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**CASE STUDY**

# Rocking the Boat: Using Environmental Education to Promote Positive Youth Development

New York City, NY

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GEEP is a partnership of the U.S. Environmental Protection Agency, the Environmental Protection Administration of Taiwan, and the North American Association for Environmental Education.



## Rocking the Boat: Using Environmental Education to Promote Positive Youth Development



### Overview

Rocking the Boat is a non-profit organization that provides positive youth development programs for 14–18-year-old students in the South Bronx, New York City, United States. Rocking the Boat serves communities with high levels of poverty, historic disinvestment, and environmental injustice. Rocking the Boat engages teens in one of three youth development tracks—Wooden Boatbuilding, Environmental Science, or Sailing—to enrich their experiences, help them advance their strengths and capacities, and provide psychological support during their formative years.

By building wooden boats, using them for ecosystem monitoring and environmental restoration of the Bronx River, and learning maritime skills in New York City waterways, students develop the technical, social, and emotional skills to succeed in their personal, academic, and professional lives. Each year, Rocking the Boat engages about 150 teens in its after-school, and summer youth development programs and another 4,000 community members through public outreach. By educating visiting school groups, offering weekend community rowing, birdwatching, and sailing programs, as well as other environmental and social events, Rocking the Boat recruits new participants, engages parents, and reconnects local communities with their natural environment. This case study explores Rocking the Boat's youth development approach as an effective environmental education strategy.

## Approach

Rocking the Boat works with high school students, beginning in the 9th grade, after school and during the summer through courses in one of three disciplines: Wooden Boatbuilding, Environmental Science, and Sailing. In each program, students advance by semester through progressive levels of skills and responsibilities. By 11th or 12th grades, students who have mastered the requisite skills join an advanced Job Skills level in each of these programs as paid apprentices. These apprentices tackle more complex projects, often collaborating with and accountable to outside partners. They assume increasing responsibility in running programs for the public and are supported with professional development training. The long-term nature of the projects and opportunities for advancement keep participants engaged and benefitting from a range of counseling services, academic coaching, and employment opportunities through high school and until they graduate from college or technical school. The program areas are described below:



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- **Wooden Boatbuilding.** Rocking the Boat's professional-grade boat shop is the heart of the operation. In this program, youths who come from schools almost completely lacking in shop facilities or technology education classes, learn to build wooden boats from scratch, employing a wide range of traditional and modern construction practices. Boatbuilders have the added satisfaction of seeing the results of their work used by their peers in the Environmental Science and Sailing programs. Their 14- and 17-foot Whitehall rowboats also serve as the workhorses of outreach programs for the public; sailing students use these sailboats to teach community sailing and rowing; and Rocking the Boat's premier fundraiser event, Rocking Manhattan, features their 25-foot Whitehall gig as participants row 29½ miles around Manhattan.

• **Environmental Science.**

This program attracts South Bronx teenagers to STEM (science, technology, engineering, and math) at a critical moment in their lives. Rocking the Boat's programming promotes engagement in STEM by making environmental science relevant and fun, by grounding lessons in exploration of the participants' neighborhood river (the Bronx River), and by giving them an important role in its restoration. Through hands-muddy activities



Photo: © Rocking the Boat

in student-built boats, the Environmental Science program nurtures a budding interest in the biodiversity of the Bronx River and trains students in the tools and methods used in environmental research. Students use those skills to take part in research and restoration projects that partner with local, state, and national organizations. For example, students are helping the New York City Audubon Society and the US Forest Service to monitor the region's wading and migratory bird populations. Students are also performing multi-site water quality testing and microplastics research in conjunction with the Bronx River Alliance. Further, students collaborate with the Billion Oyster Project to manage a Bronx River oyster reef. And finally, students contribute to the stewardship of wetlands restored by the New York City Department of Parks and Recreation and local nonprofits. Environmental Science program participants are proud that the data they collect on water quality, oyster growth, and bird activity is shared with academic partners and presented to community members at public events.



Photo: © Rocking the Boat

• **Sailing.** The Sailing program turns an elite, expensive sport into one entirely accessible to young people from the South Bronx. Generally, students who enter this program have never been in a boat and often don't know how to swim. Over the course of four years they learn not just to swim and sail, but to teach sailing to others, while working toward receiving an internationally recognized US sailing instructor certification. In 2018 the program received US Sailing Community Sailing Center status, one of only

40 such sites in the country meeting the highest standards. Apprentices in this program teach the summer sailing camp, help run community sailing days, and are exposed to maritime career possibilities they may never have considered. As an outdoor, place-based, and adventure program that introduces students to the natural blue environment, the Sailing program is a form of environmental education along with the Environmental Science program.

In addition to these curriculum-based youth development programs, Rocking the Boat provides various social work services for its participants, supports its alumni, and serves the local communities in other ways:

- **Social Work and Academic Counseling.** Social Work is intertwined through all Rocking the Boat youth development programs. The Social Work program is a multi-year engagement that identifies and alleviates social/emotional, academic, and financial obstacles, allowing participants to focus on doing well in school and use hard and soft skills learned in the program to formulate and implement post-secondary and career plans. Many participants come to Rocking the Boat having had little contact with their school guidance counselors, sometimes meeting only once a year. Three licensed social workers provide frequent individual counseling, while additional social/emotional development is promoted through group activities that help the participants explore relevant topics such as positive self-identity and productive communication. Youths participate in career workshops, explore a variety of professional environments, and learn about professional certifications. This entails assessing students' individual academic needs, counselling them on post-secondary educational and professional readiness, and guiding them through the process of finding and applying to colleges and other work or training opportunities. College and career planning activities intensify in their junior and senior years with college campus visits, workplace visits, and financial aid and opportunity programs.

- **Alumni: College and Career Persistence.** Program graduates stay engaged with Rocking the Boat opportunities and resources at a range of levels that serve their specific needs during transitions to college and careers. All alumni benefit from services that include continued social/emotional and academic guidance, mentorships, and cash scholarships. Every year, about 20 college-age graduates have the opportunity to work at Rocking the Boat as uniquely experienced Program Assistants, completing a cycle in which they are now teaching and mentoring younger students and running the youth development and public programs that give back to the community, while gaining valuable work experience and on-going training.

- **Public Programs.** Many Rocking the Boat participants learn about the organization via public outreach programs and activities. Summertime sailing and environmental camps introduce local middle schoolers to some of the most unique experiences in New York City. Community Rowing, Sailing, and Birding are free programs that operate on Saturdays from late May to early September and further Rocking the Boat's educational reach by providing community members of all ages access to the organization's fleet of rowing and sailing boats, bird spotting scopes, and knowledgeable program participants and alumni who serve as instructors and guides. On-Water Classroom programs, which range in length from a single three-hour session to weekly sessions throughout the school year, immerse approximately 1,600 students visiting from local schools in the ecology of the Bronx River as they take part in Rocking the Boat's ongoing restoration efforts.



Photo: © Rocking the Boat



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# Outcomes

Rocking the Boat views knowledge, skills, and competences as outcomes, which are connected to empowerment and positive development of its participants. To guide its educational activities, Rocking the Boat has created definitions of desired outcomes in the Boatbuilding, Environmental Science, and Sailing programs. As an example, target outcomes of the Environmental Science program are summarized in Table 1. Four levels of outcomes with increasing complexity roughly align with four years of participation in Rocking the Boat’s programs, although young people can move more or less quickly through them.

**Table 1. Environmental Science program outcomes (knowledge, skills, and competences)**

Levels	Rowing	Safety	Wildlife Ecology	Plant Ecology	Plant Ecology
1	Basic rowing	Rigging	Basic fieldwork and data collection	Community care	Introduction to water quality
2	Captaining and radio	Float plan and emergency action plan	Bird monitoring	Restoration identification	Water quality monitoring and data sheet integrity
3	Solo row with crew	Safety drill: action plan and person overboard	Wildlife monitoring	Restoration monitoring	Pathogen monitoring
4	Community rowing	Facilitate safety drill	Community monitoring	Community outreach	Evaluate and synthesize (quality control)

At the same time, Rocking the Boat monitors the broader educational achievements among its alumni. The statistics demonstrate the program’s success:

- **96% of Rocking the Boat students graduate from high school on time**, as compared to the Bronx high school graduation rate of 72% (in 2018) and the national rate of 85% (2018).
- **97% of them enroll in college or technical schools immediately after high school.**
- **57% of Rocking the Boat alumni have received their bachelor’s degrees** within six years of high school graduation.



Photo: © Charles Berenguer

Rocking the Boat students are self-selected and are not an exact reflection of the general population of Bronx high school students. That said, a great diversity of students with a wide range of academic achievement are attracted to Rocking the Boat’s variety of programs and participants range from those barely succeeding in school to those at the top of their class.

## Evaluation

Rocking the Boat has participated in multiple university-based studies related to students' identity, sense of place, and scientific literacy. More recently, Rocking the Boat started to collaborate with the Hello Insight youth development evaluation online survey (<https://helloinsight.org>), which is grounded in the latest research on social and emotional learning. Online surveys provided by Hello Insight have helped Rocking the Boat understand what kind of educational approaches and environments work best for their youth, which improvements to make, and how to communicate Rocking the Boat's unique impact. Currently, Rocking the Boat is conducting pre-post surveys to collect multi-year evidence of its impact on the following students' capacities:

1. **Academic self-efficacy.** A young person's motivation and perceived mastery over school performance and their general sense of belief in their potential to attain success.
2. **Positive identity.** A young person's sense of who they are, their multiple identities, growing self-esteem, evolving self-definition, role formation, and achievements.
3. **Social skills.** The ability of a young person to take into account others' perspectives,
4. **Contribution.** Positive engagement with family, community, and society that is key to developing a young person's positive purpose and positive societal movement.
5. **Self-management.** The ability of a young person to regulate their emotions and behavior, take positive risks, and persist through life's challenges.
6. **Social capital.** The positive bonds young people have with other people and institutions such as schools, community centers, and youth-serving organizations.

**Rocking the Boat's programs build on research and experiences showing that youth learn and develop best in an inviting, inclusive, warm, and compassionate environment.**

## Lessons Learned

After 20 years in operation, Rocking the Boat can share several lessons related to positive youth development, such as:

- Rocking the Boat's programs build on research and experiences showing that youth learn and develop best in an inviting, inclusive, warm, and compassionate environment.
- Rocking the Boat designs its programs primarily to advance youth development (as opposed to environmental knowledge or stewardship), which helped it to stay focused and achieve significant success in this area.
- Successful positive youth development programs give students a sense of power, self-esteem, efficacy, and awareness of opportunities for education and civic engagement—which enable them to improve their communities and their own lives.
- Educational projects that involve young people must create meaningful impacts on the world, and thus give teens a sense of purpose—which helps them to get through obstacles and work hard towards collective and personal goals.
- Partnering with organizations with mutual goals amplifies program impact. Rocking the Boat has partnered with several local organizations to provide real-world experience to students, while also furthering the organization's mission.

# Resources

- Rocking the Boat (RTB) <https://rockingtheboat.org>
- RTB's spotlight stories <https://rockingtheboat.org/multi-media/spotlight>
- RTB's Facebook page <https://www.fb.com/rockingtheboat/>
- RTB's Sailing program video (2016) <https://youtu.be/02uI55oOiPg>
- RTB's education about oyster restoration (2010) <https://youtu.be/OlFybOCOusk>
- Russ, A. (2016). Urban environmental education narratives. Washington, DC and Ithaca, NY: NAAEE and Cornell University. [Adam Green's narrative on pages 16-40] <https://naaee.org/eepro/resources/urban-environmental-education-narratives>
- Hello Insight's social and emotional learning evaluation <https://helloinsight.org/what-we-measure/social-emotional-learning>

# Contributors

This case study is written by Alex Russ (Alex Kudryavtsev), and is based on his interviews with Adam Green and prior research on urban environmental education at Rocking the Boat. In addition, reports that informed parts of this case study were offered by Rocking the Boat.

