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How Valuable Are Capstone Projects for Community Organizations? Lessons from a Program Assessment

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Abstract

Many MPA programs use capstone courses as culminating experiences to assess students' capacity to apply program knowledge and skills to challenges facing public or nonprofit organizations. This paper examines whether capstone projects in one university's MPA program were beneficial to organizational partners. Using data from a survey of capstone supervisors and 10 follow-up interviews, the paper finds that supervisor engagement, project location, and faculty involvement were significant factors in determining whether projects were beneficial to host organizations. The findings indicate that closer relationships among the three primary participants in capstone projects (student, supervisor, and instructor) will lead to more successful capstones for partner organizations. This study adds to our knowledge about how to structure effective capstone programs; it also suggests that community partners can be valuable sources of information in assessing the effectiveness of MPA programs.

Many Master of Public Administration (MPA) and related degree programs require students to participate in a culminating experience that assesses students' capacity to synthesize their previous coursework and apply the knowledge and skills they have learned (Garris, Madden, & Rodgers, 2008; Jennings, 2003). These culminating experiences are typically referred to as a capstone or practicum. Although MPA programs structure capstone experiences in different ways (Jennings, 2003), many require students to work with a community organization to address a managerial or policy issue (Garris et al., 2008). Some researchers

have detailed different approaches to capstone courses and made recommendations for designing successful projects (Allard & Straussman, 2003; McGaw & Weschler, 1999). Others have examined the benefit to students of incorporating reflection into capstone courses (Bushouse & Morrison, 2001). These prior studies focus on the value of the capstone experience for the student; however, little research has been done on the experiences of the community representatives who participate in capstone projects and the extent to which capstone projects have been valuable to them and their organizations. One notable exception is work by Schachter and Schwartz (2009).

Greater knowledge of the experience of community partners in capstone projects is particularly important to MPA programs, for two reasons. First, the capstone project addresses a core purpose of MPA programs: preparing students for careers in public service. Knowledge of the value of capstone projects for participating organizations provides important evidence regarding whether MPA programs have accomplished their mission and prepared students effectively. Second, many MPA programs seek to create more symbiotic relationships with community organizations, emphasizing shared value and learning.

Building on Schachter & Schwartz (2009), this article analyzes the capstone experience from the perspective of supervisors in participating organizations. It examines the extent to which supervisors and the community organizations they represent benefit from the experience. We discuss how capstone supervisors have used the information they received from the capstone project as well as challenges they faced in the process. We also explore the factors that influence the extent to which community organizations benefit from their capstone experience. In our analysis, we consider the impact of both student characteristics and the structure of individual capstone projects on overall benefit. Information from this study will be useful for leaders of MPA programs as they design capstone experiences to maximize their value for community organizations and seek to develop strong reciprocal relationships with community partners. The lessons learned from this study may also be useful in providing tools for assessing whether MPA programs have effectively prepared students for careers in public service. Finally, the findings may be relevant for other MPA courses that provide students with opportunities to work with community organizations.

Data for this study were gathered in surveys and interviews from practitioners who supervised 56 MPA capstone projects over a 4-year period at Binghamton University, a large state institution. The capstone project for students in the MPA program at Binghamton University involves conducting research and producing a professional-quality paper that addresses a managerial or policy issue confronting a public or nonprofit organization where the student interned or worked. In this paper, we discuss capstone projects as a form of service learning and review the growing literature on how such projects affect community organizations. We follow that review with our methodology and findings. We conclude by discussing the

implications of findings for the structure of capstone courses and suggest strategies for maximizing the benefits of capstone projects for community organizations. We also discuss the implications our findings have on the role capstone courses and community partners can play in MPA program assessment.

Service Learning's Impact on Community Organizations

There is no standard definition of *service learning* (Eyler, 2000), and educators have implemented it in a variety of ways (Bushouse & Morrison, 2001). According to one well-known definition, "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" (Jacoby & Associates, 1996, p. 5). In essence, service-learning projects provide students with the opportunity to apply course knowledge in the real world with benefits for both students and the community (Simons & Cleary, 2006). From this perspective, MPA capstone projects that involve students working with community organizations are a form of service learning. Past research has examined the impact of service learning on academic outcomes (Eyler & Giles, 1999; Markus, Howard, & King, 1993; Kendrick, 1996; Lambright & Lu, 2009; Wells, 2006) as well as on community organizations. To supplement the limited research that has been done on the value of capstones for community organizations, this literature review also incorporates research examining the impact other forms of service learning have on the community.

Community organizations participate in service-learning projects for self-interested and altruistic reasons (Basinger & Bartholomew, 2006). These projects provide community organizations with a source of free labor and enable them to complete projects that they otherwise could not (Basinger & Bartholomew, 2006; Bushouse, 2005). Service-learning projects also offer community organizations the chance to contribute to student learning (Basinger & Bartholomew, 2006; Gelmon, Holland, Seifer, Shinnamon, & Connors, 1998; Sandy & Holland, 2006) and to cultivate good citizens (Basinger & Bartholomew, 2006). By working with community organizations, students cross cultural and socioeconomic boundaries; doing so enables them to develop a better understanding of social, racial, and economic disparities in America (Worrall, 2007). Community organizations participate in service-learning projects for other reasons that include fostering a positive relationship with the university, enhancing their community image, and cultivating future volunteers and donors (Basinger & Bartholomew, 2006).

Empirical evidence suggests that service-learning projects can provide community organizations with useful information (Bushouse, 2005) and that community organizations are often pleased with the outcomes of such projects (Basinger & Bartholomew, 2006; Bushouse & Morrison, 2001; Ferrari & Worrall, 2000; Killian, 2004; Miron & Moely, 2006; Schmidt & Robby, 2002). Consistent with these studies, Schachter and Schwartz (2009), in research specifically focusing

on capstone projects, found that community organizations were highly satisfied with their capstone experiences and believed these projects were helpful to them. In addition, community organizations report benefiting from the enthusiasm, energy, and fresh perspectives offered by students participating in service learning (Vernon & Ward, 1999). Finally, community organizations participating in service-learning projects gain both a greater understanding of university assets (Gelmon et al., 1998) and increased access to academic research (Sandy & Holland, 2006).

Community organizations also experience challenges with service-learning projects. Participation can be a time- and labor-intensive experience (Vernon & Ward, 1999) and result in staff having less time to perform other critical organizational activities (Bushouse, 2005). This challenge can be particularly taxing for community organizations with limited staff and funding. Representatives from participating organizations have expressed frustrations with the constraints that the academic calendar imposes on service-learning projects as well (Bushouse & Morrison, 2001; Vernon & Ward, 1999; Worrall, 2007). Other challenges include varying levels of student interest in community service and lack of instructor knowledge or interest in students' placements (Worrall, 2007).

Past research has identified factors that influence the impact of service-learning projects on community organizations. Miron and Moely (2006) found that community organizations involved in the planning of service-learning projects were more likely to believe the project was beneficial to their organization. The quality of the relationship between the university and community organization also influences the success of service-learning projects. According to research by Gelmon et al. (1998), stakeholders in service-learning projects that were viewed as reciprocal were more committed to sustaining and expanding the partnerships. In research specific to capstone projects, Schachter and Schwartz (2009) found client agencies were more satisfied with capstone projects that developed or acquired tools or resources than with those that did not. They also report that client agencies were more satisfied with capstone projects that encompassed an organizational assessment. This study builds on Schachter and Schwartz, examining the factors that influence the extent to which community organizations benefit from their capstone experience. In contrast to Schachter and Schwartz's focus on how capstone project deliverables influence benefits, we consider the impact of the capstone project process as well as the characteristics of the community organization, capstone supervisor, and student. In addition, this study addresses individual capstone projects while Schachter and Schwartz focused on team projects.

The MPA Capstone Experience at Binghamton University

We focused our research on the MPA capstone course at Binghamton University. The course lasts one semester, and all students must complete it to gradu-

ate. Students take the capstone course in their final semester in the MPA program. To be eligible for the capstone course, students must have completed an internship or have their internship waived because of substantial prior administrative experience. The capstone course builds on the students' experiences in internships or work sites.

All students enrolled in the capstone course must produce a professional-quality analytical paper that addresses a managerial or policy issue confronting the public or nonprofit organization where they work or had an internship. In this way, the capstone course at Binghamton University is comparable to those in many, but not all, MPA programs. A recent study identified that 42% of MPA programs offering courses that incorporate practical experience into their curricula through a capstone or practicum require students to complete individual projects; 58% prepare team projects (Garris et al., 2008).

The Binghamton University capstone course serves two related purposes, both addressing students' preparation for professional practice. First, the capstone course provides students with an opportunity to synthesize previous coursework with their professional or internship experience. Second, the course demonstrates whether students have acquired knowledge and skills that prepare them for effective community-based public practice (the program's mission). The number of students enrolled in the course varies from semester to semester. More students enroll in the course in the spring (on average 15) than in the fall (on average 9).

Each student has a three-person committee, composed of two faculty members and the student's work or internship supervisor, that oversees the project. Students select capstone projects in collaboration with their supervisor; the course instructor also meets with each student to ensure that the project is one the student can complete in one semester. Capstone papers typically include 25 to 40 pages of text and have several common elements: a problem definition, literature review, data collection and analysis, findings, and recommendations. Faculty instructors organize the course to facilitate students' progress through the different elements of the capstone project, reviewing content from courses students completed earlier in the MPA program that will help them with their projects. Instructors also spend considerable class time discussing individual students' projects and using them to highlight problem-solving strategies. Over the course of the semester, students work closely with both faculty and practitioner committee members on the different parts of the project. While many students work with local organizations, some conduct projects in their home communities with organizations outside of the Binghamton community.

Students present their final capstone papers to an audience of MPA students, faculty, and practitioners. Each student has 20 minutes to present. After the presentation, committee members ask questions, followed by questions from others in attendance. Examples of recent capstone topics include the development of a leadership succession plan, a cost-effectiveness analysis of capital improvement

options, an examination of how to address local identity as a barrier to interorganizational restructuring, and an assessment of local adult day health care needs.

Research Design

To learn about capstone experiences from the perspective of community organizations, data were collected from practitioners who participated in MPA capstone projects conducted at Binghamton University between 2005 and 2009. Data sources included a survey of practitioners who had supervised recent capstones and follow-up interviews with selected capstone supervisors.

Survey

To create the sampling frame for our survey, we located e-mail addresses for 64 individuals who had supervised capstone projects from Fall 2005 to Spring 2009. The sample included three individuals who had supervised two capstones and another who had supervised three capstones. We e-mailed links to all of the individuals for a total of 69 surveys. The individuals who had supervised multiple students were asked to complete a survey for each student they supervised. We received 56 usable surveys, representing an 81% response rate.

The survey was primarily composed of close-ended questions. We had two slightly different versions of the survey: one for practitioners who supervised students conducting their capstone for an organization and another for practitioners who supervised students conducting their capstone for a department within an organization. Twenty-eight "organization" surveys were completed, and 28 "department" surveys were completed. All respondents were asked to rate their agreement with eight statements about their experience with the capstone project:

1. I was closely involved with the design of the capstone project.
2. I was in close contact with the student while s/he was working on the capstone project.
3. I was in close contact with the faculty members overseeing the capstone project.
4. This capstone project was one of my top priorities.
5. The capstone project achieved the goals that I hoped it would achieve.
6. I was satisfied with the final capstone paper I received.
7. My organization/department learned useful information from the final capstone paper that will help my organization's/department's ability to accomplish its core mission.
8. Participating in the capstone project strengthened my organization's/department's relationship with Binghamton University.

All capstone supervisors except those overseeing the 15 students in the most recent cohort were also asked to rate their level of agreement with two additional statements:

1. My organization/department has implemented changes as a result of the final capstone paper.
2. My organization/department has been able to use the final capstone paper to address an organizational/departmental and/or community need.

We asked all supervisors to provide background information about their organization/department and the staff person who was most closely involved with the project. These questions included the size of their organization/department's operating budget, the number of full-time staff and the number of part-time staff working for their organization/ department, the number of volunteers assisting their organization/department, the number of years that the staff member who was most closely involved with the project had worked for their organization/department, and the highest level of education that this staff member had completed.

Slightly more than half of the survey respondents worked for an organization/department with an operating budget of less than $1 million and for an organization/department with less than 20 full-time employees. Most of the respondents worked for an organization/department that had five or fewer part-time employees and 10 or fewer volunteers. Many of the staff members who were most closely involved with the project had worked for their organization/department for several years and had considerable educational experience. Of these individuals, 41% had worked for their organization/department for more than 8 years, and 72% had a Masters degree or a higher level of education.

We conducted multiple regression analysis to examine which factors influence the extent to which community organizations benefited from their capstone experience. This approach enabled us to isolate the impact of each independent variable on the extent to which community organizations benefited from their capstone experience while holding other variables constant. For our dependent variable in our regression analysis, we created a capstone benefit index based on the level of respondent agreement with the following four statements: (1) The capstone project achieved the goals that I hoped it would achieve; (2) I was satisfied with the final capstone paper I received; (3) My organization/department learned useful information from the final capstone paper that will help my organization/department's ability to accomplish its core mission; and (4) Participating in the capstone project strengthened my organization/department's relationship with Binghamton University. With each of these statements, respondents were asked to use a scale of 1 to 5 to specify their level of agreement;

a 1 indicated that they strongly disagreed with the statement, and a 5 indicated that they strongly agreed. We assessed the internal consistency of the four items in the capstone benefit index by calculating a Cronbach's alpha; the score for our index is .769, a moderate to high degree of consistency. Descriptive statistics for the capstone benefit index score and its components are included in Table 1. To maximize our sample size and our model's statistical power, we did not use data on the following topics when calculating the capstone benefit index since we did not have this information for respondents from the most recent student cohort: (1) the extent changes had been implemented as a result of the final paper, and (2) the extent the final paper had been used to help address a departmental, organizational, and/or community need.

Table 1.
Descriptive Statistics for the Capstone Benefit Index Score and Its Components

Components of the Index	N	Mean	Std. Dev.	Min.	Max.	Cronbach's Alpha
Extent capstone achieved supervisors' goals	56	3.91	.793	2	5	
Extent supervisor was satisfied with the final paper	56	4.25	.694	2	5	
Extent organization/department learned useful information from the paper	56	3.88	.935	2	5	
Extent project strengthened their organization/department's relationship with Binghamton University	56	3.5	.953	1	5	
Capstone benefit index score	56	15.54	2.61	9	20	.79

We included the following measures based on our survey data as independent variables in our regression analysis: the size of the organization/department's operating budget (Budget), the number of years that the staff member who was most closely involved with the project had worked for the organization/department (Staff experience), the level of contact the supervisor had with faculty members overseeing the project (Faculty contact), and the level of the supervisor's engagement in the project (Supervisor engagement). We created an index to measure overall supervisor engagement based on the extent to which respondents agreed with the following three statements: (1) I was closely involved with the design of the capstone project; (2) I was in close contact with the student while s/he was working on the capstone project; and (3) This capstone project was one of my top priorities. The Cronbach's alpha for the supervisor engagement index is .789, again a relatively high level of consistency. In addition to using the survey data, we included the following information on capstone students as independent variables in our regression analysis: the student's age the year the project was completed (Age), the student's cumulative grade point average (GPA), whether the student received a waiver for the program's internship requirement (Internship waiver), and whether the student conducted the project for an organization serving the Binghamton community (Binghamton organization). We gathered this information using department records. Appendix A details the independent variables and the procedures used to code them.

Interviews

To supplement the survey data, we conducted interviews with 10 randomly selected capstone supervisors who were involved in 11 distinct projects (one supervisor oversaw two capstone students). Our randomization technique ensured variation in the semester in which the supervisor oversaw the project. Appendix B provides a comparison of our full sample and our interview sample with respect to several key variables. The comparison indicates no major differences between the two samples.

Again, we used two slightly different versions of the interview protocol depending on whether the student had conducted the capstone project for an organization or a department within an organization. Participants in the interviews described the capstone project they participated in, the background and training of the staff most closely involved in the project, the process for selecting the project, their level of contact with the student and the faculty members overseeing the project, and their reaction to the final project. Participants were also asked why the project was important to them, the extent to which the project achieved its intended goals, how satisfied they were with the final paper, how their organization/department used the final paper, and how they would have improved the project or process to increase the value to their organization/department.

At the beginning of each interview, we guaranteed interviewee confidentiality. The average interview lasted 30 minutes. All interviews were recorded and data were analyzed using the qualitative data analysis software QSR NVivo (Version 7). Interviews were analyzed to learn about the capstone project experience for the supervisor from the participating organization, emphasizing factors that they perceived contributed to the success or lack of success of the individual project. Each interview was broken into text blocks and coded to reflect key concepts in the supervisor's experience with the capstone project. Codes were established at the beginning of the analysis based on the literature review and the variables used in the quantitative analysis. Additional codes were created as new themes emerged from the interviews. Codes fell into four broad categories: supervisor engagement, supervisor/faculty relationship, supervisor knowledge of course expectations, and reaction to final project.

We used the interviews to supplement the findings of the regression analysis. In that way, the analysis of the interviews deepened our understanding of the variables that were statistically significant in the regression. Using this approach, we organized the interviews into three categories based on the interviewees' assessment of the overall project: highly successful, moderately successful, and unsuccessful, and we analyzed each interview in terms of the four coding categories noted earlier.

Findings

The regression and interview analyses provide insights into what contributed to the success of capstone projects for organizations. Close working relationships between the supervisor and student were central to successful outcomes. Those relationships made it possible for supervisors to ensure capstone projects were organizationally meaningful, to remain involved with the student throughout the semester, and to solve problems that improved the project as it developed. Unsuccessful projects, as well as those that were only moderately successful, had a contrasting profile. In those cases, supervisors indicated that their lack of connection to faculty caused problems: Insufficient knowledge about course expectations inhibited their ability to provide effective feedback to students and address concerns that arose for them about the project's value for the organization. Finally, capstone projects that took place in the Binghamton community were more likely to provide results that were beneficial to host organizations than those that took place outside of the region.

Quantitative Analysis

The survey results provide a useful overview of how supervisors perceived the capstone process and product. The results indicate that nearly all respondents (92%) were satisfied with the capstone paper they received. Other important aspects of the project showed greater variation. Only about one-third of supervisors

(34%) indicated that the project was one of their top priorities. Nonetheless, large majorities reported that they learned useful information from the project (71%) and were able to use the final paper to address an organizational or community need (64%). Many indicated they worked closely with the student during both the design stage of the project (79%) and while it was being undertaken (86%). A limited number of respondents reported working closely with the faculty member overseeing the project (16%). Table 2 summarizes the survey results.

The regression analysis showed that three of the independent variables have a positive, significant relationship to successful capstone projects: faculty contact (at the .01 level), supervisor engagement (at the .05 level), and Binghamton location (at the .1 level). Our findings indicate that as a supervisor's engagement increases, the benefit that a supervisor believes the organization received from the project increases as well. Our results also suggest that the more contact supervisors had with the course instructor, the more likely the supervisor was to perceive that the capstone benefited the organization.[2] Binghamton area projects were more likely to be perceived as successful than those that took place elsewhere. Anecdotal information, based on faculty interaction with students in the capstone course, is generally consistent with the supervisor engagement and capstone location findings. Table 3 summarizes the regression findings.[3] None of the other independent variables included in the regression analysis, mostly student characteristics (such as age, GPA, previous student experience) had a significant impact on the capstone benefit index. The value of the adjusted R^2 for the model is .277, which indicates it has a moderate degree of fit in identifying the variables that account for supervisors' perceptions that capstone projects were successful for their organization.

Qualitative Analysis

The results of the interviews deepen our understanding of the quantitative findings. As noted, we organized the interviews into three categories, based on the interviewee's overall assessment of the capstone project: highly successful, moderately successful, and unsuccessful. Supervisor satisfaction and utility to the organization were the primary standards for assessing success. The highly successful and unsuccessful projects had completely distinct features; the moderately successful capstones had features of both the highly and unsuccessful capstone projects. Table 4 summarizes the three capstone profiles.

Highly Successful Capstone Projects.

Six of the interviewees reported highly successful capstones. We categorized as successful those in which supervisors expressed clear satisfaction with the project and identified practical ways in which they or others used the capstone to advance the organization's mission or goals. Interviewees described a wide range of uses, including conducting presentations to staff or at national conferences,

Table 2.
Percentage of Respondents Agreeing With Below Statements

	% Agree or Strongly Agree	Number of Respondents
I was closely involved with the design of the capstone project.	79%	56
I was in close contact with the student while s/he was working on the capstone project.	86%	56
I was in close contact with the faculty members overseeing the capstone project.	16%	56
This capstone project was one of my top priorities.	34%	56
The capstone project achieved the goals that I hoped it would achieve.	79%	56
I was satisfied with the final capstone paper I received.	92%	56
My organization/department learned useful information from the final capstone paper that will help my department's ability to accomplish its core mission.	71%	56
My organization/department has implemented changes as a result of the final capstone paper.	50%	44
My department has been able to use the final capstone paper to address an organizational/departmental and/or community need.	64%	44
Participating in the capstone project strengthened my organization/department's relationship with Binghamton University.	**52%**	**56**

Table 3.
Factors Influencing Extent Community Organizations Benefit From Capstone

Dependent variable = Capstone benefit index

	Coefficient	Std. Error	P-value
Constant	6.399	6.984	0.365
Budget (1 = $1 million or more)	–0.069	0.666	0.918
Internship waiver (1 = yes)	0.159	0.902	0.861
GPA	–0.086	1.874	0.964
Age	0.040	0.044	0.365
Binghamton organization (1 = yes)	1.480	0.841	0.086*
Supervisor engagement	0.352	0.131	0.010**
Faculty contact	1.396	0.430	0.002***
Staff experience (1 = more than 8 years)	–0.940	0.738	0.210
Number of observations	51		
Prob > F	0.004		
R squared	0.390		
Adjusted R-squared	0.277		

Note: * < = 0.1 level; ** < = 0.05 level; *** < = 0.01 level.

developing technical assistance tools, and incorporating recommendations in the implementation of new initiatives. Several interviewees reported rereading the capstone paper after it was completed and referring others to it. Successful capstone projects became living documents for staff in organizations while they continued to address the issues that were the project's primary focus.

All six highly successful projects reflected strong levels of supervisor engagement with the student, consistent with the results of the regression analysis. The interviewees identified all three components of our supervisor engagement index as central to their capstone process: supervisor involvement in project design, priority of the capstone topic for the organization, and regular contact with the student. While all of the supervisors developed close relation-

Table 4.
Characteristics of Three Categories of Capstone Projects

	Highly Successful (6)	**Moderately Successful (2)**	**Unsuccessful (3)**
Reaction to Final Project	The student analysis addressed the problem in a meaningful way and the supervisor was satisfied with the project outcome. The capstone became a "living document" used by the organization in a variety of ways (presentations, technical assistance, etc.).	Generally satisfied; each could identify a tangible benefit from the project.	Unsatisfied with the final project. Final paper neither used nor read following student presentation.
Supervisor Engagement	Close collaboration between supervisor and student on issue selection. Identified issue was real and meaningful to the organization. Student and supervisor engaged in regular communication throughout the project.	Close collaboration between supervisor and student on issue selection. Identified issue was real and meaningful to the organization.	Ineffective collaboration on issue selection, affecting project design and priority of project for the organization. Issue selected was too broad or undefined to be useful.

Table 4 continued.
Characteristics of Three Categories of Capstone Projects

	Highly Successful (6)	**Moderately Successful (2)**	**Unsuccessful (3)**
Supervisor/ Faculty Relationship	Limited interaction, most at the end of the project.	Limited interaction with faculty before student presentation.	Limited or no interaction with faculty before student presentation. No working relationship with faculty member inhibited problem solving.
Supervisor Knowledge of Expectations	Limited concern about supervisor role and project expectations among three of six interviewees. Others did not comment.	Uncertain about faculty expectations for the project. Uncertain about the role of the capstone supervisor.	Uncertain about faculty expectations for the project. Uncertain about the role of the capstone supervisor.

ships with the students, they consistently reported that their interactions with faculty members were more limited. Most of their interactions with faculty were at the end of the capstone process. Although they were not in close contact with the faculty, none of these interviewees indicated that the lack of connection to faculty caused substantive problems. In addition, highly successful projects included several other features. Each addressed the project's defining issue in a meaningful way and generated actionable recommendations that the organization implemented. The supervisors in all six projects indicated that the project either accomplished its goals or that they were satisfied with the outcome of the project.

Several comments from interviewees capture the strong levels of engagement between supervisors and students in these projects.[4] The collaborative nature of the project design stands out; this approach made it possible for supervisors to ensure that the projects students pursued were a high priority for their organization. One supervisor noted:

> [Issue selection] was a very interesting part of the process, [the student] came up with one proposal, we talked about it and modified it and talked about it a little more and there were three to four sessions, it evolved somewhat different from where he started out but better in the long run.

The supervisor further indicated that throughout the project there was regular communication and "a free exchange of ideas." It is also clear that in the highly successful capstones, it is not simply that the issue was selected collaboratively, but that the issue was one that was important to the organization. In the words of one supervisor, "This [issue] has been a long standing concern of our institution so I was trying to encourage [the student] to think along those lines and then she lit upon this notion [her capstone topic] which made a lot of sense to her and to me as well."

Collaborative issue selection, the organizational priority of the project and regular interaction were particularly evident in three of the highly successful projects involving students who did their capstone projects with supervisors with whom they had long-standing relationships (as employees or past employees of the organization at the time of the project). For example, a supervisor at one site reported:

> As my [supervisee], we [the student and I] were working together every single day so [the capstone project] was sort of a natural outgrowth of the kinds of concerns that we'd been hearing and the efforts that we'd been undertaking. It was an effort to find out are these concerns that we're hearing genuine or are they not genuine.

In such cases, students and their supervisors could take advantage of their daily interaction or close past working relationship, both to identify a capstone topic and make sure it was one that was important to the organization.

Moderately Successful Capstone Projects.
Two interviewees described capstone projects that were moderately successful. Projects were classified as moderately successful if the supervisors expressed general satisfaction with the project, but identified key issues that detracted from either the supervisor's experience or the project's overall usefulness for the organization. For example, one supervisor qualified her satisfaction with the capstone with the statement: "I'm not saying my expectations were all that high." The other supervisor in this category noted the project had achieved its goals but commented: "I wasn't as close to the process as some other supervisors would be." This distance raised concern for the supervisor and lessened her overall satisfaction with the project.

The two supervisors of the moderately successful capstones indicated that the projects provided benefits to their organizations, but each identified challenges associated with the capstone process that limited the value of the capstone for their organization. The supervisors for both moderately successful projects reported two of the same process elements that the highly successful capstone projects did: collaboration with students on problem identification and selection of a capstone issue that was meaningful to the organization. Their comments on these process elements were similar to those of the supervisors for the highly successful projects.

The experience of the supervisors in the moderately successful projects differs from those of the highly successful in their understanding of the expectations for the capstone project and their role as supervisors. Both supervisors for the moderately successful projects perceived themselves as insufficiently prepared to supervise capstone projects. They expressed uncertainty about what the capstone instructor expected from them and the student. They were also unclear about their role in the process and how to provide effective guidance to students. One supervisor's comments were indicative of this concern:

> It would have been helpful had I participated in listening the year before so that I understood what was really expected . . . it was hard for us to determine how this is different than a regular intern project. . . . We didn't know if we were hitting the mark or not, maybe a mid-term conversation with a faculty member would have been helpful or reading a draft because really we had our process and that was moving along and the paper sort of leaped right over the top of that. It [the paper] really wasn't connected.

The experiences described by both individuals who supervised moderately successful capstones underscore the importance of faculty involvement, which was a significant factor in the regression model. Both supervisors expressed uncertainty about elements of the capstone process and suggested improvements. Specifically, the interviewees recommended changes to the process, notably greater clarity about expectations and the supervisor's role. They believed that the absence of that information prevented them from being fully effective as supervisors and from completing projects that achieved maximum potential for their organizations.

Unsuccessful Capstone Projects.

We classified the remaining three capstone projects as unsuccessful. The supervisors for all three indicated they had neither read nor used the capstone after the student completed it. One supervisor indicated that the project "did not get the information I was looking for;" another noted about the final paper "it's nothing I don't already know. It restated obvious things." A third found the final

project "inaccurate," and worried that she had "done a disservice to this person [the student]."

All three unsuccessful capstone projects offer a clear contrast to those that were highly successful. Two dimensions of the unsuccessful projects stand out, both of which are consistent with the regression findings: supervisor engagement and faculty/supervisor relationship. Unlike the projects that were highly successful or moderately successful, unsuccessful projects lacked effective collaboration between the supervisor and the student, most notably in issue selection and project design, which affected both supervisor involvement and the relative priority of the project for the organization. For example, one interviewee expressed concern that the student's topic was too broad. Two other interviewees noted that the focus of the students' papers changed throughout the semester. One supervisor reported, "I don't know if [the student] had a handle on it [the topic]. I always felt like we were always changing it. I didn't feel as involved and I didn't think it was good work." In a second case, the supervisor indicated that other people (the faculty member and another staff member in the supervisor's organization) were involved in designing the project. The supervisor noted, "I think perhaps she talked with [other organization staff] and then there was a lot of conversation I remember with her, I think, advisors. I had the distinct impression that things changed throughout the course of the semester." In all three cases, the supervisors indicated that problems associated with issue selection (and the supervisor's role in it) led them to become less engaged with the capstone project.

In addition, supervisors of unsuccessful projects expressed uncertainty about project expectations and their role. In the words of one supervisor, "This being the first time I ever did this, I guess I wasn't really sure what I was supposed to do, what the expectations were." The supervisor also commented, "There just seemed to be disconnectedness between me, faculty, advisors, student, the paper." According to another supervisor:

> I honestly don't think when she [the student] started that it was clear that she would be doing this paper. . . . I think in the beginning it would have been a cursory summary of what went on here and then it grew into something more detailed and daunting. I think that's what went awry.

As with supervisors of moderately successful capstones, there was little relationship between faculty members and supervisors, which created problems in the capstone process; however, the consequences of these problems were more serious in the unsuccessful capstone projects.

One experience captures this challenge for supervisors. It reflects the confusion the absence of a relationship between the supervisor and the course instructor created for the supervisor when projects do not go well.

I was getting frustrated. I wasn't sure if I could or couldn't [call the instructor], I didn't feel like "call me anytime if." I'm not sure if that was said but I didn't want to discredit [the student] in [the instructor's] eyes. That's what I was worried about.

In summary, our qualitative analysis suggests that there is considerable variation in the experiences of capstone supervisors and highlights how supervisor engagement and faculty contact affect capstone project outcomes.

DISCUSSION

This study examines the capstone experience for representatives of community organizations and the value of those projects for them. A survey and selected interviews of capstone supervisors found that supervisor engagement, faculty involvement, and local work site were all positively related to successful capstone outcomes. Our regression analysis, however, indicates that the student characteristics this study focused on do not appear to significantly influence the benefits that community organizations receive from capstone projects. In short, the value of capstone projects for community organizations depends more on the project process and the location of the community organization than on the attributes of the students. These findings suggest that students from a variety of backgrounds can produce capstone projects that benefit community organizations. As noted, MPA programs structure capstone experiences in different ways. As a result, our findings are likely to be most generalizable to programs with capstone experiences that are similar to the capstone course at Binghamton University. This study makes a valuable contribution to our knowledge of the development and implementation of effective capstone programs, particularly those structured around individual projects with public or nonprofit organizations. Its findings are important because MPA program leaders use capstone programs to assess whether they have prepared students effectively for public service careers. The study also increases our understanding of how to build stronger community-university partnerships in service learning.

Our findings are generally consistent with results reported by Schachter and Schwartz (2009) on the benefits that community organizations receive from capstone projects. While we studied capstone projects prepared by individual students and Schachter and Schwartz studied projects prepared in teams, the consistency between the findings of the two studies suggests that both individual and team projects can benefit community organizations, and one model is not preferable. In addition, the study's findings about the importance of supervisor engagement and faculty interaction with supervisors and local organization sites build on work by Miron & Moely (2006) and Gelmon et al. (1998).

Student-Supervisor-Instructor Partnership

While it may be possible to produce a highly successful capstone without a strong partnership among the student, supervisor, and instructor, a closer analysis of our findings clarifies why these elements are important. The model under which most capstones in this study operated involved the student as the central actor, balancing individual working relationships with both the supervisor and the course instructor. The challenges this model presents are clear. The regression analysis showed Binghamton location was significantly related to successful projects. In the 12 projects based outside the Binghamton community, supervisors especially depended on students' effectiveness as intermediaries because their supervisors lacked an ongoing relationship with the MPA program, and face-to-face access with the instructor was generally not possible. This approach limited the project's benefit to the supervisor's organization because it did not allow for the development of an effective collaboration among the three key players.

The experience of supervisors who oversaw the less successful capstones also raises questions about the utility of having the student act as an intermediary. Without a working relationship with the course instructor, supervisors received all their information about their role and expectations from students, and supervisors expressed uncertainty about both. Supervisors deferred to students and chose not to contact the course instructor with questions or problems, because they did not know the instructor or because they worried that doing so would hurt the student. These situations reflect an asymmetric power relationship in which supervisors deemphasized the potential benefit of the capstone project to their organizations and emphasized assisting the student with work that would complete a degree requirement. As a result, students sometimes produced projects that were not useful to supervisors or their organizations. These experiences reinforce the notion that developing a capstone project without close contact between faculty members and capstone supervisors not only may result in a poor outcome but also can damage the community partnerships that capstone projects seek to build.

Supervisor Engagement

Another critical element of successful capstones is having a supervisor who was actively involved in the capstone process: Supervisors who were the most engaged in the capstone process received completed projects that were the most satisfactory. Effective issue selection and project design were central to supervisor engagement. Involving supervisors in the design process ensures that projects address issues that matter to the community organizations they represent and makes it more likely that they will work with students to shape projects in ways that are meaningful to their organizations. Without such involvement, supervisors will be less invested in students' projects, not see the need for regular meetings, and not know how to use time with their students effectively.

It may be possible to attribute some of the challenges with supervisor engagement to the structure of the capstone course at Binghamton University. As noted, students at Binghamton University work closely with both faculty and practitioner committee members to design their capstone projects. Other programs structure their capstone courses differently, and some require faculty and capstone supervisors to agree on project scope and the content of the deliverables before student involvement (e.g., Allard & Straussman, 2003). This approach may help foster stronger relationships between faculty and capstone supervisors earlier in the capstone process and minimize the need for students to act as intermediaries between faculty and capstone supervisors.

Finally, it is worth observing that despite the regression findings, some capstones were highly successful without high levels of faculty involvement. The interviews suggest that in those cases, supervisors had close working relationships with the student that facilitated collaboration and made it possible to engage the supervisor effectively. It is unclear how those involved with these projects overcame questions about course expectations or supervisor role. It is possible that supervisor or student characteristics not considered in this analysis may further explain their success. We would benefit from future research exploring this issue.

These results provide clear direction for capstone course instructors interested in maximizing the benefit of capstone projects for community organizations: Develop a strong partnership among the project's three primary actors (student, supervisor, and instructor) and cultivate a high level of supervisor engagement. Possible strategies for achieving these goals include (1) providing an orientation to all capstone supervisors before a capstone course begins; (2) structuring joint meetings involving the student, instructor, and supervisor at least once during the semester; and (3) conducting individualized outreach to supervisors from organizations outside of the community. While these strategies are not difficult to implement and likely would not require additional resources other than the course instructor's time, they are a reminder of the labor intensity of service learning.

Implications for MPA Program Assessment

Finally, the survey and interview findings provide valuable information for assessing the effectiveness of MPA programs in preparing students for community-based public practice, like the program at Binghamton University. Other researchers have identified the value of capstone projects as an element of MPA program assessment (Arstingueta & Gomes, 2006; Durant, 2002); however, this study and work by Schachter and Schwartz (2009) adds to that perspective by demonstrating the significant role input from community partners can play in this effort. How students apply their knowledge and skills in public and nonprofit organizations is an important measure of success. While instructors assess individual students by providing a capstone grade, a closer relationship between instructors and capstone supervisors can provide the instructor with useful information about whether the

program has effectively prepared students for professional public service careers. In other words, a closer relationship among the student, supervisor, and instructor will not only build stronger capstone projects but also enable instructors (and by extension program directors) to learn more about whether programs are accomplishing their mission. In the future, program leaders may consider duplicating this study or evaluating other forms of outreach to community partners as additional sources of data in assessing program success.

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Footnotes

1. This paper is an equal collaboration; the order of authorship is alphabetical.

2. Four different instructors taught the capstone course over the time period that our study focuses on. One of these instructors made an effort to be more engaged with the capstone supervisors and organized mid-semester meetings where she and each student met with the student's capstone supervisor. We created a dummy variable indicating whether a student had this faculty member as his capstone instructor. However, this variable was not significant in our regression analysis.

3. While students were not the focus of this study, student course evaluations did not reveal any specific concerns about supervisor engagement or the location of their internship.

4. Note that we have removed identifying information about projects, supervisors, and students to protect confidentiality.

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APPENDIX A
Independent Variables

Variable	Measures and Coding Procedures
Budget	Approximately what is the size of your department's operating budget? 0 = less than $1 million 1 = $1 million or more
Internship waiver	Dummy variable for whether student received a waiver for the program's internship requirement 1 = yes 0 = no
GPA	Student's cumulative GPA in MPA program
Age	Student's age the year in which she completed her capstone
Binghamton organization	Dummy variable for whether the student conducted her project for an organization serving the Binghamton area 1 = yes 0 = no
Supervisor engagement	Sum of the following survey items measured on a 5-point Likert Scale: I was closely involved with the design of the capstone project. I was in close contact with the student while s/he was working on the capstone project. This capstone project was one of my top priorities. 1 = strongly disagree 2 = disagree 3 = neither agree nor disagree 4 = agree 5 = strongly agree

Variable	Measures and Coding Procedures
Faculty contact	Answer to the following survey item measured on a 5-point Likert Scale: I was in close contact with the faculty members overseeing the capstone project. 1 = strongly disagree 2 = disagree 3 = neither agree nor disagree 4 = agree 5 = strongly agree
Staff experience	How many years has the staff member who was most closely involved with this project worked for your department? 0 = 8 years or less 1 = more than 8 years

APPENDIX B
Comparison Between Full and Interview Samples

	Full Sample	**Interview Sample**
Proportion Public	.45	.55
Binghamton Organization	.79	.91
GPA	3.74	3.69
Faculty Involvement Score Average	2.57	2.64
Capstone Benefit Index Average	15.54	15.55
Supervise Involvement Index Average	11.1	9.9
Internship Waiver	Yes: .23	Yes: .36

Capstone Cohort	**Full Sample Responses**	**Proportion**	**Interview Sample Responses**	**Proportion**
Fall 2005	6.00	0.11	2.00	0.18
Spring 2006	2.00	0.04	0.00	0.00
Fall 2006	6.00	0.11	1.00	0.09
Spring 2007	9.00	0.16	2.00	0.18
Fall 2007	6.00	0.11	1.00	0.09
Spring 2008	11.00	0.20	2.00	0.18
Fall 2008	4.00	0.07	1.00	0.09
Spring 2009	12.00	0.21	2.00	0.18