Developing Students' Twenty-First Century Skills Through a Service Learning Project

Isaac E. Sabat
Department of Psychology
George Mason University
Fairfax, Virginia

Whitney B. Morgan
Department of Management, Marketing, and Business Administration
University of Houston-Downtown
Houston, Texas

Sara J. Perry
Department of Management and Entrepreneurship
Baylor University
Waco, Texas

Ying C. Wang
Department of Management, Marketing, and Business Administration
University of Houston-Downtown
Houston, Texas US 77002.

ABSTRACT

It is increasingly important for students to develop practiced and applied knowledge, teamwork skills, and civic engagement in addition to core curriculum knowledge in order to be prepared for the demands of the 21st century workforce. We propose that service-learning, or learning through an applied community service project, can uniquely address these essential 21st century skills. Thus, in this paper, we outline a specific service-learning project geared towards improving these skill-sets. Then, we design an experiment to test the efficacy of this project in increasing these skills by comparing students who completed this project to those in a control condition. Results support study hypotheses that service-learning increases teamwork and civic engagement, and partially support the hypothesis that it increases practiced and applied knowledge. Additionally, students in the service-learning condition outperformed students in the control condition on a test of core-curriculum knowledge. Thus, this study supports the overall assertion that service-learning can be used to successfully teach students 21st century skills.

INTRODUCTION

Twenty-first century skill development has been at the forefront of today's educational debates (Silva, 2009). In contrast to the 20th century, the 21st century requires a new set of work, citizenship, and self-actualization skills in order to succeed (Dede, 2010). For this reason educators must find new and innovative ways to develop skills within their students. We assert that service-learning, defined as "a form of experiential learning that combines academic coursework with voluntary service in the community" (Deeley, 2010, p. 2), is an ideal way to target these newly relevant skills. The primary purpose of this paper is to share information and instruction materials on how to integrate a service-learning project into an undergraduate course curriculum to develop 21st century skills. The secondary purpose is to provide evidence of students' learning related to core content knowledge. Our goal is not only to increase educators' awareness of the importance of developing students' 21st century skills, but also to provide a clear means – a service-learning project – to achieve this outcome.

Overview of Service-Learning

Service-learning is a method of instruction that combines an educational community service project with traditional means of teaching (Furco, 1996). The service-based project is not merely an added, unrelated component to the course, but rather the means by which students learn important class-relevant concepts in a highly impactful way.

Teachers must also supplement traditional course lectures with structured discussions focused on helping students make connections between the material being taught and their real-world service experiences (McCarthy and Tucker, 2002). This definition of service-learning directed the overall structure for the project utilized within this study.

Whereas traditional forms of teaching primarily emphasize the learning and understanding of concepts, service-learning enhances learning by providing students with practice in a real-world arena; that is, a more hands-on, real-world understanding of course concepts. Instructors report positive outcomes associated with service-learning projects, such as opportunities for students to apply theory and exercise new skills (see Andrews, 2007; Flannery and Pragram, 2010; Gujarathi and McQuade 2002; Poon, Chan, and Zhou, 2011; Robinson, Sherwood, and DePaolo, 2010). In addition, service-learning encourages students to participate in civic involvement (Salimbene et al., 2005), give back to their communities in meaningful ways (Papamarcos, 2005), and create stronger ties between their schools and communities.

While there is a great deal of interest and several proposed benefits of service-learning, relatively few studies have empirically measured these specific outcomes (McCarthy and Tucker, 2002). Additionally, few studies address whether the proposed outcomes of service-learning directly benefit students in areas that relate to the evolving demands of the modern workforce. Thus, our service-learning project was designed to not only facilitate learning in undergraduate students, but also to empirically examine whether such an experience could develop students' 21st century workplace skills.

Skills Required for the Twenty-First Century Workplace

Route memory of core curriculum knowledge is no longer sufficient to cope with the evolving demands of the 21st century workplace (Salpeter, 2003). Indeed, in addition to traditional learning, students must also be able to apply concepts learned in class to solve real-world problems, to cooperate well in groups and workplace teams, and to understand of the importance of civic engagement and social responsibility. We assert that service-learning uniquely and directly addresses the specific skills required in a 21st century skill-set framework: increasing students' abilities with regards to applying and refining concepts learned in the classroom, cooperating with others within groups and teams, and increasing one's civic literacy and engagement within the local community.

Practiced and Applied Knowledge

The ability to successfully apply knowledge to the formulation of ideas or solutions is a critically important 21st century skill (International Society for Technology in Education, 2007). Employees must now be able to solve new, abstract problems that have no pre-determined solution. Thus, it is difficult to transfer learned knowledge to find solutions to these real-world problems, as these problems are often far removed from their application to knowledge. For this reason, instructing students to remember routinized solutions to specific problem sets is not sufficient preparation. Instead, instructors who focus on teaching students more general problem solving techniques, including critical thinking about concepts as they are taught, may produce more well-prepared employees. This allows students to apply information to solve the problems they will encounter in the constantly evolving workplace (Dede, 2010). Service-learning can help students develop critical thinking skills and can teach students to apply the knowledge that they have acquired (Eyler and Giles, 1999). Students will need to not only employ the knowledge of they learned within their classes, but also adapt and refine these theories to cope with real, practical limitations of the business world. Thus, we hypothesize:

Hypothesis 1. Students who participate in the service-learning project report increased practiced and applied skills compared to those who do not.

Teamwork

The ability to work well with others on a team is considered an increasingly important 21st-century skill for two reasons. First, companies are increasingly relying on groups, teams, and multi-team systems in order to accomplish the more complex tasks faced by the modern workplace (Snow, Miles, and Coleman, 1992). Indeed, it is becoming less common for individuals in today's businesses to work in isolation from one another (Karoly and Panis, 2004). Second, recent technological advancements have changed the nature and frequency of collaborations. Workers in the past primarily interacted face-to-face; today's employees work together via cell phones, email, and webcams. These technological advancements have also increased the amount of collaborations that occur with people from different backgrounds, ethnicities, cultures, and countries. Because technology has facilitated the opportunity to collaborate across long distances, and because the nature of work now requires teams of people with complementary expertise engaged in higher-level thinking, working with diverse others has become an essential 21st century skill.

Service-learning develops the ability to work well with others to achieve project goals. Students must learn how to work in teams to come up with solutions to difficult and complex tasks. They must learn what their own strengths are and be able to recognize the strengths of others to optimize the total output of their group. Unlike other group projects, however, service-learning also requires that students learn how to work with the employees and teams of the organizations they are helping. Students must learn how to actively listen to the goals and problems explicitly stated by the members of these organizations, while also paying attention to their implicitly communicated dynamics, hierarchies, cultures, and climates. They must then work within this complex framework to develop the best possible solutions for relevant organizational issues. Finally, they must be able to clearly and effectively communicate their proposed ideas to the organizations' members. This requires that students be able to work together to decipher the root of problems, explain complex concepts in terms that are easy to understand, maintain a professional, respectful, and confident tone, and persuade business members and business leaders to make use of the students' recommendations.

Hypothesis 2. Students who participate in the service-learning project report greater teamwork skills compared to those who do not.

Civic Engagement

Instilling the importance of civic engagement within students is increasingly important given these uncertain economic times. The U.S. and European economies are currently battling recessions, and unemployment rates remain relatively high (Elsby, Hobijn, and Sahin, 2010). These hardships create greater reliance on volunteers and nonprofits for basic human needs. Indeed, recessions often cause an increase in unmet needs, including food, shelter, health-care, and other necessities (Starr, 2010). Similarly, the recession has caused more and more businesses and people to teeter over the edge of bankruptcy and foreclosure. For this reason, it is urgently important that instructors focus energy on instilling civic literacy and service orientation within their students. Service-learning provides students with hands-on experience helping others within their communities, which greatly improves the chances that these students will continue to help in the future (Eppler et al., 2011).

Hypothesis 3. Students who participate in the service-learning project report a greater sense of civic engagement compared to those who do not.

SERVICE-LEARNING PROJECT DESIGN

The proposed service-learning project was a student-led consulting project that focused on family-owned and operated businesses across multiple sections of a Principles of Management course. Courses in business schools often draw upon cases or examples from large organizations in order to teach students and, conversely, courses often fail to emphasize the importance of small or family-owned business in the U.S. economy. Service-learning projects like this one provide students the opportunity to become involved with aspects of organizations in which they wouldn't normally have access, and practice 21st century skill-building. Students were able to work closely with organizations that may struggle to compete with larger organizations and may lack the resources to hire external consultants. Thus, small or family-owned business may be especially open to receiving and utilizing feedback from the students to make changes within their organization.

Project Set-up

Family-business owners that were part of the university community's Management District received a letter soliciting their participation in, and outlining expectations for, the proposed student-led consulting project (see Appendix 1). We required that the businesses participating in the project have at least five employees. Interested business owners signed a consent form agreeing to participate in the project. Students completed group formation forms noting their strengths as a student (e.g., people person, idea person, and organizer), geographic region, and interests in order to position teams for success. Based on these forms, students were grouped in teams of 4 and assigned to work with one of the participating organizations.

There were four key phases to this student-led consulting project: 1) interview with owner, 2) employee survey and data entry, 3) data interpretation, and 4) technical report writing. Critical to the project's success was maintaining progress. Therefore, like any consulting project, students were provided with dates for their deliverables and points were deducted from their grade for any late deliverables. Students also submitted progress check forms to their instructor and included comments on challenges experienced. Students gathered information in every phase of the project to complete their major deliverable, a technical report, which required students to address critical questions related to the four core management functions: planning, leading, organizing, and controlling (Daft and Marcic, 2013). However, unique to the proposed project was a method by which students could build critical 21st century skills. Therefore, as we explain the four phases of

the project below, we highlight the opportunities for 21st century skill building that we, as instructors, emphasized.

Owner Interview and Survey

Phase I required student groups to gather both qualitative (i.e., interview) and quantitative (i.e., survey) data. Students contacted the business owner to gather information to complete a situation analysis. Students also gathered information on the owner's leadership style (i.e., transactional or transformational) to make comparisons with how employees perceived the owner's style. Prior to contacting the owners, instructors discussed the importance of professional communication (i.e., written and oral). The instructors reviewed templates for professional business communications as well as discussed the importance of framing of requests for sensitive information like salary. In addition, instructors addressed the importance of customer service when interfacing with a client. Students learned about balancing academic deadlines with the constraints of the client's (i.e., owner) schedule. This phase was also designed so that students had an immediate connection and interaction with a person in the local business community to increase their awareness of civic engagement. The opportunity to have a conversation with an organizational leader encouraged students to take the project seriously, as they recognized that it had the potential to positively affect real people in a real organization. Thus, this first phase was designed to pique their interest in civic engagement.

Employee Survey and Data Entry

Phase II required a minimum of five employees per organization to complete the employee survey which took approximately 20 minutes to complete. Measures on the employee survey included the job characteristics inventory, work-family conflict, stress, engagement, trust in management, pay satisfaction, and intentions to quit. All constructs measured were taught in the course so the students had foundational knowledge. However, students likely lacked complete understanding as to how such constructs could inform workplace practices. Students were required to enter the survey results in an Excel database and conduct checks for valid data entry. During this phase of the project, two 21st skills were of critical importance: teamwork and civic engagement. Students determined roles and responsibilities within their teams for completing the surveys. Then, they had to communicate and work with the employees in order to accommodate their schedules to complete the surveys. Students then had to go to the employee's place of work in the community, raising awareness of the business community, and small, family-owned businesses in particular. It is important to note that the region of the country where this project was conducted has a sizeable Hispanic population (40%). Therefore, all survey materials were also offered in Spanish in order to accommodate participants that were non-native English speakers. Two bilingual student research assistants who spoke both Spanish and English translated the survey, and another bilingual student research assistant back-translated the survey to English. We then worked with a fourth research assistant to check the back-translated English survey and edit the translated Spanish survey, by comparing both to the original survey.

Data Interpretation

At the start of Phase III, the instructors provided students with reports of the survey findings, which included means and standard deviations for each of the constructs measured. One class meeting was dedicated to teaching students how to interpret the findings so that the students could work in their groups to critically analyze, and ultimately draw the appropriate conclusions to present in their technical report. This phase of the project was designed so that students had opportunity to enhance their applied knowledge. Students were required to think deeply about the course concepts and apply the information to solve problems that arise in the workplace. For example, what kind of inferences can we make if the mean for work-interfering-with family is high? What are the implications for employee satisfaction and morale? Could high work-interfering-with family conflict be the driver of high means on intention to quit? Students were challenged to study results and ask themselves questions like the above to develop an appropriate "picture" of the business. This exercise also fostered communication in teams because the students need to ask critical questions of each other and come to consensus on the appropriate conclusions.

Technical Report

The final phase of the student-led consulting project was the technical report. Students were required to write a report structured around the four core management functions (see Appendix 2). Professional, business-oriented writing is critical to success in today's world. Students were challenged to produce high-quality products that were worthy of submitting to the business owner for review. This was not unlike other course projects. However, unique to this project was that students also needed to be prepared to defend their conclusions and recommendations in the report to the business owner. This phase of the project enhanced students' 21st century skills by further heightening their sense of civic engagement. Students were acutely aware of how their work and recommendations affect real people and businesses in the community.

Given students had the opportunity to interact closely with business owners and employees, this phase also enhanced their sense of responsibility to produce a work product that would improve the working environment for the employees.

EVIDENCE OF EFFECTIVENESS

A test of the four core management functions as well as a survey of self-reported learning of relevant skills were used to evaluate the effectiveness of the proposed service-learning project.

Participants

Participants consisted of 232 college of business students enrolled in six sections of a core course: Principles of Management. Approximately 53% (N = 122) of the participants were female and 45% (N = 104) were male (3% (N = 6) of participants did not indicate their gender). Participants had a mean age of 27.0 with ages ranging from 19 to 52 years of age. They represented the following racial/ethnic groups: 19% (N = 43) Caucasian, 28% (N = 65) Hispanic, 19% (N = 44) African-American, 22% (N = 50) Asian-American, 9% (N = 20) Mixed or Other, and 4% (N = 10) of participants did not indicate their ethnicity. Participants represented the following majors: 36% (N = 83) Accounting, 16% (N = 37) Finance, 6% (N = 13) Computer Information Systems, 13% (N = 30) General Business, 2% (N = 4) Insurance and Risk Management, 7% (N = 17) International Business Management, 6% (N = 15) Business Management, 3% (N = 8) Marketing, 6% (N = 14) Supply Chain Management, and 5% (N = 1) of participants did not indicate their major (see Table 1 for information on participant demographics by condition).

_____

Insert Table 1 about here

_____

Procedure

Students enrolled in one of three sections of the Principles of Management course were assigned to the service-learning project manipulation whereas students enrolled in one of three other sections of this course were assigned to the control project condition. Each of three instructors taught one section that implemented the service-learning project and another section that implemented the control project. Thus, these sections were identical in content and instructor except for the differences in the projects that were conducted.

For the project that was designed to serve as the control, students were required to work independently to assess an organization that was of interest to them. They utilized online resources and the course textbook to evaluate the strengths and weaknesses of that organization, and they wrote a four-page paper regarding their overall assessments related to the four core management functions: planning, organizing, leading, and controlling (Daft and Marcic, 2013). The control project, however, was not a service-learning project in that students never contacted, worked with, or gave their recommendations to the actual organizations. Thus, the control project should not have any impact on the 21st century outcomes of practiced and applied knowledge, teamwork, or civic engagement. The control project, however, may have had an impact on the student's core management knowledge.

After completing either the service-learning or the control project, students completed a test of knowledge of the four core management functions: planning, organizing, leading, and controlling. Both groups also completed measures assessing 21st century skill development, including practiced and applied knowledge, teamwork, and civic engagement.

Measures

Core Management Knowledge

Nine multiple-choice items were used to evaluate knowledge of the four core management functions. Items were taken from the course's textbook test bank (Robbins, DeCenzo, and Coulter, 2011). One item required students to name the four core management functions. The other eight items tested knowledge related to planning (e.g., SWOT analysis), organizing (e.g., organizational chart), leading (e.g., transformational leadership), and controlling (e.g., corrective action).

Practiced and Applied Knowledge

Participants provided their perceptions of practiced and applied knowledge gained from the project they completed. The measure consisted of four items adapted from two related scales (Fairfield, 2010; Flannery and Pragram, 2010). Participants responded on a seven-point Likert-type scale ranging from (1) *very strongly disagree* to (7) *very strongly agree*. Items were preceded by the stem "I..." and included the following: "applied information learned in class," "improved my skills by completing this project," "refined my knowledge of management concepts through this project," and "will be more confident in my future work because I completed this project" (α = .81).

Table 1
Descriptive statistics for demographics of samples

Demographic Variable	Service-learning (n=133)	Control (n=100)	Combined (n=233)
Gender			
Female	64 (48%)	58 (59%)	104 (53%)
Male	68 (51%)	36 (36%)	122 (45%)
Missing	1 (1%)	5 (5%)	6 (3%)
Ethnicity			
Caucasian	28 (21%)	15 (15%)	43 (19%)
Hispanic	33 (25%)	32 (32%)	65 (28%)
African-American	29 (22%)	15 (15%)	44 (19%)
Asian-American	29 (22%)	21 (21%)	50 (22%)
Mixed/Other	14 (11%)	6 (6%)	20 (9%)
Missing	0 (0%)	10 (10%)	10 (4%)
Major			
Accounting	46 (35%)	37 (37%)	83 (36%)
Finance	21 (16%)	16 (16%)	37 (16%)
Computer Information Systems	8 (6%)	5 (5%)	13 (6%)
General business	19 (14%)	11 (11%)	30 (13%)
Insurance and risk management	1 (1%)	3 (3%)	4 (2%)
International Business management	12 (9%)	5 (5%)	17 (7%)
Business management	8 (8%)	15 (6%)	7 (5%)
Marketing	6 (5%)	2 (2%)	8 (3%)
Supply chain management	6 (5%)	8 (8%)	14 (6%)
Missing	7 (5%)	4 (4%)	11 (5%)

Teamwork

Participants provided their perceptions of how much the project improved their teamwork skills. The measure consisted of five items adapted from two related scales (Fairfield, 2010; Flannery and Pragram, 2010). Participants responded on a 7-point Likert-type scale ranging from (1) *very strongly disagree* to (7) *very strongly agree*. Items included the following: "more capable of working well on teams", "practiced teamwork skills" "learned important things about myself", "became more aware of my abilities and tendencies", and "did not help in improving my interpersonal skills" ($\alpha = .75$).

Civic Engagement

Participants provided their perceptions of whether the project improved their ability to help their local communities. The measure consisted of four items adapted from Flannery and Pragram (2010) and supplemented by items generated by the authors. Participants responded on a 7-point Likert-type scale ranging from (1) *very strongly disagree* to (7) *very strongly agree*. Items included following: "improved the work-life of a business owner," "enhanced sense of giving back to the undeserved business community," "stronger commitment to working with others for public good," and "increased sense of responsibility to working with others for public good" ($\alpha = .87$).

RESULTS

Core Management Knowledge

Knowledge of core management concepts was tested by examining differences in scores on the nine-item multiple choice test adapted from Robbins et al. (2011). An independent samples *t*-test reveals that participants who completed the service-learning project scored higher on the core management knowledge test ($M = .81$, $SD = .16$) compared to those who completed the control project ($M = .72$, $SD = .17$), $t(178) = -3.75$, $p < .05$.

Practiced and Applied Knowledge

Participants reported that the service-learning project marginally increased their practiced and applied knowledge. Participants who completed the service-learning project indicated somewhat higher levels of practiced and applied knowledge ($M = 5.87$, $SD = .83$) compared to participants who completed the control project ($M = 5.64$, $SD = .91$), as demonstrated by an independent samples *t*-test, $t(177) = -1.72$, $p < .10$. Thus, Hypothesis 1 was partially supported.

Teamwork

Participants indicated an increased understanding of how to work with others on a team through the completion of the service-learning project. Participants who completed the service-learning projected indicated higher levels of acquired teamwork skills ($M = 5.60$, $SD = .92$) compared to those who completed the control project ($M = 5.31$, $SD = .95$) as demonstrated by an independent samples *t*-test, $t(177) = -2.06$, $p < .05$. Thus, Hypothesis 2 was supported.

Civic Engagement

Finally, participants indicated that the service-learning project increased their civic engagement and desire to be a part of, and contribute to, the community. Participants who took part in the service-learning project indicated higher levels of civic engagement ($M = 5.26$, $SD = 1.15$) compared to those who completed the control project ($M = 4.82$, $SD = 1.07$) as determined by an independent samples *t*-test, $t(177) = -2.63$, $p < .05$. Thus, Hypothesis 3 was supported.

Discussion of Project Effectiveness

Findings suggest that the proposed service-learning project effectively improved students' 21st century skills. Overall, students who completed the service-learning project reported higher levels of practiced and applied knowledge, teamwork skills, and civic engagement skills compared to those who did not. These three skill-sets have been shown to be vitally important for the 21st century workforce (Dede, 2010).

Additionally, this service-learning project was shown to be effective in improving students' knowledge of core management concepts. Students who completed this project scored significantly higher on the core management knowledge test compared to those in the control condition. Thus, this project effectively improved core-content knowledge while also developing the skills that are essential to the contemporary workforce.

LIMITATIONS

Despite the success of this project, there are some limitations to consider. First, the results demonstrated non-significant differences between the manipulation and control conditions in terms of practiced and applied knowledge. There are many potential reasons for these non-significant findings. One possibility is that the proposed service-learning project did not adequately address this facet of 21st century skills, and future researchers may want to spend more time re-designing this project to more precisely target this area. It may also be the case, however, that the study suffered from a lack of power in that there weren't enough participants with fully completed surveys to capture the effects in question. Indeed, the marginal levels of significance indicate partial support for the effectiveness of this service-learning project in increasing practiced and applied knowledge. Thus, future researchers may benefit from utilizing larger sample sizes to test the effectiveness of these and other service-learning projects. Second, given the specific subject matter in question, researchers must consider the generalizeability of the findings. The current service-learning project was geared towards students taking a management course, and the "service" involved providing consultation advice for small, local businesses. Thus, the project was closely tied to the content matter involved. This project may not improve content knowledge in other domains, however, and must be tailored to fit the specific needs of the course. Third and finally, this study used single-source methodology in assessing benefits of service-learning. Future studies should utilize other sources of data to test student attainment of 21st century skills, such as instructor observation or even peer observations of team members.

IMPLICATIONS FOR CLASSROOM INTEGRATION

Educational researchers have continued to call upon researchers and practitioners to focus on the development of 21st century skills in addition to core curriculum knowledge (Silva, 2009). These skills, which include practiced and applied knowledge, team-work skills, and civic engagement, are all becoming increasingly important to the success of employees in 21st century organizations. Thus, educational researchers and practitioners must develop new and innovative ways of addressing the gap between what is currently being taught and what needs to be taught in 21st century classrooms. The current study proposes and finds support for the use of service-learning projects to uniquely address each of these facets of 21st century skill development. Thus, we encourage the integration of similar projects into pedagogical practice in order to most effectively develop the necessary skills in the

future generation of workers. Service-learning activities such as the one outlined in this paper provide meaningful, applicable experiences that help students beyond simple memorization of facts and theories. Thus, this project could clearly fit into the curriculum of educators seeking to emphasize 21st century skill development into their courses. The nature of the course should be considered in adapting the project to suit the classes' particular core knowledge needs, but the results of the study demonstrate promising outcomes of utilizing these activities.

REFERENCES

Andrews, CP (2007). Service-learning: Applications and research in business. *Journal of Education for Business*, *83*, 19-26. doi:10.3200/JOEB.83.1.19-26

Daft, RL, and Marcic, D (2013). Understanding Management (8th edition). South-Western Cengage Learning: Ohio.

Dede, C (2010). Comparing frameworks for 21st century skills. In J. Bellanca and R. Brandt (Eds.), *21st Century Skills* (pp. 51-76). Bloomington, IN: Solution Tree Press.

Deeley, S. J. (2010). Service-learning: Thinking outside the box. *Active Learning in Higher Education, 11*, 43-53.

Elsby, MW, Hobijn, B, and Sahin, A (2010). *The labor market in the Great Recession* (No. w15979). National Bureau of Economic Research.

Eppler, MA, et al. (2011). Benefits of service learning for freshmen college students and elementary school children. *Journal of the Scholarship of Teaching and Learning, 11*, 102-115.

Eyler, J, and Giles, DE Jr. (1999). Where's the learning in service-learning? *Jossey-Bass Higher and Adult Education Series.* San Francisco, CA: *Jossey-Bass, Inc.*

Fairfield, KD (2009). Growing up and growing out: Emerging adults learn management through service-learning. *Journal of Management Education, 34*, 113-141. doi:10.1177/1052562909338837

Flannery, BL, and Pragman, C. H. (2009). Service-learning and integrated course redesign: Principles of management and the campus kitchen metaproject. *Journal of Management Education,* 34, 11-38. doi:10.1177/1052562909337907

Furco, A (1996). Service-learning: A balanced approach to experiential education. *Expanding boundaries: Serving and Learning*, *1*, 1-6.

Govekar, MA, and Rishi, M (2007). Service-learning: Bringing real-world education into the B-school classroom. *Journal of Education for Business*, *83*, 3-10. doi:10.3200/JOEB.83.1.3-10

Gujarathi, MR, and McQuade, RJ (2002). Service-learning in business schools: A case study in an intermediate accounting course. *Journal of Education for Business*, *77*, 144-150. International Society for Technology in Education (2007). The national educational technology standards and performance indicators for students. Eugene, OR: ISTE.

Karoly, LA, and Panis, CW (2004). *The 21st century at work: Forces shaping the future workforce and workplace in the United States*. Santa Monica, CA: RAND Corporation.

Levy, F, and Murnane, RJ (2004). *The new division of labor: How computers are creating the next job market*. Princeton University Press.

Manolis, C, and Burns, DJ (2011). Attitudes toward academic service learning semesters: A comparison of business students with non-business students. *Journal of the Scholarship of Teaching and Learning, 11*, 13-32.

McNeil, L (2000). *Contradictions of school reform: Educational costs of standardized testing*. Routledge Falmer.

Papamarcos, SD (2005). Giving traction to management theory: Today's service-learning. *Academy of Management Learning and Education*, *4*, 325-335. doi:10.5465/AMLE.2005.18122422

Poon, P, Chan, TS, and Zhou, L (2011). Implementation of service-learning in business education: Issues and challenges. *Journal of Teaching in International Business*, *22*, 185-192. doi:10.1080/08975930.2011.653746

Robbins, SP, DeCenzo, DA, and Coulter, M (2011). *Fundamentals of Management*. (7th Edition). Prentice Hall: New Jersey.

Robinson, DF, Sherwood, AL, and DePaolo, CA (2010). Service-learning by doing: How a student-run consulting company finds relevance and purpose in a business strategy capstone course. *Journal of Management Education, 34,* 88-112. doi:10.1177/10525629093390025

Salimbene, FP, et al. (2005). Service-learning and management education: The Bentley experience. *Academy of Management Learning and Education*, *4*, 336-344. doi:10.5465/AMLE.2005.18122423

Salpeter, J (2003). 21st century skills: will our students be prepared? *Technology and Learning-Dayton, 24*, 17-29.

Silva, E (2009). Measuring skills for 21st-century learning. *Phi Delta Kappan,* 630-634.

Snow, C, Miles, R, and Coleman HJ. Jr. (1992). Managing 21st century network organizations. *Organizational Dynamics, 20,* 5-20. doi:10.1016/0090-2616(92)90021-E

Starr, MA (2010). Recession and the social economy. in M. A. Starr (Ed.), *Consequences of Economic Downturn: Beyond the Usual Economics* (pp. 189-214). New York, NY: Palgrave Macmillan

Vega, G (2007). Teaching business ethics through service-learning metaprojects. *Journal of Management Education*, *31*, 647-678.

APPENDIX 1
INVITATION LETTER

Dear Family Business Owner,

We, three faculty members in the XXXXX, request your help with a project. When we discuss businesses in our courses at XXX we typically talk about large companies and fail to emphasize the significance of family-owned business. In fact, family-owned businesses comprise 50% of the United States' gross domestic product. We have created a student-led project to explore family-owned businesses and we hope you will consider participating in our students' project this semester.

If you are willing to help students complete their project on a local family-owned business you would be agreeing to the following:

1. One-hour (maximum) in person meeting with one or two students and the CEO/President/Founder of your company. You will also be asked to complete a short (less than 10-minutes) survey.
    - Students will travel to your place of business for the meeting.
2. Encourage your employees (as many as possible) to complete a 30-minute paper survey.
    - We will provide the paper surveys and students will drop-off and pick-up the surveys from your place of business.
    - We will not ask for your employees' names when completing the surveys and all information will be kept confidential.
3. Encourage any interested employees to participate in 30-minute follow-up interview with students to gather more in-depth responses after analyzing the survey responses.

In return for your help the students will provide to you a report that highlights the following:

1. Strengths and weaknesses of current business practices.
2. Opportunities for continued growth and improvement.
3. Summary data of employee satisfaction, leadership styles, challenges (e.g., work-family), and other attitudes towards their work environment, including pay and promotion opportunities.
4. Creative solutions to make the business successful in the face of ever-present change (e.g., light rail extension, economic uncertainty, etc.).

You will be provided with a copy of the final technical report in return for your efforts.

We thank you in advance for your consideration.

APPENDIX 2
TECHNICAL REPORT TEMPLATE

I. Organizational Background

Provide overview of the organization. It is your task to appropriately summarize these findings in two paragraphs that include your numerical findings. You should learn everything you can prior to the interview so you appear prepared and knowledgeable when interacting with the CEO/Founder. This is also required so you can have a more meaningful conversation with the CEO/Founder about things that are not easily available through internet research.

II. SWOT Analysis (Planning)

Identify strengths, weakness, opportunities, and threats by conducting your own research, interviewing the business owner, analyzing survey data, and conducting follow-up interviews with employees.

	Strengths (Internal)	**Weaknesses (Internal)**
Opportunities (External)		
Threats (External)		

III. Organizational Structure (Organizing)

How would you classify the organizational structure of the business? Use the interview and survey data determine the organizational structure of the business. Is there consensus among employees? What are examples that lead

you to believe this is the appropriate organizational structure? Is there consensus among employees? If no, why do you believe there are differences?

IV. Leadership Style (Leading)

How does the Owner classify his/her leadership style? How do the employees classify the Owner's leadership style? Do these views align? If yes, what is the benefit of alignment? If no, what are the consequences of misalignment?

V. Feedback and Continuous Improvement (Controlling)

Based upon your interview(s) and survey data what are your recommendations for change? What are your proposed creative solutions to make this business competitive and successful in the face of ever-present change (e.g., light rail extension)?