Empathy and Experiential Learning:
How a Community-Based Project Enhances the College Experience

by
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Abstract

A sample of thirty college students in service-learning based courses was compared to a control sample of two hundred twenty students in a standard lecture course to examine the effect of service-learning curriculum on empathy as measured by a questionnaire. It was hypothesized that the treatment group's scores would be the same as the control before completing the course and would show a significant increase after treatment. Results showed that there was no difference between the groups before treatment, but that participation in service-learning produced a significant increase in empathy.

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The benefits of service learning are well-documented. When integrated with regular coursework, it greatly enhances students' academic experience, giving them real-world applications of their knowledge and a chance to work within their community, building skills and important connections. The commonly accepted definition of service learning in current literature, is

> a course-based, credit-bearing educational experience in which students (a) participate in an organized service activity that meets identified community needs and (b) reflect on the service activity in such a way as to gain further understanding of course content, a broader appreciation of the discipline, and an enhanced sense of civic responsibility (Bringle and Hatcher, 1995).

According to research compiled by the Corporation for National and Community Service and the US Department of Labor, it also provides an important advantage in the job market for graduates; experience volunteering within the community makes employment 27% more likely across all demographics and, importantly, is an advantage that persists even during times of high unemployment (Spera, Ghertner, Nerino, & DiTommaso, 2013). Service learning is distinct from basic volunteering though because it provides benefits beyond a résumé listing. As McDonald and Dominguez (2015) explain, it is the difference between a student in a nutrition class volunteering to serve food at a soup kitchen, compared to a project based on the needs of the same soup kitchen, designing a menu which meets daily

caloric and nutritional requirements of clients. Service learning relies on the application of knowledge from coursework, as well as assessments and reflections.

Service learning is already utilized extensively in allied health science programs because it has been a notably successful method of developing practical skills. According to Champagne (2006), it prepares them to be aware of community needs, competent, and able to facilitate changes that will enhance community health. Furthermore, service learning helps develop crucial interpersonal skills like the ability to work well with others, communicate, and lead, as well as problem solving and self-esteem (Champagne, 2006). While empathy is an important and related quality, little research on service learning has sought to determine how empathy might be affected.

Part of the problem lies in trying to quantify empathy. It is defined as "an aspect of personality that has an important role within interpersonal relationships and in facilitating competence in communication… that enables one to identify with another's situation, thoughts, or condition by placing oneself in their situation" (Hemmerdinger, Stoddart, & Lilford, 2007). Developing a way to measure a thought process or personality trait is difficult, especially when it must demonstrate reliability and validity. Hemmerdinger, Stoddart, and Lilford (2007) examined tests of empathy available and compared them for use with medical students, but found problems with all. For example, having a researcher assess a person's empathy is one method, but requires designing a context that can be used repeatedly to assess multiple participants. The reliability of the assessment would be problematic as well, as two different raters might give different scores to the same participant.

With the problematic nature of examining empathy, the results measuring service learning's impact on empathy have, of course, been inconsistent. A study of service learning in fourth graders found a negligible difference between treatment and control groups' change in empathy (r = .17) (Klassen, 2011), while a study of sixth graders found a significant difference in empathy posttest scores between students who participated in service learning and those who did not (r = .38) (Laken, 2006). Both studies used Bryant's (1982) Index of Empathy for Children and Adolescents, but it is unclear if the participants' age or the differences in experiment designs can be attributed to the difference in results, because the groups had different levels of involvement in the projects.

Only two studies of empathy and service learning utilized a collegiate population, but both used a different measure. In a qualitative comparison of service learning reflection essays, Wilson found that empathy was more often expressed by students who had participated in service learning (82%) than by those who had participated in a book discussion (46%) by using a self-designed rubric (Wilson, 2011). Most relevant to the current research, Lundy (2007) showed that service learning participation significantly improved empathy scores when compared to traditional coursework, using the Emotional Empathetic Tendency Scale (Mehrabian & Epstein, 1972). Service learning participants were compared to peers in the same class who had chosen a different project and showed higher average scores after completion (compared to an interview project, r = .26, compared to a research paper, r = .01).

Based on the current literature, the inconsistency of results and varied measures used in the few studies available necessitate further research on how service learning affects empathy.

Objectives

Hypotheses

Based on Laken's (2006) results (r = .38), the expected outcome of participation in service learning is a significant increase in empathy. It is also hypothesized that when compared to a control group, students in service learning courses will have similar empathetic tendencies at pretest (based on Lundy's (2007) comparisons).

Methods

Participants

Two junior-and-senior level classes were used for the experimental group, both of which participated in a community-based health literacy program at local elementary and preschools for part of the course grade by developing all materials, organizing, and conducting the events. The pretest data was archival, having been collected in the classes before the study commenced, and posttest data was taken at completion of the course. The treatment group consisted of 30 students (24 female and 6 male), with a mean age of 23, most of whom were majoring in social sciences or allied health sciences, had taken no other experiential learning courses, had only some service experience, and had taken one social work course.

The control group was a single freshman level class, which was a standard lecture course and did not participate in a service learning project, but was offered a few extra credit points for taking the survey. The control group consisted of 220 students (151 female and 69 male), with a mean age of 19, most of whom were

majoring in allied health sciences, business, or law, had taken no experiential learning courses, had only some service experience, and had taken no social work courses.

Materials

The Toronto Empathy Questionnaire (TEQ) was used for measuring empathy in this experiment. It is a 16 question form that uses a Likert scale to score responses (Never = 0; Rarely = 1; Sometimes = 2; Often = 3; Always = 4). It was developed by combining other common measures of empathy, such as the Interpersonal Reactivity Index (Davis, 1983) and the Questionnaire Measure of Emotional Empathy (Mehrabian & Epstein, 1972). Questions that did not effectively measure empathy were removed in order to produce the most accurate and consistent form. When compared to the IRI, total scores on the TEQ were correlated with the Empathetic Concern subscale, (r = .74) (Spreng, McKinnon, Mar, & Levine, 2009). While the IRI has been previously used as a measure of empathy, Spreng and colleagues note that its validity has been questioned, particularly for the Fantasy and Personal Distress dimensions, which are less appropriate for measuring empathy (and therefore removed from the TEQ).

In the retest study, participants returned to take the TEQ about two months later for comparison to their first scores. It was found to be highly reliable (r = .81) with high internal consistency (α = .87). Additionally, the TEQ was also contrasted with the Autism Quotient (AQ) (Baron-Cohen, Wheelwright, Skinner, Martin & Clubley, 2001), which measures lack of social processing and empathy, and found to

be negatively correlated (r = -.33).The negative correlation indicates that a person with a high empathy score on the TEQ should not score highly for autistic characteristics, like difficulty identifying, understanding, and relating to others' emotions; however, the correlation was not stronger because this is only one aspect measured by the AQ.

The TEQ was appropriate for use in this experiment because it is a short, easily accessed questionnaire with better construct validity than other forms, high internal consistency, and test re-test reliability. Since publication, the TEQ has been used in assessments of empathy for professionals in medicine, especially to see how patient interactions influence empathy over time (Lamothe, Boujut, Zenasni, & Sultan, 2014), (Youssef, Nunes, Sa, & Williams, 2014), (Lelorain, et al., 2012). The similarity in experimental design also lends support to use of this measure.

Procedure

Baseline data for the experimental group was archival, taken from two Experiential Learning classes. Participants in the experimental group were asked voluntarily to complete a survey with demographic information (which included listing other previous service and relevant class experiences) and the TEQ. The survey was completed before initiating the service learning project to prevent influencing responses (e.g. social desirability). After completion of a semester long course which integrated service learning, the same survey was administered to compare pre and post scores.

The control group was taken from a standard lecture course with no service learning component and participants completed the same survey form. All data collected was deidentified.

Results

Treatment Group. The TEQ is scored based on the summed points of Likert-scale responses with a maximum score of 64. The pre-test scores of the treatment group (n = 30) ranged from 38, or 59%, to 58, or 91% (M = 49, SD = 5.4). After completion of the service learning project, the post-test scores (n = 24) ranged from 37, or 58%, to 61, or 95% (M = 51, SD = 5.5). Five of the initial participants did not complete the course or the post-test. When the scores are compared, the post-tests were significantly higher than the scores collected before the service learning project, t (23) = 2.126, p = .044, r = .41.

Control Group. The scores of the control group participants that completed the TEQ (n = 217) ranged from 18, or 28%, to 62, or 98% (M = 48, SD = 7.4). When compared to the treatment group pretests, scores were not significantly higher than the scores collected from the control group, t (244) = 1.00, p = .318, r = .06.

Discussion

It was hypothesized that participation in service learning would lead to a significant increase in empathy, and the results supported this. In comparison to previous studies, this result was similar to Laken's (2006), but actually showed a slightly greater effect. However, it is unclear if this could be attributed to the experiments using different designs, populations, or just a different measurement of empathy. Additionally, this study's result did not agree with Klassen (2011), who found a much smaller effect among fourth graders. When contrasted with Laken's sixth grade participants, on the same measure, one possibility is, perhaps, that service learning has less effect on empathy in younger groups, as in Klassen's study, which could be an opportunity for future researchers to clarify findings.

Although the same survey form was used for a repeat test, it should have no effect on the resulting data in this experiment because there was a five month gap between the first time it was administered to the treatment group at pre-test and the post-test. Additionally, there is no validated parallel form of the TEQ available to administer after treatment.

The results comparing pre-test scores to control scores enforced previous findings from Lundy (2007), indicating no real difference between the two groups on TEQ measures. This finding was particularly interesting because it indicates that there was no selection bias for the service learning courses which were also offered as non-experiential learning sections; service learning does not only attract those who are especially empathetic, but fairly representative even in these smaller course capacities.

In the context of the current study, a moderate effect on empathy was found after one semester of a service learning-based course. With a larger sample, it may be possible to also examine the cumulative or longitudinal effects of the treatment. Additionally, if a larger pool of participants were available, it could be possible to compare levels of involvement in the project and outcomes; for example, in this study, while all students were required to go to at least one low-income school to lead an educational program, some went to as many as four and it could be expected that with more exposure, these students gained more.

In all studies of empathy, it is difficult to quantify what is an abstract personality trait, and in the literature, all have used different scales and measures. It can be assumed that because a self-report measure was used in this experiment, social desirability did influence the answers and that any result is not necessarily an indication of future behavior. For this reason, qualitative study does provide additional insight when examining empathy (Wilson, 2011). The reflection papers from one of the service learning courses were examined on a qualitative rubric which found that most students were proficient or exemplary in demonstrating experienced-based knowledge of their discipline and reflective thinking. Specifically, many of them felt that the program was great professional experience as well as personally enriching: “Being given the opportunity to go out into the community and interact with parents … was very exciting and fulfilling. ... Knowing that the research we did will actually make a difference in people’s lives is an amazing feeling” (Fowler, 2015).

To conclude, the results show additional benefit from service learning beyond the enhancement of academic experience, connection to community, and skill-building. Both control and treatment groups primarily consisted of those in "helping fields" like allied health sciences and social sciences, and students in either can especially benefit from service learning, which is already utilized extensively for clinical preparation to develop interpersonal skills, leadership, and problem solving (Champagne, 2006). Nonetheless, service learning through community-based projects can be an excellent additional component to any college program because empathy is a universally beneficial trait.

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Appendices

Survey Instruments

Toronto Empathy Questionnaire

Below is a list of statements. Please read each statement carefully and rate how frequently you feel or act in the manner described. Circle your answer on the response form. There are no right or wrong answers or trick questions. Please answer each question as honestly as you can.

1. When someone else is feeling excited, I tend to get excited too

2. Other people's misfortunes do not disturb me a great deal

3. It upsets me to see someone being treated disrespectfully

4. I remain unaffected when someone close to me is happy

5. I enjoy making other people feel better

6. I have tender, concerned feelings for people less fortunate than me

7. When a friend starts to talk about his\her problems, I try to steer the conversation towards something else

8. I can tell when others are sad even when they do not say anything

9. I find that I am "in tune" with other people's moods

10. I do not feel sympathy for people who cause their own serious illnesses

11. I become irritated when someone cries

12. I am not really interested in how other people feel

13. I get a strong urge to help when I see someone who is upset

14. When I see someone being treated unfairly, I do not feel very much pity for them

15. I find it silly for people to cry out of happiness

16. When I see someone being taken advantage of, I feel kind of protective towards him\her

Scoring Item responses are scored according to the following scale for positively worded items 1, 3, 5, 6, 8, 9, 13, 16. Never = 0; Rarely = 1; Sometimes = 2; Often = 3; Always = 4. The following negatively worded items are reverse scored: 2, 4, 7, 10, 11, 12, 14, 15.

Scores are summed to derive total for the Toronto Empathy Questionnaire.

IRB Approval Letter

Investigator: Stuart Bernstein
Department: Department of Psychology
Investigator Email: Stuart.Bernstein@mtsu.edu
Protocol Title: Family Health Literacy Nights
Protocol Number: 14-208

Dear Investigator(s),

I have reviewed your research proposal identified above and your request for continuation. Approval for continuation is granted for one (1) year from the date of this letter. Any changes to the originally approved protocol must be provided to and approved by the research compliance office.

You will need to submit an end-of-project report to the Office of Compliance upon completion of your research. Should the research not be complete by the expiration date, **3/28/2016**, please submit a Progress Report for continued review prior to the expiration date.

According to MTSU Policies, a researcher is defined as anyone who works with data or has contact with participants. Therefore, should **any individuals be added to the protocol that would constitute them as being a researcher, ensure that they have taken the correct training and inform the Office of Compliance prior to their involvement on the project**. Any change to the protocol must be submitted to the IRB before implementing this change.

Please note that any unanticipated harms to subjects or adverse events must be reported to the Office of Compliance at (615) 494-8918.

Also, all research materials must be retained in a secure location by the PI or **faculty advisor (if the PI is a student) for at least three (3) years** after study completion. Should you have any questions or need additional information, please do not hesitate to contact me.

Sincerely,

Research Compliance Office
615 494-8918
Compliance@mtsu.edu