

GRADUATE CAPSTONE COURSES: COMPONENTS, USES, AND ASSESSMENT – SURVEY RESULTS¹

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Capstone courses serve a variety of purposes in a masters' curriculum and are delivered through multiple methods. The interest in capstone development and delivery is evidenced by the number of panel sessions offered at the NASPAA annual meetings as well as the large numbers attending these sessions, particularly since the 2009 change in standards.

In an effort to learn more about how capstone courses are implemented, the benefits and challenges of the model used, and the integration of the NASPAA universal competencies, a survey was administered to 282 NASPAA principal representatives in the spring of 2012.

Prior to the recently administered national survey of NASPAA members, journal publications on the topic of capstones primarily pertained to studies involving one program's efforts in this area and focused on analysis of what the capstone courses entailed. Thus, we learned how a specific program used capstone courses, for instance as service learning projects and about the outcomes and impact of this experience for students and the community where the service was provided. However, we know little about what these capstone courses entail, how they are assessed and what purpose they serve. Most commonly, perhaps, capstone courses are seen as a vehicle for helping students synthesize and apply the variety of constructs and concepts from multiple disciplines that they encounter in our masters' programs. However, there is little systematic information regarding the structure and use of capstone courses.

Through analysis of the survey responses, we can now offer insights into not only the various methods used to assess student learning outcomes at or near the end of program requirements but also what skill sets are assessed, whether assessment is individual or through group involvement, and the benefits and challenges encountered. In combination, this information assists programs in putting what they are doing in their own program in context with what others across the nation are doing. Such information could also serve as the basis for an exploration of new dimensions in curriculum models and a debate on how to better serve our students.

Our primary purpose here is to summarize what we learned from the survey. We begin with an explanation of the development of the survey and its purpose along with an explanation of how we collected the data. Our primary focus is on reporting on what could prove to be most useful to the reader in terms of curriculum planning and development and student assessment.

¹ Special recognition goes out to Paulette Jones of Hillsdale Free Will Baptist College as it was through her conversation with the first author during the 2011 NASPAA meetings that led to this survey to gather membership input on the various culminating experiences and capstone models.

This survey represents an initial effort that is subject to various shortcomings and limitations. We discuss some of these limitations and conclude with suggestions regarding how future efforts could further enhance our understanding of how the NASPAA member programs deliver their curriculum and assess its effectiveness.

Survey Development and Purpose

In 2011, NASPAA administrators formed a Task Force to explore means through which to assist the membership in applying the 2009 standards to their programs. The focus of many of the initial conversations of this Task Force was on assessment, particularly in reference to Standard 5.1:

Universal Required Competencies: As the basis for its curriculum, the program will adopt a set of required competencies related to its mission and public service values. The required competencies will include five domains: the ability

- to lead and manage in public governance
- to participate in and contribute to the policy process
- to analyze, synthesize, think critically, solve problems, and make decisions
- to articulate and apply a public service perspective
- to communicate and interact productively with a diverse and changing workforce and citizenry

Task Force members agreed that it could prove beneficial to determine the extent of the use a culminating experience or capstone course in overall program assessment activities and their use, if any, in assessing the five universal domains. This survey was the outcome of a decision to acquire information on current practices. All Task Force members contributed to the development of the survey questions. It was decided that both closed and open-ended questions would be used to gather detailed information while recognizing and respecting the burdens the survey would place on the respondents. In efforts to increase response rates, the survey included a number of questions that provided respondents with an opportunity to select from a list of choices while giving them the chance to provide more detailed information, if they chose to do so, in answer to open-ended questions. The survey consisted of 17 questions of which eight asked for additional narrative explanations.

Task Force members, with the assistance of NASPAA staff, developed the survey that was administered to principal representatives of 282 programs (both accredited and not accredited) in the spring of 2012. The major advantage of using a nationally distributed survey was to gain a broad sense of what programs are doing to both provide and assess a course designed to cap off the graduate learning experience by integrating prior learning gained through required graduate courses together with other experiences.

The timing for the survey data collection and the follow-up analysis was ideal as many programs had recently submitted or would be submitting their self-studies in the near future under the NASPAA standards that were revised in 2009. Even for programs that had not applied

for accreditation, the information gleaned through this survey administration could assist in gaining an understanding of how graduate programs in public administration and/or affairs are using a culminating experience or capstone course to meet multiple objectives.

Methodological Approach

Early in the survey development process, Task Force members recognized that not all programs have a formal capstone course in their curriculum; so, it was decided to use both terms – capstone course and culminating experience – throughout the survey. That would encourage responses from programs that use any type of culminating experience and not be dissuaded from providing information if they did not offer capstone courses. The beginning of the survey provided brief definitions of each term clarifying that throughout the survey these terms are used interchangeably:

Capstone Course: Something considered the highest achievement or most important action in a series of actions. In the context of this survey, this refers to a specific course that is required of students toward the end of their graduate education.

Culminating Experience: This is an activity that required students to demonstrate their understanding and integrate learning acquired throughout the graduate programs.

NASPAA staff developed a final draft that was approved by members of the Task Force. Survey Monkey was used to distribute the survey to principal representatives of accredited and non-accredited master level programs, as identified through the NASPAA membership list.

An email was sent from NASPAA to 282 representatives explaining the purpose with a link to the survey. The introductory comments stated –

This survey is designed to provide NASPAA and COPRA's Competency Task Force information about the use of culminating experiences and capstone courses among NASPAA members. The survey will take approximately 10 minutes

To ensure anonymity information will be reported in aggregate form only. The results of the survey will be shared with the membership and discussed during a panel presentation at the NASPAA Annual Conference in October 2012.

Please complete the survey by May 31, 2012. Thank you for providing as much detail as you can and helping the researchers better understand the use of capstone courses and culminating experiences.

A reminder was sent out on May 22, 2012. A total of 151 survey responses were received by the end of May 2012 indicating a 53 percent response rate.

NASPAA staff compiled the survey results and shared the database with Task Force members. Two of the Task Force members analyzed the results and developed a presentation that was delivered during the 2012 NASPAA meetings. Their continued analysis led to the

development of this paper with the purpose of further informing the readers of the survey results and opening discussions for continued exploration on the topic of culminating experiences and capstone courses.

Summary of the Numerical Data Analysis

Although not formally separated into sections on the survey, the questions sought responses on six specific areas:

1. General Information about the respondent's program
2. What model(s) the program uses to assess student learning outcomes
3. What skill sets are assessed
4. What are the links to the universal competencies
5. How assessment is done
6. A catch-all category for write-in comments

The following section provides a summary of the responses. Appendix A provides a list of the questions with the number of responses and the percent breakdowns. The number of non-responses is provided for each question but is not used to compute the percent breakdowns.

General Information about Programs

Of the 151 schools that responded, 138 (91 percent) offered a capstone course or a culminating experience. Of the 123 schools that reported the names of their degrees, 105 (85 percent) indicated that they offer a “master of public administration” degree, 13 offer a master of public policy and 11 offer a master of public affairs. Only three schools reported a degree in public management and 13 offered other degrees. Of the 128 schools that indicated their accreditation status, 88 (69 percent) were accredited, 14 (11 percent) were undergoing accreditation and the remaining 26 (20 percent) were not accredited.

Table 1: Program Size

Faculty	Responses	Average	Minimum	Maximum
Full-time	119	10	2	70
Part-time/Adjunct	112	8	0	100
Full-time students	113	64	0	600
Part-time students	113	73	0	1200

There is considerable variability in the size of these programs (Table 1). The number of full time equivalent (FTE) faculty varied considerably and as one might expect, programs with fewer than five full-time faculty members were not accredited. There were three programs without full-time students and few more with fewer than ten full-time students. There were quite a few programs with very few part-time students.

Models

Most (91 percent) of the respondents indicated that there is a capstone course and/or culminating experience in their program. The follow-up question asked respondents to indicate what type of capstone course and/or culminating experience(s) are offered. Respondents checked multiple items from the provided list. The response most frequently checked was “capstone course” (50 percent) with “capstone project” (36 percent) second. Comprehensive examination (15 percent), thesis (18 percent), and research paper (15 percent) were the next highest in responses. Interestingly, service-learning project was indicated as an offering by only 7 percent.

Respondents were asked to indicate whether the type chosen was graded or assessed as pass/fail or satisfactory/unsatisfactory. Of those offering capstone courses and capstone projects, the vast majority indicated they use grades to assess student performance. Comprehensive examinations were most frequently assessed as “pass/fail”

When asked to indicate the benefits of the model used, 72 percent of respondents indicated that the model of their program “required integration of learning from other courses in the master’s program as “very beneficial” and 63 percent indicated “increases student knowledge, skills, and abilities in research” as “very beneficial”. Seventeen percent skipped the question.

Respondents were asked to rate the possible challenges of the model used with the choices ranging from very challenging to not challenging. Sixty percent of the respondents indicated “determining appropriate measures of student performance” and 43 percent indicated “locating appropriate service learning projects” in elaborating on the nature of the challenges encountered.

Skill Sets

Respondents were provided a list to indicate the skill sets assessed in the capstone course and/or culminating experience. They were given the option of checking more than one choice as well as the option to provide additional information as “other”. Almost all (98 percent) of the 124 respondents indicated “writing” with 88 percent choosing “research (quantitative and/or qualitative)”. Seventy-four percent of respondents chose “oral presentation” and 63 percent chose “computer aided presentation (power point, charts, graphs, etc.)”. Forty-percent chose “teamwork”. Eighteen percent skipped the question.

Table 2 indicates the numbers of programs that were using this experience to simultaneously assess multiple skills. More than 90 percent of the programs chose both writing and oral presentations as skills to be assessed through the capstone or culminating experience. A third of the programs used this experience to assess all five skills.

Table 2: Skill sets (percentage assessing the skills)

Skill	Computer aided presentations	Research	Teamwork	Writing
Oral Presentation	72	82	42	91
Oral Presentation + Computer aided presentations		67	35	72
Oral Presentation + Computer aided presentations +Teamwork			33	67
All Five				33

Links to Universal Competencies

Most (93 percent) of respondents indicated that the capstone course and/or culminating experience is used for assessment of student learning of one or more of the universal competencies as described in NASPAA Accreditation Standard 5.1. In responding to the follow-up question “If yes, what universal competency? Please check all that apply” the majority indicated Competency number three “To analyze, synthesize, think critically, solve problems and make decisions”. It is important to note that a number of the respondents (Table 3) also indicated using the capstone to assess the other four competencies. From this, one can conclude that the capstone course and/or culminating experience is a model heavily used to assess the NASPAA universal competencies. Of note is that 24 percent of respondents skipped this question. It is impossible to draw conclusions about the meaning of that lack of response.

Table 3: Multiple Competencies (percentage assessing the competencies)

Competency	Public Policy Process	Critical Thinking	Public service perspective	Interact with a diverse workforce
Lead and manage	62	72	62	57
Lead and manage + Public Policy Process + Critical Thinking		62	58	53
Lead and manage + Public Policy Process + Critical Thinking			58	53
All Five				52

Assessment Methods

When asked who assesses student performance of the capstone course and/or culminating experience, the majority of the respondents (64 percent) indicated the “capstone course instructor solely” with 56 percent indicating “group of faculty within the program”. Fifteen percent of respondents indicated “community representatives” and 14 percent indicated peers were involved in assessing student performance. Seventeen percent skipped the question.

When asked if a rubric is used to aid in assessment of student learning on any of the chosen measurements, 77 percent of respondents indicated “yes”.

Themes of Write-in Comments

There were a number of questions that allowed the respondent to add more detail by checking “other” at the end of the given list of choices. Some other questions were open-ended, requiring respondents to provide a brief description or statement instead of choosing from a list. These write-in responses have not been organized by using some coding scheme and analyzed. Instead the following examples provide a flavor of these comments in order to allow the reader to better understand the general tenor of the responses.

Question #2 – “What type of capstone course and/or culminating experience do you offer? Are they required? How are they evaluated?” - provided two opportunities for additional written responses. The respondents were given the choice of “other” after a list of nine items and the respondents were asked to write-in their responses to how the capstone course and/or culminating experience(s) were evaluated. There were twenty-four written responses. Most of the responses were a clarification of one of the choices given. For example, some of the responses included major case analysis, action research project, reflective paper, summary of learning paper and oral discussion, capstone presentation, portfolio, internship, mock oral examination, and written essays.

Question #4 asked respondents to provide a brief description of the capstone course and/or culminating experience used in their program. There were 114 responses, some of which were very detailed. Many of the responses included some type of team or group involvement requirement. Most of the respondents indicated that there was more than one requirement of the students in the capstone course or culminating experience such as a paper and an oral presentation, a case study and a presentation, and a community project and a presentation. Interestingly, a few of the programs indicated that they gave options to the students to choose what they would prefer to do in order to complete the course or experience. A few of the respondents indicated that the capstone course was focused on career planning. Several of the respondents indicated that the capstone experience was 6 credits, extending over two semesters while others indicated that their preference would be for a two semester sequence.

Seventeen respondents chose to write in their answers to question #7 – “What is the skill set assessed in the capstone course and/or culminating experience?” Responses included critical

thinking, analytical skills, problem solution, policy/program evaluation, self-awareness, and knowledge of core course content.

There were twelve respondents who chose other to answer question #8 – “Who assesses student performance of the capstone course and/or culminating experience?” Three respondents indicated the client or client organization. A number of respondents indicated a committee consisting of the instructor and other faculty members and/or internship supervisor, peers, and community members. One respondent indicated that mentors are assigned to all of the students and the mentor weighs in on the assessment.

Eighteen respondents chose “other” for question #9 – “Please indicate the benefits of the model used in your program for the capstone course and/or culminating experience”. Some of the major themes cited by the respondents included professional development, reflection, career building, application of course work, community service, interview and networking skills, and development of job readiness skills.

In response to question #10 – Please rate the possible challenges of the model used in your program for the capstone course and/or culminating experience – thirteen respondents chose “other” and wrote in their responses. There were no general themes. Responses appeared to be individual based on the specific challenges that the program faced. For example, one respondent indicated that it is challenging to get faculty to impose rigorous standards while another respondent indicated it is challenging to get students to work as a team for the presentation.

Discussion

Considering the high percentage of respondents who indicated that their programs offered capstone courses or some other form of culminating experience, it is likely that there is a selection bias among the respondents. It would appear that people who responded did so because they had some experience with culminating exercises and had something to share about their experiences.

In the absence of any information regarding how long capstone courses or culminating experiences have been a part of the curriculum it is difficult to state whether such experiences were included in the curriculum in response to the change in NASPAA standards. Regardless of the motivation, the programs seem to be using capstones for synthesis as well as a vehicle for assessing multiple skills and competencies.

Although some respondents mentioned that adding the capstone or the culminating experience has been beneficial, assessment remains a challenge. There appear to be a number of approaches to assessing the effectiveness of these experiences. They range from the instructor being solely responsible for providing a letter grade to there being a panel of professors, peers and practitioners who are invited to judge the students’ skills as well as lessons learned as students transition from the masters’ program into the world of practice.

It is important to note that what we have learned from this survey is about what the programs actually do. Although the programs had opportunities to comment on their experience,

we were not attempting an evaluation of the capstone course or culminating experience. So, we are reporting here on common practice not best practice. We can however, report that assessment remains a challenge. The most common assessment vehicle appears to be the common practice of an instructor grading the students.

We have reported here only on some of the preliminary analyses of the data. More can be gleaned from these responses. Clearly, the larger programs with access to greater resources will have the ability to offer more meaningful and varied experiences to their students. How these experiences match up with future success in the job is a long terms project where students will have to be tracked over time to assess the link, if there is one.

There is tremendous variety in the schools and programs that make up the membership of NASPAA. Some of the changes in the accreditation criteria and the move towards assessing skills and competencies are in response to the different missions and aspirations of these programs. This survey and the analysis of the survey responses did not take into consideration the different missions of the programs and how those differences are reflected in the capstone or culminating experience. Our survey is a fist step towards describing what different NASPAA schools do in terms of capstone courses or culminating experiences. We will have to use a different vehicle if we are to explain or assess these practices.