me to become less uncertain
 6. I believe that more structured projects would help me to become less uncertain
 - b. Post-survey
 1. I was uncertain about my ability to complete the course requirements but that became clearer as time passed.
 2. I was uncertain about course requirements by that became clearer
 3. I was uncertain about what would happen at the service-learning site but that became clearer.
 4. Group discussions helped me to become less uncertain
 5. Interaction at the service-learning site with teachers and children helped me to become less uncertain
 6. Reading assignments helped me to become less uncertain

Post - Service-learning course survey for undergraduate students

1. Describe the goal of your service project and the role you served...
2. This project allowed me to apply course content / theory to an experience outside the classroom.
3. I was able to apply experiences from the project site to the course content and class discussions.
1 Strongly Agree, 2 Agree, 3 Neutral, 4 Disagree, 5 Strongly Disagree
4. Due to this project, I better understand the material presented in this course.
1 Strongly Agree, 2 Agree, 3 Neutral, 4 Disagree, 5 Strongly Disagree
5. This course service-learning challenged me to think about things in new ways.
1 Strongly Agree, 2 Agree, 3 Neutral, 4 Disagree, 5 Strongly Disagree
6. As a way of learning, how did Service-learning compare with other traditional methods of learning (lectures, term papers, exams, reading, research, etc.)?
1 Much Better, 2 Better, 3 Neutral, 4 Worse, 5 Much Worse
7. What was helpful to you in making the connection between the course materials and your experience with your community partner agency?
8. This service-learning project was emotionally rewarding.
1 Strongly Agree, 2 Agree, 3 Neutral, 4 Disagree, 5 Strongly Disagree
9. I was uncertain about the project at first but I grew more comfortable over time.
1 Strongly Agree, 2 Agree, 3 Neutral, 4 Disagree, 5 Strongly Disagree
10. I took some risks and tried some new things because of this project.
1 Strongly Agree, 2 Agree, 3 Neutral, 4 Disagree, 5 Strongly Disagree
11. I normally do things that I am comfortable with and I like very structured environments.
1 Strongly Agree, 2 Agree, 3 Neutral, 4 Disagree, 5 Strongly Disagree
12. This service-learning project was emotionally challenging.
1 Strongly Agree, 2 Agree, 3 Neutral, 4 Disagree, 5 Strongly Disagree
13. Because of this experience I feel a greater sense of responsibility to my community.
1 Strongly Agree, 2 Agree, 3 Neutral, 4 Disagree, 5 Strongly Disagree
14. Through this experience I attained a greater awareness of the needs and the problems in society and the factors that create them.
1 Strongly Agree, 2 Agree, 3 Neutral, 4 Disagree, 5 Strongly Disagree
15. This experience has made me question potential solutions to challenges faced in public education.

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1 Strongly Agree, 2 Agree, 3 Neutral, 4 Disagree, 5 Strongly Disagree

16. I felt connected to the people and concerns at this placement site.

1 Strongly Agree, 2 Agree, 3 Neutral, 4 Disagree, 5 Strongly Disagree

17. General comments, questions, suggestions, ideas, concerns: