

Title:

The Role of Environmental Education and Community Outreach in Organizational Sustainability of the Belle Isle Aquarium

Student and Mentor Info:

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- Alisa Moldavanova, Assistant Professor, Political Science Department, Wayne State University
- Jeff Ram, Professor, Department of Physiology, School of Medicine, Wayne State University

Project Summary:

This project will investigate the role that environmental education and community outreach play in enhancing institutional capacity and ensuring organizational sustainability of the Belle Isle Aquarium. The student intern will assist the investigators by collecting and analyzing open source material regarding the sustainability of the Belle Isle Aquarium and its educational programs; as well as administering and analyzing the results of the Aquarium visitors' perception survey. The student intern will also do on-site observations of educational programming and conduct interviews to further understand attendee and volunteer commitment to aquarium. The results of the survey and interview data will be used to produce presentations and publications that will help advance current knowledge of organizational sustainability of cultural organizations. The expectations are for this study to provide clear insight for cultural institutions struggling with long-term sustainability. The data will also be used to craft direct recommendations to the Belle Isle Aquarium staff regarding the effective use of the environmental education and community outreach for achieving organizational sustainability.

Project Description:

The project will focus on two aspects of sustainability: establishing the value of the environmental education (and the Aquarium as an institution) for its stakeholders, and developing productive relationships with other social actors (public officials, schools, universities and other cultural organizations in the area)

The faculty mentor will develop output and outcome based measures of the quality of Aquarium environmental education events, and will construct a survey for the assessment of visitor and participant experiences. Among other things, the surveys will assess visitors' motivation of participating in environmental education events, the quality of educational experiences, intentions to continue participating in the educational activities and support of the Aquarium as an organization, and recommendations regarding future educational activities. The surveys will be administered at environmental education events in summer 2015 (such as Science Saturdays). Additionally, the faculty mentor will conduct interviews with management and public education staff at the Aquarium in order to identify and assess the strength of Aquarium's partnerships with other social organizations in the area.

The student intern will assist the investigator in assessing the role that environmental education and outreach programs play in building community commitment to the Belle Isle Aquarium. The intern will administer paper surveys to adult participants, and will interview aquarium volunteers at the Belle Isle Aquarium. The student intern will also select and analyze publicly available information about Aquarium's history, its path to sustainability and current educational events and programs. Finally, the intern will assist with project interviews and participate in tasks such as note-taking and transcription, as well as managing and analyzing of qualitative interview data.

Specific Aims, Background, and Objectives:

This specific aim of this project is to investigate the role of environmental education and community outreach programming for enhancing institutional capacity and ensuring organizational sustainability of the Belle Isle Aquarium. Belle Isle Aquarium is selected as the research site, since it is the oldest continuously operating public Aquarium in the U.S. that had experienced a temporary closure in 2005; however, it was able to restore its public operations since 2012. Therefore, the Aquarium presents a valuable case for researching cultural sustainability. The project will focus on two aspects of sustainability: establishing the value of the environmental education (and the Aquarium as an institution) for its stakeholders, and developing innovative forms of community engagement of the stakeholders in the Aquarium.

For this project we define sustainability in an organizational sense as "...a two-level concept that includes both institutional survival, as a baseline for sustainability, and intergenerational or longer term sustainability, understood as the ability of public institutions to persist and fulfill their purpose in the long run" (Moldavanova, 2014, p.1). The Belle Isle Aquarium would be considered sustainable by this definition after it has effectively balanced its immediate institutional survival with its intergenerational sustainability.

Stakeholders include: the city of Detroit, the general public, the Belle Isle Conservancy, the former Friends of the Belle Isle Aquarium, staff and volunteers at the Belle Isle Aquarium, and the Michigan Department of Natural Resources - Parks Department. Preliminary research into the closing of the Belle Isle Aquarium revealed that there were conflicts between some of these stakeholders. The then-Detroit mayor and the Zoo director moved to close the Aquarium as it did not fit into their interests for urban progress. They cited a lack of community interest and tough economic times; however, the research revealed that the city could afford to keep the aquarium open and a city council poll found that a considerable amount of the public were in support of the Aquarium and were in favor of it reopening (Boardman, 2010). Interviews conducted with aquarium volunteers for this study could potentially provide some information regarding the current state of stakeholder dynamics. Ideally this project will help identify strategies that will allow the Aquarium to be more adaptable to the different interests involved.

The main research questions include: What roles do current community outreach and education programs at the Belle Isle Aquarium play in forming a lasting commitment of its visitors to the Aquarium as an organization? How can current programs be improved to better benefit the sustainability of the Aquarium? What role do organizational partnerships play in enhancing the Aquarium's sustainability?

The project objectives include: a) assess the current level of public awareness about the Aquarium's public outreach programs; b) identify main sources of information that members of the public use to learn about the Aquarium; c) identify visitors' motivation and how the Aquarium can increase participation, attendance, and other forms of public involvement; d) identify degrees and forms of visitors' commitment to the Aquarium as an institution; and e) assess the quality and variety of the Aquarium's educational and outreach events.

The benefits of this study include: a) Advancing knowledge of organizational sustainability that will help provide insight for other cultural institutions struggling with long-term sustainability.

b) Provide an undergrad student working in the field of sustainability with in-depth research experience and an increased understanding of organizational sustainability c) This case study will also contribute to the mentor's overall research agenda, in particular, the larger study of social connectedness and sustainability in public and nonprofit cultural organizations in the Detroit Metropolitan Area. The goal of the larger study is to explore the relationships between cultural organizations and their communities, cultural organizations' contributions to local community sustainability, and organizational strategies enhancing organizations' own sustainability.

Hypothesis:

The project's hypothesis is that organizations that place a higher priority on expanding and improving their public outreach and building successful relationships with other social actors are more likely to achieve organizational sustainability.

The survey hypothesis is that individuals visiting the Aquarium who...

- are between the age of 18-80
- who live in the Detroit Metro area
- who visit the Aquarium 5-10 times per year
- who have a strong interest in the animals and exhibits
- who are interested in the history of the Aquarium
- who feel that the Aquarium is important for the community
- who have attended educational events

... are more likely to have a strong commitment and express this commitment by volunteering informally, formally, or donating money.

Proposed Methods & Data Management Plan:

Methods:

This project is a case study that will utilize a mixed methods approach to collecting and analyzing data. We will gather both qualitative data through publicly available information about the Belle Isle Aquarium and its educational events; as well as quantitative data through a public perception survey about Aquarium's public outreach programming and educational events.

The first type of data will be collected from open source material, including the web site of the Belle Isle Conservancy and Belle Isle Aquarium, booklets and other educational materials produced for public distribution by the public education staff, publications in the news media, discussion of Aquarium educational events in internet blogs, etc.

The second type of data will be collected via a public perception survey that will be administered to Aquarium attendees. Attendees may choose not to complete the survey, and participation is completely voluntary.

The student intern will hand out survey forms to people entering the Belle Isle Aquarium building, asking them to complete the survey upon their exit and drop the completed survey forms into the designated box.

Data Analysis:

The population of this study is visitors of the Belle Isle Aquarium, who participate in public education and outreach programming. Since it will be impossible to reach the entire population, our sample size is 150 people.

The data will be analyzed using textual analysis software and standard statistical procedures (descriptive statistics, cross tabs, inferential statistics).

Data Management Plan:

All data will be coded and entered into spreadsheets. No information identifying people who took the survey will be included since no such data will be collected in this survey. The spreadsheets will be saved on a password protected computer that is backed up on a frequent basis. The computer will be in the possession of the principal investigators at all times or stored in secure (locked room, locked cabinet, or the like) locations under the control of the principal investigator. The backup devices (external hard drives or flash drives) will similarly be stored in secure locations. Completed surveys will be kept at least 3 years in file cabinets that are either locked or in secure rooms that are either under the direct supervision of the principal investigators or are locked.

Project Activities:

Phase 1

[May 25 – June 10]

During this phase the intern will analyze existing literature to assemble an annotated bibliography that will provide a foundational understanding of the Belle Isle Aquarium's history and the details surrounding its closure in 2005. The intern will then draft and revise a research proposal based on comments and information provided by the mentors. Finally, the intern will search online for 10 open source articles that discuss the Aquarium's history and sustainability issues. The intern will learn Atlas ti software, code and analyze textual data and prepare and write a 2-3 page memo based on the results of the textual analysis.

Phase 2

[June 10 – July 10]

During this phase the intern will administer the visitor perception survey and conduct observations of the Aquarium's educational programming to help identify visitor motivation and how Aquarium can increase participation, attendance, and other forms of public involvement as well as degrees and forms of visitors' commitment to the Aquarium as an institution. The intern will then move to data management activities including screening surveys for completeness, developing a code book for survey data, and entering survey results into an Excel spreadsheet. Intern will also spend this time continuing to assemble an annotated bibliography.

Phase 3

[July 10 – July 30]

During this phase the intern will analyze the results of the visitor perception survey data. The intern will then develop an interview protocol on volunteer commitment to the Aquarium. The goal here is to get insight regarding volunteers' motivation and commitment to the Aquarium. The intern will then continue public observations and analyze volunteer interviews.

Phase 4

[July 31 – August 5]

Intern will spend this time generalizing research results, preparing a PowerPoint presentation, full draft report and a long term communication plan.

* Anticipated Problems:

The survey is lengthy and this may make it more difficult to administer to a sufficient amount of attendees.

Another limitation of the survey portion of the study is that it focuses solely on the Aquarium attendees rather than general public. Therefore, the results of the survey are likely to be limited. To remedy this problem, we are supplementing the results of the survey by conducting interviews with staff members and analyzing publicly available data about the Aquarium and its public outreach function. This data will provide broader insights about Aquarium's sustainability.

Broader Impacts:

The survey and interview data will be analyzed and used to produce publications that will help advance current knowledge about sustainability of cultural organizations. The expectations are for this study to provide clear insight for cultural institutions struggling with long-term sustainability. The data will also be used to craft direct recommendations to the Belle Isle Aquarium staff regarding the use of environmental education and community outreach for achieving organizational sustainability.

The project also has the additional impacts of:

- a) providing research education to an undergrad student intern.
- b) creating a partnership between Wayne State University in Detroit, MI and Cosumnes River College in Sacramento, CA, and the Belle Isle Conservancy.
- c) enhancing national infrastructure for undergrad research opportunities.

Supplementary Information (project reporting, roles, and recruitment/training info):

a) Project Roles:

Intern: will conduct the project research (30-40 hours per week)

Mentor: will provide guidance and support to student intern (4-5 hours per week)

b) Recruitment and Training:

Student interns were recruited from colleges across the country through an online application process. Interns received foundational research education and ethics training via the online Collaborative Institutional Training Initiative (CITI Program) at the University of Miami.

c.) Project Reporting:

- a) The student will produce a summary report with the research findings and recommendations for the Belle Isle staff at the end of the internship. This report will serve as the basis for the student presentation at the Wayne State University (WSU) undergraduate research conference to in August, 2015.
- b) Project co-mentors will present the results of the project in the Symposium on Social Institutions and Sustainability at WSU on September 11, 2015.
- c) Project results will serve as the basis for an article-length manuscript that could further be submitted for publication in a peer reviewed outlet.
- d) Project results will be presented in Cosumnes River College district-wide newsletter and campus sustainability publication.

References Cited:

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McNabb, D. E. (2013). *Research Methods in Public Administration and Nonprofit Management: Quantitative and Qualitative Approaches*, M.E. Sharpe.

Moldavanova, A. (2014). "Two Narratives of Intergenerational Sustainability A Framework for Sustainable Thinking." *The American Review of Public Administration*: 0275074014565390.

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Biographical Sketches:

See attached.

Budget:

Full \$500 travel stipend will be applied to help offset the cost of on-campus housing for intern staying at Wayne State. Additional funds may be provided to assist with financial need.

Facilities, Equipment, and Other Resources:

Facilities:

- Belle Isle Aquarium (Belle Isle Park)
- Dr. Jeffrey Ram's Laboratory (Wayne State University)
- Purdy Kresge Library (Wayne State University)

Equipment:

- Toshiba Laptop
- Clipboards & Pens
- Endnote X7 (Reference Management Software)
- ATLAS ti (Textual Analysis Software)
- Microsoft PowerPoint (Presentation Software)

Other Resources:

- Printing capabilities provided by Dr. Ram