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## AN EMPLOYEE PERSPECTIVE OF SERVICE IN AN OUTDOOR EDUCATION ORGANIZATION: A MEANS-END STUDY

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## Introduction

This research examined staff perceptions of the outcomes and values of service in an outdoor education organization through an approach known as means-end analysis. Means-end analysis provides a framework to identify and explore the interrelationships among the important attributes, consequences (i.e., benefits and outcomes), and values of a product or service (Gutman, 1982; Klenosky, Gengler, & Mulvey, 1993). Typically, the means-end approach has focused on decision-making behavior of consumers. More recent applications have used the approach to understand the outcomes associated with ropes course programming (Goldenberg, Klenosky, O'Leary, & Templin, 2000) and the components of an Outward Bound experience (Goldenberg, McAvoy, & Klenosky, 2005). The present study expands means-end research by applying the approach to examine perceptions of the service component of Outward Bound's outdoor education programs. Service projects have been one of the key foundations of the Outward Bound organization; and these projects have become increasingly recognized as key vehicles to augment learning experiences in a variety of outdoor education and general education settings.

Given the limited amount of research that has been conducted in this area, the present study examines perceptions of the role and value of service programming among staff members of the Outward Bound organization. The paper begins by providing an overview of the role of service in Outward Bound, the value of service-learning in general, and the key ideas underlying meansend analysis. Next we present the methodology and results of our empirical study. Finally, we conclude the paper by discussing the contribution of the study results for practice and future research efforts.

## Background

## Service and Outward Bound.

Outward Bound was founded on the philosophy of Kurt Hahn that stresses the principles of balance between fitness, skill, initiative, perseverance, respect, and service (Martin, 2001). As time and educational language have evolved, the principle of service has remained a part of all Outward Bound educational process models. Bacon (1983) listed the components of his Outward Bound Metaphorical Model to be skills training, stress/hardship, problem solving, community service, reflection, and evaluation. Some examples of service projects within Outward Bound programs include river restorations, rescue operations, fighting fires, and building community centers for indigenous people on an island near French Burrow (Outward Bound USA, 2004).

Hahn's original approach to education was not only experience-centered, but was value-centered (Martin, 2001). Service projects within Outward Bound have evolved, by branching out from the traditional service in an outdoor setting, to also incorporate urban community projects. One such

example was the North Carolina Outward Bound School, who cooperated on service projects with a local Boys and Girls Club, homeless shelter, and food bank (Outward Bound USA, 2004).

The creation of a service ethic seeks to satisfy a variety of Outward Bound Core Principles. In addition to the principle of service and compassion, a service ethic can reinforce the other five components of challenge and adventure, inclusion and diversity, social and environmental responsibility, character development, and learning through experience (Outward Bound USA, n.d.). A service ethic has been defined as an individual's positive outlook and his or her desire to provide services to others that may lead to an enhanced sense of self-worth and self-esteem (Tang & Weatherford, 1998). This definition further supports the claim that service can be the vehicle for character development and social responsibility in an Outward Bound program.

Outward Bound programs use a variety of facilitation methods, including reflection activities following service experiences, to help students fully understand the curriculum and transfer new-found knowledge to their daily lives. Reflection is essential to both experiential-learning and its more focused relative, service-learning (Bacon, 1987). Service learning has been linked to positive development in adolescent youth including social responsibility, compassion for others, and personal and academic achievement (Scales, Blyth, Berkas, & Kielsmeier, 2000).

#### Service Learning

Service as an educational tool is not unique to Outward Bound and is often referred to as servicelearning. The term 'service-learning' was first used in the 1960s during a time when social movements began to challenge the relevance of traditional university practices (Lounsbury & Pollack, 2001). Various educational entities have debated the actual definition of service learning, but the Commission for National and Community Service defined service-learning as a method:

- A) under which students learn and develop through active participation in thoughtfully organized service experiences that meet actual community needs and that are coordinated in collaboration with the school and community.
- B) that is integrated into the students' academic curriculum or provides structured time for the student to think, talk, or write about what the student did and saw during the actual service activity.
- C) that provides students with opportunities to use newly acquired skills and knowledge in real-life situations in their own communities; and
- D) that enhances what is taught in school by extending student learning beyond the classroom and into the community and helps to foster the development of a sense of caring for others (Waterman, 1997, p. 2).

Several other definitions of service-learning seem well suited to the Outward Bound Curriculum. For example, Jacoby (1996) suggested: "Service-learning is a form of experiential education in which students engage in activities that address human and community needs together with structured opportunities intentionally designed to promote student learning and development" (p. 5). Service-learning has also been more narrowly defined as a course-based, credit-bearing, educational experience that involves reflection on that service to gain further understanding of course content, a broader appreciation of the discipline, and an enhanced sense of civic

responsibility (Bringle, Hatcher, & Games, 1997). Another definition worth considering is "an educational activity, program or curriculum that seeks to promote students' learning through experiences associated with volunteerism and community service" (Sheckley & Keeton, 1997, p. 32).

Documented outcomes of service and service-learning include increased civic responsibility and leadership; moral, social and emotional development; and heightened critical thinking and problem-solving skills (Astin & Sax, 1998). Service to others has been found to satisfy several of Maslow's Hierarchy of needs, such as social, self-esteem, and self-actualization (Maslow, 1954; Porter 1961; Tang & Ibrahim, 1998; Tang & West, 1997).

Other researchers have documented the value of the service-learning models as a means to increase student awareness of social problems or their own biases (Blyth, Saito, & Berkas, 1997). Wang, Greathouse, and Falcinella (1998) found that service learning programs enhanced self-esteem for elementary and secondary students. In addition, students reported advancing in more practical ways through the acquisition of particular skills (Blyth, Saito, & Berkas, 1997).

#### Means-End Theory

Means-end theory was first developed by Gutman (1982) as a framework to understand the different meanings consumers associated with the products and brands they purchase and consume. Early applications of the theory focused on consumer purchase situations, such as selecting a greeting card (Walker & Olson, 1991), choosing among alternative recreation and travel destinations (Klenosky, Gengler, & Mulvey, 1993; Klenosky, 2002), and more recently purchasing organic wines and foods (Fotopoulos, Krystallis, & Ness, 2003; Baker, 2004). Means-end theory has been applied to the field of outdoor education in studies that have examined ecotourists' preference for interpretive programs (Klenosky, Frauman, Norman, & Gengler, 1998), the factors that influence greenway/trail use (Frauman & Cunningham, 2001), the outcomes from ropes course programming (Goldenberg, Klenosky, O'Leary, & Templin, 2000), and perceptions associated with the components of Outward Bound programming (Goldenberg, McAvoy, & Klenosky, 2005).

Means-end theory focuses on the interrelationship among attributes, consequences, and values, as three levels of abstraction (Goldenberg et al., 2000). Attributes, viewed as being relatively concrete, refer to the characteristics or features of the product, object, or activity. For a service project, key attributes would include the length of the project, location of the project, activities involved, and working on the project with members of the community. Consequences, which refer to the outcomes associated with particular attributes, are viewed more abstractly. Consequences can refer to positive benefits or negative perceived risks or costs. For example, the positive consequences associated with service for an outdoor education staff include the benefits carrying out the organization's mission, develop character, gain knowledge/awareness, increase participation, and make a social contribution; while the negative costs or risks could include the time, uncertainty, and chance of injury. Values summarize desired end-states of being and are viewed as being highly abstract (Goldenberg et al., 2000). Examples of values for staff from a service organization included altruism, community awareness, compassion, fun and enjoyment of life, self-awareness, self-improvement, world improvement, warm relationships with others, and a sense of accomplishment.

Means-end theory views attributes, consequences, and values as being fundamentally interrelated. According to the theory, the attributes of the product or service represent the "means" that leads to the consequences and values, or "ends". This sequence of relationships that link attributes with consequences and consequences with personal values are summarized in the form of a simple model of associated meanings called a means-end chain. As an example, a means-end chain might link an attribute of a service program, such as work with others in the community, to the consequences contribute to society and do good in society (civic responsibility) that then lead to the values of self-improvement and world improvement.

Means-end data are typically collected using a qualitative method developed by Reynolds and Gutman (1988) known as "laddering." In laddering, subjects are first asked why they feel the particular product or service in question is important to them. The response to this simple "why" question typically results in a consequence that explains why that attribute is important. The subject is then asked why that consequence was important. This process of "laddering" off the response given is repeated until the subject cannot go on or mentions a value. In this way, laddering leads subjects up a "ladder of abstraction," eliciting responses that link concrete attributes to the consequences that help explain why those attributes are important, and ultimately to the highly abstract personal values that help explain the relevance of those consequences (Klenosky et al., 1993).

Laddering data can be collected in a variety of ways including through personal interviews (Klenosky et al., 1993; Klenosky, Templin, & Troutman 2001; Klenosky, 2002; Reynolds & Rochon, 1991; Roth, 1994), via telephone interviews (Bagozzi & Dobholkar, 1994), or using a self-administered survey approach (Goldenberg, Klenosky, O'Leary, & Templin, 2000; Hofstede, Audenaert, Steenkamp, & Wedel, 1998; Pieters, Bottschen, & Thelen, 1998; Walker & Olson, 1991). In the present study, examining perceptions of service among Outward Bound employees, the personal interview approach was used.

#### Methods

#### Data Collection Procedures

The data were collected during the summer of 2004 through personal interviews conducted by the principal investigator. These interviews took place in Outward Bound program sites in the United States, which included five wilderness schools and several urban centers. Convenience sampling was used to reach employees available on-site during the time of the interviews. Potential subjects were approached by the principal investigator during their normal work routines and asked to participate in a ten-minute interview regarding service and Outward Bound. Demographics questions were first asked, followed by their views on service and their definition of service. In this latter part of the interview subjects were first asked why they felt service was an important component of Outward Bound programs. This basic laddering process of laddering off the response given continued until the subject could not go on or mentioned a value.

The 78 respondents that participated in these interviews were employees of the various Outward Bound schools at the time of the interview. Respondents ranged in age from 20 to 72 years old. Approximately half (46%) of the respondents were females. Most (88%) were white or

Caucasian. Over a third (37%) had worked for Outward Bound for 1 to 5 years, 27% between 6 and 10 years, 18% between 11-15 years, and 18% of the respondents had worked for Outward Bound for 16 or more years. Respondents held diverse positions ranging from Program Director (35%), to Instructor (26%), Administrators/Executive Director (24%), and Course Director (14%). All 78 respondents believed that service was important to Outward Bound.

#### Data Analysis

The data from each participant were entered into LadderMap, a computer program developed by Gengler and Reynolds (1995) to facilitate the analysis of laddering data. The initial step in LadderMap involved entering the verbatim responses for each subject's ladders into a data file. As each ladder was entered, a separate entry was made for the individual elements making up that ladder. As each element was entered, it was given an initial classification as being either an attribute, consequence, or value. After all of the verbatim responses were entered, two researchers then worked together to create content categories of consequences and values to help group the data. To assure accuracy, the ladders were coded based on the content categories and reviewed by a third independent researcher. An analysis of inter-coder reliability of 77%; and disagreements were resolved by the two original researchers. After this process was completed, a fourth researcher reviewed the data.

The content categories that resulted from this process included the consequences: build teamwork, carry out Outward Bound mission, develop character, gain knowledge/awareness, increase participation, make a social contribution, and more interest/influence of Outward Bound. The values that emerged included: altruism, community awareness, compassion, fun and enjoyment of life, self-awareness, self-improvement, sense of accomplishment, warm relationships with others, and world improvement.

Once the data had been coded, an implication matrix was created. An implication matrix is a table that summarizes the number of times concepts were linked together in subjects' ladders. Cutoff values are selected then selected to identify the dominant relations among the concepts included in the implication matrix. At a low cutoff value, such as one, all concepts that were associated together at least once in respondents' ladders would be included for further analysis, while at a higher cutoff value, such as five, only those relations associated together at least five times would be selected. In laddering research, the final step is to summarize the relations identified using a summary diagram called a hierarchical value maps (or HVM). (details on the steps involved in constructing HVMs can be found in Reynolds & Gutman 1988; Klenosky et al., 1993; Klenosky, 2002). In this paper, two HVMs were created to summarize the means-end relations associated with two key consequences that emerged during the analysis of the study data. Consequences in the HVMs are depicted with initial capital letters and the values are in all capital letters.

## Analysis and Results

## Service Definitions

All respondents were asked to indicate how they would define service. Respondents' responses included definitions such as "the opportunity for people to give back to the environment and society by volunteering their time and skills," "to take action to contribute/help the good of others, having a larger purpose," "response to a need, comes from the heart," or a "commitment to making a difference." These definitions provide Outward Bound administrators with an indepth view of employees' perceptions of service and demonstrate the diverse and general nature of the definitions held by different employees.

#### Laddering Results

The two HVMs that were created focused on the consequences of "increase participation" and "make a social contribution." The HVM for "increase participation," which was created using a relatively high cutoff value, resulted in initial links to two other outcomes "make a social contribution" and "increase enrollment." The chain of meanings for "make a social contribution" in this HVM indicated links to the values "self-improvement" and "world-improvement;" while the chain linked for "increase enrollment" resulted in links to the consequence "more are interested/influenced by OB," and then to the value "world-improvement."

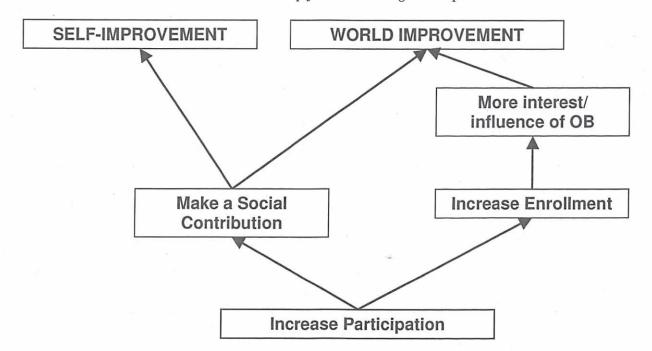
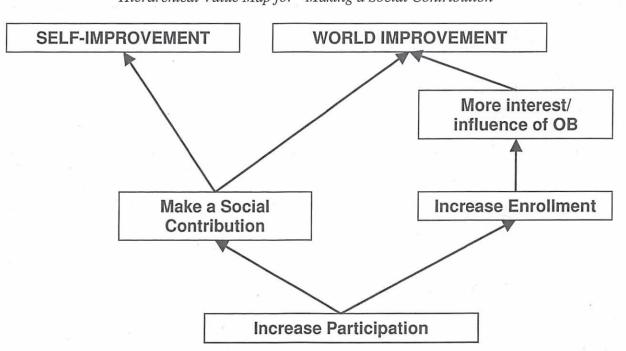


FIGURE 1 Hierarchical Value Map for "Increasing Participation"

Additional analysis was conducted to provide further insight into the consequence "make a social contribution." In practice this was done by selecting a lower cutoff level and examining only those concepts associated with the concept in question – in this case "make a social contribution." The result of this more detailed analysis, depicted in Figure 2, revealed that the values of "altruism," "compassion," and "fun and enjoyment of life" were also linked to "make a social contribution," in addition to the values of "self-improvement" and "world-improvement,"

which were also mentioned in Figure 1. The additional detail in this HVM shows that "making a social contribution" also leads to the consequence "gain knowledge/awareness," which leads to the consequences "compassion" (i.e., having more compassion for others), and "character development," which was linked to the values "self-improvement" and "fun and enjoyment of life."





#### Discussion

The purpose of this research was to develop a better understanding of the role and value of service as a component of outdoor education programs among the staff members of Outward Bound schools in the United States. While the study focused on perceptions of service among Outward Bound employees, useful insights emerged that should be applicable to similar outdoor programs that incorporate a service component in their curricula. The findings are useful for future programming because they help organizations understand what is demanded of a particular program in order to achieve a desired value. For example, according to the data from this study, if Outward Bound provides participants with an opportunity to make a social contribution and gain an awareness of their community, participants may feel that their world has been improved and they have improved as an individual.

This study builds on the existing body of knowledge regarding service in Outward Bound stemming from the 2004 service conference (Outward Bound USA, 2004). The findings from this study suggests that many of the documented benefits of service learning are present in the service component of Outward Bound, such as civic responsibility, social contribution, social and emotional development (Astin & Sax, 1998; Wang, Greathouse, & Falcinella, 1998), self awareness, and community awareness (Blyth, Saito, & Berkas, 1997). This information suggests

the possibility of using service learning theories and methodologies in Outward Bound programming and evaluation.

The study's results also suggest that a service component can lead to end states that benefit both participants and the global community. For example, frequently occurring consequences included building teamwork and making a social contribution. Nearly every value mentioned in the study has potential to benefit the community at large, such as altruism, community awareness, compassion, warm relationships with others, and world improvement. The findings also suggest a number of personal benefits arise from service in Outward Bound such as fun and enjoyment of life, self-awareness, self-improvement, and sense of accomplishment.

In conclusion, service was one of Hahn's six founding principles of Outward Bound (Martin, 2001), and despite over 60 years of evolving educational theory, it is still a valid component. Outward Bound staff members perceive service as a fundamental program attribute that leads to a variety of benefits to participants and the community at large.

## Implications

The research has valuable implications for service providers in the outdoor education industry. Organizations similar to Outward Bound could evaluate the significance of a service component and possibly modify their current program attributes in an attempt to achieve certain desirable end-states. Such organizations could also use this method of means-end analysis to evaluate attributes of their own programs that may or may not be related to service.

This information can also be used by any organization that values service. The data provide a critical understanding of employees' perception of service and the impact that service can have on participants. For Outward Bound the study reinforced the value of service as one of the six founding principles of the organization. This study demonstrated that the significance of service in Outward Bound programming is timeless and every bit as important today as in 1941 when Hahn first envisioned it. The personal interviews administered in this study also served as a reflective activity for many subjects that resulted in a new-found awareness of the importance of service of service and may contribute to an increased valuing of service in the future by the staff.

## Recommendations

This study provided valuable insight into staff perceptions of service, but a similar study examining Outward Bound participants' perceptions of service would also be useful in an overall evaluation of the role of service in this outdoor education organization. Furthermore, a longitudinal study of participants' perceptions of service would allow researchers to see not only how participants perceive service, but also how service in Outward Bound may affect their lives in the years to come. A comparative examination of different groups of outdoor education participants, such as youth at-risk or corporate/professional groups, could be useful in revealing the difference or similarity of outcomes.

## Summary

This study applied means-end theory and the laddering approach to examine the role of service to employees of an outdoor education organization. These findings suggest that service provides a number of important outcomes and reinforces a number of key organizational values, such as

making a social contribution, world improvement, and compassion. One key example of the linkages among these concepts shows that through service, Outward Bound staff members provide participants with an opportunity to make a social contribution and thus gain an awareness of their community. In doing so, participants improve themselves and make the world a better place. These findings reinforce the value of service as one of the six founding principles of the Outward Bound organization.

## References

Astin, A. W., & Sax, L. J. (1998). How undergraduates are affected by service participation. Journal of College Student Development, 39, 251-263.

Bacon, S. (1983). The conscious use of metaphor in Outward Bound. *Outward Bound Press*. Denver, CO.

Bacon, S. (1987). The evolution of the Outward Bound process. *Outward Bound Press*. Denver, CO.

- Bagozzi, R., & Dobholkar, P. (1994). Consumer recycling goals and their effect on decision making to recycle: A means-end chain analysis. *Psychology & Marketing*, 11(4), 313-340.
- Baker, S. (2004). Mapping the values driving organic food choice: Germany verses the UK. *European Journal of Marketing. (38)*8, 995-1012.
- Blyth, D. A., Saito, R. & Berkas, T. (1997). A quantitative study of the impact of service learning programs. In A. S. Waterman (Ed.), *Service learning: Applications from the research* (pp. 39-56). Mahwah, NJ: Laurance Erlbaum Associates.
- Bringle, R. G., Hatcher, J. A., & Games, R. (1997). Engaging and supporting faculty in service-learning. *Journal of Public Service & Outreach*, 2, 43-51.
- Fotopoulos, C., Krystallis, A., & Ness, M., (2003). Wine produced by organic grapes in Greece: Using means-end chains analysis to reveal organic buyers' purchasing motives in comparison to the non-buyers. *Food Quality and Preference*, 14, 549-566.
- Frauman, E., & Cunningham, P. H. (2001). Using means-end approach to understand the factors that influence greenway use. *Journal of Park and Recreation Administration*, 19(3), 93-113.
- Gengler, C. E., & Reynolds, T. J. (1995). *LadderMap* [Computer Software]. Camden, NJ: Means-End Software.
- Goldenberg, M., McAvoy, L., & Klenosky, D. B., (2005). Outcomes from the components of an Outward Bound experience. *Journal of Experiential Education*, 28(2), 123-146.

Goldenberg, M. A., Klenosky, D. B., O'Leary, J. T., & Templin, T. J. (2000). A means-end investigation of ropes course experiences. *Journal of Leisure Research*, 32(2), 208-224.

- Gutman, J. (1982). A means-end chain model based on consumer categorization processes. Journal of Marketing, 46, 60-72.
- Hofstede, F., Audenaert, A., Steenkamp, J., & Wedel, M. (1998). An investigation into the association pattern technique as a qualitative approach to measuring means-end chains. *International Journal of Research in Marketing*, 15, 37-50.
- Jacoby, B. (1996). Service-learning in today's higher education. Service learning in higher education. San Francisco, CA: Jossey-Bass, 2-25.

Klenosky, D. B. (2002). The "pull" of tourism destinations: A means-end investigation. Journal of Travel Research, 40, 385-395.

Klenosky, D. B., Frauman, E., Norman, W., & Gengler, C. (1998). Nature-based tourists' use of

interpretive services: A means-end investigation. *Journal of Tourism Studies*, 9(2), 26-36. Klenosky, D. B., Gengler, C., & Mulvey, M. (1993). Understanding the factors influencing ski destination choice: A means-end analytic approach. *Journal of Leisure Research*, 25(4), 362-379.

Klenosky, D. B., Templin, T. J., & Troutman, J. A. (2001). Athletic recruiting: A means-end investigation of student athletes' school choice decisions. *Journal of Sport Management*, 15(2), 95-106.

Lounsbury, M., & Pollack, S. (2001). Institutionalizing civic engagement: Shifting logics and the cultural repackaging of service-learning in US higher education. *SAGE*, *8*, 319-339.

Martin, J. M. (2001). Towards the next generation of experiential education programs: A case study of Outward Bound. Massey University, Palmerston North, New Zealand.

Maslow, A. H. (1954). Motivation and Personality. New York: Harper.

Outward Bound USA. (2004). 2004 Service Conference Working Paper. Garrison, NY: Goldenberg, M. & Malone, L.

Outward Bound USA. (n.d.). *Outward Bound Core Values*. Retrieved December 15, 2005 from http://www.outwardbound.org/philosophy.html.

Pieters, R., Botschen, G., & Thelen, E. (1998). Customer desire expectations about service employees: An analysis of hierarchical relations. *Psychology & Marketing*, 15(8), 755-773.

Porter, L. W. (1961). A study of perceived need satisfactions in bottom and middle management jobs. *Journal of Applied Psychology*, 45, 1-10.

Reynolds, T. J., & Gutman, J. (1988). Laddering theory, method, analysis, and interpretation. *Journal of Advertising Research*, 28(1), 11-31.

Reynolds, T. J., & Rochon, J. P. (1991). Means-end based advertising research: Copy testing is not strategy assessment. *Journal of Business Research*, 22, 131-142.

Roth, M. S. (1994). Enhancing consumer involvement in health care: The dynamics of control, empowerment, and trust. *Journal of Public Policy & Marketing*, 13(1), 115-132.

Scales, P., Blyth, D., Berkas, T., & Kielsmeier, J. (2000). The effects of service-learning on middle school students' social responsibility and academic success. *Journal of Early Adolescence*, 20(3), 332-358.

Sheckley, B. G., & Keeton, M. T. (1997). Service Learning: A theoretical model. In J. Schine (Ed.), Service Learning: Ninety-sixth yearbook of the National Society for the Study of Education, Part I (pp. 32-55). Chicago: University of Chicago Press.

Tang, T. & Ibrahim, A. (1998). Importance of human needs during retrospective peacetime and the Persian Gulf War: Mideastern employees. *International Journal of Stress Management*. 5(1), 25-37.

Tang, T. & West, W. (1997). The importance of human needs during peacetime, retrospective peacetime and the Persian Gulf War. *International Journal of Stress Management*. 4(1), 47-62.

Tang, T. & Weatherford, E. (1998). Perception of enhancing self-worth through service: the development of a service ethic scale. *The Journal of Social Psychology*, 138(6), 734-742.

- Wang, J., Greathouse, B., & Falcinella, V. (1998). An empirical assessment of self-esteem enhancement in a CHALLENGE Service Learning Program. *Education*, 119(1), 99-105.
- Walker, B. A., & Olson, J. C. (1991). Means-end chains: Connecting products with self. Journal of Business Research, 22, 111-118.

Waterman, A. S., (1997). *Service-Learning: Applications from the Research*. Mahwah, NJ: Lawrence Erlbaum Associates

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