2013

Effectiveness of Grand Valley State University Service-Learning Project in the Grand Rapids Public Museum

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Effectiveness of Grand Valley State University Service-Learning Project in the Grand Rapids Public Museum

Lauren French and Linnea Petzke

2013
EFFECTIVENESS OF GRAND VALLEY STATE UNIVERSITY
SERVICE-LEARNING PROJECT IN THE GRAND RAPIDS PUBLIC MUSEUM

By:

Lauren M. French and Linnea C. Petzke

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In

Partial Fulfillment of the Requirements

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Abstract

The purpose of this qualitative study was to explore the effectiveness of a service-learning project completed by Grand Valley State University occupational therapy students in collaboration with the Grand Rapids Public Museum. This study sought to discover the perceptions of service-learning projects from community collaborators’ perspective. A qualitative focus group was used to gather data about the museum’s role in the community and in learning, occupational therapy’s role within community settings like the museum, and the use of service-learning projects to integrate the two. Overall themes from the qualitative data analysis included: Occupational Therapy in Museums, Learning Environment, and Service-Learning. Data analysis revealed information concerning museum staff perceptions about the GVSU student service-learning project as well as their overall comprehension of the field of occupational therapy and its relevance to the museum environment. The results suggested that the collaborative project was a highly successful experience. Additionally, staff vocalized excitement and anticipation for future projects within the museum and generated additional ideas about other community institutions that might benefit from occupational therapy. Further research should be conducted to evaluate service-learning projects and perceptions of community partners, as well as occupational therapy and its role in community settings.
Acknowledgements

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1) The Grand Rapids Public Museum staff for their enthusiasm to participate in this study and share their experiences and perceptions.

2) The Grand Valley State University Occupational Therapy Class of 2012 for their hard work and dedication during the GRPM Shipwreck Exhibit service-learning project.

3) Susan Cleghorn, OTR/L for sharing her passion with us. Thank you for your guidance through this process and the opportunities that have resulted from it.

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Definition of Terms

Service-Learning Project
A service-learning project is a teaching and learning strategy that utilizes community
service with instruction and reflection to create a meaningful learning experience, teach
responsibility, and support communities (RMC Research Corporation, 2011).

Community-Based Programs
Community-based programs are curricula for a specific population that occur in a
community setting, versus an institution (RMC Research Corporation, 2011).

Universal Design for Learning
Universal Design for learning is a set of principles for curriculum development that give
all individuals equal opportunities to learn (Ringaert, 2002).

Occupation
Occupation refers to everything that people do during the course of everyday life.

Engagement
Engagement is willingness to participate in an activity.
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Effectiveness of Grand Valley State University Service-Learning Project in the
Grand Rapids Public Museum

Grand Valley State University
Lauren French and Linnea Petzke
CHAPTER 1
INTRODUCTION

Service-learning is a teaching and learning strategy that integrates meaningful community service with instruction and reflection to enrich the learning experience, teach civic responsibility, and strengthen communities. Service-learning provides students with an active learning opportunity to solve real life problems while addressing the needs and concerns of the community. Such projects can be implemented in a variety of settings that may include schools, universities, and community-based or faith-based organizations. This educational tool is mutually beneficial for students and communities (RMC Research Corporation, 2011).

The Grand Rapids Public Museum (GRPM) directly serves the greater Grand Rapids area, in addition to any and all members of the general public. Museums are designed to act as learning tools for people of all ages. Exhibits provide museum-goers with the opportunity to directly interact with historical, cultural, scientific, or artistic material, which can lead to enhanced comprehension of the information presented. Museums facilitate self-directed learning, which may also lead to personal exploration, growth, and desire for lifelong learning.

The Grand Rapids Public Museum recognized that they could improve accessibility to better reach all members of the community. Because the museum plays an integral role in community learning, Grand Valley State University (GVSU) occupational
therapy (OT) students consulted with GRPM administrators about how to adapt the museum environment to better serve all Grand Rapids citizens (Education, 2012).

Grand Valley State University students took part in this service-learning project by providing suggestions about how to reformat exhibits to appeal to all age groups and levels of physical and cognitive ability. Groups of students were assigned different sections of an exhibit to research holistically and determine how an individual can best interact and learn within each section. The outcomes of this service-learning project were an increased level of understanding of barriers in the community for students, and development of professional insight, which the museum administrators used to make changes and increase inclusion at their facility.

These outcomes led GVSU students to investigate the effectiveness of the project completed by the former GVSU occupational therapy students from the perspective of the community partner, the Grand Rapids Public Museum.

**Background**

According to personal communication with Susan Cleghorn, OTR/L, the Grand Rapids Public Museum administration observed that the exhibits they offered were not accessible to all people. Those with physical or cognitive limitations struggled to actively engage in the learning process. Because the museum is a learning tool for all members of society, museum officials determined exhibits should be modified to better serve all members of the public (Cleghorn, 2012).

Students of occupational therapy needed practical and realistic methods of learning to be adequately prepared to practice their craft upon graduation. Service-learning projects are used to provide community service, while meaningful engagement
assists in the learning process. Students engaged in service-learning provide community service in response to community-identified concerns. This process provides students with the opportunity to learn about the context in which service is provided, the connection between their service and their academic coursework, and their roles as citizens (Seifer, 1998). An evaluation of the value of the GVSU service-learning project to museum staff was necessary to determine if similar projects should be implemented in the future.

**Problem Statement**

There was no research done to assess the GRPM staff satisfaction of the knowledge provided by the service-learning project.

**Purpose**

The purpose of this research project was to assess the effectiveness of the service-learning project implemented by GVSU students at the Grand Rapids Public Museum. The level of satisfaction of the museum staff and how they have utilized the universal design suggestions of the occupational therapy students was examined. This information was used to determine the degree of effectiveness of service-learning projects in community museums.

**Significance of Problem**

Service-learning relates directly to the field of occupational therapy as the purpose is to create a meaningful learning experience for participants. A service-learning project is a teaching and learning strategy that utilizes community service with instruction and reflection to create a meaningful learning experience, teach responsibility, and support communities. This is relevant to occupational therapy students as they strive to
“maximize clients’ independence and enhance their quality of life by assisting them in engaging in purposeful activities” (Townsend & Polatajko, 2007, p. 4), such as participation in community outings like those at the Grand Rapids Public Museum. The hands-on engagement that service-learning projects provide creates important opportunities for occupational therapy students to participate in real world application of the profession’s principles.

Communities are comprised of individuals tied together by occupational engagement and a collective sense of meaning (Ringaert, 2002, p.1). The goals of community-based occupational therapy are to engage citizens in activities that cannot be done in isolation, to build relationships, and provide members with enhanced self-worth. In order for all members of a community to be able to engage, the concept of universal design is commonly utilized.

According to design professional Elaine Ostroff (1997), "a (universal design) expert can be anyone who has developed natural experience in dealing with the challenges of our built environment.” These diverse people have developed strategies for coping with the barriers and hazards they encounter every day (p. 33).” In order for one to provide a universal design consultation, one must have a background in, “the theories and principals of universal design, human rights laws, standards and codes, and the functional requirements of a variety of users” (Ringaert, 2002, p.1). Occupational therapists are able to contribute to implementing universal design, as they are skilled in understanding human functioning, disability, and the person-environment connection. Their educational background provides them with the ability to identify factors that allow people to engage in daily activities. This can mean removing barriers to participation or
providing community members with methods of adaptation. The knowledge of occupation, occupational engagement, and other interventions of enablement is crucial to understanding environmental interaction (Townsend & Polatajko, 2007).

The GRPM staff noticed that the museum was lacking universal design for learning. The Center for Inclusive Design and Environmental Access (1997) defines universal design as “the design of products and environments to be usable by all people, to the greatest extent possible without the need for adaptation or specialized design” (p.1). Subsequent to the GRPM’s discovery of this need, staff from the museum asked GVSU students to provide input to improve the learning environment. The proactive museum staff bridged the separation between the classroom learning environment and a real-world need. This research project determined if service-learning projects in collaboration with community museums are effective tools for improving universal design.

Research Questions

For the purpose of this study, several questions were identified and answered:

1. What knowledge did the museum staff acquire from the GVSU students participating in the service-learning project?
2. Did the museum staff apply this knowledge?
3. If so, how did museum staff apply this knowledge?
4. What results did the museum staff observe from the application?

Summary

The researchers explored the Grand Valley State University occupational therapy service- learning project with the Grand Rapids Public Museum in which students
evaluated specific sections of the museum’s exhibit for accessibility and content relating to populations with disabilities. The goal was to evaluate the benefits and limitations of this project from the perspective of the museum staff to determine if service-learning projects in community museums should be continued.
CHAPTER 2

REVIEW OF THE LITERATURE

Service-learning (SL) provides students with an active learning opportunity to solve real life problems while addressing the needs and concerns of the community (RMC Research Corporation, 2011). This study examined how well the needs of the community were met during a service-learning project. Specifically, the role of occupational therapy in service-learning projects with community museums was explored. The researchers provided background on museum needs and accessibility, service-learning projects in healthcare, a Grand Valley State University (GVSU) service-learning project that utilized collaboration with the Grand Rapids Public Museum (GRPM), and the value of these projects. Literature from a variety of databases including CINAHL Plus, ProQuest Medical Library, PubMed, and OT Seeker was reviewed and information relevant to the exploration of this study was compiled into the following literature review.

REVIEW OF THE LITERATURE

Museums as Learning Institutions

The American Association of Museums (2011) defines museums as institutions that enable people to explore collections for inspiration, learning and enjoyment. The museum environment facilitates free-learning without curricular constraints, testing, or accountability. Because there are no “user guidelines” at a museum, the environment must be stimulating enough to attract the attention of the museum visitor and present information in a way that appeals to visitor’s personal learning style. The quality of “unrestricted choice” may have large implications on learning in a museum setting, so
exhibitions must be designed to stimulate interest and engagement (Allen, 2004). A learning experience requires learner engagement, which can be mental, physical, or social activity (Rennie & Johnston, 2004). Silverman (1995) stated that meaning is made from experience “through a constant process of remembering and connecting” (p. 162).

A study done by Leinhard and Crowley describes museums as beneficial to people of any age, race, or level of ability (2001). Four characteristics that place museum learning above traditional methods are (1) resolution and density of information, (2) scale, (3) authenticity, and (4) value. Real objects provide learners with a tangible object from which to learn. In contrast to pictures, objects in museums are of actual size, so learners experience an accurate visual depiction of material. Authenticity refers to specific objects related to history and culture. This type of learning happens when museum visitors are able to make a historical connection from seeing a real object connected to an incident or individual from the past. Value refers to an object’s uniqueness and monetary value, which may induce memory formation and ultimately lead to learning (Leinhardt & Crowley, 2001).

These values are critical to the current study because it is important to understand components of museum learning and how it can be more valuable than traditional methods. In a technologically advanced society, it is important to understand how to best reach community members and promote museum learning. However, limitations to this study prevent readers from understanding exactly how to best reach community members. Instead, the study done by Leinhard and Crowley (2001) focuses on an individual’s personal experiences with museum learning to support the museum characteristics previously stated. The researchers in the current study were interested in
ways to best reach museum learners, which was not addressed in the Leinhard and Crowley research.

Rennie and Johnson (2004) found that consideration of the personal nature of learning, context of learning, and the time taken to process and integrate new material provides principles for continuing research into the impact of learning in museums. Research of learning in museums helps measure the impact of learning, which leads to further understanding of how to present information so that it is best received. A review of over a hundred assessments of museum learning demonstrated consistent evidence about learning in public museums. Falk (1999) concluded that “museum learning experiences facilitate some degree of learning in virtually all participants and significant learning in the majority of visitors” (p. 271). While these studies provide evidence for learning in museums, the limitations are similar to those from Leinhard and Crowley (2001). Researchers did not directly address how to facilitate learning in a museum environment, nor do they provide clear information on how to assess learning of museum patrons.

**The Grand Rapids Public Museum**

The Grand Rapids Public Museum (GRPM) was the first museum to be accredited by the American Association of Museums in 1971 and has been accredited every year since (Grand Rapids Public Museum [GRPM], 2011). The GRPM mission statement is “to play a vital leadership and servant roles in enhancing the lives of those in our communities” (GRPM, 2011, p.1). The institution strives to bring individuals together in the pursuit of insight and understanding, use past and present to teach lessons for the future, inspire discovery learning, and provide life-long learning. According to the 2010
GRPM Annual Report, the museum became more accessible, collaborative, and innovative to better serve all members of the community. More than 280,000 people visited the museum in 2010, which breaks the previous attendance records (GRPM, 2011). GRPM staff involved in the current study included:

- several individuals from the exhibits department, exhibit design, and exhibit fabrication,
- the education manager,
- the collections manager and the director of collections/historian,
- the project manager, and
- a curator.

Museum Accessibility

Handa, Dairoku, and Toriyama (2010) stated that museum accessibility can be defined by “various features including general types of public accommodation (e.g. entrance without stairs) and various aspects that particularly define a museum experience such as providing effective communication for exhibitions” (p. 222). While many museums comply with physical access regulations, as cultural and learning institutions, many tend to lack intellectual, cognitive, and sensory access (Handa, Dairoku and Toriyama, 2010).

Museums are learning resources to which members of the public have access on a continuous basis. Though community members choose to take advantage of the opportunities provided by museums, it is important that all members of the community are able to access and profit from the information provided by the learning institution (Rennie & Johnston, 2004). Museum accessibility has been linked to growth and economic development of urban areas and fosters engagement, volunteerism, and cohesion among diverse members of the community (Shaw, 2006).
Although nearly one in five persons in the Unites States possesses some type of disability, the sum total of persons with any particular disability has historically been considered too small for most institutions to address. Lawrence Scadden, Senior Director of the National Science Foundation’s Program for Persons with Disabilities (PPD), stated that “making a resource or facility ‘accessible’ to persons with disabilities does not necessarily make it ‘usable’ to all such members of the population, so it is important to consider different ways to reach the greatest number of people possible” (Powlik & Karshmer, 2002, p. 217).

Powlik and Karshmer (2002), researchers from the National Science Foundation, investigated and assessed the different ways the government program has attempted to create activities that were engaging to all students, despite ability. They found that barriers to inclusion and participation were the following: (a) the need for change in the attitudes of faculty, (b) the need for educating staff in disability support services regarding techniques used to provide math and science accessibility, (c) development and wide use of improved tactile and audio presentations, and (d) the need for research on making multimedia instructional materials accessible to all students (Powlik & Karshmer, 2002).

In 1998, Congress amended the Rehabilitation Act of 1973 to require Federal agencies to restructure their electronic and information technology so that it is accessible to people with disabilities. Section 508 was ratified to eliminate barriers in information technology, create new opportunities for those with disabilities, and encourage the development of new technologies to help better achieve these goals (“Laws” 2011). Despite the physical changes enacted by the Section 508 guidelines, information
SERVICE-LEARNING

accessibility may not necessarily mean that it is useable. Any given technology should not be evaluated based on whether it is in use, but how well it works for those needing it. Though it is impossible to find a single set of solutions that can apply to every population, it is important to find ways to accommodate alternate learning styles (Shaw, 2006).

Universal Design for Learning

Universal design for learning (UDL) is a set of principles for curriculum development that give all individuals equal opportunities to learn (Ringaert, 2002). The core components of UDL are multiple means of representation, expression, and engagement. The Center for Applied Special Technology (CAST) uses the UDL concept as a “means of focusing research, development, and educational practice on understanding diversity and applying technology to facilitate learning” (Edyburn, 2005, p. 16). The American Association of Museums published “Excellence and Equality” in 1992, which instructed museums to recognize that their purpose was public education, and to be more inclusive in all facets of their learning environment. While museum visitors vary in their learning styles, preferences, and motivations, it is important to design exhibits to reach the greatest number of learners possible (Allen, 2004).

Edyburn (2005) stated that when UDL products are not readily available, the principles of UDL can be applied to instructional materials and learning environments through accommodations and modifications. The Smithsonian Institute published guidelines and design tools for accessible exhibition design to teach to different learning styles, respond to issues of cultural and gender equity, and offer multiple levels of intellectual information. The guidelines address standards for exhibition content, visual,
tactile, and auditory access, language, exhibit interaction, museum circulation route, color, spacing, furniture, safety, and physical accessibility (Majewski, n.d.).

Research studies show that interactive exhibits facilitate engagement, understanding, and recall of information. A survey by Tokar (2003) found that designing for physical access has become a norm among institutions with hands-on learning exhibits, which is attributed to the Americans with Disabilities Act. Though many institutions are implementing physical changes to increase access, universal design for learning is not yet a fully established standard of design.

Service-Learning

Higher Education.

Service-learning (SL) projects are used by a variety of academic disciplines to provide a practical context for students to apply their new found knowledge. According to Hoppes, Bender, and DeGrace (2005) these projects may occur:

- at homeless shelters, the Salvation Army, correctional facilities, a children’s home, an adult daycare facility, a nonprofit alcohol and drug treatment facility, a residence for individuals with human immunodeficiency virus, a sheltered workshop, a group home, and an after-school program for at-risk youth, or among any other community setting where a population in need may receive services (p. 47-48).

Service-learning projects require “win-win relationships” with their community collaborators (Hoppes, Bender, and DeGrace, 2005, p. 48), but one of the biggest criticisms of SL projects is that the priorities of the community setting are second to the academic institution’s prerogatives (Jones, 2003). “The academic discourse of rigor and
quality often conflicts with the collaborative discourse of empowerment and participation” (Steiner, Warkentin, & Smith, 2011, p. 284). It is likely that community partners may become discouraged from participating if they predict this conflict between priorities.

Academic institutions and SL projects are also criticized for not “listening” to the community (Stoecker and Tryon, 2009). In their 2005 article, Hoppes, Bender, and DeGrace advised that successful relationships between the academic and community partners require substantial face-to-face follow-up time. The academic partners must then evaluate the feedback from community partners to determine that the service-learning project was just as beneficial (or more so) to the community as to the students. The Hoppes et al. article strongly supports this current research study’s exploration into community collaborators’ perceptions of service-learning. The researchers in this study demonstrated initiative on the part of the academic institution by evaluating the SL project, and more importantly, focusing on the Grand Rapids Public Museum’s level on content with the services they received via the project.

**Occupational Therapy.**

This critique of the mutual relationship is reminiscent of the Occupational Therapy Practice Framework’s guidelines regarding client-centered practice (AOTA, 2002). Ward and Wolf-Wendel (2000) described service-learning as part of a movement from “doing for to doing with” (p.774). Ward and Wolf-Wendel suggested several ways of “doing with,” including making sure students have some connection to the community setting, blurring the line between “us” (students) and “them” (community members), providing opportunities for empathy, encouraging reciprocal assessment to allow
community members to have a voice, and to reward genuine community partnerships (Ward, & Wolf-Wendel, 2000).

Occupational therapy (OT) is a client-centered profession. The qualities of an effective occupational therapy intervention correspond to the qualities of an effective service-learning project. Bazyk, Glorioso, Gordon, Haines, and Percaciante (2010), cite O’Brien & D’Amico (2004) that, “understanding how a person functions while engaging in everyday activities within real contexts is at the core of occupational therapy” (as cited on p. 172). Engaging in a service-learning project provides the context that occupational therapy students need to fully understand the clients they are serving and how to address their occupations.

The study by Bazyk et al. (2010) brought forth several themes that connect service-learning projects with the process of becoming an occupational therapist. Themes include understanding of the role of occupational therapy in nontraditional settings, recognizing the power of occupation, and developing a realistic view of occupational therapy and professional reasoning skills. Being able to apply classroom lessons to real community needs bridges the gap between being a student and becoming a practitioner with an important role in the community. Although the study revealed that SL projects enabled entry-level occupational therapy students to reason, adapt, and participate in a nontraditional setting, it was solely a phenomenological exploration into the experiences of 18 students from one Midwestern university. The results of the Bazyk et al. study cannot be generalized to how all students of occupational therapy feel about participation in service-learning projects.
Occupational Therapy Theory.

The effectiveness of service-learning projects in occupational therapy curricula is supported by the use of occupational therapy models of practice. The Person-Environment-Occupation (PEO) model of practice emphasizes the transaction between a person and his/her environment – the result of which is one’s occupational performance (Cole & Tufano, 2008). This means that the environment has a role in how people participate and perform daily occupations.

This role of the environment can be seen in a variety of contexts but is especially relevant to this study’s exploration of how service-learning projects within the community can be beneficial to both the academic partners and the community collaborators. The PEO model encompasses the research question by illustrating how the assessment of the museum environment is integral to this study as adaptations and modifications were suggested to better facilitate community member engagement. Not only was the museum environment key to community learning, but also the learning of GVSU students and museum staff in this specific study. If environment did not influence behavior, participating in the GVSU and GRPM service-learning project would have not been an effective means for the museum administrative team and students to exchange information with the goal of addressing community needs.

The PEO model is based on assumptions about human behavior and the environment (Cole & Tufano, 2008). Several of these assumptions were relevant to the influence of service-learning on community museum staff. These assumptions include: (a) people utilize resources to master environmental demands, (b) individuals derive self-fulfillment and self-identity through meaningful participation, (c) performance is
influenced by the person, the unique environment, and the occupations, and (d) the PEO model studies environments that allow and/or restrict performance and is client-centered in nature (Cole & Tufano, 2008).

These assumptions and the PEO model facilitate occupational therapy interventions that correspond with and support service-learning within community museums. The PEO model guides occupational therapists to recognize the role of the environment on how people participate. By allowing students to come into the physical and social environment of the Grand Rapids Public Museum, museum staff enabled the formation of a transactional relationship. The students were able to assess how the environment allowed or restricted participation of museum patrons, and the museum staff were able to gain valuable information for the advancement of their exhibits. This study explored what knowledge the museum staff gained, if they used the information they were given, and how they have since utilized it.

**Grand Valley State University’s Service-Learning Project.**

The purpose of the service-learning project completed by occupational therapy students from GVSU in the fall of 2011 was to provide students with an opportunity to research and, “develop a proposal for a community-based educational exhibit that is accessible to a variety of populations with diverse learning needs,” by utilizing their knowledge of Universal Design for Learning (UDL) and the diverse needs of the community (Cleghorn, 2011, p.1).

Groups of students were instructed to describe their assigned section of a shipwreck exhibit and the challenges and opportunities it affords, complete a literature review, make recommendations using UDL, develop an engaging learning activity, and
present their proposals to the GRPM administrative team (Cleghorn, 2011). In their written reports of the assignment, students portrayed a practical and expansive comprehension of the museum’s purpose, goals, and needs. Students also acknowledged the needs of the museum patrons and future museum-goers. Feedback from the museum staff was not collected.

**Summary**

Past literature clearly indicated support for incorporation of service-learning projects into healthcare higher education. The greatest gap found in the literature was that many results of past studies cannot be generalized. Utilizing service-learning in the realm of public museums is not a common practice. It is the hope of these researchers that their exploration of the GRPM staff’s perception of knowledge from the GVSU occupational therapy SL project provides evidence to support future projects and collaboration within the museum setting.
CHAPTER 3

STUDY DESIGN

This study explored how well the needs of a community museum were met during an occupational therapy (OT) program service-learning (SL) project. The service-learning project in question occurred during the 2010 – 2011 academic year when Grand Valley State University (GVSU) occupational therapy students collaborated with the Grand Rapids Public Museum (GRPM). Students used their knowledge of universal design for learning (UDL) to provide suggestions about how to reformat exhibits to appeal to all age groups and levels of physical and cognitive ability. Groups of students were assigned different sections of an exhibit to research holistically and determine how an individual can best interact and learn within each section.

The outcomes of this service-learning project were students’ increased level of understanding of barriers in the community and the development of professional insight. The museum administrators used this professional insight to make changes and increase inclusion at their facility but no follow-up has been completed to assess the effectiveness of the project.

Study Design

The approach being used within this study was phenomenological because it examined the experience of a particular group, the GRPM museum staff. The study sought to analyze the experience of service-learning projects as perceived by the museum staff, since the goal of the researchers was to learn how the community partners in the SL project of concern interpret the value of this type of project. A qualitative study design was used in this study to determine if the museum administrators believed that the
service-learning project was effective and to help shape future service-learning projects between occupational therapy students and community museums. A qualitative design was appropriate because the researchers were striving to gain insight into the experience and perceptions of the museum staff; concurrently, phenomenology was the most fitting approach for the researchers’ goals. Qualitative work is naturalistic, emergent, fundamentally interpretive, holistic, and sensitive to the influence of the investigators (Lysack, Luborsky, & Dillaway, 2006).

The primary means of qualitative data collection in this study was a focus group that asked a purposive sample of participants specific questions concerning their encounter with the GVSU OT students and the perceived benefits and drawbacks of the SL project. All data was from the perspective of the museum staff participants and was coded for emerging themes that could be used to assess the effectiveness of SL projects between OT students and community museum partners. Although the results of this study cannot be broadly generalized to the experience of all community partners in various service-learning projects, the results of this study will guide future SL projects. Moreover, these data were beneficial in determining if community partners receive satisfactory results from participation in service-learning projects.

Advantages to this design include that it was client-centered and holistic – pillar concepts of occupational therapy. Lysack, Luborsky, & Dillaway (2006) stated that qualitative research is emergent, as is the use of service-learning projects in healthcare education. Qualitative research examines specific participants’ feelings and actions to get a broader understanding of how they experience a phenomenon. These data can be added to the larger body of knowledge about service-learning projects in occupational therapy.
with community museums for a more holistic and comprehensive understanding of their effectiveness, which can be applied to future service-learning projects. This chapter explains the design, population, tools, and procedures used to obtain qualitative data for this study and how it was analyzed.

The researchers selected this study design because qualitative studies seek out interactions between variables in context to get a better understanding of the relationship between them. Qualitative studies may also be called “naturalistic inquiries” because the investigators’ interest in complex social interactions leads them to research in organic settings such as observation of children in a classroom or of museum-goers in a museum (Lysack et al., 2006).

Qualitative research does not refer to a single method of research. There are many approaches to qualitative research including ethnography, narrative analysis, content analysis, and others (Lysack et al., 2006). The method used in each study depends on the research questions and what type of data is desired. A phenomenological approach to this qualitative research provided the best framework in this study for understanding museum staff opinions and perceptions about the service-learning project of interest.

For the purposes of this study, the investigators chose to interview participants in depth via focus group. Data from focus groups may not be greatly generalizable but is valuable to the explanation of the specific relationship among the variables studied. In this case the variables included Grand Valley State University (GVSU) occupational therapy (OT) students, service-learning (SL) projects, and community museum partners such as the Grand Rapids Public Museum (GRPM). A qualitative study design utilizing focus group methodology was appropriate to examine the relationship between those
variables. The goal of this study was to determine the effectiveness of the SL project that was completed by GVSU OT students, from the perspective of the GRPM staff members – focus groups can adequately obtain that information. “Focus groups are used to explore people’s perceptions and attitudes regarding topics in which the participants have some investment or stake,” (p. 531) and thus meet the needs of this investigation and fit with a phenomenological approach (Taylor & Kielhofner, 2006).

Focus group interviews are conducted with a small group of participants (typically 6-10) who are selected purposefully because of their knowledge or experience with the topic of interest to the researchers. Throughout the interview, participants listen to others’ responses and add their own opinions based on dialogue (Lysack et al., 2006).

Advantages of a focus group design include efficiency, high face validity due to the natural environment, and in-depth, comprehensive information (Lysack et al., 2006). These discussion-based interviews allow dynamic interactions among group members but come with limitations as well. Some disadvantages of focus groups are that they can be difficult to control due to unexpected distraction, interpersonal conflicts between participants, limited confidentiality, and possible biased responses due to social influence (Lysack et al., 2006). Due to the previously mentioned factors in focus group research that can be difficult to control, researchers were prepared and able to redirect conversation. Certain strategies included as king probing questions, giving a break, or using subtle transitions onto a new topic (Lysack et al., 2006). Further limitations of the study are discussed later.
Study Site and Population

The study was conducted on June 25, 2012 at a conference room in the Grand Rapids Public Museum. The sample recruited for the focus group was purposeful – it was comprised of museum staff members who were employed during the GVSU service-learning project of 2011. Particularly, staff members who were directly involved in the Shipwreck SL project with GVSU OT students were vital members of the focus group. A list of staff that were known to have participated in the SL project in some way were provided by the project’s research committee chair. If the number of staff involved in the service-learning project exceeded 10 members, multiple focus groups were to be held. Researchers determined a size restriction would facilitate good participation and a variety of viewpoints. If the focus group was larger, there might have been dominant speakers who controlled the session, or participants may have felt intimidated while vocalizing opinions to a large group (Taylor & Kielhofner, 2006).

Criteria for exclusion from the focus group included (a) staff who were not employed by the museum in the winter of 2011, (b) staff who either did not work within the Shipwreck exhibit or were not administrators, or (c) staff (who might have worked within the Shipwreck exhibit or are administrators) who had no recollection of the GVSU service-learning project or changes that were made to the Shipwreck Exhibit between 2010 and the time of the focus group. If any GRPM staff met any of these criteria, they were excluded from the focus group because they could not provide information pertinent to the research study.

The focus group participants included: several individuals from the exhibits department, exhibit design, and exhibit fabrication, the education manager, the
collections manager and the director of collections/historian, the project manager, and a curator.

**Instrumentation with Reliability and Validity**

Steward, Shamdasani, and Rook (2007) stated that the greatest purpose focus groups serve are to gather qualitative data from individuals who have all experienced some sort of concrete situation. Creswell (2009) suggests that qualitative data enhances validity, trustworthiness, authenticity, and credibility if certain strategies are used. As interviews and surveys are used to gather quantitative data, focus groups are the most popular way to gather qualitative information. There are four elements to focus groups that most researchers adhere to in order increase trustworthiness. These elements include (a) a constant focus, (b) an understanding of group dynamics, (c) in-depth data, and (d) humanistic interview (Steward, Shamdasani, Rook, 2007). The following describes how the traits of trustworthiness were applied to this particular study.

For the purposes of the study, the researchers created a focus group script based on the literature reviewed in Chapter 2. In order to increase the validity of the focus group questions, research committee members reviewed and provided written and verbal feedback about the script. The research committee members had experience collecting research so their professional opinions were valuable in formulating appropriate questions. After initial feedback, the questions were adapted and modified to yield more reliable results (Taylor & Kielhofner, 2006).

It is important to maintain a focus throughout the session so that the topics discussed directly correlate to the research study goals. The focus of this specific data collection session was the museum staff’s perceptions of the GVSU service-learning
project. While many topics were addressed during the focus group, researchers ensured that all were pertinent to the specific research goals (Steward, Shamdasani, Rook, 2007). To maintain focus, researchers followed the moderator script (Appendix A) and employed strategies to redirect the group discussed earlier when necessary.

The second trait for increased trustworthiness is to understand group dynamics. This study’s focus group aided the researchers in uncovering the insights of staff at various levels and positions (Steward, Shamdasani, and Rook, 2007). Researchers understood that different individuals have varying perceptions, ways of processing, and making decisions, which assisted them in evaluating the data.

The third trait researchers employed was carefully constructed questions. Research shows that fewer focus group questions lead to more in-depth answers and discussion (Creswell, 2009). In order to better understand the attitudes, preferences, and motivations of museum staff, a small number of questions were asked to stimulate extensive discussion. Questions asked were open-ended and organized in a logical manner. Example questions included: What is most challenging in developing an exhibit? What concepts did you learn about exhibit design as a result of this SL project? What is your opinion of the quality of work and the relevancy of the work done by the OT students? Can you provide any examples?

Finally, the trait of “humanistic research” refers to the meaning rather than measurement of data collected, so it was important that researchers were prepared to immerse themselves in the experience of each participant. This means that researchers understood the need to be empathic, open, actively listening, and prepared for various types of interactions with research participants (Steward, Shamdasani, and Rook, 2007).
While moderating the focus group, the researchers were prepared to ask “unscripted” questions to ensure participants’ views and opinions are accurately recorded. The script guided the researchers through the duration of the focus group, but they actively listened to participant’s responses to best formulate the direction of the discussion.

Researchers used the traits identified to obtain the best data possible. Constant focus, an understanding of group dynamics, in-depth data collection, and humanistic interview guided the formulation of focus group questions, methods used to conduct the focus group, and interaction with the participants. The purpose of the focus group was not to gather generalizable data. Creswell (2009) proposes that qualitative research is more accurately represented by the term “particularity.” The researchers sought perceptions that were particular to these museum staff and concerned the service-learning project of interest.

Since the population (and the sample) of museum staff who experienced the service-learning project of interest is small, it was difficult to have test-retest reliability unless more focus groups are held at a later date. The focus groups could be reproduced but they would likely consist of the same or many of the same participants. The transferability of this data is not strong since this study specifically investigated the Grand Rapids Public Museum and not at other museums in general that have partnered with universities for service-learning projects.

To ensure credibility, researchers in this study kept the names of participants confidential. Anonymity could not be fully achieved between those attending the focus group since participants were co-workers and likely already knew each other. Additionally, researchers made a statement that both positive and negative opinions were
welcomed and appreciated. This will ensure that data from the focus group interviews stays as true to reality as possible.

Member checking is another way to increase credibility of the study. Researchers provided participants with the opportunity to review their statements before data analysis occurs to make sure that what was reported was what the participants intended to say (Shenton, 2004). The researchers also debriefed participants and admitted their affiliation to Grand Valley State University so that participants were aware of any possible bias (Shenton, 2004). Again, it was important that researchers maintained that any opinions were welcomed and appreciated. Additionally, this study had an audit trail to trace the course of the researchers so that future researchers may explore and replicate the findings.

Procedure

Prior to participant recruitment, researchers hoped to acquire approval from the Grand Valley State University Human Research Review Committee to proceed with the study. The researchers submitted their proposal to be approved by the committee, but were informed that the research did not meet the federal standards for human research because it was primarily a program evaluation and human contact did not provide any sort of threat or risk. The committee was provided with additional information about the research project, but the committee stated that the scope was small and did not qualify as research under it’s set of standards. Although the researchers did not receive approval from the HRRC, a contact from the HRRC advised them to continue with their research project to provide groundwork for future studies. After consulting with research committee chairs, the researchers continued with the project as planned.
Primary museum staff e-mail contact information was obtained from the committee chair who designed the service-learning project analyzed in this study. Researchers made primary contact with the museum administrator who led the communication between GVSU and the GRPM, and met with him to discuss research goals and objectives. The museum administrator stated he would identify and contact potential participants selected based on inclusion/exclusion criteria previously stated. He had already scheduled a staff meeting in June, so he thought the most convenient date and time would be directly after the meeting. Once potential participants who met the inclusion criteria were identified, each person received a request to participate via an e-mail from the museum administrator with a letter that described the study purpose, assured confidentiality, explored the role of GRPM staff, and included a proposed timeline for focus groups. Upon agreement of participation, museum staff members were sent a response thanking them for their participation and a document with the date, time, and location of the focus group. Because there were not more than ten participants, two different focus groups did not need to be held on different dates. One week prior to the focus group, the museum administrator received an e-mail from the researchers to ensure all information was received by staff, remind him of the date and time, and thank him in advance for his assistance and participation.

Researchers arrived at the Grand Rapids Public Museum on June 25, 2012 at 9:00 a.m., one hour prior, to set up. Set up included arranging chairs in a circle formation to better facilitate open conversation, setting up a table for snacks and refreshments, as well as an area to set the audio recorder and the computer to take notes. When everything was organized, researchers took photographs to visually document the environment.
At the start of the focus group, each participant was asked to complete a consent form (Appendix B) that provided them with information about their personal protection and participation in the research study. Participants were also asked to write their name and e-mail addresses on a separate sheet of paper so researchers could thank them after and contact them at a later date if necessary. Before the questions began, researchers reminded participants that their responses were recorded with an audio recorder and that they would be taking notes throughout the session. Participants were encouraged to enjoy the refreshments and snacks before, during, and after, and were reminded that they were to step out to use the bathroom whenever necessary because there would not be a designated break.

One researcher was responsible for moderating the focus group, which included an introduction to the study and its purpose, and the administration of discussion questions. The other researcher took detailed notes and assisted in summarizing key points after each question to ensure participants’ perspectives were accurately recorded. Notes were taken electronically via typing on a laptop to ensure legibility. In addition, the focus group was recorded using an audio file recorder, to ensure accurate collection of audio data. The audio file was checked prior to use and periodically throughout the focus group to ensure it was recording properly and nothing was missed. The researcher who took notes during the focus group also transcribed the data prior to data analysis.

All notes and tape were dated and labeled as “GRPM Focus Group.” After the data analysis was complete, all study participants received a copy of the findings. They were given the opportunity to comment on the data for further interpretation and assist in potential research modification. All notes and forms are kept in a locked file in the
occupational therapy department for three years. Audiotape recordings were destroyed after the study was complete.

Data Analysis

Rabiee (2004) presents several frameworks for analyzing data from focus groups. This study adopted the Ritchie and Spencer five step analysis that was developed in 1994. The five steps include familiarization in which the researchers (a) listened to tapes, (b) read transcripts and observational notes to get a sense of the focus groups, (c) identified themes by writing notes in the margins of the transcripts, (d) indexed and charted these themes by sifting through data, making comparisons, reducing the data, and rearranging quotes under new themes, and finally (e) interpreted the themes that were identified. This analysis was within days of the focus groups so researchers had recent sense of how the focus group interviews went.

Prior to data analysis, researchers met with an experienced professional to review the data analysis procedure to ensure all steps were properly carried out. Data analysis included thematic exploration to establish themes from a transcribed version of the qualitative data obtained and recorded during the focus group. Each participant was given a letter code (A,B,C, D, etc.) Once coded, researchers read through each focus group participant response and grouped similar responses together. Through this process, researchers identified major themes and minor themes that were interpreted to form conclusions about the effectiveness of service-learning projects through the perspective of the museum staff participants.
Summary

This chapter reviewed the methodology used to explore how well the needs of a community museum were met during an occupational therapy (OT) program service-learning (SL) project and reasons for qualitative design selection. A phenomenological approach best fit the primary research goal of discovering and understanding the perceptions of museum staff. The need for in-depth and comprehensive information drove the researchers to implement focus group research because it most appropriately explores these specific variables in the natural setting. The procedures involved in focus group data collection drove the researchers to formulate questions and produce this chapter based on former literature to optimize validity and reliability. Although focus group data is not as generalizable as other forms of data, this information will serve as an informative identification of current themes and implications to service-learning projects with community partners, specifically related to occupational therapy and community museums.
CHAPTER 4

RESULTS

Techniques of Data Analysis

This study utilized a focus group as the means for data collection. Due to the specific and small population, only one focus group was held. This focus group took place on June 25, 2012 at the Grand Rapids Public Museum (GRPM). Participants in the focus group included museum staff and administrators who agreed to participate in the study (Appendix B). The list of focus group questions (Appendix A) was developed by the researchers and guided the discussion about the service learning partnership between the GRPM and Grand Valley State University (GVSU) occupational therapy (OT) graduate students. The focus group began with participant introductions that included descriptions of work roles within the museum. In addition, the researchers described the purpose of the focus group and provided an overview of the research project. The focus group was audio taped to ensure reliability and accuracy of the responses. One researcher moderated while the other researcher took notes. Following the focus group, the audio-tape was transcribed by one of the researchers. Notes from the focus group were used as a guide during transcription. Following transcription, each researcher reviewed the documents to begin the coding process.

The researchers independently reviewed the data transcribed from the focus group for themes. Each researcher highlighted repetitive comments in the transcription document. These comments resulted in the initial codes which included: (a) multiple forms of learning, (b) immersed in learning, (c) more ideas than money, (d) inspiring people to think and engage in new ways, (e) service-learning is collaboration, (f)
occupational therapy gives museums a broader perspective, (g) occupational therapy gives helpful suggestions for the way museums do things, (h) museums need to be able to gage community needs, (i) occupational therapy gives verification to the museum, (j) students brought new perspectives, freshness, and passion to the museum, (k) funding limits the student suggestions that are carried out, (l) the service-learning project created an experience that was successful for everyone, (m) occupational therapy students exceeded expectations of work and professionalism, (n) the staff enjoyed the service-learning project, (o) the service-learning project made the staff excited about possible future projects.

These initial 15 codes were condensed by the researchers into a list of seven codes. Next the researchers collaborated and came to consensus on the final codes by grouping the 7 codes into three major themes (Learning Environment, Occupational Therapy in Museums, and Service Learning). In addition, each theme contains subthemes that provide further detail and clarification. Finally, the researchers independently reviewed the content from the transcription document in order to identify key comments to support themes and subthemes.

**Characteristics of Subjects**

The participants in this study included nine staff members of the Grand Rapids Public Museum of the 12-15 who were involved with the original SL project. For the purpose of coding, each participant was assigned a letter (A – I). Staff included individuals from the following departments: exhibit design (3), exhibit fabrication (1), education (1), collections (2), project management (1), and curator (1). The participants
Theme I: Learning Environment

Throughout the focus group, the museum staff indicated that the learning environment of the Grand Rapids Public Museum was an essential component of their mission to inspire learners. The learning environment dictates who can learn, what they learn, and the way in which they learn. The major theme of learning environment was divided into related subthemes: multiple forms of learning, inspiring people to think and engage in new ways, and limited funding. These subthemes, provided clarification to understand the importance of the learning environment to the mission of the Grand Rapids Public Museum.

Multiple forms of learning. The concept of multiple forms of learning refers to the various stimuli and ways that a person can receive and interpret information when learning. This concept is of particular interest to the GRPM due in part to the diverse learning styles and needs of museum patrons. The museum is challenged to find ways to facilitate learning and connecting with each individual who enters the museum, even though each person has a different learning style and worldview.

Staff Person E described the process of making a connection:

I think one of the challenging things about exhibits is trying to find out what’s really going to touch the audience, what’s really going to hit them. We’ve talked about this immersive stuff...about a way to engage without a book on a wall. We’ve talked a lot about this emotional connection we are trying to make between our visitors, our customers, and what it is that we’re building…it’s really hard to take all that information and distill it and really hit those key points (E, 83-90).

Most of the museum staff stated that their favorite exhibits were those that
immersed the visitor in various mediums.

Staff Person I shared this about his favorite exhibit:

It’s one that we really worked with intention to try to create as many forms of multiple intelligence, brain-based learning things that were incorporated into it and so I guess if I were to bring people here to show and tell…that would be the one I take them to (I, 24-28).

The museum staff take pride in their efforts to meet the needs of visitors. They also struggle to ensure that each person is engaged in a valuable learning experience.

Staff Person I referred to two specific exhibitions:

You have two very different audiences coming into those exhibits. One is somebody who has never seen Lake Michigan, so where you have to start from explaining the content is from the very beginning. You can’t assume they know anything… (the other audience) are the guys who dress up in uniforms, they wear their facial hair so it’s appropriate for reenactment…so you have to start at ground zero…it can be conveyed in words, but we know most people don’t read most of the labels on the wall so how do you do that in a visual, experiential way (I, 95-104).

**Inspiring people to think and engage in new ways.** Inspiring people and engaging them to think in new ways connects to the learning environment and the aforementioned multiple ways of learning through outcomes. The museum staff repeatedly used the word “engrossed” to describe what they wanted the outcome of the learning environment to be in order to engage people in learning. The following responses to the “most important purpose of a museum” question reflect the GRPM museum staff’s desire to inspire:

Inspiring people to think in patterns that they don’t normally encounter (I, 109).

…it’s inspiring people to want to go and learn more, to continue learning. I think that’s what we can do (E, 100-112).

I’ve come to move away from using the words “education” and “learning” to “thinking.” (F, 113-114).
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Make them think (I, 117).

I like to think we want to engage people in the world around them; to see things first hand firsthand, not read about it on the wall (B, 118-119).

I think I got it: It’s to preserve the past, engage the present, and inspire the future (D, 138-139).

Throughout the focus group, there was a focus on the desire to inspire patrons as learners. Key elements that contributed to inspiration and engagement of patrons included the physical environments of the museum exhibits, the multiple forms of teaching/learning utilized within each exhibit, the experience that is created, integration of patron needs with available resources, and continuous learning and improvement by the GRPM staff.

The museum staff must be forward thinking in terms of meeting the needs of patrons. The staff members expressed desire to maintain a fresh perspective and do what they can to provide a variety of opportunities for community members to be inspired, engage, learn, and grow.

**Limited funding.** Funding dictates, in part, elements that can be included in the learning environment at GRPM. One common thread throughout the focus group was the concept that there is so much to do (and so much that the museum staff want to see accomplished) but funding can limit ideas and desires.

Staff Person B was the first to reply to the question about what the biggest challenges are when developing an exhibit:

I think getting the money (B, 61).

Everyone in the focus group laughed at Person B’s response but then a conversation ensued supported what he said.
Person H stated:

We always have more ideas than we do money, time, or space (H, 72-73).

Having the GVSU occupational therapy students to assist in needs assessments and recommendations has positively benefitted the museum’s funding by providing needed services at no cost.

Yet Person B refers to the student service-learning projects:

There were areas where there were great suggestions that, again, time, money, and space factor in (B, 250-251).

Person I added:

I think an important thing to mention (we touched on it when we all laughed about it earlier) is funding, that has touched this project as well. When we initially met with the OT class, the concept for the exhibition was for a different gallery in a larger size. Because of funding limitations, we’ve had to scale that back and so some of the suggestions, some of the design ideas that we were headed for, may still be incorporated in this, some of them have been eliminated or they have been altered to fit. While those ideas were still valuable, we may or may not be able to implement them (I, 288-295).

Person F spoke to how the service-learning project provided an opportunity for the museum to pursue their goals without financial burden:

As we’re moving forward and we’re changing from being publicly funded, where funding isn’t really an issue, to needing to have funding…when we work with groups like the Grand Valley occupational therapy interns or others, we’re doing community service too, and it’s something that has always been key to our mission, not only creating stuff ourselves, but trying to bring in others to learn and use the resources that we have, you know ebbing and flowing and shifting around (F, 338-344).

Funding was of concern to all those attending the focus group. In addition, a clear connection was made between funding concerns and the benefits of the GVSU OT service-learning project. The students provided a valued service that helped the museum meet the need for a comprehensive assessment and made a positive contribution to the
museum staff’s knowledge of multisensory learning as it pertains to planning future exhibits.

**Theme II: Occupational Therapy in Museums**

During the course of the focus group, museum staff reported their perceptions of occupational therapy and how to integrate OT services within the museum setting. Museum staff also reported that the GVSU service-learning projects were their first exposure to occupational therapy. As a result, a discussion of the role of occupational therapy in museums was a common topic of the focus group. Through data analysis, the theme of occupational therapy in museums revealed three related subthemes which included: broader perspective, provides evidence, and museums need to gage community needs.

**Broader perspective.** Collaboration of multiple disciplines is commonly utilized to enhance perspective and expand knowledge base. This relates to the partnership between museum staff and GVSU OT students as they were able to share their knowledge and experiences to produce a collaborative product.

Staff Person B recognized the value of different viewpoints:

We try our best to be broad minded and think of every aspect we can and be inclusive of everyone but when you get that, groups that have specific skills, like an OT group, then you can really draw upon experiences then that we as individuals or we as a staff might not have. It’s just kind of widening the knowledge pool to incorporate into our education program (B, 205-209).

Staff Person I commented about the significance of occupational therapy in a museum setting:

I think that educational, formal education, schools understand OT, some medical professions understand OT, I don’t think a lot of other professions know what you do at all, nor do they understand what you have to offer. We’ve been talking about this with some pride to our colleagues in the museum profession that this is
really a whole base of knowledge that is very relevant to what we do and that we are together, forging new territory, figuring out where this can go (I, 388-391).

Staff Person F agreed that the museum benefited from the interaction with students, but also stressed the importance of a mutually beneficial experience:

We seek expertise that we don’t have, with the occupational therapy knowledge that the department and students had, that’s expertise that we may not have had….It’s not only creating stuff ourselves but trying to bring in others to learn and use the resources that we have. It’s part of that too, giving you guys an opportunity (F, 334-344).

The museum staff is constantly searching for fresh perspective to best meet the needs of the community members. Additional insight aids in formulating innovative ideas to regularly improve the museum learning environment. Collaboration between staff and students provided both parties with new knowledge and experience that could not be gained elsewhere.

_Provides evidence (verification)._ In order to provide museum staff with recommendations supported by evidence, students researched how to meet the learning needs of community members in the most effective way. Though the moderator did not ask specific questions about research utilized in the museum, museum staff spoke about the value they found in the evidence presented by students.

Staff Person I reported:

I think we’ve intuitively tried to create multisensory experiences for visitors but not necessarily with the training or science that goes behind it. And I think one of the benefits we’ve received by working with you guys is that you have the research behind it so that there can be a method to what we otherwise would just do an ok job at because we’re thinking in the right direction but without all the training (I, 221-225).

Staff Person H added:

That’s also verification that what we’re doing is worth it (H, 228).
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Staff Person E reflected on student recommendations:

As we looked at many of these exhibits and have many exhibit projects, we’ve designed a lot of different touch points for the visitor to go through, ways to create an environment, creating the mood with lighting, with sound, with label texting, we’ve had these things in mind but this helps give us another set of checkpoints. More than that, it focuses and directs us in a way that we’re thinking about other reasons for these particular design goals (E, 213-218).

Many staff members commented that while they typically utilized multiple components to appeal to learners, they did not know that there was theory or research behind the concept. Additionally, staff did not know about accessibility guidelines but knew guidelines had been considered by the original architect when creating a plan for the building. All staff members agreed they had learned many new concepts and were impressed with the research used to validate their work.

*Museums need to be able to gage community needs.* Museums must be able to assess community needs in order to provide a successful learning environment from which all community members can benefit. In order to do so, museums provide multiple forms of learning to stimulate education at every level of ability. The following responses demonstrate considerations behind creating an exhibit:

If you want to read the book you can just read the book but what we’re trying to create are experiences (F, 77-79).

I think one of the challenging things about exhibits is trying to find out what’s really going to touch the audience, what’s really going to hit them (E, 83-84). Somebody might be totally shut down because there’s too much stuff on the wall, but the rest of us might just walk past the label (I, 95-97).

Additional responses reflected staff desires to continuously meet the changing needs of community members. Many responses reiterated the value of learning on every level and the importance of benefiting diverse populations. Furthermore, all staff
members demonstrated a clear understanding of universal design for learning and the benefit of structuring an environment to produce the best experience for all individuals.

**Theme III: Service-Learning**

Throughout the focus group, museum staff spoke about their experiences with GSVU OT students during the service-learning project in positive light. Upon reflection of museum staff responses, the theme of service-learning was divided into subthemes which allowed researchers to provide depth of analysis of the service-learning project. The subthemes include: successful experience and anticipation of future collaboration.

**Successful experience.** A successful experience is one in which satisfaction from involved parties is an outcome. The following are reflections about the service-learning project that portrayed that it was a successful experience:

They (the students) really heard what we were trying to do and took their knowledge base of occupational therapy and altered it for the setting and customer that we were (I, 359-361).

Your work has put us in a really good place to move things forward (F, 400). I was pretty jazzed up about it (B, 316).

In addition to success, the group was in mutual agreement that the students met the needs of the museum and expectation of the staff.

When asked to evaluate student performance, Staff Person I stated:

In terms of the quality of what you guys have been doing I think you’ve exceeded expectations (I, 403-404).

Staff Person B added:

I was really impressed with the professionalism that all of the students brought in… and the advisors and professors. The goods were delivered when and how they said they would be. There was very little contact from the overview meeting and what we were thinking of, to some follow-up, and then that final presentation. I thought you guys really spent time and put in the effort to dig deeper and it was presented in a really professional way (B, 407-412).
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Staff also stated that they were satisfied with the results of the service-learning project, many student recommendations were utilized, and additional knowledge was gained to enhance the learning environment.

**Anticipation of future collaboration.** The museum staff was very pleased with the end result of the service-learning project, as well as the knowledge they gained from working with the students. Many vocalized their excitement about potential future projects with the GVSU students.

Person E stated:

(Student could help with) ideas of what we want the message that we want to get across (to be), some thoughts about how we would do that, and then there are different steps of evaluation, from my point, for us here to actually look at this, building it, and making sure it works and continue to function properly. And everything that comes from the occupational therapists perspective goes into that too. That’s one thing I think we could partner on.

Staff Person I mentioned specific projects:

I have two project areas that we’ve talked a lot about that I think have potential for us to collaborate on and both really involve creation of new active learning spaces in the museum. Creating a hands-on science laboratory…..and taking our classroom experiences out of a box with four walls, and sort of create active learning centers that are in the midst of those exhibits. There is potential and there is challenge in that. How do we create a classroom-y experience in the middle of an exhibit that’s not overwhelming and how do we make use of it in the exhibit so that it’s enhancing. So I think that’s another potential design project.

Additionally, Staff Person I also spoke about other areas that might also benefit from collaboration with OT students:

There are a whole lot museums, and zoos, and nature centers, and sculpture gardens out there and if you can begin to prove the value of this for that sort of facility, I think it opens up your profession to a huge new segment and potential market (I, 431-433).
Many staff members vocalized excitement about innovative techniques, as well as “new ideas and new inspiration” (B, 260). All could see a benefit to the partnership with the occupational therapy students and were excited to work with them again.

**Summary**

The qualitative data analysis revealed rich information concerning museum staff perceptions about the GVSU student service-learning project as well as their overall comprehension of the field of occupational therapy and its relevance to the museum environment. The focus group allowed for gathering in-depth, comprehensive information which was analyzed through thematic coding. Researchers identified common themes and subthemes which provided insight into staff perceptions that are particular to these museum staff concerning the service-learning project of interest.
CHAPTER 5
DISCUSSION AND CONCLUSIONS

The purpose of this study was to explore the effectiveness of a service-learning (SL) project completed by Grand Valley State University (GVSU) occupational therapy (OT) students in collaboration with the Grand Rapids Public Museum (GRPM). This study sought to discover the perceptions of service-learning projects from community collaborators’ perspective. A qualitative focus group was used to gather data about the museum’s role in the community and in learning, occupational therapy’s role within community settings like the museum, and the use of service-learning projects to integrate the two. The researchers posed four questions: (1) What knowledge did the museum staff acquire from the GVSU students participating in the service learning project?, (2) Did the museum staff apply this knowledge?, (3) If so, how did museum staff apply this knowledge?, and (4) What results did the museum staff observe from the application? This chapter discusses the data in terms of these questions. The researchers address the significance of this data to future SL projects, higher education, and occupational therapy. In addition, the researchers highlight limitations of this study and suggestions for future research.

Discussion of the Findings

*Question (1): What knowledge did the museum staff acquire from the GVSU students participating in the service learning project?*

The researchers developed questions that probed the museum staff about their experience during the GVSU service-learning project. The museum staff reported that their knowledge of occupational therapy grew with each interaction they had with GVSU
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OT students, and that their understanding of how OT students’ training applies to community organizations like the museum keeps growing. Another staff member added that the GVSU students helped her integrate the way staff should be thinking and planning exhibits (F, 163).

Other knowledge that the museum staff gained from OT students included the concepts of multiple intelligences, sensory integration, multisensory learning, and universal design for learning (UDL). Before the SL projects, the museum staff reported that they did not have an understanding of what these concept meant or how to apply them to their practice of community education. During the focus group, there was a general discussion of “widening the knowledge pool,” and using the OT students as a way to guide the development of exhibitions (B, 209-210). The staff discussed how they use experts for topics they are unfamiliar with, and during the SL projects, the OT students were the experts on these important concepts relating to ways of learning. Subsequently, the museum staff addressed the need for research. Research is needed in each aspect of the museum and exhibit development; the OT students brought with them the research that supported the proposed suggestions.

*Question (2): Did the museum staff apply this knowledge? and*

*Question (3): If so, how did they apply this knowledge?*

Throughout the focus group the museum staff discussed ways they used the knowledge and expertise provided by the GVSU OT students. The staff implemented many of the concepts of universal design for learning through physical adjustments to exhibits and to plans for future exhibits (such as aspects of text, floor surfaces, lighting, and artifacts to touch and experience). One staff members stated that a benefit of working
with the students was, “the concept that if we greatly improve the experiences we provide for those people with sensory learning deficits, we are also improving them for all of our visitors,” (I, 198-200). The staff also mentioned the use of social stories before the visit and post-visit to make a well-rounded experience, which was a suggestion of the OT students (B, 277).

The main barriers to implementation of student suggestions were not that the suggestions were invalid or not applicable; the barriers were frequently related to funding or lack of space. The focus group revealed this concept on several occasions and it became a theme of the focus group. As one GRPM staff person stated, “those ideas were still valuable, we may or may not be able to implement them,” (I, 294). The museum staff viewed the SL project as having a financial benefit (additionally to the aforementioned benefits) because students were providing a service at no cost, and the museum was providing a learning environment for the students – helping them to fulfill their mission of community service.

A non-traditional application of the knowledge OT students brought was represented through interactions. Many of the staff stated that they learned new ways to interact with a variety of populations. They stated that the OT students either validated what was currently happening within the museum, or brought a novel way to connect to the museum’s audiences. This was encouraging to the museum staff.

Question (4): What results did the museum staff observe from the application?

After the service-learning project and implementation of suggestions, the staff observed changes within the environment, the populations being served, and their own perceptions regarding the needs of their constituents. They gained additional and broad
perspectives about the ways they can interact to best meet the needs of the most people within the community. The staff reported that this experience will continue to shape their future exhibit designs and that there are possibilities for further occupational therapy services within the museum.

The museum staff also reported that they have been discussing the project and use of occupational therapy with other museums. “This is really a whole base of knowledge that is very relevant to what we do and that we are together, forging new territory, figuring out where this can go,” said one staff person (I, 388-391). This is a statement of the impact the museum staff observed after the SL projects. If they are excited about sharing the experience with those who are unaware of related projects, the benefits must be substantial. Another staff person addressed that the SL project paralleled the Partnership for 21st Century Skills, an organization that advocates to adequately prepare students. The SL project helped the GRPM meet the standards of this organization. Consequently, the museum staff reported that they have seen positive changes in staff enthusiasm regarding the information and suggestions students gave.

**Application to OT Practice/Education**

This study and its results are significant to occupational therapy higher education, future service-learning projects, and opportunities for the profession of occupational therapy as a whole.

First, this study provides support for the use of experiential learning in occupational therapy higher education. Student experiences were not gathered in this study because student involvement and perceptions of the SL project had already been addressed within reflections upon completion of the project. However, this previous data
combined with the reports of museum staff support the mutually beneficial relationship that developed as a result of the SL project. Not only did students gain valuable hands-on, practical experience, they were able to work with real situations. Community collaborators, in this case the GRPM staff, received a valuable service that benefits their mission in a variety of ways. The staff also reported that simply engaging in the SL project contributed to their goal of facilitating learning. Normally this learning is interpreted within the context of exhibits, but facilitating the GVSU OT students’ exploration allowed the museum staff to teach in a new way (and be taught). As Hoppes et al. (2005) state, service-learning projects require “win-win relationships” with their community collaborators; this was accomplished in the interactions between the GRPM and the GVSU students.

Other benefits of this study to higher education practice include the immersion of students into the learning environment, the enthusiasm students brought to the experience, and the professionalism necessary to be successful in a project like the one studied. All of these aspects create a unique experience that cannot be taught inside a traditional classroom. Service-learning projects blur the lines between “us and them,” and reward genuine partnerships (Ward and Wolf-Wendel, 2000). The SL project explored during this research study sparked a partnership that has blossomed and continues to have benefits for the community collaborators and the students who are preparing to practice their profession in the real-world. The relationships that have developed because of this project are continuing to provide support to students seeking higher education degrees, with plans to continue doing so in the future. Students who engaged in the SL project gained insight into occupational therapy’s role in a non-traditional setting and developed
their professional reasoning – outcomes that Bazyk et al. (2010) predicted for OT students who engage in SL projects.

As discussed within the themes, museum staff anticipated that future SL project opportunities will be beneficial. The staff reported that after each SL project, they discussed the experiences (proudly) with other museum cohorts in various regions. During the focus group interview, they suggested possibilities for future projects within their organization as well as for other community learning environments such as sculpture gardens, zoos, and nature centers. The unsolicited enthusiasm from the museum staff for future service-learning projects indicates not only the possibility for future SL projects, but the necessity for them. The researchers interpret these findings as substantial. As this research project concludes, *OT Practice* magazine highlighted one museum and how COTA students have modified exhibits to better facilitate engagement for children with impairments (Waite, 2012). The need for occupational therapy within community settings, such as museums, is becoming more apparent. Exposure to the varying needs of community members and the responsibility of these organizations to meet those needs is increasing the search for experts who can provide improvements. Occupational therapy students and practicing therapists are showcasing, through projects like this, that they can be those experts and meet the needs of community members.

For occupational therapy as a whole, this study validates community practice and the possibilities for OT practice within well populations (those without traditional disabilities). Traditionally, occupational therapy has had a place in mental health and medical settings. The face of healthcare is changing to one of prevention and universal design. This study provides evidence for occupational therapy’s expertise within these
models of practice. Occupational therapists bring an understanding of human functioning within contexts and how to optimize this functioning. These areas of knowledge contribute to a holistic view on how to prevent physically and socially imposed barriers to learning and functioning. During the SL project of interest, function was viewed as learning within the museum. The researchers believe that data from this study contributes to the body of evidence supporting OT practice in other community environments in which various populations function. Not only has this study highlighted successes in service-learning for occupational therapy, it underscores the vast opportunities that may exist for service-learning projects that benefit students and a wide variety of community organizations.

**Limitations**

There are several limitations provided by this type of data collection that researchers were unable to avoid. The knowledge produced from qualitative data cannot typically be generalized, so the information that was gathered is unique to this study. One limitation was a small sample size. The focus group was conducted at a senior staff meeting, so only nine employees were able to attend. All those in attendance had some sort of experience with the Shipwreck exhibit and GVSU students, but eagerness to respond might have been affected by their knowledge base and amount of interaction they had with the exhibit and the students. Other employees (general staff) were not invited because the museum contact wanted responsibility for recruiting members, which may have skewed discussion responses. Other employees with more experience may have worked with the students during the SL project, or with the exhibit that could have provided additional insight but were not included. Attendees were highly encouraged by
the museum director to stay for the focus group, so responses may have been inflated due to his presence.

Focus groups often provide limitation in data credibility (Creswell, 2009). Researchers learned what the GRPM staff said, but there is no guarantee that this is what they actually thought or felt. Because of the partnership between the two groups at hand, focus group attendees may provide overstated answers to maintain a positive relationship with the university. Additionally, a few individuals dominated the group, responding in length to each question, while some did not respond to any (Steward, Shamdasani, and Rook, 2007).

The tool utilized to collect data was created by the researchers, which was not a standardized data collection method. The reliability and validity of the questions developed by the researchers were not established beyond the pilot study. The questions were created for a very specific group, so it can only be used to assess perceptions related to museum staff, occupational therapy students, and a service-learning project.

Prior to participant recruitment, researchers hoped to acquire approval from the Grand Valley State University Human Research Review Committee to proceed with the study. The researchers submitted their proposal to be approved by the committee, but were informed that the research did not meet the federal standards for human research because it was primarily a program evaluation and human contact did not provide any sort of threat or risk. The committee was provided with additional information about the research project, but the committee stated that the scope was small and did not qualify as research under their set of standards. Although the researchers did not receive approval
from the HRRC, they were advised to continue with their research project to provide groundwork for future studies.

Another limitation of the study is that the researchers were not directly involved with the service-learning project. They did not visit the exhibit that had been modified through the GVSU service-learning project because the project had been completed prior to the researchers’ entrance into the occupational therapy program. If the researchers had been a part of the project or directly viewed the results, they may have acquired more information to further develop research questions and might gained more in-depth, specific responses.

The last limitation is that the researchers had limited experience conducting focus groups. Researchers had held focus groups in the past and sought advice from an experienced professional but would still be considered novice moderators.

**Suggestions for Further Research/Modifications**

The researchers recommend that further research be conducted to evaluate service-learning projects and perceptions of community partners, as well as occupational therapy and its role in community settings. While there is a large amount of research examining the educational benefits of service-learning, little has been done to address the perceived benefits and limitations of the community partners. Additional research is necessary to add to the evidence-base to support the continuation and adoption of service-learning projects higher education, as well as to support an emerging area of practice for occupational therapy practitioners.

It is important to address the need to assess the participant perceptions of service-learning projects to illustrate the mutual benefits and gain more support from both
SERVICES-LEARNING

communities and educational institutions. Researchers suggest that future studies expand
the scope of research and ask more probing questions to a larger number of participants
to provide more in-depth results of how and why collaborators may benefit from
participating in service-learning projects.

An implication of focus groups is that there may be one or two dominant
participants, so personal interviews may be used in the future in order to ensure
participation from each involved person. It is also suggested that a quantitative
component be added to provide additional concrete evidence. An example might be to
track the amount of student suggestions utilized after the service-learning project or
adding a survey to supplement the interview component.

Additionally, service-learning projects’ effectiveness should be compared to each
another to determine which approach is most beneficial for the students and the
community partners. The researchers hope that future research will support occupational
therapy as an emerging area of practice in community settings, as well as service-learning
as an educationally rich experience for students and community partners.

Conclusion and Summary

In conclusion, this study demonstrated the success of the GVSU service-learning
project in the GRPM as perceived by museum staff, as well as the relevance of
occupational therapy to the museum setting. This study has also provided direction for
future research to explore the needs of community members, generate future service-
learning projects, and evaluate the experiences of those involved. The current study
uncovered several themes in order to analyze the perceptions of museum staff in regards
to service-learning, occupational therapy, and it’s place in the museum setting. The data
SERVICE-LEARNING

analysis revealed the perceived experience of museum staff members involved in the GVSU service-learning project, and what specific factors influenced their experience. Overall, staff reported the experience as highly successful because of the amount of knowledge they gained from occupational therapy students and its relevance to the museum setting. Additionally, staff vocalized excitement and anticipation for future projects within the museum and generated additional ideas about other community institutions that might benefit from occupational therapy. Further research must be done in order to gain further insight into the perceptions of all staff members to make complete generalizations, but this current study provides groundwork for future studies.
REFERENCES


Cleghorn, S. (2011) *Service-Learning PMGR Shipwreck Exhibit Proposal Assignment.* Unpublished manuscript, Grand Valley State University, Grand Rapids, MI.


SERVICE-LEARNING


APPENDIX A

Moderator Script

The following script will be used to guide the discussion about the Grand Rapids Public Museum’s collaboration with Grand Valley State University’s occupational therapy students.

Good morning. Thank you for taking time to meet with us. The purpose of this focus group is to have an open discussion about the perceived benefits and drawbacks of service-learning projects in public museums.

Last year, some of you and your staff witnessed a service-learning project in which GVSU occupational therapy students came into the museum and assessed the design of the Shipwreck exhibit. Then students made recommendations based on the premises of universal design for learning.

Our goal is to learn from you about that project, what you learned, if and how you applied their recommendations, further suggestions you have that may benefit the process of future service-learning projects, and more.

We have developed some questions to guide the discussion. Feel free to add any thoughts or feeling you have, regardless if they are positive or negative. Also, do not feel compelled to answer every question.

Let’s begin.

What’s your favorite exhibit in the museum and why?

What is most challenging in developing an exhibit?

Please fill in the blank: The most important purpose a museum has is ______

…because ____________________________.

Can you please define your understanding of service-learning?

Did you know what occupational therapy was before the service-learning project? And if “yes,” did you think that occupational therapy could have a role in museums?

Universal design for learning or “UDL” is a set of principles for curriculum development that give all individuals equal opportunities to learn. Since each individual brings a different set of skills and needs to the learning environment.

How do you think the service-learning project with GVSU student fits with the concept of universal design for learning?
In what ways do you think the Grand Rapids Public Museum incorporates a “universal design” for all of its patrons?

Which of the suggestions offered by the GVSU OT students were implemented?

How did the Grand Valley students who conducted the needs assessment during the service-learning project meet your needs as museum staff and administration?

What strategies did the students use to assess your desires and address if those desires were met after the project?

One criticism of service-learning projects is that they serve the needs of the students but may not adequately serve the desires of the community partners. In this case, you (the museum staff) and the GRPM stakeholders are the community partners. In what ways do you feel that the SL project benefitted the museum and/or its staff?

If you were talking to other museums about the SL project, what would you say about the quality of work and the relevancy of the work done by the GVSU OT students?

How do you feel the OT students accomplished the goal of “collaborating” with you to fill their need of hands-on learning?

How do you feel the OT students accomplished the goal of “collaborating” with you to fill your need of an assessment for universal design for learning (UDL)?

Would you invite Grand Valley State University occupational therapy students to participate in another collaborative project with you?

*Elaboration questions that may be used throughout the focus group:
Can you tell me why you feel/think that?
What does that mean to you?
In what way? Can you elaborate?
Do you have anything else?
APPENDIX B

Participant Consent Form

TITLE: The Effectiveness of Service-Learning

SPONSOR: Grand Valley State University

RESEARCHERS: Lauren French, OTS and Linnea Petzke, OTS

RESEARCH ADVISOR: Susan Cleghorn, OTR/L

PURPOSE: The purpose of this study is to explore how well the needs of a community museum were met during an occupational therapy program service-learning project. A qualitative study design will be used because the researchers are striving to gain insight into the experience and perceptions of the museum staff.

PROCEDURES: A focus group will be led by the researchers. Questions will be asked to gather information about opinions of museum staff members.

RISKS: There is minimal risk to participating in the study. All opinions, positive or negative, are valued by the researchers.

POTENTIAL BENEFITS TO YOU: Results from this study will guide future occupational therapy students’ participation in service-learning projects at the Grand Rapids Public Museum.

POTENTIAL BENEFITS TO SOCIETY: Moreover, this data will be beneficial in determining if community partners receive satisfactory results from participation in service-learning projects.

VOLUNTARY PARTICIPATION: It is entirely your choice whether or not you take part in this study. Your choice will not change your relationship with Grand Valley State University or with the Grand Rapids Public Museum. If you chose to attend the focus group, you have the choice of not answering any of the questions and you may leave at any time.

PRIVACY AND CONFIDENTIALITY: Your name will not be given to anyone other than the researchers. All of the information collected will be kept private to the greatest amount allowed by law. In very rare situations university or government officials may be allowed to look over research records. This is only done to further protect participants’ rights and safety.

RESEARCH STUDY RESULTS: If you are interested in the study results, you can call or e-mail either of the researchers listed below.
PAYMENT: There will be no payment for participation in this study.

AGREEMENTS TO PARTICIPATE:
By signing below you are agreeing to the following:
- The details of this research have been explained to me. Details include what I am being asked to do, as well as the possible risks and benefits to me;
- I have had a chance to have my questions answered;
- It is entirely my choice to take part in this study;
- I may ask more questions or quit this study at any time without punishment.

________(Initial here) I have been given a copy of this form for my records.

Print name: __________________________________________

Sign name (in ink): __________________________________________

Date signed: __________________________

If you have any questions or concerns about this study, please contact the researchers:
Lauren French
PHONE: 810-938-2055
E-MAIL: frenchla@mail.gvsu.edu

Linnea Petzke
PHONE: 269-930-2705
E-MAIL: linneapetzke13@hotmail.com

Susan Cleghorn
PHONE: 616-331-2799
E-MAIL: cleghors@gvsu.edu

If you have any questions about your rights as a research participant, please contact the Research Protections Office at Grand Valley State University, Grand Rapids, MI.
PHONE: 616-331-3197
E-MAIL: hrrc@gvsu.edu
APPENDIX C

Audit Trail

Initial Codes – 10-03-12
(a) multiple forms of learning, (b) immersed in learning, (c) more ideas than money, (d) inspiring people to think and engage in new ways, (e) service-learning is collaboration, (f) occupational therapy gives museums a broader perspective, (g) occupational therapy gives helpful suggestions for the way museums do things, (h) museums need to be able to gage community needs, (i) occupational therapy gives verification to the museum, (j) students brought new perspectives, freshness, and passion to the museum, (k) funding limits which student suggestions are carried out, (l) the service-learning project created an experience that was successful for everyone, (m) occupational therapy students exceeded expectations of work and professionalism, (n) the staff enjoyed the service-learning project, (o) the service-learning project made the staff excited for possible future projects

Integration of Codes – 10-11-12
Engaging/Learning
Collaboration
Research
Mutually Beneficial Experiences
New Perspective
Staff Reflection
Future of Service-Learning Projects

Themes– 10-12-12
Learning Environment
Occupational Therapy in Museum
Service-Learning