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Capstone Revival

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Capstone Revival

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Capstone Curriculum

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Abstract

The capstone project is a culminating experience whereby students choose to research a topic that is relevant in their field of study and have been highly regarded as important learning activities. The capstone allows students to use research, analytical, problem solving and evaluation skills they have learned in the course of the graduate program. McGill indicates the benefit of the completion of a capstone project not only in gaining knowledge in capstone but also in learning how to apply the knowledge gained in other courses in the major (McGill, 2012). Currently, COPACE (College of Professional and Continuing Education) has three separate capstone programs – one each for MPA, MSPC, and MSIT. The goal of this study is to evaluate our existing capstones at COPACE and identify the components of a quality capstone program to benefit future capstones. This study will also determine whether integrating these three separate capstones programs into a single standard capstone is more beneficial than the current model. We will also show how to improve the existing capstones programs. The methods used in this study are: survey, broad research on other universities and analysis of 44 COPACE capstones. The target populations of the survey are COPACE graduate students graduated from 2013 to 2014. An anonymous questionnaire was sent by email to approximately 120 Clark students. The survey results are interpreted with suggestions for achieving more consistency in capstones.

Keywords: Capstone, Criteria, Clark University, Quality

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Introduction

Capstone-type courses have existed as a prerequisite for graduation for many years. There is a growing emphasis on improving the relevance of education nationwide. Graduate programs are recognizing this need and are changing their curricula to better prepare their graduates for the real-world practice. In order to better prepare graduate students for the professional workplace, many schools throughout the world have offer capstone-type courses. These courses have been highly regarded as important learning activities for students. Currently, COPACE has three separate capstone programs for Master of Public Administration (MPA), Master of Science in Professional Communication (MSPC) and Master of Science in Information Technology (MSIT). The capstone is the core course for MPA, MSPC and MSIT programs. There are no current standard criteria of components for a qualified capstone program. This means students in these three program received different levels of education and their learning outcomes may vary. Recently COPACE faculty and students have focused their attention on this issue. Our client, COPACE, requested we identify what constitutes a good quality capstone, both externally and within Clark University leading us to our research question: what makes a good capstone? In order to improve COPACE's capstone program and make teachers and administrators satisfied with how the courses serve their programs, we investigated current educational practices to learn from the experiences of others. This effort included a broad assessment of current practices in capstone education over a wide range of disciplines – domestically and internationally. Also, we conducted an on-campus survey to analysis and evaluate the current capstone programs at COPACE. This paper describes the overall findings of the broad research and the survey.

Literature Review

Capstones are intricate projects assigned in higher education that require students to apply and display skills they have obtained during their academic program in a synthesized body of work. In a research article "Problem-Based Learning and Self-Efficacy: How a Capstone Course Prepares Students for a Profession" by Joanna C. Dunlap, the question, "Why are capstones important?" is explored. One reason why having a capstone is crucial in higher education is the preparation students acquire for their professional careers once their academic career comes to an end. The article describes the role of education, stating, "educators need to create learning environments that engage students in ways that help them develop content expertise and problem-solving, collaboration, and lifelong learning skills"(Dunlap, 2005, p. 65). This is executed in the classroom in the form of a capstone by allowing students to grasp and apply skills that will aid their transition into the workforce. Another article "Understanding the Capstone Experience Through the Voices of Students" by Patsy Tinsley McGill also expresses the crucial demand for capstones in order to prepare students for life after school. McGill incorporates student's own voices and opinions, which leads to the development of these assertions.

The structure of a capstone also allows for students to use skills they have learned in past courses and apply them to their capstone project. McGill's article describes students reporting, "not only gaining knowledge in capstone but also learning how to apply the knowledge gained in other courses in the major"(McGill, 2012, p. 494). Others also reported mastering skills during their capstone projects that they hadn't mastered in previous classes (McGill, 2012, p. 495). "Assessing Student Learning Outcomes and Documenting Success through a Capstone Course" by Paul E. Sum and Steven Andrew Light also discusses the importance of capstones. The article describes the role of capstones as "allowing students to reflect on their experience in their major and consider future applications of the major's themes and skills to a variety of civic and professional contexts"(Sum & Light, 2010, p. 524). The skills-based projects further extend the students thinking beyond the classroom and allow skills to form that would pertain in their profession after higher education.

Capstones allow students to work closely with real clients to address an issue and help recommend viable solutions. McGill defines students' experiences and reaction to working with clients as having great value because students were able to apply the theoretical knowledge they had acquired throughout the program in a practical manner (2012, p. 497). The students gain real life experience and furthermore observe their work in a more meaningful way. "The Value of Capstone Projects to Participating Client Agencies" by David R. Schachter and Deena Schwartz addresses the importance of working with real clients for MPA students. Through their study, they have found that experiential learning through the capstone program has a strong, positive impact on students as well as the clients themselves (Schachter & Schwartz, 2009, p. 449). The article discusses the importance of universities giving back to its community and views capstone work that allows students to work on real-life projects as an avenue to effectively add value to the community (Schachter & Schwartz, 2009, p. 456).

It is crucial to understand the requirements of a capstone in order to create consistency within the COPACE programs. For years, authors have addressed the goals and standards university capstone courses should include. T. C Wagenaar's "The Capstone Course" discusses what he believes a capstone course should embody. He states that his goal of capstones is to "emphasize sharing of ideas, synthesis and critical informed reflection as a precursor to action"(Wagenaar, 1993, p. 209). He continues by affirming that "capstone course should require theories and methods (and various other course) as prerequisites and then build in this prior knowledge in the capstone, should revisit the basic fundamentals learned in the beginning of the program, and should be a required course because it communicates the importance of the course" (1993, p. 211). Wagenaar considers the role of the capstone in the student's academic career, expressing the significance having a set criterion that acts as the guideline for the course.

In "Romancing the Capstone" authors Dickinson McGaw and Louis Weschler collect different authors perspectives on what a capstone look like. The idea of experience-based education is explored. Robert Denhardt (1997) is quoted in stating, "Abstract learning must be supplemented

by how it feels to work in a group or engage in organizational learning" (McGaw & Weschler, 1999, p. 91). Bob Cunningham continues this thought arguing, "Experiential learning is practical in the sense that it integrates theory and practice in thought and action (McGaw & Weschler, 1999, p. 91)." Combining theoretical learning with practical execution enables the students to apply skills learned in the classroom in a real-life setting. McGaw and Weschler continue the conversation by listing what they believe a capstone accomplishes. They begin by maintaining that the course permits faculty, students and practitioners to examine each other's thinking. Capstones also help facilitate systemic integration of coursework and knowledge across the discipline while encouraging the refinement of critical and analytical skills. Lastly, it promotes an assessment of personal values, competencies, and standards (McGaw & Weschler, 1999, p. 92).

While exploring scholars impressions on what a capstone course should look like, some articles specifically discussed key objectives of a capstone course for the Masters of Public Administration (MPA) program. Gary E. Roberts and Tom Pavlak's "Designing the MPA Capstone Course: A Structured-Flexibility Approach" describes a capstone course in the MPA program as a "rite of passage that is an experiential and symbolic test that affirms the students learning and application abilities (Roberts & Pavlak, 2002, p. 179)". The course should also aim to enhance student self-awareness, promote critical value assessment, refinement of critical thinking and analytical skills (Roberts & Pavlak, 2002, p. 180). Unlike other programs, capstone courses in the MPA program should be team-based that focuses on real world policy or management issues (Roberts & Pavlak, 2002, p. 181). The journal goes on to list what a revised capstone course in the MPA program should look like. First, the capstone course should have a balance between student autonomy and prescribed structure, meaning a balance must be constructed that allows students to take control of their own project while still being given some direction. It is also important for students to have a workload that is manageable (Roberts & Pavlak, 2002, p. 182). Unmanageable work can result in a flawed project. When students participate in the project it is crucial that their

work reflect their critical thinking and an application of analytical skills. Demonstrating skills learned from past classes shows that the student has such ability.

Due to the fact that MPA capstone programs usually work with an organization on real world issues a lot of research has been done on the impact such work has on students. As mentioned in the above text, David Schachter & Deena Schwartz's "The Value of Capstone Projects to Participating Client Agencies", however, explores the usefulness an MPA capstone has on contributing clients. The journal focuses on NYU's MPA capstone course, surveying the effects of the capstone course on clients who were involved in the capstone projects during the 2006-07 academic school year. The survey received a 74% response rate from clients that were contacted and it was found that most clients rated the capstone program with overall satisfaction. Many of the clients stated that partaking in the capstone project gave them a point of reference from an outside perspective, offered them an understanding of "best practices", helped with the advancement of their project and found themselves changing practices based on quality recommendations from the students. Eighty Five percent (85%) of clients rated that the data compiled by the capstone teams were unique, as they did not exist anywhere else. This response indicated a positive about the capstone project for some organization might not have had the resources to compile the newly discovered data otherwise. Many affirmed the impact of the capstone would be lasting while only 5 clients indicated that they were not sure if it would or not. This provides some insight on the usefulness of the capstone project for clients.

David Campbell & Kristina Lambright's "How Valuable Are Capstone Projects for Community Organizations? Lessons from a Program Assessment" also sought out to explore the value of students working alongside organizations. The article first defines service learning as, "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" (Campbell & Lambright, 2011, p. 63). This philosophy reflects one of the major goals of the MPA capstone program. The survey focused on research at Binghamton

University in the MPA program. Clients who participated in the capstone program from 2005-2009 were asked to take a survey and out of those who responded, 10 were randomly selected to partake in a follow-up interview. Ninety two percent (92%) of those responded to the survey said they were satisfied with the capstone paper they received. Seventy one percent (71%) found they learned from information in the project, while 64% were able to use the final paper to address an organizational or community need. Only 34% said the project was top priority. While 16% said they worked closely with the faculty as well as the student on the project, 79% said they worked closely with just the students.

After completing the 10 follow up interviews, 6 interviewees reported highly successful capstones. All 6 reflected strong levels of supervisor engagement with the student and sited great communication throughout the process. There were two interviewees that found the capstone work moderately successful. There was a general satisfaction with the project but identified key issues that detracted were either the supervisor's experience or the project's overall usefulness for the organization. Some were not very close to the project as others and found difficulty in finding a meaningful problem to solve within the organization. The key difference between those that were highly satisfied and those that were moderately satisfied is preparation and understanding the expectations of the capstone project. The last two interviewees expressed that they considered their capstones to be unsuccessful. They stated that they neither read nor used the students work in their organization after the fact. One interviewee complained that they did not receive the information they were looking for while the other said the information they did receive was not new and some were inaccurate. It is clear that the relationship between the student-client and instructor must be strong in order to reach a successful outcome (Campbell & Lambright, 2011, p. 68). Equally as important is the supervisor's involvement in the project. Students and clients must create positive synergy and work alongside one another throughout the whole process. One challenge found during this survey that hurt the student-client relationship was a lack of resources within the organization themselves. This meant that when an employee took the time to work on the capstone there was one

less person working on the organization's objectives, which would be taxing. Despite this challenge, these responses provided crucial information about the relationship between the student's projects and the organizations.

While constructing an effective capstone, it is important to be clear about the format and process of the capstone in order to guarantee consistency and uniformity throughout all the projects. Wagenaar's "The Capstone Course" specifies what he believes should be the format of a capstone course. He first declares that the capstone course should be in a seminar format and that students should work in small groups (Wagenaar, 1993, p. 212). Ideally, the course will be team taught (two professors) though he acknowledges the difficulty some universities may have in terms of being able to staff all capstones with two professors. Wagenaar makes a point to state the importance of grading the course, stating, "it shows that varying levels of performance are possible and identifiable"(1993, p. 212). Lastly, there is a discussion about the use of resources in the capstone. An array of books and articles/journals should be used when executing the project (Wagenaar, 1993, p. 213). Randy Brooks, Jodi Benton-Kupper and Deborah Slayton's "Curricular Aims: Assessment of a University Capstone Course" also mentions the sort of format a capstone course should mimic. At the beginning of the semester, each student would propose a project and would explain what the team members would accomplish while participating in the project. Once all ideas were shared, the most compelling projects that generated enough interest for teams would be executed. The groups would plan and implement action contributions based on the proposed concepts. The team would establish clear roles and expectations for each member and an action plan of research or development of the project, along with proposed outcomes and methods of evaluation (Brooks, Kupper & Slayton, 2004, p. 277-278).

In McGaw and Weschler's "Romanizing the Capstone", they begin to discuss the format by stating that early in the semester each team presents a research design/proposal to their instructor. During the semester, teams will conduct its grounded research and at the end of the semester the teams present a written report and an oral presentation based on their work (McGaw & Weschler,

1999, p. 96). Specific to the MPA program, McGaw and Weschler believe through the capstone students need to learn and practice public service skills so some class time would be dedicated to workshops that help develop skills such as writing, listening, speaking negotiating (1999, p. 97). In "Designing the MPA Capstone Course: A Structured-Flexibility Approach", the implementation of an MPA capstone course was written out. The process would begin before the semester started where faculty met and selected the capstone project topics that corresponded to faculty expertise and interests. Students would then make their topic choices and groups would be formed based on their newly picked topics. The students would then work to identify the external and internal factors that influence the need for change, diagnosing the nature of the problem, developing appropriate solutions, implementing planned change interventions and evaluating the effects of change efforts – working with the organization. There would be very clear deadlines and students would be expected to produce drafts throughout the semester. The students would have two different advisors: one for basic check-ins and expectations debriefings and one that supervised the project itself. The final would consist of each student giving a 30-minute presentation, followed by a defense of the student's main conclusions and recommendations (Roberts & Pavlak, 2002, p. 182-184). Although there are different approaches to structuring the course, creating a consistent format plan is important in maintaining a strong capstone course.

The last thing that is fundamental in achieving a successful capstone program is utilizing effective methods to measuring the outcomes of each student's performance and project. "A Case Study of Measuring Outcomes in an MPA Program" by Jody L. Fitzpatrick and Katrina Miller-Stevens explores methods to assess the outcomes of an MPA program at the University of Colorado-Denver. Two ways to effectively assess the student's outcomes were in survey form at the end of the semester and the use of a detailed rubric (Fitzpatrick & Stevens, 2009, p. 23). Faculty would go through the rubric with the students during all the stages of the capstone so students understand what is expected of them. At the end of the semester, the students would evaluate themselves and their team as well (see Appendix 10 and 11 for Example of Self and Team Evaluation).

In "Implementation and Effect of Rubrics in Capstone Design Courses" by George Platanitis, Remon Pop-Ilievs, and Scott Nokleby, the paper demonstrates the implementation of a rubric system for a capstone level course. Although the rubric in the paper was used for an engineering capstone, the same structure could be used when developing an evaluation rubric for any COPACE capstone. The rubric is based on the ICE (ideas, connections, extensions) philosophy. ICE rubrics have been used for a range of subjects (Platanitis, Pop-Ilievs & Nokleby, 2009, p. 401). For a capstone course, the paper recommends a multidimensional rubric, which gives instructors a wide range of choices when evaluating while simultaneously giving students a clear direction of what is expected in the course (see Appendix 12 for Example Rubric Structure). Letter grades are assigned to each box assignment involving the skill to be learned, depending on the understanding and application achieved (Platanitis, Pop-Ilievs & Nokleby, 2009, p.402). Ultimately, the rubrics can be customized to highlight any specific element relevant to the capstone project and instructors may use their own discretion as to what grades to assign to each level (Platanitis, Pop-Ilievs & Nokleby, 2009, p. 404). Creating a clear and concise rubric enables the students to better understand expectations and reach higher grading ranges.

There has been extensive research on the importance of capstones and how to produce a quality capstone course. It is clear from the literature discussed above capstones are crucial in graduate programs because they not only allow students to apply obtained knowledge from other courses but gain real world involvement. Therefore, it is important for capstone courses to synthesize critical learning with practical experience. Capstones not only benefit the students, but also the organizations they work with. In terms of assessing outcomes, it is imperative that students are made aware of how they are being evaluated. A strong capstone program will make sure everyone involved, from the students and advisors to the organizations themselves are committed to the project and offer support when needed. Implementing quality capstone programs will breed quality students and future employees.

Methodology

I. Design

To assist the client in the evaluation of the current capstone projects learning outcomes, a data analytics design was needed. In the design, three forms of data analysis undertakings were identified:

- Analysis of COPACE capstone reports
- Literature review on capstone requirements
- A survey of COPACE alumni for feedback on the importance of Capstone report components

The project team endeavored to make the research methods consistent and intensive. Documents included in the Appendix demonstrate the integral part measurement and data analysis play in the success of the research to be performed. The list of forms and their function with regards to obtaining information and measuring and tracking results of the research are explained below.

Primary Subject Consent to Participate in Research: Our target population of the research is the COPACE alumni graduated from 2014 to 2015. The rationale for this approach was to get the perspective not only from current students, but also from those who has gone through the capstone process. Before agreeing to participate subjects review the Consent form (see appendix 2 for Consent Form). This form authorizes researchers to obtain the necessary preliminary information that will be used in the research. It also outlines clearly their responsibility, the researcher's responsibility and what rights they have throughout the process.

Background Information & Questionnaire: In an effort to avoid generalization or bias in the sample the questionnaire is key in obtaining the necessary background information in order to complete in the study. Information obtained from the questionnaire was also used when designing a qualified capstone guideline for future capstones.

II. Sampling and Data Analysis Plan

We collected quantitative assessment information from a variety of sources. These sources include broad research on capstone projects at other universities, reviewing past capstone projects in COPACE, and specific surveys designed to assess various components of the capstone process to ascertain learning outcomes.

A broad research on capstone projects of other universities was conducted at the beginning of the project to get a brief overview of possible forms capstone projects can take, the types of requirements and deliverables for completing the course and learning goals and outcomes. No specific criteria on selecting universities were set. Ideally we hoped to identify universities that had similar programs to MPA, MSPC and MIST. For example our sample for each program would have 8 domestic universities and 7 global universities. After extensive research, a total of 36 global universities were randomly selected as our samples (11 in Public Administration, 12 in Professional Communication and 11 in Information Technology). The list of universities is included in Appendix 8. Variables used to measure capstones included clients, written reports, oral presentation, length of the course, and individual/group work.

The second research effort was to review COPACE current capstone projects. 44 capstone reports were reviewed in order to get the data of completeness of a formal academic paper. Those reports were selected from MPA, MSIT and MSPC program during year 2013-2015. Criteria for a qualified capstone reports were created after the literature review on capstone was completed. Based on our research, we determined that elements of a formal capstone academic paper include: title page, table of content, literature review, content, recommendations, work-cited page and format.

COPACE capstones were evaluated based on the following criteria:

Evaluation Criteria and Definitions	
Title Page	<ul style="list-style-type: none"> - Front cover of paper should include the title of the work, name of student, date, advisors names, and course name -The semester -The client name

Table of Content	- A list of titles of the parts of a book or document, organized in the order in which the parts appear
Lit Review	-Lit review will discuss published information in the relevant subject area -It will also summarize and synthesize the arguments and ideas of others without adding new contributions
Content	-Identification of the problem -Methodology - Collection of data -Analysis of data -Analysis of Conclusion
Recommendations	-Actions are recommended based on analyzed data
Work cited page	-List of works that you referenced in the body of your paper, whereas a bibliography is a list of all sources you used in your research
Format	-Follow the Purdue APA

If the COPACE capstone report met a requirement criteria, “1” was assigned. If the criteria component did not meet the operational definition, a score of “0” was assigned. Once the total inventory was completed, we added all of the “1” and divided it by the total number of COPACE capstones we examined. The third form of research was an electronic survey given to COPACE alumni. According to Clark University Policies on Human Subject Research, if the use of human subjects will be involved in research activities (interviews, surveys, etc.), an approval from the Clark University Institutional Review Board (IRB) must be obtained prior to the initiation of the project. The IRB is responsible for safeguarding the rights and welfare of persons participating in Clark research projects. An online application for Anonymous Survey was submitted and Institutional review board IRB approval (see Appendix 4 for IRB Approval) was secured to distribute the survey. A name list of alumni from year 2013 to 2015 was obtained from the Clark Alumni office. The Alumni office sent the prepared email including the survey link to survey participants via ClarkConnect.

Participants: A target sample was used in the study. Clark alumni graduated during 2013 to 2015 from MPA, MSPC and MSIT program were surveyed using the instrument. The survey was opened for 7 days from the date of the survey participation request email. 18 people out of the approximately 114 alumni completed the survey.

Survey Instrument: The survey gave a preview of procedures and learning outcomes of capstone project. The instrument consisted of 10 items. The items in the survey consisted of: 1) demographic information; and 2) open ended questions that explored values, and opinions of those surveyed on their COPACE capstone experience. The open-ended survey questions were provided conducted to give respondents the opportunity to give factors and reasons on how they truly felt about their COPACE capstone learning experience. The survey was divided into two main sections:

- Prompted with specific choices - This section was designed to understand the demographic information of the respondents and the methods in which they found most useful during their capstones
- Open-ended and unprompted - After the prompted section, the survey had a section, which allows the respondents to give answers freely without any prompts. This was designed to test the literature review findings, and also provide the respondents an opportunity to highlight some factors that may be important but were not mentioned by the respondent during the first part of the survey.

Analysis and Results

I. Broad Research Analysis

MPA Analysis

While looking at other schools' MPA capstone descriptions online, it was quickly noticeable how different each school chose to display their capstone requirements. While some went in great detail, others were very vague in their online description about their capstone program (see Appendix 8 for

Capstone Descriptions). We began the research by examining eight universities in the United States that offered the MPA program then broadened the search by examining three other schools outside of the United States that also offered the MPA program. Going through the description of each school, it was evident that certain requirements were mandatory for every MPA program. For example, every school required the students to work collaboratively with a client. In addition, all but one school made it clear that the work should be focused on assisting a local public or nonprofit organization on a pressing social or policy issue. Ten out of the eleven schools looked at also mandated the capstone to be group-based with an average of 3-5 students in each group (see as the Figure 1 shows).

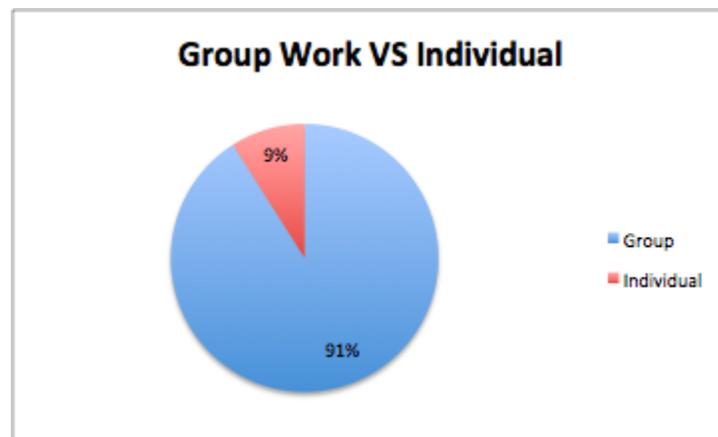


Figure 1: MPA Programs at Other Schools: Group vs. Individual Work Method

Despite these similarities, there were categories that were inconsistent between the different MPA programs. One clear difference was the way in which the students would present their final project. While all the schools that did offer this information required a written component, seven of the schools also made it a requirement to give a presentation to the clients as well as the program heads. Two schools required only a paper at the end of the project. Two schools did not offer this information in their description of the capstone course. Each international school fell into one of the three categories mentioned above. In addition, six schools stated the capstone had to be completed in one semester while four other schools required that the capstone be a yearlong project. One school did not specify the length of completion time for the capstone course. One international school

offered the course for one semester while the other two required a year of capstone work.

After analyzing each school's MPA capstone descriptions, it is clear that the school's location (domestic or international) does not play a factor in the way the schools operated their MPA programs. However, it was crucial that an MPA program capstone project team worked with an organization that was committed to some sort of social or policy change. Although not all the schools displayed this, most saw the benefit of having students work in a group. Furthermore, two out of the eleven schools evaluated went into great detail about what an MPA capstone should look like and what was expected for each capstone project. The clear and useful detail added some transparency to the capstone project as well as the MPA program as a whole.

MSPC Analysis

While researching on MSPC capstone program, we found the sources and detailed description on this program very limited. So we decided to extend our research scope from capstones of Master of Science in Professional Communication to capstone programs in Master of Arts in Communication and search on communication-related program such as global communication, public communication etc. We selected 12 schools as our research target -- 8 domestic and 4 international. After analyzing all these schools using our research variables, we found that there is no standard on the structure of how to conduct capstone program (see Appendix 8 for Capstone Descriptions). It could be individual-based or group-based, or students can select group work or individual work by themselves. But in general, individual-based capstone is the mainstream. Sixty six percent (66%) require student to deliver written documents and presentation at the end of the project, while three school's required only a written paper as deliverables of this program. 11 out of the 12 schools set the project as semester long, and only 1 school offered a yearlong program. As for whether the program is client based or designed to assist a local organization, most schools did not specify in the course description. We know 4 out of 12 schools (33%) are client-based and 3 out of 12 (25%) were focused on assisting a local organization.

Based on our research data, we can conclude that capstone projects in a graduate level

communication program can involve either a team or an individual. Both teams and individual are required to interact with a sponsoring organization in a collaborative relationship to address real world problems or work on opportunities relevant to the sponsoring organization. In addition, a capstone project in a graduate level communication program can be a proposal in increasing organizational success, launching an entrepreneurial endeavor, or addressing a community or societal problem or need.

MSIT Analysis

While researching other MSIT programs, we settled on a total of eleven universities: 7 of which were American universities and 4 were international universities. Based on the data we found for guidelines on the MSIT program, capstone descriptions were not clear or very detailed (see Appendix 8 for Capstone Descriptions). We found that over 60% of the total number of universities (11) required students to work in groups (see Figure 2 for MSIT Capstone graphs). Forty six percent (46 %) of the total universities required both a paper and presentation, as their final while 18 % did not provide this information. We also found that most MIST capstones were semester long in length. At the same time, about 50% of the programs examined were client-based projects and required students to work alongside a local nonprofit or public organization assist.

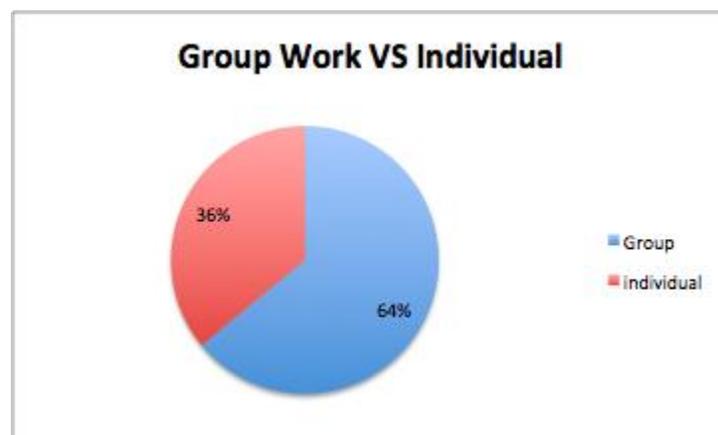


Figure 2: MSIT Programs at Other Schools: Group Work vs. Individual Method

II. Survey Analysis

From the report (see Appendix 5 for Survey Results), we receive 12 survey responses from a

total 114 email surveys sent out. (A response rate was 8.3%). The response rate was low because the alumni we were surveying only had one week to respond with no follow up reminders. From the responses, we can see that 88% of the total respondents are female and 81% of them are of young age (from 18 to 29). Unfortunately, we only received responses for MPA and MSPC alumni. Our survey respondents consisted of mainly fifth year domestic students.

The respondents ranked the importance of the capstone deliverables. The ranking results were as follows: (1) literature review, (2) methodology, (3) data analysis, and (4) discussion. The responses showed that the literature review was ranked the most important of all capstone deliverables. A review of the literature is important because it provides an up-to-date understanding of the subject and its significance to the capstone project. A literature review also identifies the methods used in previous research on the topic. The literature review can help answer any questions the student one may have, help discover what questions need to be asked and provide comparisons for the student’s own research findings.

Regarding research methods, the responses were very consolidated; most of the students used the quantitative research and qualitative research in their capstone. This indicates that most respondents needed to take the research methods and strategies courses in order to know how to apply quantitative and qualitative research. (See the Figure 3)

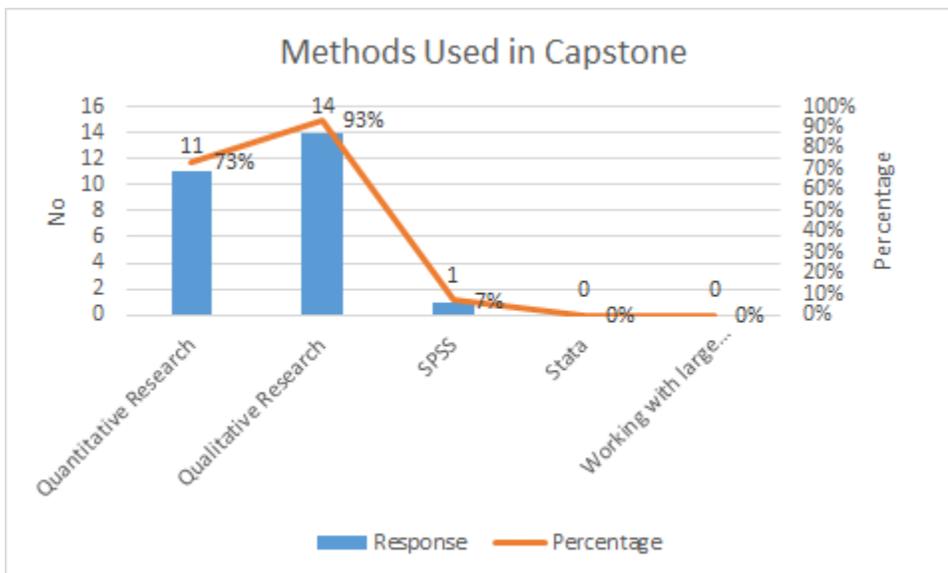


Figure 3: Methods Used in Capstone in the Survey Report

The following were the common responses about what worked well in the capstone projects:

- Having the good team and meet often
- The capstone advisor helps a lot
- Working with real organization, the scope and deadline are both clear
- Keep the project on track

From the open question feedback, the team and the advisor are the two components that help a capstone project are successful. Most of the respondents' feedback emphasized that the team members and the capstone advisors were influential on the capstones. The ability to freely select team members and advisors seem to add to the quality of the capstone based on the respondents' answers to the open ended questions.

Our survey also asked question about would what makes a capstone experience more meaningful. The open-end responses were along the following points:

- More guidance about the capstone project from advisors and clients
- Capstone project should be challenging

The last question of the survey asked respondents was they perceived to be the benefit of the capstone. The following responses were provided:

- Ability to graduate from Clark and capstone work looks good in your resume
- Good experience of working with peers and advisors

III. Capstone Document Analysis

As part of our analysis, we reviewed a total of 44 final capstone papers from the following COPACE programs: MPA, MSIT and MSPC. We created a set of criteria that we recommend should be in every capstone paper. These elements reflect a standard that all COPACE graduate level capstone papers should seek to obtain. While reviewing each capstone paper, we recorded which elements were missing and which elements were included based on our quality criteria. If the

capstone fit the specific criteria, we marked the box with a “1”. If the capstone did not include an aspect of the criteria, we marked the box with a “0”.

Below we will analyze each criterion one by one to determine how well each program met each element. The following chart (see Figure 4) is the overview of the programs and how they measured up to our criteria.

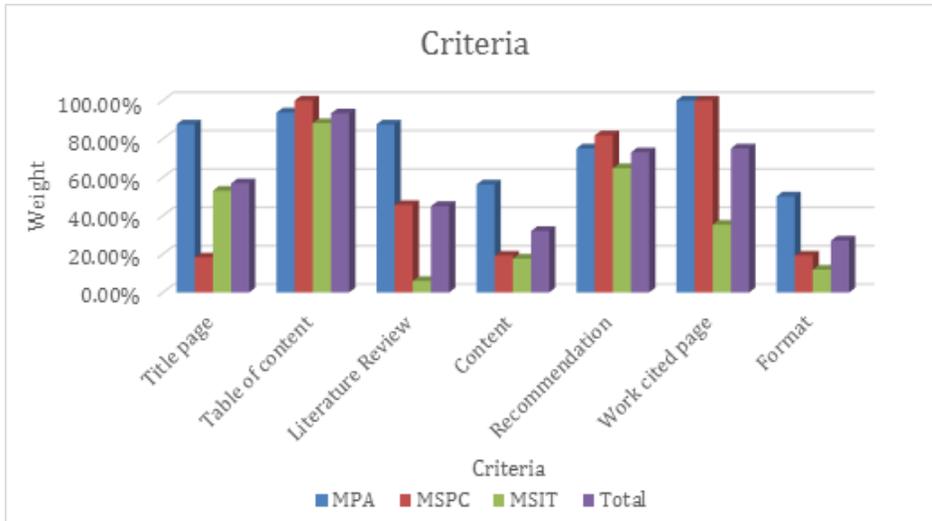


Figure 4: Inventory of Final Masters Paper That Met Analysis Criteria

Title Page: Figure 5 displays how well each Masters program did in including a title page that had all the correct elements listed in our criteria. From the chart, it is clear that the MPA program had the most students whom followed our guidelines (87.5%). The MSIT program had 53% of capstone papers that followed the title page criteria while only 18% of MSPC papers reflected the same criterias. The most reoccurring problems with the capstone title pages were the missing clients’ name and/or the advisors’ name.

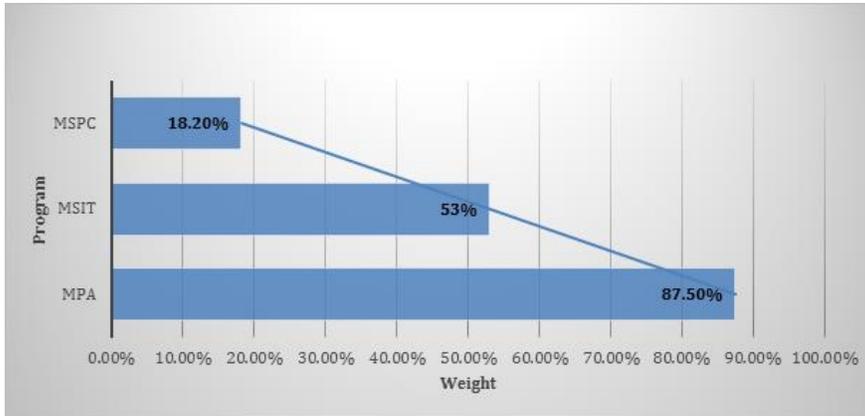


Figure 5: Percentage of Capstone Papers in Each Master Program that Included a Title Page that Obtained all Elements Listed in Our Criteria

Table of Content: Figure 6 exhibits the percentage of capstone papers in each program included a table of content. All the capstones reviewed from the MSPC program included a table of content. The MSIT and MPA programs had similar percentages: MSIT had 88% and MPA with 93.7%. It is important for the fluidity of the capstone that a table of content is included in the final product.

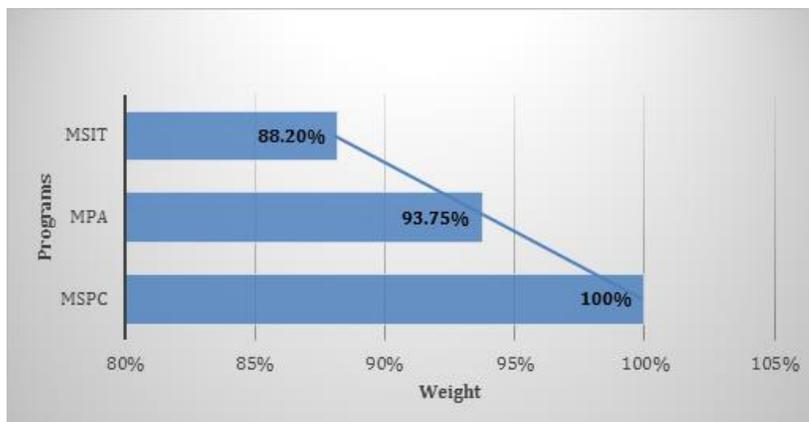


Figure 6: Percentage of Capstone Papers in Each Master Program That Included a Table of Content

Literature Review: Figure 7 displayed the most distinct differences among the three programs. Most of the MPA capstone papers (87.5%) included a literature review. However, we found lit reviews missing from both the MSPC and MSIT capstones. This may have occurred due to the differences in approach each program had in terms of determining what should be included in a

capstone. While it may have been required in the MPA program it was clearly not a factor for MSIT capstones. Despite this, it is important for literature reviews to be included because it allows for the reader to obtain current knowledge about the particular subject as well as show how the student’s work fits within a larger field/project.

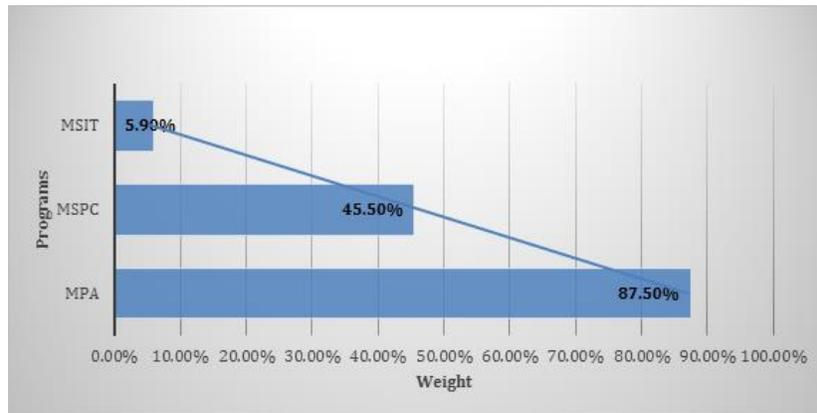


Figure 7: Percentage of Capstone Papers in Each Master Program That Included a Literature Review

Content: While looking at each capstone paper, we determined that the content section should contain the following: identification of the problem, methodology, collection of data, analysis of data, and analysis of conclusion. Figure 8 shows how each program did not quite include all the elements listed above. Relatively, MPA capstones demonstrated better performance. While over half of the MPA capstones incorporated the methodology, collection of data and analysis of data, the MSPC and MSIT capstones rarely included methodology and data analysis.

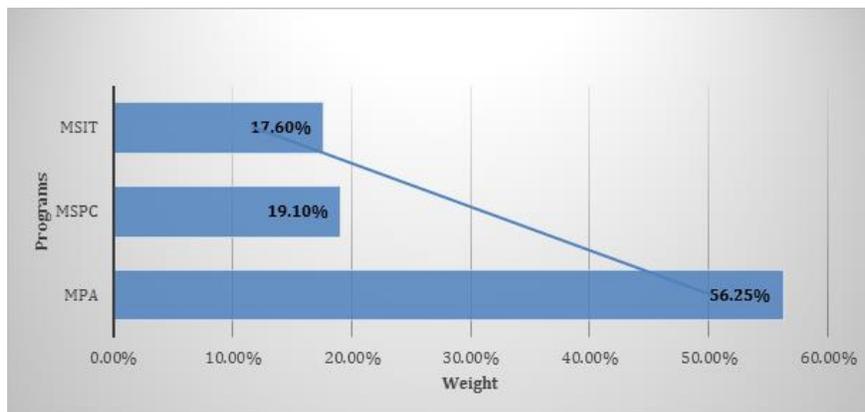


Figure 8: Percentage of Capstone Papers in Each Master Program That Included Content that Followed the Guidelines Presented in the Criteria Chart

Recommendations: Figure 9 displays the percentage of capstones in all three programs that included a recommendation section. This section is critical to a capstone paper since one of the goals of the capstone is to use the research done to propose a better course of action. While some papers included a recommendations section, some included the their recommendations in the conclusion and others blatantly overlooked a recommendations section.

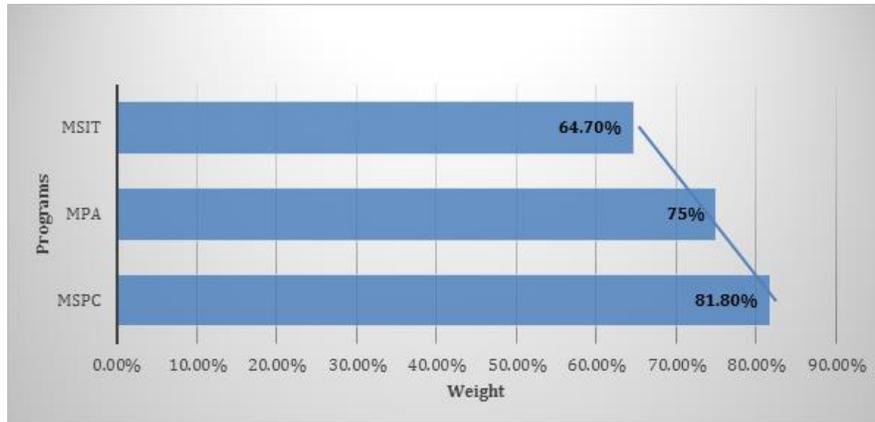


Figure 9: Percentage of Capstone Papers in Each Masters Program That Included Recommendation

Work-Cited Page: After looking over figure 10, it is clear that the MSIT program was the only program lacking in including a work-cited page. This occurred due to the type of capstone the program required. The MSIT capstone did not use sources because the assignment was to develop the new software or system. Despite this, it is important to construct a capstone that requires research and inevitably a work-cited page.

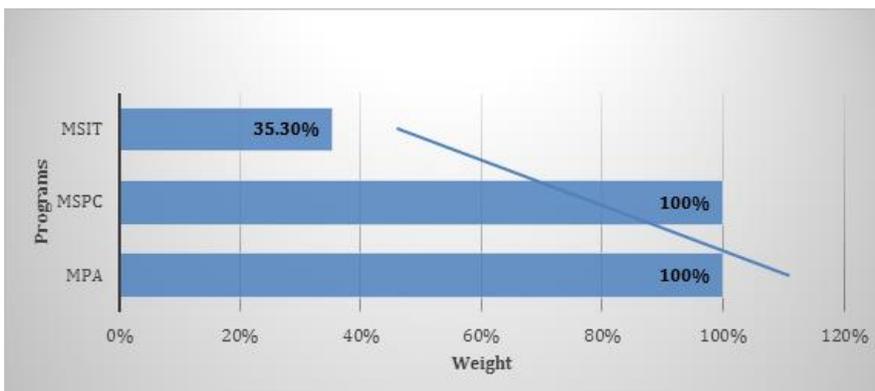


Figure 10: Percentage of Capstone Papers in Each Master Program That Included a Work Cited Page

Format: Something we established when creating the capstone paper criteria was the need for all papers to follow the APA format. This, however, was clearly not an established rule. We can see from figure 8(see Appendix 7 for Format Chart) that most of the capstones didn't follow the APA form. The capstones missed a variety of the APA standard format requirements such as: the page number, running title, and/or the subject heading and subheading. Some papers also failed to follow the typeface and size rule. In the future, all of the three programs should follow the same paper format.

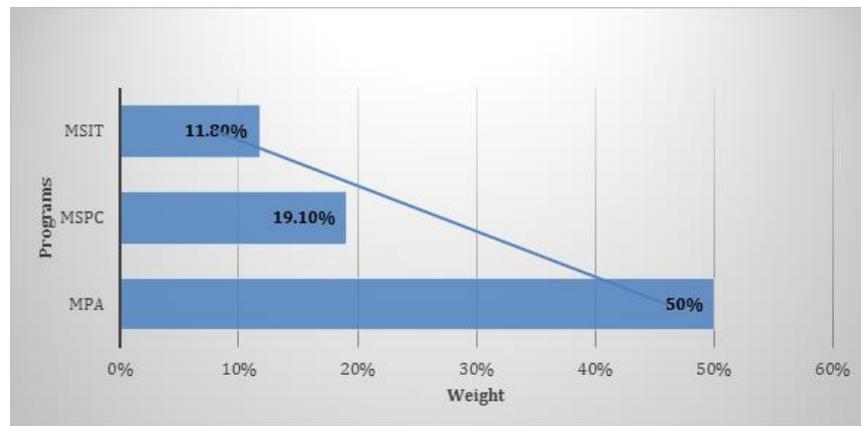


Figure 11: Percentage of Capstone Papers in Each Master Program That Included the APA format

Limitations

Although this research was carefully prepared, we are still aware of its limitations and shortcomings. One limitation we found was the time period in which we went out the survey. The lack of time we gave the alumni attributed to the low response rate. This left us with a small target sample to make an analysis. If we sent out the earlier, alumni would have had more time to respond. Another limitation was the target audience pool was not large enough. Instead of only reaching out to graduate who graduated within the last 2 years, we could have extended it to 5 years. From the responses we did receive, none were from the MSIT program, which is another limitation. Although we included open-ended questions in the survey, we did not conduct any individual interviews, which may have given us a more in depth response.

Recommendation

The following recommendations are offered for COPACE to improve the quality of its capstone courses. While doing research on capstones, we came to the conclusion that capstone projects in all three COPACE graduate programs should follow the same general standard with the ability to customize based on unique aspects of each program (For example, the MSIT program may require a “return on investment” section based on the project they worked on which may not be relevant for the other programs). Our recommended capstone standard consists of the following elements: title page, table of content, literature review, content/analysis, recommendation, work cited page/appendix and correct formatting.

The title page includes: the title of the work, name of student, date, advisors names, course name, the semester and the client name. The table of content lists the titles of the parts of the capstone paper and organized in the order in which the parts appear. The literature review discusses published information in the relevant subject area while summarizing and synthesizing the arguments and ideas of others without adding new contributions. The content in the capstone includes the following: developing research questions and identification of the problem, methodology, collection of data, analysis of data, analysis of conclusion and limitations. Recommendations must list actions the student believes the client should precede based on analyzed data. The work-cited list the works that students referenced in their final capstone paper. The Appendix must also be included such as tables, graphs and other documents like a copy of the survey questions. Lastly, the format for the papers must be in APA format as it is the standard form used for social sciences.

We also recommend that once the standard for the capstones are created, a detailed guideline be fashioned for students that will be handed out alongside the syllabus (or act as the syllabus). These guidelines will include not only what content is expected in the paper, but would also include deadlines and how they will be evaluated. For example, the current syllabus for the capstone course in the MSIT program is only three pages. Very little detail is offered about what is specifically

expected for a capstone course in MSIT. In addition, after our analysis of past capstones in COPACE, with the exception of the title page, every criteria we established all capstones should have, MSIT always fell shorter than the other two programs (see Appendix 7 for Charts). However, the MPA and MSPC do include some sort of detailed document, outlining the capstone course. The revised MSPC capstone description also includes most of our recommendations (see Appendix 13 for MSPC Capstone Guidelines). The more information students have the less confusion they will experience.

It is also important to make sure each capstone project works with a client that has established a particular need. Working with an outside organization allows students to use knowledge they have obtained and apply it in a “real-world” context. After surveying COPACE grad alumni, we found multiple responses noting that working with an outside organization in the Clark Community was one of the key benefits in completing their capstone. Many respondents felt as though they were making a difference and appreciated the real world experience (see Appendix 5 for Survey Responses). Working with outside clients has the potential to not only benefit the student but organizations as well.

When considering if a capstone course should allow students to work individually or work in groups, we came to the conclusion that this should also be at the discretion of the advisor and students. However, based on our experience, we found that working in groups gave us the ability to divide up the work based on each team member’s strengths. It also further developed our communication skills and offered opportunities to share diverse perspectives. Four of the responders in our survey noted the importance of having a quality team in order to be successful in completing the capstone project. One respondent specifically stated that picking their team members allowed them to feel more confident in the process because they knew they wouldn’t be pulling all of the weight (see Appendix 5 for Survey Responses).

During the capstone experience, we recommend maximum involvement of the advisor. Students should still be in control of the project, but advisors should be available for meetings upon

request and offer any support needed. During our capstone experience, we found that meeting with our advisor every week allowed us to stay on track with our capstone and gave us the opportunity to ask questions/receive feedback on our developments at the time. Therefore, we suggest capstone groups plan to meet with their advisor once a week, however, this will also be at the discretion of each individual group. A common theme in survey responses was the involvement of the advisor during the former students capstone experience. 7 responses (58.3%) specifically noted that the advisor's involvement/support was helpful in completing their capstone. One respondent stated that the advisor they worked with became a mentor in their life (see Appendix 5 for Survey Responses). When done right, the advisor can have a positive, lasting impact on the capstone project itself as well as on the students.

During the process, we also found that the initial meeting with the client face to face allowed us to effectively grasp their particular need. It also gave us to opportunity to ask any clarifying questions. We also met with our client one more time to display our progress but also ask more questions. Therefore, we recommend all capstone teams meet with their client face to face at least once and continue to have the option to check in throughout the semester if need be. It is also important for advisors to help pair students with organizations that are willing to commit to their capstone project for the duration of the time. Our experience with our client was very positive because she was willing to meet with us upon request and allowed us to email her when we sought necessary. When asked “what could have been done to make your capstone experience more meaningful”, 3 respondents stated that they had a negative experience working with their organization (see Appendix 5 for Survey Responses). Having a higher commitment from the organization was a specific request from one of the survey responders.

Reflecting from our experiences, we found that taking certain steps during the process improved our ability to complete the capstone. We recognize these steps may not be helpful for every group so we would recommend the advisor present these opportunities as optional. One of the first steps we took was take a library tour that included information about how to research

effectively. We learned the most successful ways to research through different databases and the best ways to organize our research. This helped greatly when writing the literature review. Some students may already have gone through a library tour, however, it is always helpful to get a refresher course. In addition, it gives the student the chance to learn the most up to date research skills that may not have known otherwise.

Another tool we found useful was creating a responsibility matrix and data sheet. The responsibility matrix allowed us to outline whom in the group was responsibility for each task. It made our roles in the project very clear. If there was a section that was lacking, we knew exactly who was accountable. The data sheet outlined our objectives, project outcomes, and timeframe for each deliverables that we had to complete. Organizing this gave us some structure and made it easier to stay on track throughout the semester. These tools will be presented as an optional component because some groups may not find them as useful however; we strongly recommend groups take this extra step. Along the same lines, we also recommend teams use Google docs or an equivalent software that allows all members to see each others work and allows them to work on the same document at the same time. This was a small but useful tool for our group because it made it easier for everyone to contribute equally. It was also just a more simple way to compile all the different parts of the capstone project. Lastly, we recommend students contact any office on campus they may need to work with early in the semester. For example, this could include the alumni office if part of the project is to survey alumni, getting surveys approved and out to ensure a higher chance of getting more survey responses, and submitting the IRB proposal early in case it gets rejected the first time.

Continuing with the recommendations, we would recommend all capstone projects include an operational definition section that defines concepts and labels or any criteria that will be included in data analysis. Each project will have specific variables that should be well defined for clarity and transparency. For example, during our project we concluded what elements should be required in every capstone project. While creating the criteria, we had to also include definitions of each element in order to be clear about what specific components made up each section of the capstone.

In the MSIT program, it may be helpful for the team to create a data dictionary for their client in order to define data objects or items in a data model for the benefit of programmers and others who need to refer to them.

An important factor we want to emphasize is making Research Methods a prerequisite to taking any capstone course. The class discusses different tools that would be utilized during a capstone course. Mastering both qualitative and quantitative methods are great tools that would benefit the actual research. Qualitative data provides a detailed picture through adequate responses by those who have experienced. (In our case, it was the former COPACE students who replied to our survey). Quantitative research allows the researcher to measure and analyze data. The relationship between an independent and dependent variable is studied in detail and the method is more objective. Using a combination of qualitative and quantitative data can improve an evaluation by ensuring that the restraints of one type of data are balanced by the strengths of another. Lastly, using such methods would also uphold the capstone course to a standard of academic rigor. We do want to note that it would have been helpful for us to learn how to use the survey tools and SPSS statistics software used during our capstone beforehand, so we recommend this be taught in the Research Methods course.

In terms of evaluation, we recommend that in addition to students being evaluated by the advisor and client, students should also be evaluating the clients and advisors, their group members and themselves. The students should also list the things they learned throughout the capstone course. This will be shown to advisor and future students. When documenting these evaluations, we recommend advisors use a multidimensional rubric that would be customizable based on each advisor (see Appendix for Example of Rubric). Students will also get rubrics to rate their peers and themselves (see Appendix 10 and 11 for Self and Peer Rubric) as well as answer open-ended questions about their experience with the main actors involved in the project.

Our hope is that the above recommendations will be implemented as they would be beneficial to the students, faculty, COPACE and Clark University. Students would benefit because

they will have a better chance of producing a quality project the first time. They will also be able to add the work they did onto their resume and gain clients who could provide a future reference. For faculty, there will not be any ambiguity about what a good capstone looks like; everything is clear and objective. The set standard will also be sustainable, meaning it does not people depended. If there is a change in program directors or faculty, the new staff will know exactly what is expected from a capstone in COPACE. The benefits to COPACE and Clark University are very are identical. Creating this standard will generate consistency and ensures quality within the capstone courses while enhancing the institution's reputation by having a rigorous capstone program.

Conclusion

This project examined the importance of capstone courses and determined through research and analysis which methods best develop a quality capstone. The different perspectives presented in the literature offered ways in which capstones should be executed from a set of requirements from the capstone should be evaluated. It is crucial to provide a capstone project that encourages students to think critically and apply learned techniques (research methods, critical thinking, analytical skills, team building and communication) in a practical setting. In addition, capstone projects allow for students to connect to the community and address a local issue. At the same time, organizations gain a point of reference from an outside perspective. Producing a set standard for all capstone courses in the same department (COPACE) will increase the quality of each project and status of the institution/program itself.

Reference

- Brooks, R., Benton-Kupper, J., & Slayton, D.(2004). Curricular Aims: Assessment of a University Capstone Course. *The Journal of General Education*, 53(3/4), 275–287. Retrieved from <http://www.jstor.org/stable/27797996>
- Campbell, D. A., & Lambright, K. T.. (2011). How Valuable Are Capstone Projects for Community Organizations? Lessons from a Program Assessment. *Journal of Public Affairs Education*, 17(1), 61–87. Retrieved from <http://www.jstor.org/stable/27919548>
- Dunlap, J. C.(2005). Problem-Based Learning and Self-Efficacy: How a Capstone Course Prepares Students for a Profession. *Educational Technology Research and Development*, 53(1), 65–85. Retrieved from <http://www.jstor.org/stable/30220418>
- Fitzpatrick, J. L., & Miller-Stevens, K.. (2009). A Case Study of Measuring Outcomes in an MPA Program. *Journal of Public Affairs Education*, 15(1), 17–31. Retrieved from <http://www.jstor.org/stable/40215834>
- McGaw, D., & Weschler, L.(1999). Romancing the Capstone: The Jewel of Public Value. *Journal of Public Affairs Education*, 5(2), 89–105. Retrieved from <http://www.jstor.org/stable/40215426>
- Patsy Tinsley McGill. (2012). Understanding the Capstone Experience Through the Voices of Students. *The Journal of General Education*, 61(4), 488–504. Retrieved from <http://doi.org/10.5325/jgeneeduc.61.4.0488>
- Platanitis, George, Remon Pop-Iliev and Scott Nokleby.(2009) "Implementation and Effect of Rubrics in Capstone Design Courses." *International Design Engineering Technical Conferences*. Retrieved from http://designchair.engineering.uoit.ca/ASME%20Papers/IDETC%20ASME%202009%20-%20Rubric%20Implementation%20Capstone%20-%20Platanitis_Pop-Iliev-Nokleby.pdf
- Roberts, G. E., & Pavlak, T.. (2002). Designing the MPA Capstone Course: A Structured-Flexibility Approach. *Journal of Public Affairs Education*, 8(3), 179–191. Retrieved from <http://www.jstor.org/stable/40215569>
- Schachter, D. R., & Schwartz, D.(2009). The Value of Capstone Projects to Participating Client Agencies. *Journal of Public Affairs Education*, 15(4), 445–461. Retrieved from <http://www.jstor.org/stable/25703147>
- Sum, P. E., & Light, S. A.. (2010). Assessing Student Learning Outcomes and Documenting Success through a Capstone Course. *PS: Political Science and Politics*, 43(3), 523–531. Retrieved from <http://www.jstor.org/stable/25699361>

Robert H. Todd, Spencer P. Magleby, Carl D. Sorensen, Bret R. Swan David K. Anthony. (1995). A Survey of Capstone Engineering Courses in North America. *Journal of Engineering Education*. 84, (2), 165–174. Retrieved from <http://onlinelibrary.wiley.com/doi/10.1002/j.2168-9830.1995.tb00163.x/abstract>

Wagenaar, T. C.. (1993). The Capstone Course. *Teaching Sociology*, 21(3), 209–214. Retrieved from <http://www.jstor.org/stable/1319011>

Appendix

Appendix 1: Data Sheet

Sponsors

Cher de Rossiter, COPACE adjutant

Project Objectives

This capstone will focus on answering the research question: what makes a good capstone? We will evaluate past capstone content from Clark’s MPA, MSIT and MSPC program. We will then look at other university master’s programs, answer the question: why are capstones important, what we, at Clark, want to accomplish through capstones now, what should be in the program at Clark going forward, how the programs should be structured, how capstones should be evaluated, and what do students need in terms of support.

Project Outcomes

Our end goal is to provide a recommendation that answers the question: What should be included in a capstone for COPACE that could be implemented.

Scope

Our scope is high level of all graduate capstone research material, both global and domestic to determine the critical critique to create a robust capstone program for COPACE.

- **In-Scope**
We will review 45 graduate level capstones in COPACE (MPA, MSIT, MSPC).

- **Out-of-Scope**
We will not be focusing on capstones outside of the graduate level MPA, MSIT and MSPC program.

Deliverables

The deliverables during this capstone program will include the following: research, literature, literature review, survey, analysis and the final paper and presentation.

Milestones/Timeframe

#	Milestone Description	When
	Data sheet	9/25
	IRB Application	9/30
	Check in meeting with Client	10/21
	Brainstorming session	10/28

	Have all research done	11/3
	Second check in with Client	11/18
	First draft of paper/recommendation	11/18
	Paper	11/28
	Evaluation	12/3
	Final	12/3

Assumptions/Dependencies

Some assumptions and dependencies for this capstone includes the following: capstones from pervious years at Clark will be given to us to analyze, survey request must be approved, data will be available for our research, project will be completed within the time frame, the survey response rate and feedback from Alumni and Register’s office.

Risks:

- **Negative Risk**
A negative risk is failure to conduct survey will eliminate voice of former students

- **Positive Risk**
Some positive risks are that the recommendation we make is useful and the potential for publication

Project Measures of Success

- Timing—we follow the timeline set
- Following what we decided is the scope—not researching/moving away from the scope/research question—adhering to project plans with minor modification
- Client satisfaction—Cher approves of the direction we go/went in...important to have check in’s with her
- Final grade (A)
- 10% or better response rate of survey
- IRB approval

Staffing/Resources

- Library
- Mary (advisor)
- Cher (Client)
- Survey Monkey
- Meeting room
- 45 Capstones from former students

Appendix 2: Consent Form

Date: October 27, 2015

Consent Form

The investigators' names are Ruochen Lu, Qilin Jiang, and Mary Mesele. We are doing Master of Public Administration (MPA) program at College of Professional and Continuing Education (COPACE) of Clark University. We are conducting a study with Advisor Mary M. Piecewicz who is the interim director of MPA program at COPACE Clark University on the evaluation of the current capstone projects and components of a quality capstone project at COPACE Clark University to benefit future capstones. This survey is a part of a fall course.

We are enthusiastically looking for graduated students who may help us fill out this survey questionnaire. It will take approximately 10 minutes. Participation is totally voluntary and anonymous. We will use the Qualtrics as the survey tool. Survey response cannot be tracked back to participants. You may decline to answer any multi-choice questions that you do not wish to answer. If you wish to drop out of the study at any time, you are free to do so. The survey will be opened for one week.

The survey link is:

https://clarku.co1.qualtrics.com/SE/?SID=SV_6yWUbZSO1a9Bd7n

Any questions about human rights issues should be directed to the IRB Chair, Dr. James P. Elliott. Please do not hesitate to contact us with below if you have any problems.

Thanks for your kind participation and patience!

Contact :

Investigator:	Ruochen Lu (508) 471-8626	rlu@clarku.edu
	Qilin Jiang (508) 667-8159	qiljiang@clarku.edu
	Mary Mesele (207) 332-0622	mmesele@clarku.edu

Advisor:	Mary Piecewicz MPA Interim Director (508) 793-7217	mpiecewicz@clarku.edu
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Appendix 3: Questionnaire

1. Please indicate your gender

Male

Female

Other

2. Your age is:

18-29

30-44

45 and above

3. The program you graduated from:

MPA

MSPC

MSIT

4. Please choose your country of origin:

Domestic

International

5. You do describe yourself as:

Fifth Year

Adult learner

Graduate students

6. Please rank the following capstone deliverables to your learning:

Literature review

Methodology

Data analysis

Discussion

7. Please indicate which research method(s) you used in your capstone (multiple answers):

Quantitative research

Qualitative research

SPSS

Stata

Working with large administrative data sets

The following 3 questions are open ended, please be as specific as possible.

8. What worked well in capstone project?

9. What could have been done to make your capstone experience more meaningful?

10. What was the biggest benefit to you in completing the capstone?

Appendix 4: IRB Approval Letter

From: Diane Sainsbury

Sent: Wednesday, October 28, 2015 11:58 AM

To: Ruochen Lu

Cc: Mary Piecewicz

Thanks, Ruochen. Sorry about the email mix-ups.

Given the Chair's approval email and the fact that we have your revised consent statement, please consider that your anonymous survey has been approved. Research may begin. This email serves as evidence of that approval; please retain a copy for your records, since a paper copy will not be mailed to you.

If you have questions about this decision, you may email Diane Sainsbury at humansubjects@clarku.edu or phone Diane at 508.421.3880, and use the IRB protocol #2015-011A.

Regards,

Diane

--

*Diane Sainsbury
Assistant in OSPR/IRB Coordinator
Office of Sponsored Programs and Research
Clark University
508-421-3880
Hours: M through F 9:00am – 1:30pm*

Appendix 5: Survey Report

Last Modified: 11/10/2015

1. Please indicate your gender

#	Answer		Response	%
1	Male		2	13%
2	Female		14	88%
3	other		0	0%
	Total		16	100%

Statistic	Value
Min Value	1
Max Value	2
Mean	1.88
Variance	0.12
Standard Deviation	0.34
Total Responses	16

2. Your age is:

#	Answer		Response	%
1	18-29		13	81%
2	30-44		2	13%
3	45 above		1	6%
	Total		16	100%

Statistic	Value
Min Value	1
Max Value	3
Mean	1.25
Variance	0.33
Standard Deviation	0.58
Total Responses	16

3. The program you graduated from

#	Answer		Response	%
---	--------	--	----------	---

1	MPA		11	69%
2	MSPC		5	31%
3	MSIT		0	0%
	Total		16	100%

Statistic	Value
Min Value	1
Max Value	2
Mean	1.31
Variance	0.23
Standard Deviation	0.48
Total Responses	16

4. Please choose your country of origin

#	Answer		Response	%
				

1	Domestic		13	81%
2	International		3	19%
	Total		16	100%

Statistic	Value
Min Value	1
Max Value	2
Mean	1.19
Variance	0.16
Standard Deviation	0.40
Total Responses	16

5. You describe yourself as:

#	Answer		Response	%
1	Fifth Year		11	69%
2	Adult learner		1	6%

3	Graduate student		4	25%
	Total		16	100%

Statistic	Value
Min Value	1
Max Value	3
Mean	1.56
Variance	0.80
Standard Deviation	0.89
Total Responses	16

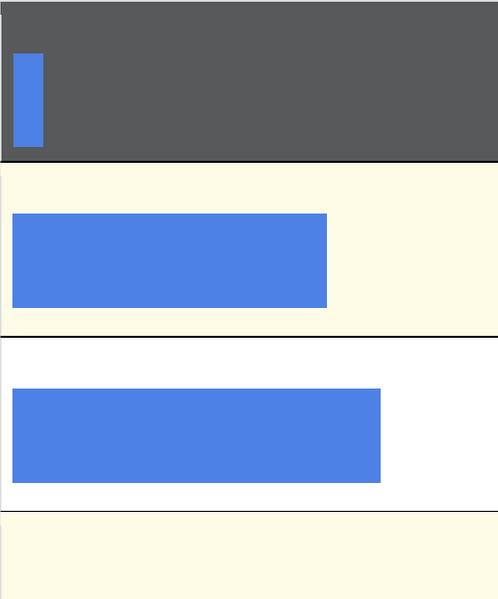
6. Please rank the importance of the following capstone deliverables to your learning:

#	Answer					Total Responses
1	Literature review	6	2	6	2	16
2	Methodology	4	6	3	3	16
3	Data analysis	2	5	5	4	16
4	Discussion	4	3	2	7	16

	Total	16	16	16	16	-
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Statistic	Literature review	Methodology	Data analysis	Discussion
Min Value	1	1	1	1
Max Value	4	4	4	4
Mean	2.25	2.31	2.69	2.75
Variance	1.27	1.16	1.03	1.67
Standard Deviation	1.13	1.08	1.01	1.29
Total Responses	16	16	16	16

7. Please indicate which research method(s) you used in your capstone(multiple answers)

#	Answer		Response	%
1	Quantitative research	11	11	73%
2	Qualitative research	14	14	93%
3	SPSS	1	1	7%

4	Stata		0	0%
5	Working with large administrative data sets		0	0%

Statistic	Value
Min Value	1
Max Value	3
Total Responses	15

8. What worked well in capstone project?

Text Response
experience
Working with a real organization that needed a real deliverable was the most helpful thing in our capstone. It helped keep us on track.
My team was full of extremely hard workers.
I honestly don't even remember doing a capstone project during 5th year

Freedom in choosing the project and team members.

The team I worked with during my capstone project was highly productive. We met weekly to stay on task and discuss all aspects of our work. We were a team.

A small group that communicated well and a capstone advisor who was invested in the project and happy to meet with us often.

Being able to talk with the nonprofit we were preparing our study for, so we could tailor it to their wants and needs.

Being specific about the scope of the project and setting clear deadlines for deliverables.

We had a motivated team and a great supervisor

My capstone advisor was absolutely fantastic—Professor Louise Eichman was a huge contributor to the success of our project. The capstone project was born from her Project Management class over the summer. I am grateful that we were able to complete the capstone project in the fall semester instead of waiting until the spring. The group itself was a great group of women: we balanced each others' skill sets perfectly and were all equally invested in the project.

When I went to Clark (graduated 2014 from MPA) what worked well for our Capstone project was that my advisor left it up to my group to dictate what we wanted to do and he supported our efforts however he could. Our capstone focused on a new project or department that could have been implemented at Clark and we were given the leeway to run with it. It was up to us and was truly hands on.

My professor really allowed us to decide what we wanted to focus on and that made the capstone so interesting and fun. Choosing the people I did the capstone with allowed me to feel more confident that I would not be pulling someone else's work load.

Statistic	Value
Total Responses	13

9. What could have been done to make your capstone experience more meaningful?

Text Response
more in depth research
More guidance from professors and administration, plus more guidance about what we were supposed to deliver.
Nothing really.
More rigor and structure in the requirements and deliverables. Higher commitment level from the partner organization.
The organization we were working for was not completely invested in our work, making it difficult to get excited about our results. We also had trouble developing a project focus at first.
A capstone project with a more meaningful outcome that would have been useful to an organization that could have helped them in practical ways.

Not sure if this would be possible, but to have it tie in more to our other coursework in the MPA program. Maybe as something students start earlier, working on bits of it different, relevant classes, so it feels more like a culmination of our studies instead of just another class.

The MPA program should have their capstone options finalized before offering them to students. Also, advisers should be active and present during the process. I had a very negative experience where our capstone organization dropped out half way through and our project had to be completely redone.

More challenging requirements

I'm not sure anything ever came of our deliverables.

I knew we would get an A. It was about getting it done and not really about the actual product. There was no real pressure, ever, in my MPA program. There needs to be standards - Clark doesn't give two shits about COPACE, it's not even an accredited program which is a JOKE. And that messaging of not caring filters down to classrooms, professors, and students. This is an advanced degree, it should be treated as such. The program was what you make of it, which is nice to empower us, but at least have some standards. The 5th year program is so challenging because you have little to no context for what the work actually means because we haven't entered the workforce. TAILOR IT TO THESE STUDENTS WHO DON'T HAVE MUCH WORK EXPERIENCE.

Advanced degrees are more practical for those with at least 2-3 years of work experience, we don't have that. Make it work for us, put some damn time into the program, and for the love of god please increase the funding! LEEP doesn't need as much funding as it does.

Statistic	Value
Total Responses	11

10. What was the biggest benefit to you in completing the capstone?

Text Response
looked great on my resume
Real-world experience and working closely with peers.
Our involvement in an outside group. We were able to finish our capstone project a bit early and present it to an unrelated (to Clark or the organization we were researching for) group for review and encouragement.
Pulling together the project into a fully developed assessment. Experience navigating the gaps in research and insights from the partner organization.
Gaining experience working with real world examples
It has been a talking point for me in applications for jobs and further graduate programs.
Having help and guidance from our advisor.
I graduated because of it.
The experience of working with our advisor
Feeling like we may have made a positive impact on the Clark/COPACE community and gaining an incredible mentor in Professor Eichman.

I got my masters degree and wrote about something I cared about. I wrote something about Clark, for Clark, to implement and never really heard back on it. So many students write capstones and papers about ways to improve Clark because we're passionate about it. How about reading them and listening to us - we're trying to participate in the process and change things by providing concrete ideas. Ideas that your organization (professors) work with us on - they aren't pieces of crap. If you're paying people to work with us on our ideas, don't you think they have merit? The biggest benefit to me completing my capstone was that I was done with everything and I learned practical skills because of who my advisor was. It wasn't because of the program. Your Capstone group is fighting an uphill battle with this project because people probably won't listen to you, but I promise you that you will get an A on the project.

working with the surrounding Clark community. We did our capstone on a local business and I really gained so much knowledge about the Worcester community which really made the capstone even more meaningful.

Statistic	Value
Total Responses	12

Appendix 6: MPA, MSPC and MSIT Capstone Programs at Other Schools

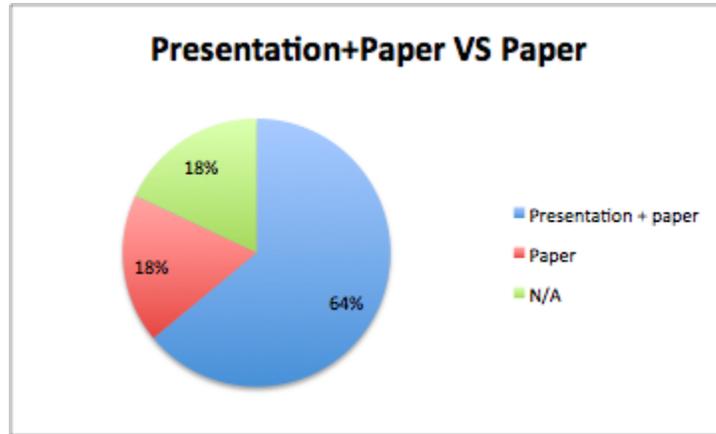


Figure 1: MPA Programs at Other Schools: Method Used for Final Capstone

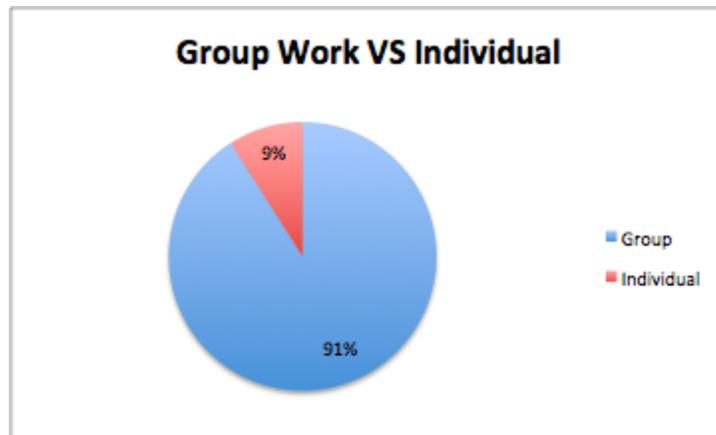


Figure 2: MPA Programs at Other Schools: Group vs Individual Work Method

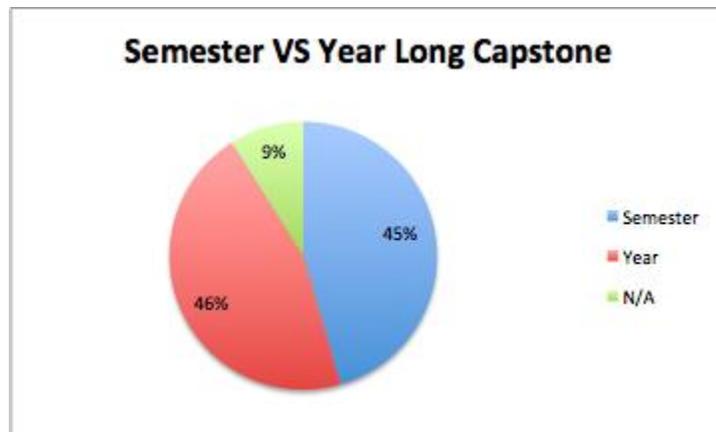


Figure 3: MPA Programs at Other Schools: Duration of Capstone Program

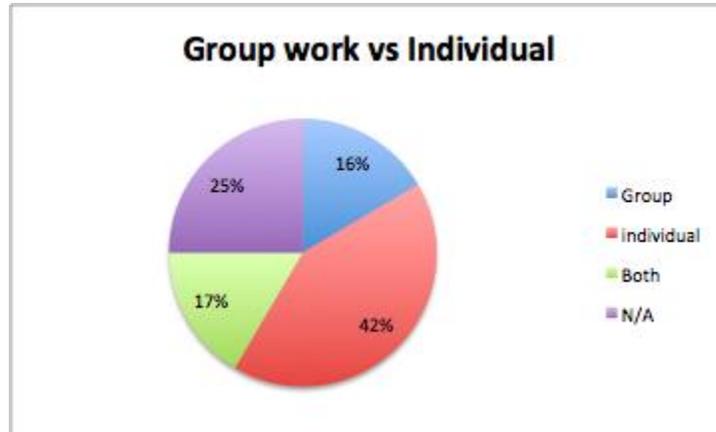


Figure 4: MSPC Programs at Other Schools: Group Work vs Individual Method

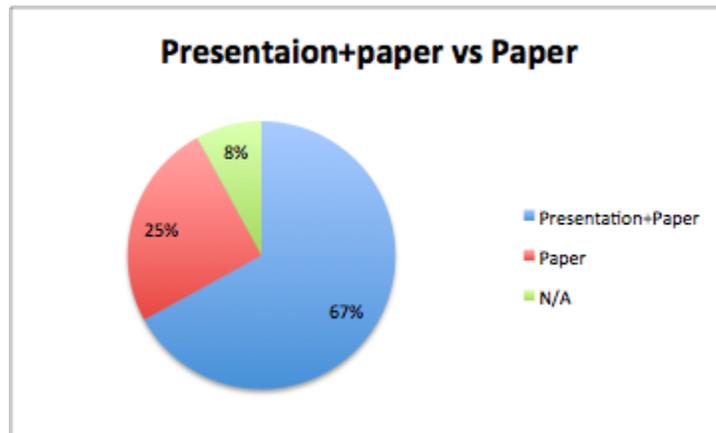


Figure 5: MSPC Programs at Other Schools: Method Used for Final Capstone

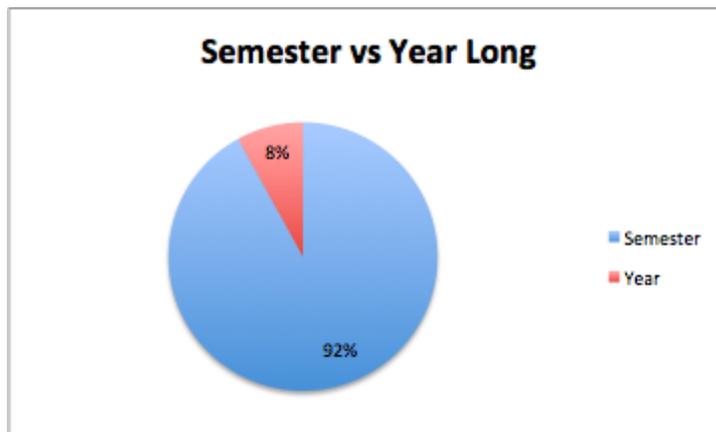


Figure 6: MSPC Programs at Other Schools: Duration of Capstone Program

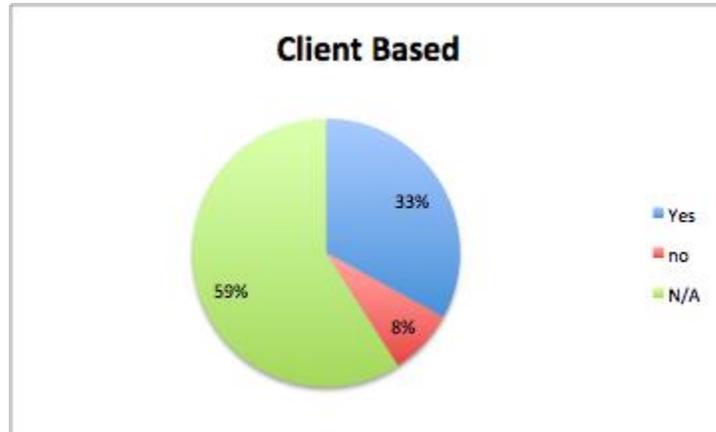


Figure 7: MSPC Programs at Other Schools: Client Based or Not

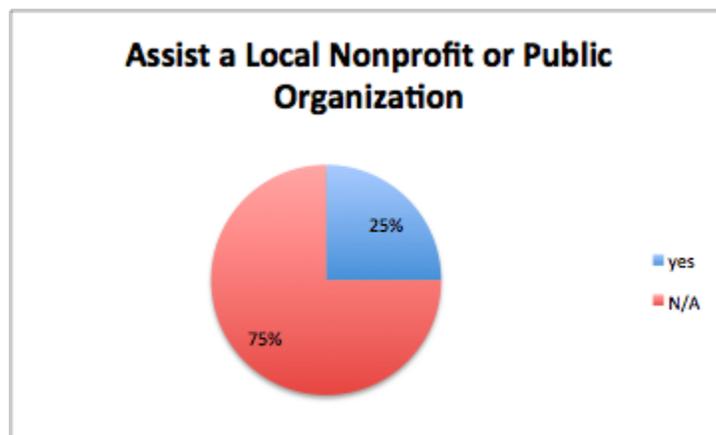


Figure 8: MSPC Programs at Other Schools: Assisting Local Organizations or Not

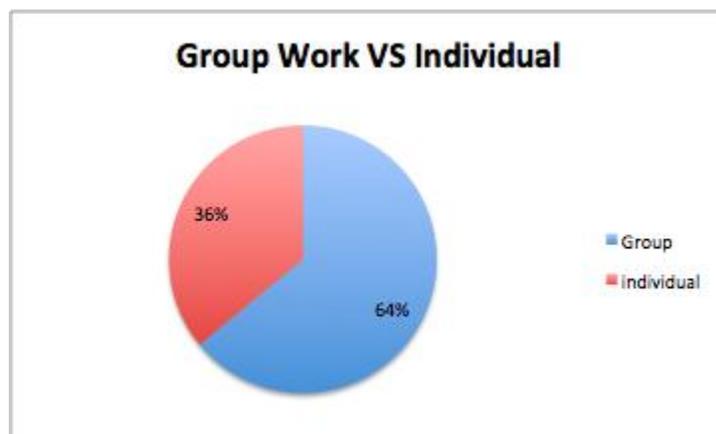


Figure 9: MSIT Programs at Other Schools: Group Work vs Individual Method

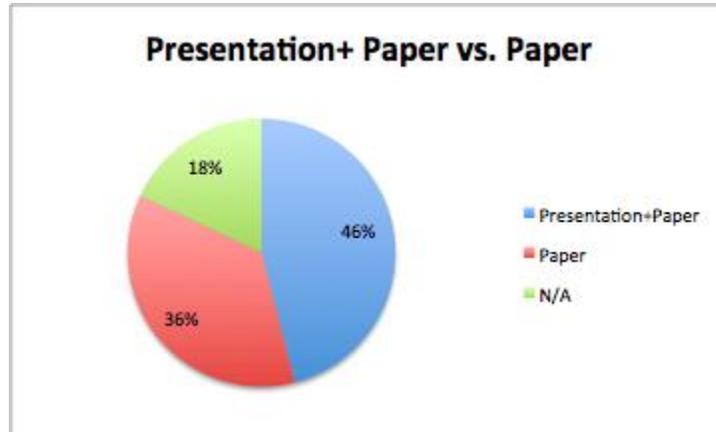


Figure 10: MSIT Programs at Other Schools: Method Used for Capstone Final

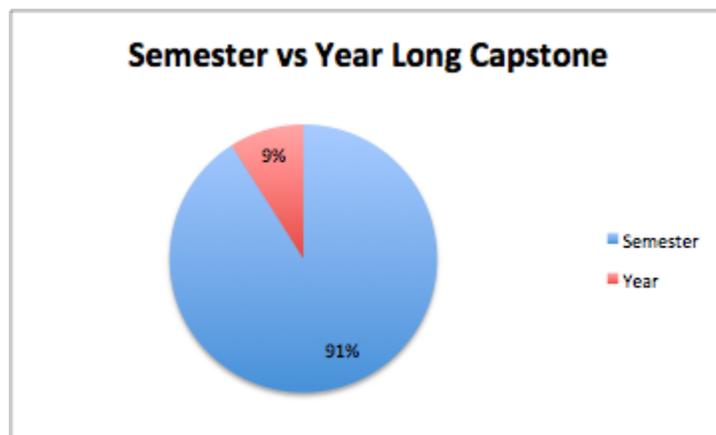


Figure 11: MSIT Programs at Other Schools: Duration of Capstone Project

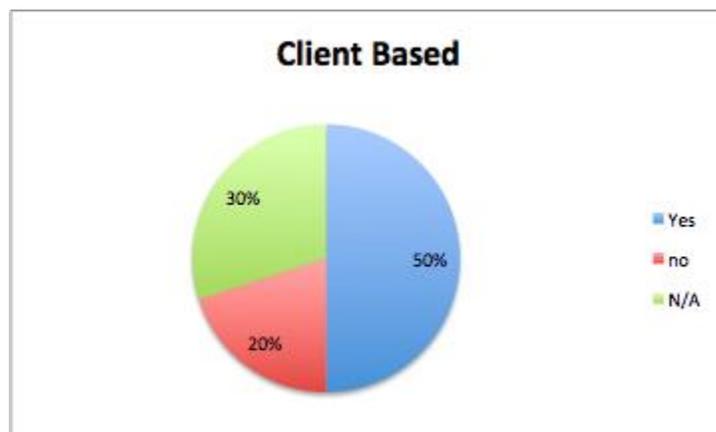


Figure 12: MSIT Programs at Other Schools: Client Based or Not

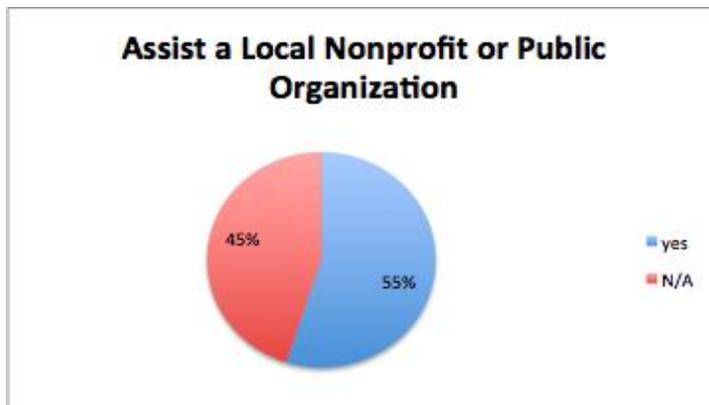


Figure 13: MSIT Programs at Other Schools: Assisting Local Organizations or Not

Appendix 7 : Inventory of Final Master’ s Paper

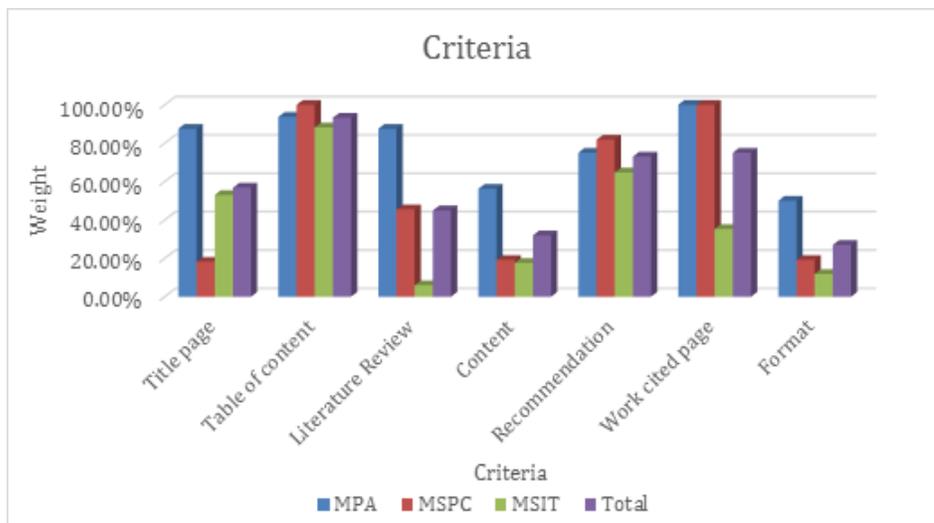


Figure 1: Inventory of Final Master’s Paper That Met Analysis Criteria

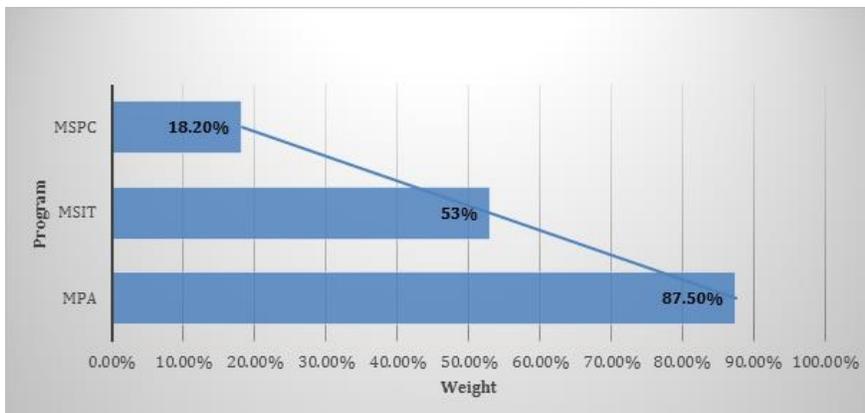
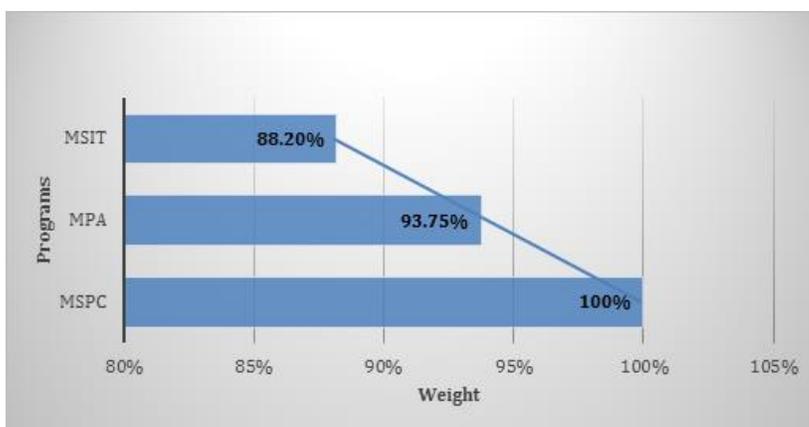


Figure 2: Percentage of Capstone Papers in Each Masters Program that



Included a Title Page that Obtained all Elements Listed in Our Criteria

Figure 3: Percentage of Capstone Papers in Each Master's Program That Included a Table of Content

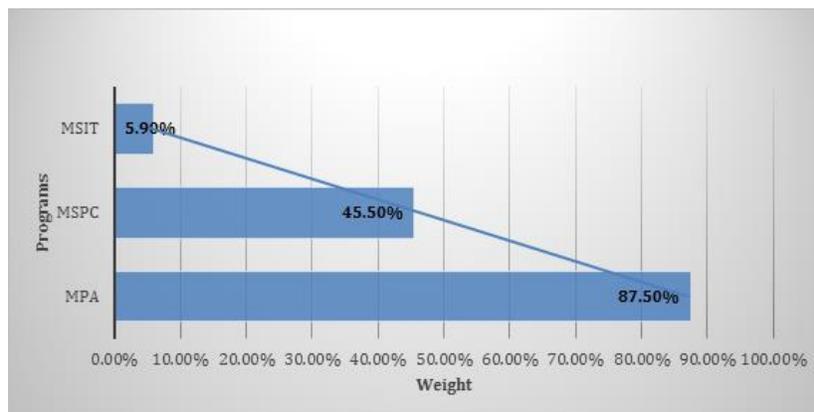


Figure 4: Percentage of Capstone Papers in Each Masters Program That Included a Literature Review

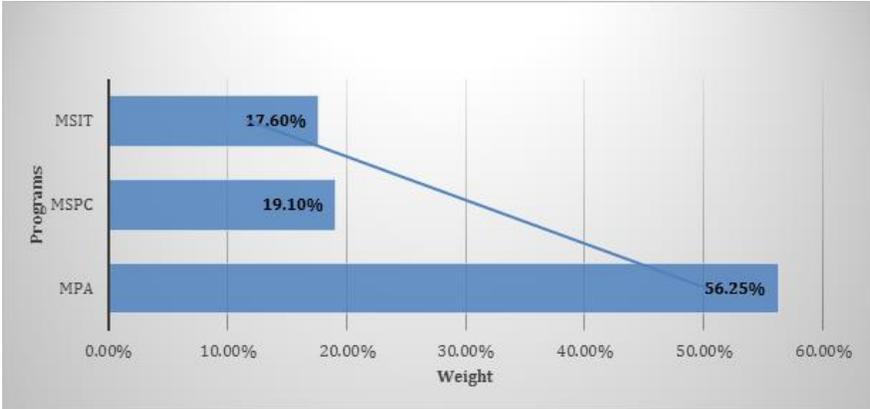


Figure 5: Percentage of Capstone Papers in Each Masters Program That Included Content that Followed the Guidelines Presented in the Criteria Chart

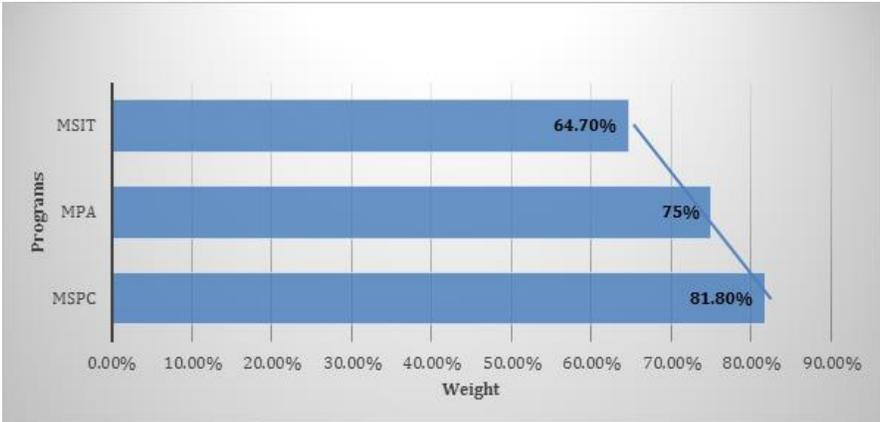


Figure 6: Percentage of Capstone Papers in Each Masters Program that Included Recommendation

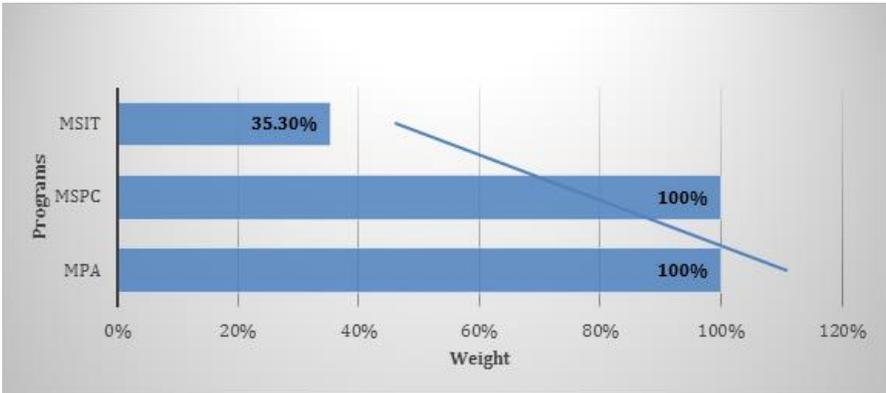


Figure 7: Percentage of Capstone Papers in Each Masters Program that Included a Work Cited Page

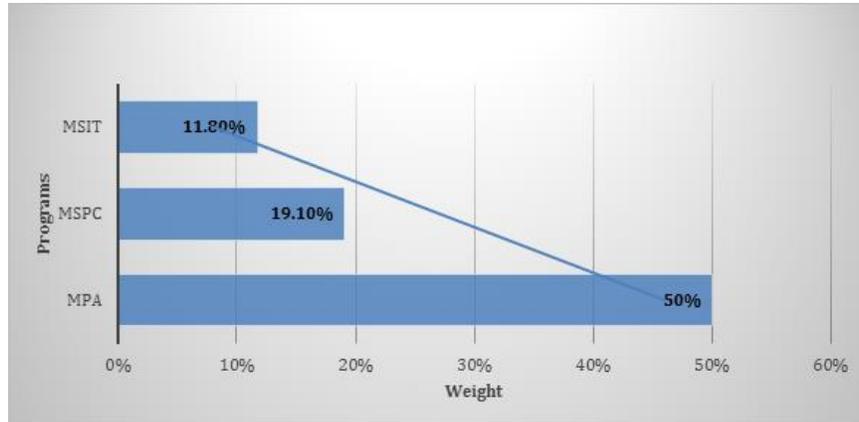


Figure 8: Percentage of Capstone Papers in Each Masters Program that Included the APA format

Appendix 8: Capstone Descriptions of 34 Universities

MPA

United States

(1) University of Connecticut

Students can choose either (1) PP 5362 Applied Management Project or (2) PP 5397 Causal Program Evaluation as their capstone. Students interested in managerial careers might choose the applied management project option. On the other hand, students interested in analysis or evaluation careers might be more attracted to the causal program evaluation option. Students can also choose both options.

(1) APPLIED MANAGEMENT PROJECT CAPSTONE

The Department of Public Policy's Master of Public Administration (MPA) Applied Management Project Capstone is a unique opportunity for students to put theory into practice. Students work in teams to **assist a local public or nonprofit organization in addressing an organizational or managerial challenge, in identifying organizational opportunities, by performing a policy analysis, program evaluation or process evaluation, or by conducting a financial management or budgeting project.** Their work culminates in a **formal, professional report and presentation of findings and recommendations.**

The **one semester** Capstone experience is taken during a student's second year in the MPA program. The Capstone experience offers students the opportunity to synthesize and apply the concepts, tools, and skills they have learned through coursework in the program. **Working in teams of 3-5 students,** they also learn and apply skills in project management and teamwork.

Student teams work collaboratively with client organizations to clearly define the challenge and the project scope of work. The teams use methods for collecting, analyzing and reporting data in concert with management concepts to design and implement a research project. Based on the research findings, they offer recommendations to the client organization. The teams deliver their analysis and recommendations in a formal report and presentation at the end of the semester.

(2) CAUSAL PROGRAM EVALUATION

This course builds upon prior MPA courses, particularly PP 5397 Quantitative Methods for Public Administration and PP 5370 Applied Research Design. Students will master the techniques important for evaluating causal claims about the impact of public policies and programs. The course is structured around a series of projects that require students to apply these techniques to evaluate public policies and programs. One of the projects involves student teams developing a program evaluation methodology for a public or nonprofit organization. Lectures will complement the projects by providing the link between behavioral theory, statistical theory, and actual program evaluations. The course includes the various techniques used in making causal inferences about the impact of public policies and interventions. Specific topics include, randomized field trials, panel data analysis, difference-in-differences, instrumental variables, regression discontinuity designs and propensity score matching.

(2) Northeastern University

Students in the School of Public Policy and Urban Affairs at Northeastern University complete their degree requirements by engaging in a group capstone project in conjunction with **and in service to a public or nonprofit sector partner**. These projects are **research based and client oriented analyses**, which, in the end, are to be applied by the client to the issue at hand. Such projects typically focus on problems that clients want to address but which they neither have the time nor resources to pursue given other priorities. Areas of focus range broadly, encompassing issues of urban and regional policy (e.g., transit oriented development, housing, and sustainability), social policy (e.g., workforce development, community services, urban education, health), and public and nonprofit sector management (e.g., strategic planning, budgeting, program evaluation). Students work in **3-5 person teams** over the course of **15 weeks**, supervised by faculty in the School, and conclude with presentations to clients, faculty, and fellow students. Project teams are comprised of students in masters programs in Urban and Regional Policy, Law and Public Policy, and Public Administration, who will have had core training in policy analysis, research methods, statistics, and, to varying degrees, more specialized skills (e.g., cost/benefit analysis, program evaluation, data visualization, survey research, GIS). Capstone projects should be large and multi-faceted enough to challenge a team of students, but not so open ended or sophisticated that it requires PhD-level economists or statisticians.

(3) Rutgers University

The Rutgers University School of Public Affairs and Administration Capstone Program provides graduating students in the Master of Public Affairs program with an opportunity to apply learned theory to actual practice. Collaborating with nonprofit and government organizations throughout the Tri-State area, student-consulting teams provide research, data collection, and analysis services as part of their three-month engagement. Student consultant **teams** are supervised and supported by a faculty member and a staff member of the host organization. The student-faculty team in collaboration with the organization's Capstone Project superior work with the students during their **three-month** engagement in achievement of these goals:

- Assist the organization in studying and defining a specific issue, problem, or task**
- Identify best-practices and current research regarding the issue, problem, or task
- Gather data in relationship to the issue, problem, or task and/or to seek further clarification**
- Present the research (best-practices) and the findings from the data gathered**
- Develop an action plans for addressing the presenting issue present the organization with a complete report inclusion of the above mentioned tasks**

-Application of public management theory and best practices, and to focus students in one of our five concentrations: nonprofit management, finance and budgeting, performance management, public health administration, and/or administration and management of public organizations

This "end-event" for graduating MPA students is a three- credit course. Students will be required to meet with their faculty advisor once a week during the semester and are expected to be able to commit 10-15 hours per week to their consulting assignment in addition to the class attendance.

Sponsoring Organizations

We are seeking Capstone Program projects from our nonprofit and government partners.

Sponsoring organizations provide our Capstone Program Project Teams with:

- A clearly defined organization issue, problem, or task
- One staff member assigned to supervisor/task the student team
- A specific deliverable from the student consultant team
- Support so the students can complete the assigned task in three months

(4)University of Illinois at Chicago

The PA 590 Capstone Course provides MPA students with a practical, team-based experience in **problem-solving within public or nonprofit organizations**. This course requires students to integrate classroom learning with practical experience, and must be taken during the last two semesters in the MPA program.

The course requires each to student to work in a team with **3-4 students** to analyze an organizational or policy problem and to deliver a professional final report to the sponsoring organization that typically specifies the problem or task, defines alternatives, and **proposes recommended course of action**. Government, community, and nonprofit organizations work with the PA program to identify relevant projects that challenge students and serve agency goals. Students apply knowledge, skills, and competencies gained from core and elective courses in the MPA program to these practical public policy or management problems. This course also provides students with new knowledge about effective management of teams, negotiation skills, project planning and monitoring, and professional presentation skills. Students are responsible for negotiating project scope, determining project plans and scheduling, and researching and writing deliverables (reports and presentations). **The final report is presented to the sponsor and academics in the public administration program.**

(5)University of Colorado Denver

The primary goal of the capstone course is to provide Master's in Public Administration (MPA) and Master's in Criminal Justice (MCJ) students with an opportunity to integrate and synthesize what they have learned in the program. In completing the capstone, students are expected to demonstrate in the knowledge they have gained in the core curriculum and from their elective courses, bringing this theoretical knowledge to bear on a practical problem in a public agency or nonprofit organization.

Students work with an organization or agency, **designated as the client**, to complete a project for the organization that is of significance and practical use to the organization. By the end of the semester, **the student will write a paper** that will address the client's needs and conform to the standards of graduate work. A committee evaluates the student's performance: the course instructor, a second faculty member, and the client.

Project Parameters

The project should

- •be related to public administration or criminal justice;
- •be of sufficient scope and magnitude to challenge the student's skills in public affairs;
- •be doable during a **16 week** semester, with the student devoting approximately 10-12 hours a week to it;
- •not normally be conducted as part of the student's ongoing work responsibilities; and
- •not receive financial compensation.

Timeline

Ideally, students select their projects and make a start at the project prior to beginning the semester. Projects for the spring semester (end of January to early May) can be posted as early as October or November; projects for the fall semester (mid-August to early December) can be posted as early as May or June.

Client's Role

The client's role is to provide a project for the student, work with the student to understand the project, and help the student identify appropriate materials or contacts to research. The client should give feedback to the student's written draft and final papers, as well as attend the **student's presentation** at the end of the semester.

(6)Portland State University**(detailed capstone Guideline)**

https://www.pdx.edu/cps/sites/www.pdx.edu.cps/files/Capstone%20Guidelines-%20THE%20ART%20OF%20REFLECTIVE%20PRACTICE%20%281%29_0.docx

(7)New York University

A requirement of the [Master of Public Administration](#) and [Master of Urban Planning](#) programs at NYU Wagner, Capstone provides students with both a critical learning experience and an opportunity to perform a public service. **Over the course of an academic year**, students in Capstone work in **teams** with faculty oversight to address challenges and identify opportunities **for a client organization or to conduct research on a pressing social question**.

Capstone projects require students to get up-to-speed quickly on a specific content or issue area; enhance key process skills such as project management and teamwork; and develop competency in gathering, analyzing, and reporting out on data. For students, it's an opportunity to interweave their learning in all these areas and to do so in real time, in an unpredictable, complex, real-world environment; for organizations, it's a chance to have current and future public service leaders focused on their success.

(8)James Madison University**(capstone guideline)**

http://www.jmu.edu/mpa/wm_library/JMU_MPA_Portfolio_Aug_2011.pdf

GLOBAL

(1) London School of Economics and Political Science

The Capstone project is a compulsory course undertaken by all second year MPA students. This one unit course is a key part of the MPA core curriculum and it is designed to ensure that students have an intensive and closely supervised experience of working in a group on a real-world public policy project. The Capstone groups tackle socially relevant and topical policy issues and the contribution of MPA students has been highly valued by the Capstone clients.

The Project

The project is a team effort to carry out analysis and research in order to address a **practical policy issue relevant to the client organisation**. It allows students to extend their capabilities and apply what they have learnt in the MPA core courses in a professional manner.

During their second year of study, MPA students are assigned to groups (usually consisting of **3 to 6 members**) and team members are expected to devote around 1.5 to 2 days a week to the project between **October and February**, including some vacation time.

Each project is supervised by a member of the MPA staff, who provides advice and monitors progress. But the project earns a collective grade and students are expected to manage the division and development of work amongst themselves.

Student Benefits

The MPA Capstones provides an excellent opportunity to:

- Learn and improve organisational skills required for successful planning and implementation of public policy projects.
- Strengthen policy analysis skills through the involvement in a variety of activities, such as reviewing policy literature, designing a methodological framework, gathering data, developing evaluation indicators, carrying out the analysis, and drawing policy recommendations.
- Sharpen policy report writing skills. Policy report is different from academic paper in that it requires application of analysis and research for solving a practical problem. Students learn how to effectively frame a policy problem and make strong and compelling arguments, whilst tailoring the presentation to a specific policy audience.
- Improve group working skills. Group working is an area that potential employers are increasingly focusing on during recruitment. Students are given guidance and professional development support during the Capstone to help them focus positively and proactively on group working and also to enable them to deal promptly, effectively and appropriately with any issues that arise.

(2) University of Hong Kong

The Capstone project in the Master of Public Administration is a **group-based learning-in-action project**. It addresses and proposes possible solutions to a **contemporary issue in public administration** in Hong Kong. Its underlying purpose is to ensure that students grasp the essentials of applied research and analysis in a selected area of public affairs. A topic is selected in

consultation with relevant teaching staff in September and the title of the capstone project is submitted for approval by 31 January of the final academic year of study. The project is then researched, **written** and submitted for examination by 31 July of **the final academic year** of study. Assessment: 100% coursework

(3) Central European University

The Passion Project is about transforming a student's passion into "purpose beyond power." As part of the core curriculum of SPP's multi-disciplinary MPA program, **the Passion Project** is the culmination of the effort to bridge classroom and experiential learning. By learning in action, the Passion Project provides students with a critical learning experience, while contributing to the common good.

Passion Projects are client-driven and student-run, policy-oriented capstone projects. Over the course of the two-year MPA program, students work in **teams together with a client – to address challenges, identify opportunities, and/or conduct research on a pressing social question.** Passion Projects integrate and enhance student learning in different arenas: a policy-related content or issue area; key professional skills including project management and teamwork; and methods for gathering, analyzing and reporting data.

Each Passion Project team approaches its client and assignment with a high degree of initiative and professionalism. Teams work closely with clients to design and organize their projects into a thorough implementation plan that results in a high-quality work product that aims to help improve **the client's performance and meet its policy objectives.** Clients include non-profit organizations, government, international organizations, and other policy-related institutions.

MSPC

United States

(1) New York University

Public Relations & Corporate Communication Capstone

This final capstone project course marks the culmination of the program. Each student is required to enroll in this course following the completion of the core and concentration courses. It is based on a communications challenge facing an organization, individual, product, service, or public policy issue selected with faculty approval and conducted under the stewardship of a faculty member. The study may be related to an existing communications problem, a new business venture or an extensive case analysis based on primary research, interviews and profiles of the key individuals or institutions related to the student's area of concentration. The project must include a communications plan and strategy that addresses the challenge.

Primary Research:

- Students may conduct primary research, including surveys, interviews, or focus groups. The extent of this optional human-subject-based primary research depends on the topic and the judgment of the adviser. Advisers must complete the UCAIHS tutorial and test.
- Any student conducting primary research with identifiable human subjects who wish to publish their papers and any students who are planning to conduct focus groups must adhere to the UCAIHS research guidelines and approval process. Submission of a UCAIHS application and subsequent approval is required before research may begin. This process may take up to **four months.**
- Students may conduct primary research without further approval provided that:

Research is not conducted on "special populations"
 All research subjects remain anonymous in the paper
 Interview questions do not involve a personal opinion (no "What do you think?" or "How do you feel?")
 Audio or video recording is not conducted
 Final paper is not distributed outside the department (no formal publishing, can take to interviews)

Secondary Research:

- Students may write their paper based entirely on an in-depth analysis of secondary research. This may include a secondary data analysis or other specified metrics plan.
- All secondary research must be attributed throughout the paper and in the bibliography.
- The paper must be considered publishable by the adviser, which means it must be well written, contain new findings, and be completely error and typo free.

The paper should make a contribution to the field (best practices, new finding, etc.)

<http://guides.nyu.edu/c.php?g=277085&p=1848825>

(2) Queens University of Charlotte

Queens University of Charlotte's [MA in Communication curriculum](#) culminates with the capstone, in which students translate a personal passion into practice through a **year-long** project or initiative that will be ready for implementation upon graduation. Students may explore an important communication topic or challenge that will prepare them to make a difference, whether it is **increasing organizational success, launching an entrepreneurial endeavor, or addressing a community or societal problem or need.**

Through the capstone project and a digital portfolio showcasing their learning and accomplishments at Queens, students demonstrate to current and potential employers and/or community participants how the knowledge and skills acquired in their studies will enable them to contribute by implementing innovative ideas. Featured below are abstracts from a few MA in Communication graduates' capstone projects that represent the variety of learning outcomes possible through the program.

<http://online.queens.edu/resource/business-leadership/the-capstone-project-022614>

(3) Regis University

Purpose of the Capstone Experience

The project provides students with the opportunity to explore a problem or issue of particular personal or professional interest and to address that problem or issue through focused study and applied research under the direction of a faculty member. The project should demonstrate the student's ability to synthesize and apply the knowledge and skills acquired in his/her academic program to real-world issues and problems. This final project should affirm students' ability to think critically and creatively, to solve practical problems, to make reasoned and ethical decisions, and to communicate effectively.

Goals of the Capstone Experience

- To provide students with the opportunity to apply the knowledge and skills acquired in their courses to a specific problem or issue.
- To allow students to extend their academic experience into areas of personal interest, working with new ideas, issues, organizations, and individuals.

- To encourage students to think critically and creatively about academic, professional, or social issues and to further develop their analytical and ethical leadership skills necessary to address and help solve these issues.
- To provide students with the opportunity to refine research skills and demonstrate their proficiency in written and/or oral communication skills.
- To have students demonstrate their achievement of the Regis University outcomes and their ability to extend and refine this knowledge and skill in the realization of their personal and professional goals

Capstone Experience Outcomes

The goal of our undergraduate programs is to prepare adult learners for the contemporary workplace and modern society, to educate them to take leadership roles, and to make a positive impact in a changing society. Consistent with our mission and goals, the Regis University learner outcomes focus on the development of:

Knowledge

- Knowledge of discipline or content area
- Knowledge of diverse cultures, perspectives and belief systems
- Knowledge of arts, sciences, and humanities

Ability

- Ability to think critically
- Ability to communicate effectively
- Ability to use contemporary technology

Commitment

- Commitment to ethical and social responsibilities
- Commitment to leadership and service to others
- Commitment to learning as life-long endeavor

Capstone Project Guidelines and Expectations:

You are entering the final phase of your coursework with Regis University. The capstone process is the culmination of all of your work toward your undergraduate degree. Prior to attending your first night of class, you will be responsible for completing an essential step in the process. The work assigned to you prior to your course is essential to your success in the course. Do not take the assignment lightly. Your capstone facilitator will be guiding you and directing your project. You cannot proceed with your project until your facilitator has formally approved your proposal. The Pre-assignment should be well thought out, as this assignment provides the material you will soon use to formalize your Proposal.

The requirements of the capstone course are outlined below. Each component is explained in detail in the pages that follow. Review all the material presented before you proceed with any section. Your facilitator will be able to answer specific questions that you have that may not be addressed in the guidelines presented.

I. Capstone Component Requirements:

- Select Project Topic; Project Definition and Rationale
- Concept Draft
- Proposal
- Research Activities and Summary
- Implementation Phase
- **Project Documentation**

This comprehensive project report (possibly bound) includes the following six sections: Project Definition; Final Project Overview; Updated Research Summary; Project

Implementation Summary (action steps taken); Project Analysis, Evaluation, and Recommendations; and Materials Delivered.

- **Formal Presentation:** Your facilitator will specify whether this formal presentation will be made to your classmates, to a panel of interested parties, or to some other available group outside the class. If you make your presentation outside of class, you may be required to present an in-class debriefing of the presentation.

Closure/Capstone Evaluation. This is a requirement to complete the course and will be graded Pass/Fail. In it you will present a brief Self-Assessment/Reflection of your experience at Regis University.

<http://academic.regis.edu/spsugmod/capstone.htm>

(4) Southern Utah University Department of Communication

Graduate Capstone Project

With approval of the Graduate Director and the student's Graduate Committee, the student may elect to complete the capstone requirement for the Master's degree with a successful research based production project. Such projects might include documentary films and/or television productions, TV or Radio series, extended applied public relations campaigns, photographic productions, etc. The following requirements apply to the use of project to successfully complete the degree.

1. While the graduate project credit is 6 hours, project developers will be expected to create and document applied research based productions that meet very high standards applied by the student's committee. Such projects as Dr. John Smith's "Miracle at Kap Yong," with research documented in electronic format is anticipated.
2. The project will have an applied research component as well as communication production requirements.
3. The Advisory Chair will have communication production credentials and will agree to regular meetings with and guidance for the student.
4. A comprehensive prospectus for the project will be filed with and approved by the student's committee prior to beginning the project.
5. Substantial effort will be made to get outside funding to support the project and the Department of Communication will assist this effort in every way, but the Department will not be expected to underwrite such projects financially.
6. A formal portfolio will be created and bound for the Departmental Graduate library representing the entirety of the student's work during the project including:
 - A. **Reports** from all applied research activities that have been part of his/her project.
 - B. Completed production samples from all film, broadcast productions, advertising campaigns, promotional campaigns, special event promotions, crisis communication responses, organizational development activities or research, etc. that the candidate has been involved in during the project will be detailed in the formal portfolio.
 - C. A copy of the final project production.
 - D. A comprehensive **plan and summary report** written by the student that describes and analyzes the work experience of the project.
7. A formal **capstone defense** responding to the portfolio and the production as presented in its final form will be held at the end of the program. The examination will be conducted by the student's chair and include all of the graduate committee. If a professional supervisor is involved, he/she will also be invited.

8. When the bound copies and Approval Page are signed by the committee after the successful defense, the candidate is considered to have completed the degree and hold the benefits thereof.

<https://www.suu.edu/hss/comm/masters/pdf/handbook.pdf>

(5) National University

Course Description: Presentation of skills the learner has acquired in the program. Their research, analysis, strategic thinking, message shaping, and evaluation skills will all come together in the final project: The preparation of a digital, web-based e-portfolio that will be an asset in the search for an appropriate post-graduation position. Grading is by H, S, or U only.

Course Learning Outcomes:

- Evaluate the organizational structures and units in which communications professionals work.
- Conduct informational interviews.
- Create a reflective journal that discusses what has been learned in the M.A. program.
- Create a professional-competent digital portfolio with appropriate text, graphics, interactive links, a video podcast, and contact links.

Specified Program Learning Outcomes:

- Apply formative research to develop communication campaigns and messages.
- Apply formative research to develop communication campaigns and messages.
- Conceive integrated marketing communication plans.
- Create media mix plans that specify content dissemination channels.
- Create persuasive campaigns that meet high ethical standards by producing messages.
- Create persuasive campaigns that meet professional ethical standards.
- Critique integrated marketing communication campaigns.
- Deliver professional communication presentations online.
- Deliver professional-level presentations in the online environment.
- Demonstrate leadership and collaborative skills by participating in group tasks and presentations as leader and team member.
- Evaluate communication campaigns by conducting summative research.
- Evaluate effectiveness and return on investment of communication campaigns.
- Manage communication campaigns by producing budgets, task lists, and schedules.
- Manage communication campaigns by producing budgets, task lists, and schedules in project management software.
- Plan communication campaigns by producing multi-public, multi-channel communication campaign planning documents.
- Produce marketing communication messages.
- Produce multi-public, multi-channel communication campaign planning documents.

Writing Across the Curriculum:

Students are expected to demonstrate writing skills in describing, analyzing and evaluating ideas and experiences. Written reports and research papers must follow specific standards regarding citations of an author's work within the text and references at the end of the paper. Students are encouraged to use the services of the University's Writing Center when preparing materials.

The following website provides information on APA, MLA, and other writing and citation styles that may be required for term papers and the like:

<http://www.nu.edu/OurPrograms/SchoolOfEducation/SpecialEducation/Courses/SPD696Syllabus.html>

(6) George Washington University

Students from four Elliott School master's programs — Asian Studies, Global Communication, International Affairs, and Security Policy Studies — form teams to tackle a real-world policy challenge in the Global Capstone project. Capstone teams plan, implement, and present a group-designed, research-based project. The final products should make defensible policy recommendations that can be showcased as the culminating experience of a student's time at The George Washington University. Although the Capstone is conducted under the guidance of a faculty member, groups have considerable agency throughout the process and are encouraged to be ambitious.

Capstone projects demonstrate students' ability to take an idea from conception to final presentation and combine academic knowledge, research, and professional skills into a coherent product.

Students employ project management skills, briefing and public speaking skills, and analytic and policy relevant skills through the project.

At the end of the Capstone experience each group will have produced several deliverables.

- A **written product** with policy recommendations.
- A final **briefing** to a professional audience.
- Various methodological outputs — both quantitative and qualitative.

Dissemination might additionally include:

- A podcast
- A product for a client or a particular audience
- A website

Bottom line: The Capstone is a product for your résumé demonstrating combined academic and professional skills.

<http://elliott.gwu.edu/project-examples>

(7) Western Kentucky University

Successful completion of a Graduate Capstone Experience is the culminating graduation requirement for the Master of Arts in Communication. The non-thesis capstone experience allows students to demonstrate their ability to organize and synthesize knowledge as developed throughout their academic program by exploring communication theory and applying it meaningfully to real-world problems. Through this project, students will further refine their written and presentation skills to share or disseminate effectively the knowledge they have gained to the appropriate audience. The non-thesis capstone project consists of a position paper, case synopsis, and presentation as described below.

Capstone Committee

During the semester prior to planned graduation, it is the responsibility of each student to consult with the director of graduate studies to make plans for the capstone activity. Each student will select a theory from three Communication courses taught by three different members of the Department of Communication faculty. The professor for each class will serve as a member of the student's capstone committee. The student will ask one of these professors to serve as the chairperson for the committee and will inform the Director of Graduate Studies so that the Director will be aware of the progress that

the student has made toward completing the process. When the proposed chairperson and committee members have agreed to serve, the student will notify the Director of the final arrangements for the capstone activity.

Capstone Position Paper

Students will write a **10-13 page paper** which reviews, analyzes, and synthesizes their coursework in the Communication discipline. This paper will demonstrate the academic writing skills students have acquired through the coursework as well as demonstrate their understanding of the role communication plays in people's lives (e.g., work, relationships, etc.). This paper will be divided into three sections. In the opening section (1-2 pages), students offer and defend their definition of communication and define and discuss the importance of theory. In the second section (8-9 pages), students demonstrate a comprehensive understanding of three communication theories or theoretical frameworks (from three different content communication courses). In this section, students should explain, analyze, and identify significant findings, and provide examples to illustrate their working knowledge of the theories. In the final section (1-2 pages), students synthesize the three selected theories, by elaborating on their similarities and differences and exploring ways they link together to describe, predict, explain, or understand communication in specific contexts. All graduate student Capstone Papers will be submitted to a plagiarism detection database (SafeAssign) through Blackboard.

Guidelines

All written materials must follow the current APA guidelines and be presented to the Chair and Committee in typewritten form using a 12-point font, double-spaced, and using 1-inch margins. All written documents must be free of grammatical, typographical, and spelling errors and cite a minimum of six sources (sources can come from class readings). The paper must be submitted to the Chair for approval and then to the other committee members for their approval before the student begins work on the Capstone Presentation.

Case Synopsis

Along with the Capstone Position Paper students should also submit a one-page, single-spaced synopsis of the scenario/case to which they plan to apply their selected theories and a one-page, outline/overview of how they plan to organize the Capstone Presentation (see description below). This approval must take place before mid-term of the semester in which the student plans to graduate.

Capstone Presentation

Using the three communication theories or theoretical frameworks the student selected for the Capstone Position Paper, students will develop and deliver a **20-25 minute presentation** for their Capstone Committee applying the theories or theoretical frameworks to a real-life experience/problem, case study, or approved hypothetical scenario. The application of the theory may take the form of a solution or method of addressing the issue. In addition, in the final portion of the presentation students should delineate how they envision using the knowledge they have learned about communication in their lives and work.

Guidelines

The Capstone Presentation should be approximately 20-25 minutes with PowerPoint slides, used sparingly, allowing approximately thirty minutes for a question/answer session with the committee. Prior to scheduling the presentation, students should provide the committee chairperson copies of the slides for review. Once the committee chairperson approves, students will schedule a presentation date with the full committee. The Capstone Presentation must take place on or before the 12th week of the semester. Capstone Presentations scheduled during the summer sessions will follow a similar timetable as during fall and spring.

http://www.wku.edu/communication/graduate_program/capstone_project_non-thesis_cap_experience.php

(8) American University School of Communication

The capstone project is the culmination of the master's degree program in public communication at American University. All graduates complete a capstone as part of a capstone seminar working in

close cooperation with faculty.

<http://www.american.edu/soc/communication/capstone-projects.cfm>

(9) Minnesota State University

MA degree students in technical communication may choose to complete a thesis, an alternate plan paper (APP), or the Capstone Course (Eng 696).

Research and Theory of Technical Communication (Eng 673) is a prerequisite for the Capstone Course as well as for the Capstone projects.

Capstone course

Students research and write an article-length document that may serve as the basis of a professional publication or presentation. All documents will go through a formal review process including peer review, SME review, and editorial review. Prerequisites include Research and Theory of Technical Communication (Eng 673) and at least 28 credits completed in the technical communication MA degree program.

Capstone project requirements

Deadlines

The College of Graduate Studies and Research posts deadlines related to capstone projects. In addition, graduate students must submit the following forms in addition to the capstone project itself:

1. An [PDF] application for graduation (175 KiB)
2. The [PDF] recommendation for awarding the certificate/degree (123 KiB)

Formatting guidelines

The College of Graduate Studies and Research provides basic guidelines for page layout, formatting, and typography for theses. Note that those guidelines trump guidelines provided within the specialized or general style manuals listed. Since the Chicago Manual of Style is required reading for the Editing Technical Publications (Eng 575) course, you are encouraged to follow it or to follow APA style or an appropriate specialized style guide selected in consultation with your advisor.

APPs should be formatted similarly to theses.

Specifications for documents required for the Capstone Course (Eng 696) will be provided by the instructor of the course.

Publication

The final draft of **APPs** and theses must be submitted to all committee members. In addition, theses must be submitted either online (for publication by ProQuest/UMI Dissertation Publishing) or in print form (to the College of Graduate Studies and Research), in which case students must provide four copies and pay a fee to have the copies bound.

Presentation

Once the examining committee has approved the thesis or APP and prior to their signing the [PDF] recommendation for awarding the degree form (123 KiB), the author must give a **formal presentation** (typically online) of his or her research. Such presentations are open to the public (announced on the technical communication website) and must be scheduled two weeks in advance.

<http://english.mnsu.edu/techcomm/capstone.html>

Global

(1) Swinburne University of Technology

Capstone Project: Cross Cultural Communication Design

Aims and objectives

The aim of this unit is to provide students the opportunity to engage in independent **individual and/or group design projects** as the culminating demonstration of on their discipline and specialization knowledge.

On successful completion of this unit the student should be able to:

1. Write a research-driven communication design strategy and design brief
2. Demonstrate application of appropriate research, critical thinking and analysis as the basis of concept development for cross-cultural communication
3. Develop concepts and artifacts for cross-cultural communication design
4. Execute strategically targeted communication design
5. Publish a persuasive and professional standard design proposal that addresses the creative, strategic and cross-cultural aspects of the brief

Teaching methods

Teaching is conducted in a student-centered studio environment, through lectures, group discussions, site visits, demonstrations and critiques. Students present their work to the group at the end of each project.

Assessment

Weekly Concept Blog (Individual) 25%

Midterm Project Review (Individual) 25%

Final Project, **Presentation**, and **Documentation** (Individual) 50%

General skills outcomes

Given the global market into which design students enter, this capstone project unit produces students with the following Graduate Attributes:

- Adaptable and able to manage change
- Aware of local and international environments in which they will be contributing (e.g. socio-cultural, economic, natural)
- Entrepreneurial in contributing to innovation and development within their business, workplace or community

This capstone project unit provides students with the following Key Generic Skills:

- Analysis skills
- Problem solving skills
- Ability to tackle unfamiliar problems
- Ability to work independently

Content

- Project planning and design
- Date gathering and creative conceptualization
- Design and implementation of sustainable projects
- Presenting evidence-based designing

<http://www.swinburne.edu.au/study/courses/units/Capstone-Project-Cross-Cultural-Communication-Design-DDD80002/international>

(2) University of Technology Sydney

Media Arts Project Capstone

In this subject students complete an original short project in film, video, television, online, sound, radio, performance and installation or multi-platform. The completed project should demonstrate the student's advanced professional skills and creative expertise. The project must be successfully completed during the semester, although it may have been developed and commenced during the Research and Development subject or equivalent Scriptwriting subject. It must be feasible to be produced within the resources available both through UTS and those provided by the student from outside UTS. The proposed project must be approved by the academic adviser. Students are required to submit critical **documentation** (approximately 3000 words) of their research, production development and production process to accompany the final project. This documentation should demonstrate the student's critical relationship to their media production practice. This subject differs from Media Arts and Production Minor Project in that it is expected that the completed project work is conceptually and creatively challenging. The production and/or post-production process should be considerably more demanding and the resulting project should show evidence of the student as a media arts program maker. The subject is conducted by **individual or small group** supervision. <http://handbook.uts.edu.au/subjects/57180.html>

(3) University of Alberta

Master of Arts in Communications and Technology

The capstone research project is designed to draw together all of your studies in the MACT. It is the last course that you will take in the program. The project's practical and professional focus should integrate the core areas of study in the program. You will conduct original research into the application of a chosen aspect of communications technology in a substantial area of personal or professional interest under the guidance of a project supervisor.

The project is designed to assess your ability to:

- Identify, clarify and investigate a problem/topic
- Apply theory to practice
- Locate, analyze and integrate relevant literature
- Gather analyze and interpret data
- Consider the application of the findings of the study

Complete satisfactorily a comprehensive project that represents an original contribution to professional knowledge and practice in the field of communications and technology

The full text of MACT student projects is available on the MACT community of the University of Alberta Libraries' Education and Research Archive (ERA). The extended abstracts of many MACT student projects are available on the MACT website.

Consult the MACT Student Handbook for the capstone project guidelines.

Successful completion of the project entails these things:

- a research topic approved by both your academic and project supervisors
- the application of theory to practice resulting in new knowledge or insights about the topic
- the documentation of that research according to the guidelines set forth in this booklet
- the presentation of the draft research proposal to your colleagues (a part of COMM 501)
- the **presentation** of your research as a completed project to your supervisor

Your project may take the form of one of the following:

- formal analysis of management practice, organizational processes, or policy
- formative or summative evaluation of a program, initiative, or project
- case study, using secondary documents, survey data, or interviews
- replication of a previous study, with either the introduction of a new variable or the analysis of a changed context

Developing Your Draft Proposal

Together with your supervisor, you will refine, redevelop (from COMM 501) or develop a proposal that demonstrates:

- that you have identified an interesting and worthwhile problem for investigation, and;
- that you have the means for conducting a viable investigation within the timeframe available.
- Your proposal should follow the format given in the following pages. Every proposal should include a timeline that identifies stages or milestones that can be used to plan your research.

The word length for the proposal should be approximately 2500 words. Your research proposal should contain the following parts:

- Proposed title of the project
- Research question
- Literature review showing the theoretical base of the proposed study
- Objectives of the study
- Hypotheses, where relevant
- Methodology
- Timeline
- Curriculum vitae of the researcher
- Copies of draft research instruments, such as survey forms.

Overview

In the capstone project, you will be studying a problem in depth and gaining hands-on experience in designing and conducting an applied research project. You will directly experience the difficulties inherent in research and will gain an appreciation of the essentially tentative nature of the knowledge, evidence and data available to researchers and scholars in the social sciences.

Some comments follow on the different parts of the capstone project.

Length:

- The applied research project should be 60 - 80 pages (double spaced). It should be concise, follow a logical sequence, and contain all the requisite components, including bibliographic references. You should refer clearly to appendices.

Style:

- The final project should be written in formal academic style in accordance with the requirements of the current APA style guide.
- You should provide appendices which detail all primary evidence collected, any correspondence, and details of any questionnaires or interview schedules.
- These are not included in the word count.
- Projects should be word-processed and double spaced. Font must be Times New Roman 12 point. Individual entries in the bibliography may be single-spaced, but you should double space between entries.
- Your submitted project must have the title, author's full name (including your middle name) and year on the title page. (See Appendix A for required format)
- Cited references should be accurate and consistent. This is a requirement of good scholarship.
- Ensure that there are no typographical or grammatical errors. The use of a third party proof-reader is recommended. Keep in mind that your work will be posted to the UAlberta Libraries ERA website

Components of the Capstone Project

- Preliminary pages (do not number these pages)
- Title page - See Appendix A for required format

- Acknowledgements page - It is usual practice to acknowledge supervisors, and anyone who has offered particular assistance, while respecting confidentiality.
- Disclaimers- Required when projects make recommendations upon which an organization or individual might act.
- Table of Contents- Specifying chapters and/or sections and their page numbers in the main body of the project.
- Abstract page - A brief description (150 – 200 words) of the work. This should include a short description of the research problem, a brief comment on the direction taken; and a summary of the conclusion.

Main body of project

The main body of your project contains the following parts:

Introduction

A general background to the problem that is meaningful to a reader unfamiliar with the area. Discuss why this study is worthwhile. The introduction includes the problem statement.

Problem and Research Question

A general statement of the problem followed by specific question(s) that will be explored.

Literature Review

The literature review provides a theoretical perspective that directly relates to the problem. It interprets and synthesizes relevant ideas and concepts. This literature should give direction to, and guide the design of, the study. It will also provide a context in which to interpret and discuss the findings. Basic values and assumptions will be revealed through the selection and interpretation of the literature but should be explicitly stated as well.

Methodology

This is a detailed description about how the study will be conducted. The methodology will include descriptions of the sources of data, construction of data/collection techniques/instrumentation, description of the sample or participants, data/collection procedures, and methods of analysis.

Findings

Present a clear description of the findings along with the procedures used to sort, code and interpret the data. Evidence must be presented that supports the categorization, theory or interpretation.

Discussion/Conclusion

This section includes the summary/ conclusions of the findings, consideration of weaknesses and validity issues, and directions for future research.

And, at the end...

Following the main text of the project are these two parts:

References

This is a complete listing of all references using APA Style.

Appendix

The appendix should include materials (such as the survey questionnaire used or the informed consent agreement provided to respondents) that are important for a clear understanding of the study but too cumbersome to be included in the body of the text.

MSIT

United States

(1) University of Washington

The primary goal of your Capstone project is to demonstrate your mastery of the knowledge that you have gained in your program. You may emphasize different components of your learning, but will be expected to show how all your education has contributed to the solution you come up with for your problem. Examples might include:

- Develop a system design for adoption by the client and include socio-technical evaluation.
- Do a requirements study for the creation and integration of taxonomies in an information management system and provide recommended solution for adoption by the client.
- Build a policy portfolio for an organization in a specific information management area.
- Conceive and design a new department for an organization that centralizes the management of information resources and create a plan for how to get the department established.
- Perform a system integration between two data systems that requires you to map between the schemas of each system, draw data from each and produce a unified view.
- Assess the information needs of a group of people. Determine where in the organization the information all exists and design a methodology for drawing it all together into a unified view.
- Perform an information inventory across a large and diverse set of documents.
- Create a system design for the incorporation of taxonomies in a portal or web UI of client's product.
- Do a requirements study incorporating needs assessment, analysis of technologies, proposed solution, ROI.
- Analyze a defined collection of information in its existing state and usage. Develop a set of recommendations for expanding or shifting the focus of the collection, including the means for description, cataloging and tracking of the collection. Include a review of existing and potential technologies.
- Assess a program by defining metrics and providing an analysis of the success of the program through various measures.
- Research best practices for information vendor assessment and synthesize to produce a set of recommendations.
- Design mobile/virtual service for users of a given library. Analyze technology, hosting options and modes of delivery.

For any project, think in terms of the deliverables you will provide to document the end result of your work, and make sure that you have scoped the project well enough to come up with some concrete products at the end of the quarter. They may be interim reports, a finished product or a completed project plan ready for approval.

<https://ischool.uw.edu/current/mlis/final-project/examples>

(2) Carnegie Mellon University

MSIT-PRIVACY ENGINEERING

An important element of the program will be a learning-by-doing component, where students will be brought in as privacy consultants to work on client projects. Some projects will be completed in collaboration with students from other professional master's programs. Some of these projects are

sponsored by industry or government while others are more entrepreneurial in nature and driven by the students themselves. By bringing students from the MSIT in Privacy Engineering program into these projects, we will give them first-hand experience in what it takes to (1) take on the role of privacy professional as a member of a multi-disciplinary team and, (2) reconcile the demands of time-critical design activities with the need to develop adequate privacy solutions. In the process, students will have to draw on the knowledge acquired in their other classes. While participating in the team projects, students will be required to report weekly on their progress in the context of a "Privacy by Design Workshop" class, where they will share their experience with their colleagues in the MS in Privacy Engineering program.

(3) University of Houston

Computer Science - Master of Science Capstone Project

The capstone project course gives students comprehensive experience working on real-world projects as part of a team. The capstone project demands intensive, face-to-face communication with other team members, the faculty instructor, and the project mentor.

Our industrial partners sponsor most projects. These firms provide initial project specifications and mentoring. Partner companies include Tietronix, AtLink Communications, United Space Alliance, GHG Corporation, and MiniCheck-OCR. This partnership offers the students invaluable industrial experience, significantly helping them find jobs after graduation. Some of them were hired by the mentoring companies.

Many projects use leading-edge technologies, such as:

- J2EE
- Mobile Internet using J2ME and PDA
- VoIP
- .NET technology
- XML and XSL
- SVG
- Ruby on Rails

The nature of the teamwork varies from project to project. Popular areas include Web development, application development, database-driven application, network programming, scheduling, workflow, and graphics.

The teams have displayed examples of recent projects sponsored by our industrial partners on their Websites:

- [TieFlow Workflow Toolkit Process Verifier](#)
- [A .NET and Java based Performance Monitor for the Web](#)

http://prtl.uhcl.edu/portal/page/portal/SCE/COMPUTING_MATHMATICS_DIV/CS/Comp_SciMS/CS_Project_MS

(4) Georgia Southern University

Information Technology Capstone Project

Course Description

This course provides students with the opportunity to develop in-depth knowledge of IT project design and implementation. The course covers the main topics of IT project management including requirements specification, project integration, scope, time, cost, quality, human resources, communications, and risk management. In addition, techniques and methods used in IT project management will be covered. To reinforce the course concepts, students will complete projects related to their specialization and/or second discipline. This course is part of the IT core required for all IT majors.

Course Outcomes

On completion of the course, students will be able to

1. Discuss the concepts and fundamental principles involved in requirements analysis and design.
2. Discuss the relationship between cost, time, scope, and performance for a project.
3. Discuss the phases of a project.
4. Demonstrate an understanding of the PMBOK.
5. Develop and implement an IT project related to their specialization and/or second discipline.
6. Utilize project management tools and methods.
7. Discuss the ethical, legal, and social issues related to IT project management.
8. Apply the principles, concepts, tools and techniques learned to the solution of IT problems in a team environment.

Rationale for Inclusion

The course contributes to the following student outcomes and attributes:

1. Identify and define the requirements that must be satisfied to address user needs
2. Analyze user requirements to design IT-based solutions.
3. Identify and evaluate current technologies and assess their applicability to address individual and organizational needs.
4. Work in project teams to develop and/or implement IT-based solutions.
5. Use current computing techniques, skills, and/or technologies.
 - (a) An ability to apply knowledge of computing and mathematics appropriate to the program's student outcomes and to the discipline.
 - (b) An ability to analyze a problem, and identify and define the computing requirements appropriate to its solution.
 - (c) An ability to design, implement, and evaluate a computer-based system, process, component, or program to meet desired needs.
 - (d) An ability to function effectively on teams to accomplish a common goal.
 - (e) An understanding of professional, ethical, legal, security and social issues and responsibilities.
 - (f) An ability to communicate effectively with a range of audiences.
 - (h) Recognition of the need for an ability to engage in continuing professional development.
 - (i) An ability to use current techniques, skills, and tools necessary for computing practice.
 - (j) An ability to use and apply current technical concepts and practices in the core information technologies. [IT]
 - (k) An ability to identify and analyze user needs and take them into account in the selection, creation, evaluation and administration of computer-based systems. [IT]
 - (l) An ability to effectively integrate IT-based solutions into the user environment. [IT]
 - (m) An understanding of best practices and standards and their application. [IT]
 - (n) An ability to assist in the creation of an effective project plan. [IT]

(5) Rochester Institute of Technology

MS in Information Sciences Technologies (MS/IST) In the Information Sciences and Technologies program, students may elect to do either a MS project, a MS thesis or a capstone course as the capstone experience. The MS/IST capstone can be worth from four (3) up to a maximum of eight (6) credits. If an six-credit thesis is elected, then the number of three-credit elective courses required is reduced by one course. Many students elect to do a three-credit MS project. Students may also elect a three-credit (3) capstone course. This is a structured course in which the students in the course engage in a team effort to attack a large problem. Each student's role is carefully delineated, and each student's contribution is an individual effort within the team effort.

ISTE-790 MS Thesis

This is a capstone experience for the Master of Science in Information Technology program. Students must develop a proposal, carry it out, and defend their work. Student must submit an accepted thesis proposal in order to enroll.

Prerequisite: Completion of all or nearly all MS coursework

IST Capstone Guide - 5 - AY 2013-14

Credits: 6

ISTE-791 MS Project

The capstone experience for the Master of Science in Information Technology. Students must develop a proposal, carry it out, and defend their work. Student must submit an accepted proposal in order to enroll.

Prerequisite: Completion of all or nearly all MS coursework

Credits: 3

ISTE-795 MS Capstone

A course-based capstone experience for the Master of Science in Information Technology. Students must develop a proposal, carry it out, and defend their work.

Prerequisite: Completion of all or nearly all MS coursework

Credits: 3

<http://www.ist.rit.edu/assets/pdf/IST%20MS%20Capstone%20Guide.pdf>

(6) Aspen University

The Capstone Project is a large scale academic project in which students select a topic that both relates to their studies and their field of work. The results of the project must be presented in the form of a detailed final, written report. The project must adhere to the APA citation guidelines.

Capstone Process

In most of the academic degree programs at Aspen University, the Capstone process is comprised of two phases. The School of Nursing has a different process, which is detailed in MSN Student Handbook. All other programs at Aspen University follow this two-phase process:

Phase 1

The first phase has been designed to assist students in developing and creating a formal Capstone Project Proposal. The Capstone Mentor will review the student's Project Proposal and make recommendations before granting approval to proceed. This phase is usually completed in the first month after enrollment and is accomplished through a series of email exchanges between the student and their Capstone Mentor. Upon approval of the Capstone Project Proposal, students will submit the proposal through the Online Course Platform and a grade of "P" (for Passing) will be entered.

Writing the Proposal Paper

The following material explains how to produce a proposal paper. A template is provided that outlines the major parts of an acceptable proposal paper.

A proposal paper presents an arguable opinion about an issue. The goal of a proposal paper is to convince the audience that an opinion is valid and worth listening to. All ideas that the student is considering need to be carefully examined when choosing a topic, developing an argument, and organizing the paper. It is very important to ensure that all sides of the issue are addressed and presented in a manner that is easy for an audience to understand. The student's job is to take one side of an argument and persuade the audience that well founded knowledge of the topic is being presented. It is important to support the argument with evidence to ensure the validity of any claims, as well as to address the counterclaims.

Issue Criteria

To take a side on a subject, the student should first establish the reasoning of why that topic interests them. Below are questions to ensure that they will be able to present a strong argument:

- Is it a real issue with genuine controversy and uncertainty?
- Can you distinctly identify two positions?
- Are you personally interested in advocating one of these positions?
- Is the issue narrow enough to be manageable?
- Analyzing an Issue and Developing an Argument

Once a topic is selected, the student should research the subject matter. While they may already have an opinion on the topic and an idea about which side of the argument they want to take, they need to ensure that the proposal is well supported. Listing out the pro and con sides of the topic will help examine their ability to support counterclaims, along with a list of supporting evidence for both sides. Supporting evidence includes the following:

- Factual Knowledge: Information that is verifiable and agreed upon by almost everyone.
- Statistical Inferences: Interpretation and examples of an accumulation of facts.
- Informed Opinion: Opinion developed through research and/or expertise of the claim.
- Personal Testimony: Personal experience related by a knowledgeable party.

Once the student has made a pro and con lists, they should compare the information side by side. Considering the audience, as well as their own viewpoint, choose a position.

Capstone Project Proposal Template (to be used as a guideline):

Project Title

Submitted by:

[Your Name]

Submitted to Aspen University MBA/MS Program [list one]

Date Submitted

For Aspen University Use

Date Received:

Reviewed by:

Approved/Disapproved:

Signature:

Date:

Comments:

Capstone Project Proposal

by

[your name]

Project Title Write the name of your project. **Project Description** This should be a half page to a page detailed description of what exactly your Project is. **Project Rationale** Two to three paragraphs

stating the need for, and justification of, selecting this Project topic. Who will benefit and how will they benefit from this project (not including you)? **Personal/Professional Expectations** Two to three paragraphs on what you hope to gain from this Project, both professionally and personally. **Project Goals** List and explain the goals of your Project. This section should address, in detail, a description of your project, what you plan to do and how you will achieve it. **Research** Your project should also include a review of the existing research on your topic and a discussion comparing this research to your project focus. The proposal should address how you plan to review the existing literature, what sources you plan to use (the Internet, journals, books, popular magazines, etc.). **Procedure** A step-by-step analysis of how you intend to meet your goals, including resources you will need, where you intend to find them, and an estimated timeline of how long each step will take. This is the major section of your proposal. **Evaluations** One half a page to one whole page on how your Project is to be evaluated. Is your work going to evaluate it? How? Community evaluation? What specifically will make your project a success, both to you and to others?

Phase 2

The second phase has been designed to assist the student in implementing their approved formal Capstone Project Proposal toward completion of their project. As the student progresses toward completing their project, their Mentor will likely wish to have the opportunity to review and critique the Capstone Project activities and the formal documentation on a section by section basis so that any significant changes or amendments that are suggested can be integrated into the final presentation well before the submittal of a final paper.

Capstone Project Review

The final Capstone Project should follow the exact format of the Capstone Proposal.

For each heading examine how well your project followed the proposal. Did you have any unexpected trouble with resources or goals? Does the project benefit who it was expected to benefit? Did you derive from your Project what you believed you would? Did the plan have to be rewritten? Include information on steps that did not work, and those that did. Please be sure to explain why.

The Write-up of Your Project

The write-up is what students will submit as their Project to the University.

Paper Structure/Organization

Length - The body of your paper will vary in length depending on the class for which the paper is being prepared. The Study Guide for your course will inform you of the length requirement. A table of references, diagrams, and appendices are in addition to the length guide.

Format - The paper must be well organized. A portion of the grade will be based on this aspect. Use section headings. Start with an abstract and conclude with a summary. As a guide for preparation of your paper, use the following:

1. Cover page should begin with your name, course number and title, date, and email address centered on the page.
2. Center the title of your paper on the first page.
3. Single-space paragraphs.
4. Indent the first sentence of each paragraph 5 spaces.
5. Double-space between paragraphs.
6. Text should be 12-point, Times New Roman font. Headings should be sized according to level and can use a different font.
7. Text should be left justified.

8. Include figures, diagrams, pictures, or flow charts within text, as appropriate.
9. Page set-up should be 1" margins at top and bottom, and 1" left and right margins.
10. Keep a back-up copy of your project until finished.
11. Table of contents: A separate page.
12. Page numbering: Number every page (upper right-hand corner). Page number one is the page after the Table of Contents.
13. Headings: The hierarchy of headings Aspen recommends are: Section, Subsections, and Sub-subsections. Not all three levels are required.
 - Section headings should be centered and underlined or in bold.
 - Subsection headings should be left-justified, underlined, or bold and on a separate line.
 - Sub-subsections should be left-justified, not underlined, and on the same line as the text, and followed by a colon.
 - Note. APA's manual lists up to five levels.
14. Typed: Papers must be typed; erasures are not acceptable. For this and other reasons, you are urged to use electronic processing.
15. Spelling and grammar: Inaccuracies will be deducted from the grade of the paper. Therefore, you are urged to use a spell checker and carefully edit your English grammar or use a grammar checker.
16. Reference of sources of information: All references (e.g., books, periodicals, reference manuals, newspaper articles and internal company publications, online sources such as Dialog, Internet, CD-ROMs, and interviews) must be documented. Failure to include references when using information from one of these sources is considered plagiarism. Rules for citations in the body of the paper and the reference list at the end of the paper are given later in this guide. Authors quoted in your paper should be referenced as cited in the "Reference" section of your paper. Please use a variety of references, including but not limited to: books, periodicals, journals, and the Internet. Do not plagiarize other's material.

For Formatting Techniques, refer to the APA Style Guide in the Student Resources Menu.

Extras

If part of your project includes a PowerPoint presentation, a DVD, or any of the other approved audio/visual, please include these in your package to Aspen University. Do not forget to include an APA formatted bibliography.

Send your project to your mentor first and be sure to communicate extensively with the professor. Any questions should first be addressed to your assigned faculty mentor. If your professor approves your project, it will be sent to Aspen University.

The final Capstone Project submission will be graded by your Capstone Mentor and forwarded to Aspen University for a second evaluation and concurrence.

<http://www.aspen.edu/current-students/capstone-project>

(7) The Catholic University of America

Capstone Research Project

The Capstone Research Project, a requirement of the Health Information Technology program in Library and Information Science (LIS) of The Catholic University of America, offers a unique opportunity for students to gain professional experience in a healthcare setting. Students earn three graduate credits by working 120 hours on projects related to the application of information technology in a healthcare environment under the supervision of a healthcare professional. The Capstone Project is completed in the last semester of course work or after all course work has been completed. Students are required to have the approval of the Capstone Project Coordinator to enroll in a Capstone Project.

Hours of the Capstone Project may be arranged at the mutual convenience of the student and supervisor. A variety of healthcare settings may serve as the site for the project. Graded: Pass/Fail. Students who work in a healthcare environment may do the Capstone at their work site but the Capstone should not take place in the same work unit and cannot be supervised by the immediate supervisor at their place of employment.

Planning Your Capstone Project

Students will work with the Capstone Project Coordinator to identify a project. LIS is compiling a database of projects at local hospitals and will share that information with students in the spring semester. Students may identify projects on their own but the Capstone Project Coordinator prior to registration must approve the projects.

Project Plan for Approval

After the student has identified a suitable project and found an appropriate supervisor, the student and the supervisor will complete the Capstone Research Project application form. The following information must be provided:

- Information on the supervisor and the site (names, title, email addresses, phone numbers, addresses)
- Nature of the project, including major activities
- A draft schedule of the Capstone
- Expected learning objectives
- Expected learning outcomes of the project

The student must get the site supervisor to sign the completed application form. The student will then submit the application form to the student's advisor for review. When approved, the advisor will send the approved form with the advisor's signature to the Capstone Project Coordinator (cua-slis@cua.edu) who will send an email to the LIS registrar indicating the project has been approved. A copy of this email is also sent to the student, the advisor, and the site supervisor.

Required Activities Throughout the Capstone

- The student will keep a reflective journal on the Capstone that not only logs what the student has done but also the connections between classroom learning, work experience and the Capstone experience. Each week the student posts the journal to a discussion board on a Blackboard site for Capstone students to share their experience.
- Midway through the Capstone, the Capstone Project Coordinator will work with students to arrange for a site visit and discussion with the site supervisor about the student's performance and progress.
- Students with significant performance issues at midpoint of the Capstone may be asked to withdraw from the course.
- At midterm the supervisor will receive an evaluation form and is asked to complete it and email it to the Capstone Project Coordinator at the end of the semester. The completed evaluation is held in confidence by the Coordinator and shared only with the student's advisor.

Activities at the end of the Capstone

- Client deliverables - Students will submit the work produced for clients.
- Final Report - When the student has completed the required 120 hours of fieldwork, the student will submit a report of at least 1,000 words that describes what the student has learned. It is expected that the reflective journal will be a source for this paper but the student must make sure the report provides evaluative information on the Capstone and the learning experience

and outcomes. The student will submit this report, along with the complete journal, to the Capstone Project Coordinator by the date due specified by the Coordinator.

- All work will be submitted via Blackboard

Global

(1)Toronto University

An experience in engineering practice through a significant design project whereby student teams meet specific Client needs through a creative, iterative, and open-ended design process.

The project must include:

- The application of disciplinary knowledge and skills to conduct engineering analysis and design.
- The demonstration of engineering judgment in integrating economic, health, safety, environmental, social or other pertinent interdisciplinary factors.
- Elements of teamwork, project management and Client interaction.
- A demonstration of proof of the design concept.

Some Unique Characteristics of Capstone

- No new content (i.e., no class meetings)
- All work completed in a team
- Long periods of independent work
- Regular meetings with Supervisor
- Industry client plays an active role
- Emphasis on technical and non-technical graduate attributes (including communication)

Types of Capstone Projects

All projects fit into one of these categories:

- Standard capstone project
- Student-sourced capstone project
- Multi-disciplinary capstone project
- International capstone project

Standard Capstone Project

- Sourced by Capstone Coordinators and Faculty Supervisors
- Supervised by a single MIE faculty member
- Matched to students in mid-August

Student-sourced Capstone Projects

- Sourced by students through PEY, ESIP employer or other industry contact
- Must be submitted by June 13, 2014
- Supervised by a single MIE faculty member
- Can be matched to students before August
- Sourcing student may form his/her own team and request a Supervisor

Multi-Disciplinary Capstone Projects

- Sourced by MCP Coordinator (Kamran Behdinan) and capstone coordinators across faculty
- Require 3-5 team members from at least two disciplines
- Supervised by a single APSc faculty member with disciplinary subject-matter experts
- Have an accelerated self-selection and matching process
- May require a competitive interview

International Capstone Project

- Sourced by International Capstone coordinator (Kamran Behdinan)
- University partners from Peking and Shanghai Jiao Tong Universities
- Require a competitive interview
- Follow a modified deliverable schedule
- Check your U of T e-mail regularly, starting in mid-August

<https://www.mie.utoronto.ca/undergrad/capstone/>

(2) Strayer University

This course is the capstone course for the Bachelor of Information Systems program. The course takes a senior management approach to examine issues in managing the information systems function in organizations and how information systems integrate, support and enable various types of organizational capabilities. Topics include developing an intellectual framework to critically assess existing information systems infrastructures, emerging technologies and how enabling technologies affect organizational strategy. <http://www.strayer.edu/course/cis-499-information-systems-capstone#sthash.CfIIIGcVY.dpuf>

(3) Singapore Management University School of Information System

Internships & Capstone Projects

Students in the Master of IT in Business (Financial Services) Programme may complete a capstone project or internship as part of the curriculum.

Capstone Projects

The general effort required for the Capstone Project is minimum 182 hours per student. The capstone project will enable the students to apply and integrate what they have learnt and give them an opportunity to delve in greater depth, into one or more of the topics covered in the courses. Faculty supervisors will be assigned to guide the students. Desirable length of project would be around 6-10 months, 6 months (Full Time), 10 months (Part Time).

Capstone projects are available on a competitive basis. To successfully clinch a capstone project, students are required to undergo the capstone project sponsor's selection process which may include interviews and assessments. In some cases, capstone projects may include compensation to the student either in the form of an allowance or a scholarship.

Mode of Work

Students work on the projects individually, in collaboration with a sponsoring company, under the supervision of an SMU appointed advisor. In cases where the project scope is large enough to allow for the involvement of more than one student, two may work on the project provided each student makes a distinct contribution towards the project.

Students may be expected to work on-site at the sponsoring company's premises if necessary. This

may help them in understanding the business domain, problem definition and even in gaining access to information systems, documents and resources available within the company. An allowance may be paid to the students for their work, at the discretion of the company. The work arrangement may assume the form of an internship with the sponsoring company.

Strictest confidentiality is maintained between the sponsoring company, the students and SMU advisor. Prior permission will be sought from the company before the use of any information, in any way, such as for presentation and report purposes.

<http://sis.smu.edu.sg/master-it-business/financial-services-track/capstone-project>

(4) Antigua and Barbuda International Institute of Technology -Caribbean campus of Business and Technology

Information Technology Capstone Project

The goal of this capstone course is to integrate the concepts of the Information Technology program to prepare individuals for positions that use information technology to develop computer-based systems that support organizations. These positions involve the use of information technology to acquire, organize and communicate data; coordinate processes; and make decisions.

<http://abiit.edu.ag/abiit-it-capstone-2015/>

Appendix 9: Lessons Learned from Capstone Revival

Developed by Mary, Ruochen and Qilin

What did we do well?

- We continuously kept communication
- Organized the tasks based on each members strengths
- Meeting deadlines we made for ourselves through out the semester
- Utilized advisor

What can we do better?

- Although we divided up the tasks based on skill sets, we could have done a better job of checking in with each other and making sure one person wasn't too overwhelmed with their part of the assignment

What still puzzles us?

- I think something that may still confuse us is if our recommendation is adequate enough

What would we do again?

- Meeting with group and advisor every week so everyone stayed on the same page
- Creating a Google Doc account to keep each other on the same page
- Meeting the client in person

What would we not do again?

- We would've prepared the survey so late in the semester. It prevented us from getting a higher number of alumni responds

What would we do differently?

- We would probably have checked in with the client in November just to make sure we were on the right track
- We would have also started writing earlier in the semester

What have we learned?

- Communication is very important in order for the group work to get done
- Divide up tasks equally
- Meet with advisor as often as needed-they are supposed to be a support system

Appendix 10: Self and Team Evaluation

EXCELS	MEETS	NEEDS ATTENTION
Responds and relates extremely well to people in all positions, initiating and maintaining relationships inside and outside his or her team and field of expertise	Responds and relates well to peers and to those in positions of authority	Not good at lateral cross boundary relations
Builds trust and able to lead teams, encouraging others to step out of their comfort zones to form new interpersonal relationships	Is seen as a team player, and is cooperative	Doesn't strike fair bargains or understand what peers expect or need
Esteems those with experience, and openly relies on their expertise to benefit the team	Looks for common ground, and solves problems for the good of all	Not open to negotiation
Has a knack for diplomacy and fosters goodwill between groups members	Represents his or her own interests and yet is fair to others	A loner, not seen as a team player, doesn't have the greater good in mind

Appendix 11: Student and Team Evaluation

EXCELS	MEETS	NEEDS ATTENTION
Uses a combination of logic, analysis, experience, wisdom, advanced methods, and other resources to solve problems	Uses a combination of logic, analysis, experience, wisdom, and methods to solve problems	Not a disciplined problem solver; may be stuck in the past, wed to what worked before
Demonstrates the ability to solve complex, difficult, and intractable problems	Probes appropriate sources for relevant information and answers to key questions	Many times has to come back and rework the problem a second time
Creates effective and innovative solutions	Demonstrates persistence and skill in gathering information	May be a fire-ready-aim type
Skillfully probes all appropriate sources	Has solutions and suggestions that are effective in addressing the problem at hand	May get impatient and jump to conclusions too soon
Demonstrates advanced skill and keen insight in gathering, sorting, and applying key information and demonstrates deep resolve and resilience throughout the process	Involves others in the thinking and decision-making process	May not stop to define and analyze the problem; doesn't look under rocks
Is well respected inside and outside the team; is often pursued as a consultant for input, analysis, process support, and direction	Can see hidden problems	May miss the complexity of the issue and force fit it to what he/she is most comfortable with
	Looks beyond the obvious and doesn't stop at the first answer	Unlikely to come up with the second and better solution, ask penetrating questions, or see hidden patterns

Sample two-dimensional rubric showing levels of knowledge application (ranks) and learning (levels) along with assigned grades and descriptions for each level and rank coordinate for Advanced Mechatronics

Element		RANKS						
		IDEAS		CONNECTIONS		EXTENSIONS		
FORM DESIGN AND ENGINEERING ANALYSIS	LEVELS	BAISIC	D 50-59% 1.0	- defines form of components - defines type and form of interfaces (where function happens)	B- 70-72% 2.7	- performs informed and justified material selection	A- 80-84% 3.7	- optimizes design based on engineering analysis - strives to integrate multiple components into a multifunctional one
		INTERME- DIATE	C 60-66% 2.0	- defines type and form of interfaces (where function happens)	B 73-76% 3.0	- determines component dimensions based on chosen materials, the loading and other constrains for achieving a given minimum safety coefficient	A 85-89% 4.0	- uses DFM and DFA methods to improve design - verifies calculations through various means including use of FEA and motion simulation
		ADVANCED	C+ 67-69% 2.3	- incorporates engineering analysis into the design process to verify "what if" scenarios	B+ 77-79 3.3	- performs and clearly documents all necessary engineering calculations based on theoretical formulas	A+ 90-100% 4.3	- skillfully uses FEM as a quick tool for design form improvement - demonstrates developed skills and judgment to determine if the obtained FEM results make sense

Appendix 13: MSPC Revised Capstone Guidelines

Master of Science in Professional Communication Capstone Guide

BY DR. J CHETRO-SZIVOS

CHAPTER 1

Understanding the Capstone Experience

The capstone project is intended to be a culminating experience calling upon your ability to analyze an organization's issues and apply the competencies you developed through your course work in the Master of Science in Professional Communication (MSPC) program. This is a demonstration of your professional competencies and your foundation of theoretical knowledge applied to "real-world" issues. Through the process of searching and working for an external client you will probe and respond to issues within an organization using analytical, research, writing, and other professional skills you acquired through your course of study. At the close of the semester, you and your team members are expected to write and present a well-researched, insightful, creative plan that illumi-

nates how your strategic considerations will lead to positive outcomes for your client. Your plan will tell the story of the original research, implementation plan, timelines, and budget necessary to meet the client's communication goal. It is highly recommended you have completed all or nearly all of their coursework in the program so you can investigate and substantiate what you have learned throughout the program. In addressing an organization's issues and preparing the capstone report, students are asked to draw on a wide variety of techniques, procedures and knowledge they have developed as students of professional communication, such as:

- o completing a communication audit
- o analysis of the company's online presence
- o knowledge of budgetary processes
- o command of evaluative techniques for policy analysis
- o perform situational analysis
- o identify implementation issues for an organization
- o understand what comprises the organization's system
- o develop an action plan for the organization

Defining a Capstone

Some people confuse a capstone with a thesis. Generally a thesis is written for an academic audience and is regarded as a contribution to an academic field of study. A capstone project is aimed at least two audiences: the client (organization) who has established a particular need and the MSPC program faculty who evaluates the report accompanying the deliverable to the client. This process builds a connection between the academic components of the MSPC program and the application of knowledge to a "real-world" context.

Your capstone requires completion of a project where the final product is a potential deliverable for a workplace audience accompanied by an extensive report. Examples of a deliverable includes a set of public relations materials and a schedule of implementation, a training manual, a comprehensive communication audit of an organization, a social media presence audit, a marketing plan and schedule, or a usability assessment. Your overall report should document how the deliverables reflects scholarly concepts supporting the decision your group made in designing the plans.

Roles and Expectations

You will be working as a member of a team and your teamwork abilities are critical to the success of your capstone project. This is your project and you are responsible for all aspects of the project. However, the scope of your project will be large and it is highly recommended a member of your team serves as the project manager for the capstone. All team members should have a schedule of important meetings and deadlines to ensure the project goes smoothly. You will work with a faculty member and they will determine if your project is appropriate and can reject or approve your proposal and ask for revisions. The faculty is your mentor throughout the project and should guide you through the process of writing and presenting your project. You will meet with the faculty member at least once per month and it is critical that all team members attend these meetings.

As indicated above, teamwork is critical and you will complete 2 self evaluations of your contributions as a team member throughout the semester and your team members will also evaluate your participation at the end of the semester. Listed below are the assessment standards and definition of teamwork:

Teamwork - Responds and relates well to people in all positions; is seen as a team player, and is cooperative; looks for common ground, and solves problems for the good of all

EXCELS	MEETS	NEEDS ATTENTION
Responds and relates extremely well to people in all positions, initiating and maintaining relationships inside and outside his or her team and field of expertise	Responds and relates well to peers and to those in positions of authority	Not good at lateral cross boundary relations
Builds trust and able to lead teams, encouraging others to step out of their comfort zones to form new interpersonal relationships	Is seen as a team player, and is cooperative	Doesn't strike fair bargains or understand what peers expect or need
Esteems those with experience, and openly relies on their expertise to benefit the team	Looks for common ground, and solves problems for the good of all	Not open to negotiation
Has a knack for diplomacy and fosters goodwill between groups members	Represents his or her own interests and yet is fair to others	A loner, not seen as a team player, doesn't have the greater good in mind

In addition to teamwork you will be evaluated for your analytic and problem solving skills. You will complete 2 self evaluations of your analytic and problem solving skills and your team member will also evaluate your skills. Listed below are the assessment standards and definition for analytic and problem solving skills:

Analytic and Problem Solving Skills - Uses analysis, wisdom, experience, and logical methods to solve difficult problems; incorporates multiple inputs to establish shared ownership and action.

EXCELS	MEETS	NEEDS ATTENTION
Uses a combination of logic, analysis, experience, wisdom, advanced methods, and other resources to solve problems	Uses a combination of logic, analysis, experience, wisdom, and methods to solve problems	Not a disciplined problem solver; may be stuck in the past, wed to what worked before
Demonstrates the ability to solve complex, difficult, and intractable problems	Probes appropriate sources for relevant information and answers to key questions	Many times has to come back and rework the problem a second time
Creates effective and innovative solutions	Demonstrates persistence and skill in gathering information	May be a fire-ready-aim type
Skillfully probes all appropriate sources	Has solutions and suggestions that are effective in addressing the problem at hand	May get impatient and jump to conclusions too soon
Demonstrates advanced skill and keen insight in gathering, sorting, and applying key information and demonstrates deep resolve and resilience throughout the process	Involves others in the thinking and decision-making process	May not stop to define and analyze the problem; doesn't look under rocks
Is well respected inside and outside the team; is often pursued as a consultant for input, analysis, process support, and direction	Can see hidden problems	May miss the complexity of the issue and force fit it to what he/she is most comfortable with
	Looks beyond the obvious and doesn't stop at the first answer	Unlikely to come up with the second and better solution, ask penetrating questions, or see hidden patterns

The capstone report, presentation, and deliverables will also be evaluated when completed. However, because teamwork and analytic and problem solving skills are evaluated individually it does not mean that all team members will earn the same grade for the course.

A successful Capstone project is marked by high levels of interest, interaction, and buy-in between MSPC students and their faculty member. Poor Capstone projects result when there is lack of buy-in or interest from students. The single best strategy for a successful Capstone project is to communicate and meet frequently with the faculty member!

How do I choose a topic for my capstone project?

The faculty member will help you identify potential research topics or encourage students to connect with local organizations to find a project. Students are encouraged to develop projects of practical or professional use into their capstone projects; for example, recent students have developed capstone projects involving the development of manuals or web and software applications; the usability testing of procedures, documents, or websites; and the recommendation of best practices for a not for profit's principal fund raising event.

What are Possible Topics for a Capstone

The Capstone Project can:

- Present a case study

- Develop a communication campaign

- Create a communication plan for an organization

- Investigate an area of interest such as:

- Communicating through crisis and change management

- Organizational communication policy and strategy

- Corporate governance, policy, and practice

- Corporate social responsibility and ethics

- Cross cultural communication

- Image, identity, and reputation management

- Integrated advertising and marketing

- Internal communication

- Social media and Internet/intranet practices

- Issues management

- Old and new media relations

- Performance measures for organizational success

- Strategic public relations

Examples of Past Capstone Projects

Marketing Plan and Strategy for Nested Bean an infant product

Adult Family Care Marketing Plan for a human service provider

Analysis of Community Event that is an annual fundraiser

Social Media Marketing Plan for a local not for profit

Marketing Plan for an area Preschool

Analysis to Increase readership for a Weekly Newspaper

Strategic Planning for a Meadery

CHAPTER 2

Capstone Guidelines

The project begins by choosing your team. Some groups form before the first night of class, but it is not necessary. Your team should be made up of persons with specific skills so that each is able to make a recognizable contribution to the project. For example: some people are good writers, others good with methodology, others good with project management, and others are good with library research. Of course compatibility is important, but choosing your friends may not be the wisest decision if they do not complement your skills. In building your team it is most useful to decide from the start who will be responsible for which items. As mentioned in the Introduction, a person with

good project management skills is an important part of the project. You will be given time in the first class to talk with other students and get a feel for who will be good team members.

Selecting a Topic

The faculty member may have few topics areas available, but ultimately it is your responsibility to find a topic. It can be a for profit or nonprofit organization that has identified an issue. The key is selecting an area of focus related to your degree and program. When you select a topic be sure to you choose a topic that lends itself to analysis, and the organization will cooperate with you in completing the project. Here are some criteria you should keep in mind when you chose a topic:

- Is the topic area relevant to the MSPC program? Do the issues identified line up with courses in the program? Is there a communication issue present?
- Is this a manageable topic? Is the topic defined or is the scope too large?
- Does the organization understand this is a capstone and not an internship? Are you being asked to complete tasks at the organization? If so this might not be an appropriate capstone.
- Do informational resources exist for this topic? Will you be able to collect data to support your work? Are their people to interview? Is there information available for a library search?
- What is the level of interest among the team members and is it likely to be sustained throughout the project?

Before the First Meeting with the Client

It is important to prepare for your first meeting with the client and this should be done no later than the third week of the semester. Your team can work together and find this data about the client:

1. Define the objectives for the capstone with your team and be able to communicate this to your client
2. Search the social media, etc. on the organization prior to the meeting and record your impressions.
3. Find the mission, vision, core values on web sites or printed material and identify what these are.
4. Start looking for new trends relevant to the industry. Don't go to the meeting unprepared. Give a brief overview of what you have found.

5. Try to understand how the organization fits into a larger system and describe this in the report.

You are required to submit a 2-3 page report to the faculty member before you meet with the client. This will be a graded assignment. The remaining assignments will be discussed in the next chapter.

Project Proposal

Prior to beginning the capstone you will need to complete a project proposal and submit this to the faculty member. This is a mandatory step in the process. This must be submitted no later than the fourth week of the semester.

Capstone Project Proposal Form Outline (Form is available on the Moodle site)

1. Purpose and Scope of the Project (include description of the intended audience and deliverable)
2. Statement of the proposed method for achieving the desired deliverable, with references to academic sources and other resources as necessary
3. Summary of your background/experience/ knowledge that qualifies you for this project
4. Timeline for completion of capstone, including proposed schedule for meeting with advisor(s), deadlines for completion of research and chapters/sections, projected defense date
5. Consideration of any potential obstacles and the feasibility of the proposed capstone
6. Evidence that necessary workplace approvals have been granted (attach as appendix)
7. Evidence that necessary human subject research approval has been requested or granted (attach as appendix)
8. Preliminary list of resources that you will use, with annotations describing their relevance to your project

Your team's purpose statement should be specific, goal-oriented, and clear. It is also important that your team identify what you will present as a deliverable to the organization. The statement of proposed method should describe if you are using interviews, survey, library or database research. The methods are contingent upon your topic. When you do identify the methods provide a statement of why your team chose to do so. The Project Proposal Form will ask for workplace approval. What this is referring to are companies that have internal policies that govern their information. You may need the approval of a decision maker within the organization before your team plans on using proprietary material in your report.

Sections to Complete for the Final Report

Your completed report will include several key sections and will usually be made up of approximately 75-125 pages. The report should include the following content areas:

1. Executive Summary- about two pages that tells the reader how the work came about, how it was conducted, a summary of findings, some of the salient points, and the final recommendation
2. Table of Contents – identify the pages where the reader can find the information
3. Introduction – give the background information on the project and what the report will address. You can include the history of the organization, as it is relevant to the project.
4. Trends in Industry – Scan the literature and identify the contemporary trends. Be sure to make copies of the articles that you used and include these in the final report in the appendix. Be sure to find articles pertaining to what the client has told you.
5. Findings – If you use a survey, or interview people, or do both be sure to give a table of the results or some kind of synopsis of the findings. You can break the information out by locations, job classifications, or any way that you find it relevant and it yields different results. If you conduct interviews be sure to describe the interview process, the questions used, the major themes, and interpret what you heard.
6. Salient Issues – Identify the major issues that you discovered about the topic, the organization, and the field or industry.
7. Summary and Conclusions – Highlight what you found and provide the client with concrete recommendations.
8. Appendix – Provide the client with all of the supporting materials you used in conducting the study or consultation

Final Presentation or Defense

Your group is required to make a formal presentation referred to as a defense. A defense is a term that simply denotes a discussion of your capstone before the faculty member and possibly others from the MSPC program. All team members must be present and participate in the defense. You will not receive a passing grade for the course if you do not attend the defense and participate in the presentation. For many this is the final step in the evaluation of your work in the MSPC program, and the tradition of “defending” your capstone serves as a rite of passage from student to a professional.

The defense should include a power point or some other visual presentation that discusses the main points of the capstone project. All defenses must be scheduled before the last day of instruction during the semester.

The presentation should be at a minimum 15 minutes in length but no more than 45 minutes and you should leave at least 15 minutes for questions. The client should be invited and you may invite colleagues, family, friends to the presentation.

The presentation should include the following sections:

- Project title
- Background of the project
- Goals and purpose of the project
- Description of the project process and outcomes
- Salient Issues identified in the report
- Recommendations
- Implications for your professional development
- Acknowledgements to people that assisted you in completing the project

You are expected to follow good form in assembling the visuals so the presentation is clear and easy to follow. Your oral presentation is being graded as well. Therefore, it is important you rehearse and be familiar with the content of you graphics and visuals. Your presentation is timed and it is expected your team will present the material in a professional manner.

The best way to prepare for your defense is to meet with the faculty member at least two weeks before your scheduled defense date. During this meeting, ask him or her to review the formalities of the session, how questions will be asked, how long the session is likely to be, and how the session will be chaired. Be open with the faculty member about any problems or weaknesses of your work, which may come up in your defense. Realize the faculty member is there to support you—in most cases, their questions are not intended to trip you up or find fault; they are genuinely interested in hearing your perspectives and what you learned and in helping you transition into the post-graduate role of expert in the field. Remember: you are the expert with respect to what's in your capstone—no one knows it better than you.

You should dress comfortably; business casual is recommended. You want to be taken seriously and professionally, so dress accordingly. You are welcome to invite family or friends to a defense.

This is big moment in your academic life, Completing a capstone demonstrates your ability to apply the knowledge you have acquired in the MSPC program. At the end of your work, you should be proud of what you have accomplished!

Deliverables

You are expected to provide the faculty member with a comprehensive report in both hard copy and electronically. The client should receive a copy of the report as well as deliverables that your team promised. Your final grades will not be given until both the hard and electronic copy have been submitted. Your report should be either bound or placed neatly into a three-ring binder. This is a major piece of work and should be presented as such.

Human Subject Research Approval

If you choose to use human subjects for your capstone, you must get proper approval. If you propose to engage in research activities (interviews, surveys, etc.) involving the use of human subjects, you must have approval prior to the initiation of the project from the Clark University Institutional Review Board (IRB). The IRB is responsible for safeguarding the rights and welfare of persons participating in research projects. The point of contact for IRB matters is Diane Sainsbury, Assistant in the Office of Sponsored Programs and Research, at x3880.

Please visit the Office of Sponsored Programs and Research web page for a complete description of the IRB process and checklists. You can find the page at this url:

<http://www.clarku.edu/offices/research/compliance/humsubj/>

It is strongly recommended all student complete the online National Institute of Health training on human research. This is a free training program and upon successful completion the Institute will certify your completion of the program.

Your completed approval request form to the IRB should be attached as an appendix to your project (make a copy).

Researching Your Topic

A vital component to your capstone project is the research you can gather on your topic. By now you should know how to use research questions to narrow the scope of the project. However, at the same time your team should develop a solid base of knowledge about the industry and the issue you are addressing. You can use the following sources:

The Clark library in person or online

MSPC professors

Online sources such as Google Scholar or online periodicals

Books in the field of communication or relevant disciplines

Primary research such as interviews, surveys, and observations.

CHAPTER 3

Assignments

While the capstone course is unlike other courses in terms of meetings there are several major pieces of work that must be completed in a timely fashion. This section will identify those assignments and provide a timeline.

Assignment 1 - Prior to First Meeting with the Client

This assignment mentioned in chapter 1 and it is the brief report prior to meeting with the client. The report should be approximately 2-3 pages and it will help to prepare your team for the first meeting. The report should include the following information:

1. Define objectives for this capstone with your team members
2. Search for the organization on social media and record your impression.
3. Identify the mission, vision, and core values
4. Start looking for new trends relevant to the industry. Don't go to the meeting unprepared.
Give a brief overview of what you have found.
5. Try to understand how the organization fits into a larger system and describe this in the report

This assignment is due no later than the 3rd week of the semester and is 5% of the final grade

Assignment 2 - Guide to the Pre-Assessment Phase of Consultation

In preparation for a communication consultation, gather as many answers to as many of the following questions as possible. You will be required to submit this as a report after your first meeting with the client. This will be a 5-7 page report and *must be completed no later than the 4th week of the semester and is 15% of the final grade*. The report should include the following information:

INTRODUCTION

Let the client define the issue and what they may have attempted to do to address it. Describe the issue in your report. Also be sure to identify the organization's history. When were they launched and what are the trends in the organization now.

HISTORY

- When did the project the client wants to address start?
- Who was instrumental in starting/participating?
- What precipitated their involvement?
- What goals were set for program and by whom?
- What areas/people/organizations were involved?
- What is the current level of their involvement?
- Are there any key historical issues?

ORGANIZATIONAL ISSUES

- In your words what is the vision statement of this project? - (get a copy of a written vision and ask how this project fits in with the overall vision)
- What are the organization's goals and priorities?¹⁵

- How is the organization organized/who chairs/leads?
- How do they define the formal or informal structures?
- How is information given to employees?

SITUATIONAL ANALYSIS

- Who is affected by the issues and how?
- Who is interested in this issue?
- Who is addressing the problem?
- Who are your potential partners in addressing these issues?

PRODUCT/SERVICE DESCRIPTION

- How do you describe your service/product?
- What benefits do you offer? (strengths)
- What benefits do you feel you lack? (weaknesses)
- Describe your organization's current image?
- What image do you want to convey?
- Who are your target audiences- be specific?
- What is their profile?
- Where are they located?
- What are the best communication methods with the target audiences?

IMPLEMENTATION ISSUES

- What strategies were selected in the past and how effective were they?
- What resources were secured or leveraged through the process?
- What resources do you have available now for implementation?
- How are those resources being allocated?
- What resources do you lack? Time, materials, money?

EVALUATION ISSUES

- What is the current progress towards your goals?

- What benchmarks were used?
- How will you know when this project is successful?
- How can people give feedback for improvements?
- What is the smallest thing you can do to move the project forward?

CONCLUSION

- Map the project with team members and provide an outline of what needs to be done and who is responsible for each task

Assignment 3 - Project Proposal

Prior to beginning the capstone you will need to complete a project proposal to the faculty member. This is a mandatory step in the process. An outline of the Project Proposal Form can be found at the end of this chapter and the actual form will be found on the moodle site for the course. *This must be submitted no later than the fourth week of the semester and is 10% of the final grade.* The report should include the following information:

1. Purpose and Scope of the Project (include description of the intended audience and deliverable)
2. Statement of the proposed method for achieving the desired deliverable, with references to academic sources and other resources as necessary
3. Summary of your background/experience/ knowledge that qualifies you for this project
4. Timeline for completion of capstone, including proposed schedule for meeting with advisor(s), deadlines for completion of research and chapters/sections, projected defense date
5. Consideration of any potential obstacles and the feasibility of the proposed capstone
6. Evidence that necessary workplace approvals have been granted (attach as appendix)
7. Evidence that necessary human subject research approval has been requested or granted (attach as appendix)
8. Preliminary list of resources that you will use, with annotations describing their relevance to your project

Assignment 4 - Monthly Reports

Your group will be required to complete a report addressing the 5 issues below. This is brief paper due on _____. You will use this as the basis of your discussion with the faculty member.

1. Objectives of your project
2. Develop a Project Plan for the month of _____ and outline the steps with dates and who is responsible for each item
3. What do you need at this time from your client?
4. What steps have you taken in completing the Trends in Literature?
5. Challenges your group is facing now please list these

Meetings times will be set with the faculty member and the meetings are worth 10% of the final grade.

Assignment 5 - Self-Evaluation

Complete the following self-report *you are required to submit this report at the seventh week and again one week before the presentation and is worth 5% of the final grade.* Copies of this form are available on the Moodle site.

Assignment 6 - Peer Evaluation

You will be required to complete a similar form as the one above on your team members during the last week of the semester and is worth 5% of the final grade.

Assignment 7 - Final Report

The next chapter will describe the report in detail. Including the length and specific sections. This assignment is worth 20% of the final grade.

Assignment 8 - Power Point Presentation - Defense

Your group is required to make a formal presentation referred to as a defense. A defense is a term that simply denotes a discussion of your capstone before the faculty member and possibly others from the MSPC program. All team members must be present and participate in the defense. You will not receive a passing grade for the course if you do not attend the defense and participate in the presentation. For many this is the final step in the evaluation of your work in the MSPC program, and the tradition of “defending” your capstone serves as a rite of passage from student to a professional.

The defense should include a power point or some other visual presentation that discusses the main points of the capstone project. All defenses must be scheduled before the last day of instruction during the semester.

The presentation should be at a minimum 15 minutes in length but no more than 45 minutes and you should leave at least 15 minutes for questions. The client should be invited and you may invite colleagues, family, friends to the presentation.

The presentation should include the following sections:

- Project title
- Background of the project
- Goals and purpose of the project
- Description of the project process and outcomes
- Salient Issues identified in the report
- Recommendations
- Implications for your professional development
- Acknowledgements to people that assisted you in completing the project

You are expected to follow good form in assembling the visuals so the presentation is clear and easy to follow. Your oral presentation is being graded as well. Therefore, it is important you rehearse and be familiar with the content of you graphics and visuals. Your presentation is timed and it is expected your team will present the material in a professional manner. This assignment represents 20% of the final grade.

Assignment 9 - Self-Reflection on the Capstone Experience

This will not be presented to the client and should be submitted individually for each group member to the faculty member. This separate paper would be devoted to the student reflecting on how his or her project, the student's overall education, and especially coursework, contributed to the final proposal and project. This assignment represents 10% of the final grade.

CHAPTER 4

The Final Report

The sections for the final report were mentioned in Chapter 2 and they are restated here as:

Your completed report will include several key sections and will usually be made up of approximately 75-125 pages. The report should include the following content areas:

1. Executive Summary- about two pages that tells the reader how the work came about, how it was conducted, a summary of findings, some of the salient points, and the final recommendation

2. Table of Contents – identify the pages where the reader can find the information
3. Introduction – give the background information on the project and what the report will address. You can include the history of the organization, as it is relevant to the project.
4. Trends in Industry – Scan the literature and identify the contemporary trends. Be sure to make copies of the articles that you used and include these in the final report in the appendix. Be sure to find articles pertaining to what the client has told you.
5. Findings – If you use a survey, or interview people, or do both be sure to give a table of the results or some kind of synopsis of the findings. You can break the information out by locations, job classifications, or any way that you find it relevant and it yields different results. If you conduct interviews be sure to describe the interview process, the questions used, the major themes, and interpret what you heard.
6. Salient Issues – Identify the major issues that you discovered about the topic, the organization, and the field or industry.
7. Summary and Conclusions – Highlight what you found and provide the client with concrete recommendations.
8. Appendix – Provide the client with all of the supporting materials you used in conducting the study or consultation

This is the suggested outline of the Capstone Final Report:

Initial Pages:

- Title/Cover page
- Acknowledgement
- Executive Summary

Chapter One Introduction

- Statement of the Problem (clearly define the issue, address important and relevant concepts, examine contextual concerns)
- Purpose of the Capstone Project
Significance of the Capstone Project
- What the Reader will find in the Subsequent Chapter

Chapter Two Literature Review or Trends in the Industry

- Focuses on important research
- Clearly explains what is known and not known about the issue and this particular problem of practice

Chapter Three Methods

- Design (surveys, interviews, etc.)
- Materials
- Ethical Concerns
- Data Analysis

Chapter Four Results and Reflection

- Findings
- Salient Issues

Summary Conclusion

- Recommendations for Practice

In order to complete the report it is important the team defines and works on several steps along the way. These include:

- Develop a conceptual framework
- Develop research questions
- Develop a plan of analysis and a plan of action
- Analyze the results
- Identify the salient issues about the topic or the organization
- Make recommendations for action
- Summarize the report
- Construct and appendices

Developing a conceptual framework is the lens your team will use to look at the issues in the organization. Your group must specify the perspective you are using and a conceptual framework²²

must be selected. It is possible to combine more than one perspective, but you will have to indicate why this is being done. The framework must be drawn from communication thought and literature. The conceptual framework selected must be directly relevant to the particular problem selected. This will help you focus on the precise objectives of the study, the relevant literature and the appropriate organizational experience.

Developing the research questions helps the team to refine the issue or problem and begin its investigation. Generally there should not be more than 4 research questions that you are attempting to answer.

Once the problem has been specified the team should construct a plan of analysis and action--a roadmap for the project. It must indicate the specific objectives of the study, the method(s) that will be used in gathering data, the size and method of selecting your sample, organization or data base on which the study will be based and the potential outcome(s) of the plan of analysis. It is understood that along the way new constraints will arise that were unanticipated. This plan becomes the core of the capstone and must describe the particular methods that will be used to evaluate or understand the feasibility or impact of one or more alternatives for responding to the problem selected. Plans may need to be altered to cope with unforeseen constraints. In spite of these constraints the plan should serve as your guideline and that you should always try to accomplish as many of the objectives of the plan as is possible, rather than change your plan in the middle of the research process. In real life, public policy plans meet unforeseen constraints and part of the creative process of the capstone is demonstrating your ability to keep to the task in spite of these unforeseen circumstances. An important part of this plan of action is to develop a set of milestones that will be an action guideline for the project. Once this is done the team can move to analysis of what it has gathered. This is the point at which you tie the data to the specific problem studied and indicate the meaning of the findings for solving the problem selected. Your interpretation should indicate whether the alternative will "work"; how your findings do or do not support your original thesis; in what way this is or is not consistent with the literature and/or past organizational experience; it should specify the limits, alternatives and unexpected findings of the research.

Your client is counting on you to make recommendations and the purpose of this project is to be an exercise in applied research, no applied research project has worth if it does not draw from the data analysis a set of recommendations for action for the client. This step, in fact, is the reason for the project. Each team member has contributed his/her part to the project for the express purpose of drawing up action guidelines. In the real world the goal of research is action: to improve some part of the organization, to create alternatives to overcome unproductive patterns, or develop a cost-benefit analysis of a strategy.

The summary is an important part of your report to the client and should not be seen as just a statement ending the exercise. This is where you want to impress upon the client the important of your analysis and recommendations.

Lastly, you need to pull all the additional and ancillary materials together for the client to review at some later point. This may be very helpful to a manager now or later on in the history of the organization.

CHAPTER 5

Resources

Here you will find a number of resources that may help you and the members of your team in completing the capstone project.

Designing an Effective Capstone Presentation

- Use a template and keep it simple - usually basic templates work the best as academic/business presentations stay away from ornate or “cute” templates
- Don’t clutter and distract the audience. Too many colors and fonts can be a distraction
- Create a stand-out title slide- provide the title and date, list the faculty advisor, and include a professional and tasteful picture of your team .
- Devote a slide at the beginning of the presentation for the outline
- Tell the audience exactly what your team will present
- Follow your outline through the presentation

- One slide equals about 90 seconds of talk, so a 20 minute presentation will have somewhere between 15-20 slides.
- Slides should not go beyond 6 lines of text
- Include images to breakup text and try to find copyright-free images
- Summarize data in a table and keep colors consistent. Use a set of three or four colors throughout the presentation

Writing Tips

You may have heard the old adage there is no such thing as good writers, there are only good re-writers. This is a comprehensive project and it will require many drafts. In addition, working with team means there can be several different writing styles. One team member should take responsibility for editing, which includes re-writing and giving the report one voice. Here are a few practical writing tips:

- If your team has chosen a topic you are passionate about, writing will be less tedious.
- Read widely and actively. Reread, underline, write down your thoughts and impressions in notebooks, and copy out quotations. Writing while you read is the best way to become an active reader.
- Spend a great deal of time working on your thesis. The thesis is the cornerstone upon which any great paper is built. It should be clear and concise. Try to be original and familiarize yourself with the scholarly debate surrounding your topic, and see if you can come up with a perspective you've never heard.
- Start writing in the appropriate format and style guide requirements from the beginning; it's much easier than stressing about it as the end when you have a deadline to meet.
- Set a time limit for the research aspects as research can go on for a long time leaving too little time for writing.
- Try to write some every day. Keep in the writing habit and if you can't write anymore, make it a day to proof read and re-write.
- Find the time of day you are at your best to write and try to make that the writing time.
- Your project should follow APA guidelines. Here are two great resources to help you:

The Official APA Style Guide Site: <http://www.apastyle.org>

Purdue Online Writing Lab (OWL): <https://owl.english.purdue.edu/owl/section/2/10/>

The Capstone Paper

The purpose of a the Capstone Research Paper is to present an investigation and inquiry into a question, problem, or issue an organization is facing. As mentioned in the previous chapter this is the suggested format for the paper. An outline of the key elements of the Capstone Research Paper is delineated below.

Initial Pages:

- Title/Cover page
- Acknowledgement
- Executive Summary

Chapter One Introduction

- Statement of the Problem (clearly define the issue, address important and relevant concepts, examine contextual concerns)
- Purpose of the Capstone Project
Significance of the Capstone Project
- What the Reader will find in the Subsequent Chapter

Chapter Two Literature Review or Trends in the Industry

- Focuses on important research
- Clearly explains what is known and not known about the issue and this particular problem of practice

Chapter Three Methods

- Design (surveys, interviews, etc.)
- Materials
- Ethical Concerns
- Data Analysis

Chapter Four Results and Reflection

- Findings
- Salient Issues

Summary Conclusion

- Recommendations for Practice

Self-Reflection on the Capstone Project

This will not be presented to the client and should be submitted individually for each group member to the faculty member. This separate paper would be devoted to the student reflecting on how his or her project, the student's overall education, and especially coursework, contributed to the final proposal and project.

General Writing Guidelines

Organization: Each chapter requires an introduction, body and conclusion. The introduction provides a sufficient background on the topic and previews major points. Paragraph transitions are present, logical, and maintain the flow throughout the paper. The tone is appropriate to the content and assignment. The conclusion is logical, flows from the body of the paper, and reviews the major points.

Mechanics: The paper—including tables and graphs, headings, title page, and reference page—is consistent with APA formatting guidelines. Intellectual property is recognized with in-text citations and a reference page. Rules of spelling, grammar, usage, and punctuation are followed. Sentences are complete, clear, concise, and varied.

Knowing Your Personal Resources

It should be clear by now that you are working as a member of a team, which means you can call upon your strengths to contribute to the completion of this important project. There are four areas a professional should measure their skills against; 1) knowing your competencies 2) knowing what areas needing development 3) personal resources and supports and 4) your story. A suggestion is to complete this assessment and then discuss the results with your team members. This could help your team identify who is best suited for each job and how you can support one another throughout the project. Listed below are a few questions to help you assess yourself in these four areas.

My Skills and Competencies

These are my strengths:

What do people say I am good at?

What do I usually contribute to a group?

What is my base of my knowledge?

How do rate myself in the following areas (1-10 with 10 being excellent)

Presentation skills — Listening Skills

Ability to Analyze — Writing

Perseverance — Time Management

Envision How well do I take direction —

My Areas of Development

What am I doing to get stronger in the areas above?

What could I do to make these stronger?

What am I working on now or what should I be working on now?

My Resources

Where do I go when I need help?

Who do I ask when I need help?

How likely am I to ask someone for help?

Who in my network do I respect?

My Story

What are my professional goals?

What things usually get in the way of me working harder on my professional/academic projects?

What other stories are important stories in my life (personal, social, etc)?

At this time in my life I would rank my life stories in this order

Appendix 14: Presentation Slides

The Capstone Revival

Mary Mesele, Ruochen Lu & Qilin Jiang
 Advisor: Mary Pieciewicz
 Client: COPACE



CLARK
UNIVERSITY

Dec. 2, 2015

Presentation Overview

- Introduction
- Purpose of Study
- Research Question
- Method
- Sampling & Data Analysis Plan
- Analysis of COPACE capstone reports
- Broad Research Analysis
- Survey Analysis
- Limitations
- Recommendation
- Conclusion
- Lessons Learned

Introduction

- Capstone Projects:
 - Important learning activities
 - better prepare graduate students for the professional workplace
- COPACE:
 - three separate capstone programs for MPA, MSPC and MSIT;
 - no current standard criteria for capstone programs

Purpose of Study/Research Question

- Identify what constitutes a good quality capstone, both externally and within Clark University;
- To understand if our capstone programs are adequate for what they are meant to do;
- Improve COPACE's capstone program
 - quality
 - structure
 - 3 or 1?

Literature Review

- 11 Articles (10 Peer Reviewed)
- Themes:
 - Prepare student for professional career
 - Capstones should exercise students critical and analytical thinking skills
 - Applying knowledge gained from other courses
 - Theoretical learning meets practical execution
 - Structure (ex. group work, client work, use of rubric/survey)

Method

- Analysis of COPACE capstone reports
- Broad research on capstone requirements
- A survey of COPACE alumni

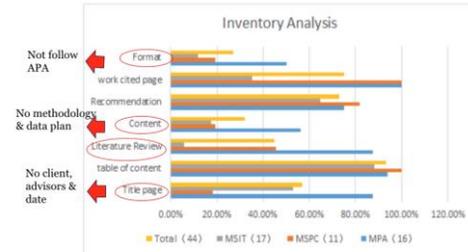
Capstone Revival

Sampling & Data Analysis Plan

- Broad research on capstone projects of 34 universities
 - 11 in Public Administration, 12 in Communication and 11 in Information Technology
- COPACE current 44 capstone reports
 - selected from MPA, MSIT and MSPC program during year 2013-2015
 - evaluation criteria: meet -- "1" is assigned; not meet -- "0" was assigned.
- Survey
 - 114 Clark alumni graduated during 2013 to 2015 from COPACE
 - demographic information and open ended questions

7

Analysis of COPACE Capstone Reports



8

Broad Research Analysis

MPA

- All the programs clients based and also focus on the local public and nonprofit organization
- Group
- Year long (4) and semester (6)
- Presentation and paper

MSPC

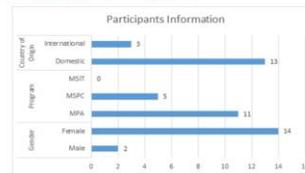
- No standard on conducting the MSPC Program
- Individual or group
- Semester long
- Most of them have no clients or local organization need to assist
- Presentation and paper

MSIT

- Hard to find the MSIT program capstone
- Group
- Semester long
- About half of universities have clients and organization could assist.
- Presentation and paper

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Survey Analysis



- Importance of the capstone deliverables:
1. Literature Review
 2. Methodology
 3. Data Analysis
 4. Discussion

- Research Method:
- Qualitative Research
 - Quantitative Research

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Capstone Revival

Survey Analysis

Work well in Capstone:

- Having the good team and meet often
- The capstone advisor helps a lot
- Working with real organization, the scope and deadline are both clear. Keep the project on track.

Experience make the capstone more meaningful?

- More guidance about the capstone project from advisors and clients
- Capstone project should be challenging

Benefit from the capstone:

- Ability to graduate from Clark and capstone work looks good in your resume
- Good experience of working with peers and advisors.

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Limitations

Survey responses

- Time period alumni were given
 - attributed to low response rate
 - restricted us with low target sample to make an analysis
- Only reaching out to graduate who graduated within the last 2 years
 - Instead, could have extended to last 5 years
- Zero MSIT responses
- No individual interviews

Recommendation p.1

- One capstone standard for all 3 programs (with the ability to customize based on unique aspects of each program)
 - Recommended capstone standard includes = title page, table of content, literature review, content/analysis, recommendation, work cited page/appendix and correct formatting (all in APA format)
- Detailed guideline created in order to ensure transparency
- Client based projects (external)
- Group based projects
- Advisor involvement
- Meeting with client 2-3 times during the semester

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Recommendation p.2

- Research Methods = prerequisite to taking any capstone course
- Evaluations = students evaluating the clients and advisors, their group members and themselves.
 - Fill out "lessons learned" worksheet for future students
 - Documentation
 - students evaluation for their group and selves (MSPC example)
 - student evaluations for client and advisor (open-ended questions)
 - advisor and client evaluations for students (multidimensional rubric that would be customizable based on each advisor)

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Capstone Revival

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Recommendation p.3

- Recommendations but optional:
 - Library tour
 - Responsibility matrix
 - Data sheet (listed out our objectives, project outcomes, and timeframe for each deliverables)
 - Use of google docs
 - Contact offices you want to utilize early in the semester (alumni office, IRB)

Benefit Statement

- Implementing these recommendations benefit:
 - Students-produce quality projects the first time, add experience on resume and gain potential future references
 - Faculty-no ambiguity, standards are clear and objective + sustainable
 - COPACE/Clark- generate consistency, ensures quality and enhance the institution's reputation by having a rigorous capstone program

Conclusion

- Accessed what constitutes a quality capstone
 - read literature that offered ways capstones should be executed
 - set of requirements + evaluations
- Producing a set standard for all capstone courses in the same department (COPACE) will increase the quality of each project and status of the institution/program itself

Lessons Learned

Well

- We continuously kept communication
- Organized the tasks based on each member's strengths
- Meeting deadlines we made for ourselves throughout the semester
- Utilized advisor

Not Well

- We prepared the survey so late in the semester
- It prevented us from getting a higher number of alumni responses

Next Time

- Communication is very important in order for the group work to get done
- Divide up tasks equally
- Meet with advisor as often as needed-they are supposed to be a support system

Capstone Revival

