Using Service-Learning to Enhance Employability Skills in Graduate Business Capstones: A Dissertation Overview

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Abstract

This dissertation overview summarizes a study that examined the alignment between employability skills employers need and employability skills graduate business students gain through service-learning in business capstones. This nonexperimental, mixed-methods, comparative study assessed whether the inclusion of service-learning in capstone courses influences students' development of employability skills. The top three employability skills enhanced by service-learning were decision-making, presentation skills, and teamwork; only presentation skills showed a significant difference for students whose capstone included service-learning versus those whose did not. Exploratory factor analysis (EFA) found a four-factor solution, and one factor, collaborative learning, was significant for service-learning. Qualitative data from semi-structured interviews revealed that decision-making, teamwork, and presentation skills were enhanced by service-learning. Findings show alignment between collaborative learning skills needed by employers and those enhanced through service-learning, and that the instructor's role in structuring projects is key to learning.

Keywords: service-learning, mixed methods, MBA, business education, capstones, employability skills

Introduction

*H*igher business education faces many criticisms from stakeholders. Business leaders from corporations such as Microsoft, Apple, and Cisco have criticized academia for using obsolete educational approaches *(Symonds, Schwartz, & Ferguson, 2011)*. Historically, critics have complained that business education does not help students learn employability skills *(Elsaid & Schermerhorn, 1991)*, which are skills necessary for career success in any environment and at all levels of employment and education *(Overtoom, 2000)*. Another potential problem for business education is a perceived skills gap, or the gap between what workers know how to do and the skills required by today's knowledge workers. This gap is growing, and there seems to be a mismatch between

the skills employers need and the skills obtained by managerial, professional, and technical workers.

Using traditional instructional approaches to create business education curricula that bridge perceived gaps between theory and practice can be challenging. Some business education programs have responded by incorporating a business capstone experience into the curriculum. A capstone is an educational experience intended to synthesize the content learned in a particular major *(Gardner & Van der Veer, 1998)*. Although capstones are widely used by traditional undergraduate business students (e.g., *Bailey, van Acker, & Fyffe, 2012; Wei, Siow, & Burley, 2007*), there is less data about business capstones that are modeled around adult learning theory and used by graduate learners.

Business programs have also implemented experiential learning approaches in their capstones *(Rashford & de Figueiredo, 2011; Robinson, Sherwood, & DePaolo, 2010)*, and capstones that use experiential learning have been found to be effective *(Andreasen & Wu, 1999)*. One experiential learning approach that helps students deepen their understanding of course content is service-learning (e.g., *Robinson, Sherwood, & DePaolo, 2010; Wei, Siow, & Burley, 2007*). However, although proven outcomes of service-learning exist, service-learning experiences are used less in the business disciplines than other instructional methods, and the research related to how service-learning impacts the employability skills of business students is scarce, especially in graduate business education *(Wittmer, 2004)*.

To address criticisms from business leaders about obsolete educational approaches, the perceived skills gap, and the gap between theory and practice, it is critical that business education prepare students for the workforce by fostering skills needed by employers. The purpose of the dissertation study summarized here was to examine the alignment between the employability skills employers need and the employability skills that graduate business students gain through service-learning in business capstone courses. This study accomplished its stated purpose by answering the following research questions: Are there differences in employability skills developed between MBA students who participate in capstones that include service-learning and comparable MBA students who participate in capstones that do not include service-learning? Which, if any, essential employability skills, as identified by employers, are enhanced by service-learning experiences in business capstones? Which aspects of service-learning experiences

contribute to enhanced employability skills in graduate business students?

Theoretical and Conceptual Framework

This study focused on service-learning experiences conducted by adult (graduate-level) business students. The following conceptual frameworks were appropriate for the inquiry: experiential learning theory, constructivist theory, and andragogy. Dewey *(1938)* posited genuine learning comes through experience. Similarly, Kolb's *(1984)* experiential learning model is a conceptual model that describes the process of experiential learning. The model consists of a four-step cycle that is partially based on the writings of Dewey *(1938)*, who advocated for education that allowed learners to engage in real-world problem-solving. The four stages in Kolb's *(1984)* model are concrete experience, reflection on the experience, synthesis and abstract conceptualization, and active experimentation. The experiential learning cycle offers a framework for how learning happens when service is combined with reflection.

The dominant modern educational approach to designing instruction is based on the theory of constructivism (e.g., *Bruner, 1966; Dewey, 1929; Vygotsky, 1978*), and constructivism informs experiential learning theory. Constructivism states that individuals construct new knowledge from their experiences by interacting with other people and the environment *(Fosnot, 1996; Gagnon & Collay, 2001)*. Instructors who use constructivism to guide their teaching pose problems that are relevant to students' lives or professions; allow learners to work together to solve problems; help build on prior knowledge; create authentic, real-world learning experiences; and have students reflect on their learning *(Grennon-Brooks & Brooks, 1999)*.

Given that this study focused on graduate business students, who are adult learners, andragogy was a final important theoretical framework informing the study. Andragogy is the art and science of helping adults learn *(Knowles, 1984)*. It recognizes that adults are unique because they want to know why they need to learn something *(Knowles, Swanson, & Holton, 2005)*; are engaged participants in their learning, constructing what they learn as they learn it *(Dirkx, 1998)*; need individualized learning so their experiences can foster learning; and are self-directed (e.g., *Dewey, 1938; Knowles, Holton, & Swanson, 2012; Wlodkowski, 1985*).

Research Design, Methods, and Data Sources

The research design was a nonexperimental, comparative, descriptive study. It utilized mixed methods in order to offer various forms of data to address the research questions *(Creswell, 2009)*. The study examined students' development of employability skills through their participation in service-learning in MBA capstone courses. In particular, it assessed whether capstone courses that include service-learning influence students' development of employability skills in comparison to capstones that do not include service-learning *(Wickam, 2017)*. The quantitative method employed was survey research. Tanyel, Mitchell, and McAlum's *(1999)* survey instrument containing a list of skills prospective employers desired of business graduates was modified for this study and used to test which, if any, skills identified by employers were enhanced by service-learning experiences in business capstones.

Qualitative methods provide an opportunity to enhance the inclusion of participants' voices, which can enrich and help explain quantitative results *(Creswell & Plano-Clark, 2007)*. The focus of the qualitative analysis was on the service-learning experiences of MBA capstone students, so survey respondents who indicated that their MBA capstone course included a service-learning project were invited to participate in an interview. Survey respondents optionally included their name and e-mail address if they were willing to be interviewed, and 10 were interviewed by telephone, using a semi-structured protocol.

The sample population included graduate business students who completed a capstone in their MBA program. Participants were sought through professional electronic mailing lists, two Google groups focusing on service-learning in higher education, and seven LinkedIn groups that focus on service-learning in higher education or MBA alumni. Participants were also obtained directly from two institutions at which faculty members shared the research opportunity with alumni from their MBA programs, and both institutions granted Institutional Review Board (IRB) approval.

Data Analysis

Quantitative data collection using a Qualtrics survey occurred over a period of 2 months, and there were 79 usable surveys to analyze. Respondents were asked to indicate the extent to which 19 employability skills were enhanced during their MBA capstone course. The enhancement of employability skills was measured on a scale of 1 (skill was not enhanced) to 7 (skill was greatly enhanced).

The analysis involved two steps. The first round of analysis involved looking at each skill separately. A Mann-Whitney-U test, a nonparametric test used for comparing two populations that does not assume the data are normally distributed, was used to compare the scores of Group A (service-learning in capstone) and Group B (no service-learning in capstone). In the second round of analysis, exploratory factor analysis (EFA) was used to determine if factors were present. The EFA provided an opportunity to reduce a large number of variables to a few factors by combining those that were moderately or highly correlated with each other. The qualitative data were analyzed using constant comparative and content analysis methods.

Results

The three skills reported to be enhanced the most during respondents' capstone projects were decision-making (6.71), presentation skills (6.66), and ability to work in teams (6.65). Results of the Mann-Whitney-U revealed a significant difference between Group A (service-learning in capstone) and Group B (no service-learning in capstone) only for presentation skills ($p = .003$). There was no significance between groups for either decision-making ($p = .212$) or the ability to work in teams ($p = .087$).

The results of the EFA (see Table 1) showed that four factors existed on the scale, and they accounted for 73% of the total variance. The Mann-Whitney-U was highest for Factor 1 (44.81) and Factor 2 (36.65). Mann-Whitney-U was performed to compare the scores of Groups A and B to see if there were differences between students who had service-learning in their capstones and those who did not. Results showed significance (at $p < .05$) only for Factor 1, collaborative learning, suggesting that collaborative learning is enhanced for capstone students who have a service-learning experience more than for students whose capstone does not include service-learning.

Table 1. Factor Loadings for Exploratory Factor Analysis With Promax Rotation

Factor Number and Label	Number of Items	Variables	Cronbach's Alpha
Factor 1: Collaborative learning	7	Ability to work in teams, interpersonal, oral communications, persuasive ability, presentation, project management, responsibility	.939
Factor 2: Technological and organizational awareness	7	Ability to assimilate new technology, analytical ability, computer problem solving, computer word processing, ethical values, global awareness, punctuality	.848
Factor 3: Timely written communications	3	Accountability, time management, written communications	.899
Factor 4: Making creative decisions	2	Creativity and creative thinking, decision-making	.749

Results of the qualitative analysis revealed four themes: (1) structure and deliverables of capstone; (2) opportunities to make decisions; (3) opportunities to build teamwork skills; and (4) opportunities to build presentation skills. The first theme, that the structure of the service-learning projects enhanced skill development, is supported by existing literature (see *Bringle & Hatcher, 1999; Jacoby & Associates, 1996*). The summative nature of the capstone was an important structural component, and one participant said, "It echoed very much for me the ability to pull the different skills we're learning from the MBA program into one kind of grand-finale course."

Another important structural aspect was that the major instructional method used was client-based. One participant voiced appreciation for the service-focused nature of the project, which allowed her to summarize business knowledge learned during the MBA program for the benefit of the community. Producing deliverables (e.g., written report, oral presentation) for actual use was also an important part of skill development: 60% of participants produced a business plan for their clients. In one case, a team's business plan was going to be used by the client to share with investors because the client was aiming to find new funding sources.

Decision-making and teamwork were two more themes that emerged as key skills gained through service-learning. One

participant said, "Decision-making was a huge component for nearly every part of our project, from minor decisions to major ones, individual decisions, group decisions." Decision-making was related to teamwork because decisions were made collaboratively. Teams were able to make progress on and finish their projects when they were successful with communication and accountability, and when they clearly defined their team roles.

Presentation skills, the final theme, were enhanced because so many presentations were required during the capstone project, including a practice presentation to classmates and the professor, and a final presentation to the client. Practicing with classmates and the professor made the presentations increasingly easy to do, because feedback was provided, presenters could correct potential errors, and it offered preparation for the final presentation to the client.

Discussion and Conclusion

Results of the study yielded several key findings. First, there is alignment in the collaborative learning skills needed by employers and those enhanced through service-learning experiences in graduate business capstones. Colbeck et al. *(2000)* define collaborative learning as "a variety of instructional practices that encourage students to work together as they apply course material to answer questions, solve problems, or create a project" *(p. 61)*. In collaborative learning, small groups share the responsibility for outcomes of tasks and projects. The student experience in a service-learning capstone project enhances several related skills, including the ability to work in teams, interpersonal skills *(Gardner, 1983)*) and presentation skills. In a large employer survey *(National Association of Colleges and Employers, 2014)*, employers were given a list of job candidate skills and qualities and asked to rate them in order of importance. *Ability to work in a team structure* and *ability to make decisions and solve problems* tied as the most important skills, which aligns with the results of this study.

Another key finding is that the instructor's role in structuring and facilitating service-learning in a client-based business capstone project is important to learning. For example, decisions must be made about how teams will be selected. In this study, five out of ten students' teams were self-selected. Bacon, Stewart, and Silver *(1999)* found that MBA students who self-selected their teams experienced a better team experience than randomly selected teams. In addition, there is some evidence that self-selection motivates

students to manage any team conflict more successfully because by self-selecting their teams they are assuming responsibility for them *(Mello, 1993)*.

Significance of the Research

The purpose of the study was to examine the alignment between the employability skills employers need and the employability skills that graduate business students gain through service-learning in business capstones. This study adds to the very limited research that exists on graduate business capstone projects and service-learning by demonstrating that collaborative learning and presentation skills are important outcomes of service-learning experiences. Because employers who hire MBAs value collaboration through teamwork *(Graduate Management Admission Council, 2016)*, service-learning should be considered for capstone curricula as a way to achieve that aim. Employers also confirm the need for oral communication skills *(The Role of Higher Education, 2012)*, which can be developed in service-learning courses that provide opportunities to practice giving presentations to real-world stakeholders. The National Association of Colleges and Employers *(NACE, 2014)* surveyed 250 employers, who rated the importance of certain job candidates' skills/qualities. The employers rated teamwork, decision-making, problem-solving, and verbal communication as the most important skills.

Business schools responsible for aligning curricula with the stated needs of employers can be helped by the findings. These schools need to design programs that best meet the needs of their adult learners, who learn most effectively by engaging in tasks that are experiential and focused on problem-solving *(Fisher, 1985; Knowles, 1987)*. Along these lines, the Association to Advance Collegiate Schools of Business, the premier accreditation agency for business programs, asks programs to offer curricula that require active and collaborative learning *(AACSB, 2011)*. This study demonstrates that service-learning may offer a valuable avenue for preparing adult learners for the business world, meeting the needs of their future employers, and satisfying standards of practice in the field.

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