Epilogue and Prologue: A National Picture of Senior Capstone Experiences

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Session Learning Outcomes

As the result of attending this session, participants will:

• Gain a greater understanding of the administrative & educational characteristics of senior capstones & their relationship with 21st Century learning outcomes

• Have the opportunity to compare the structural and instructional characteristics of their senior capstones to a national profile and to consider innovations or refinements to their program

• Discuss institutional challenges and promising practices with respect to the delivery of senior capstones
Section 1:

INTRODUCTION & BACKGROUND
Senior year represents the final opportunity to serve students to prepare them to face the demands that lie ahead.

High-Impact Educational Practices

First-Year Seminars and Experiences
Many schools now build into the curriculum first-year seminars or other programs that bring small groups of students together with faculty or staff on a regular basis. The highest-quality first-year experiences place a strong emphasis on critical inquiry, frequent writing, information literacy, collaborative learning, and other skills that develop students’ intellectual and practical competencies. First-year seminars can also involve students with curricular questions in scholarship and with faculty members’ own research.

Common Intellectual Experiences
The older idea of a “core” curriculum has evolved into a variety of modern forms, such as a set of required common courses or a vertically organized general education program that includes advanced integrative studies and/or required participation in a learning community (see below). These programs often combine broad themes—e.g., technology and society, global interdependence—with a variety of curricular and cocurricular options for students.

Learning Communities
The key goals for learning communities are to encourage integration of learning across courses and to involve students with “big questions” that matter beyond the classroom. Students take two or more linked courses as a group and work closely with one another and with their professors. Many learning communities explore a common topic and/or common readings through the lenses of different disciplines. Some deliberately link “liberal arts” and “professional courses”; others feature service learning.

Writing-Intensive Courses
These courses emphasize writing at all levels of instruction and across the curriculum, including final-year projects. Students are encouraged to produce and revise various forms of writing for different audiences in different disciplines. The effectiveness of this repeated practice “across the curriculum” has led to parallel efforts in such areas as quantitative reasoning, oral communication, information literacy, and, on some campuses, ethical inquiry.

Collaborative Assignments and Projects
Collaborative learning combines the two key goals: learning to work and solve problems in the company of others, and sharpening one’s own understanding by listening seriously to the insights of others, especially those with different backgrounds and life experiences. Approaches range from study groups within a course, to team-based assignments and writing, to cooperative projects and research.

Undergraduate Research
Many colleges and universities are now providing research experiences for students in all disciplines. Undergraduate research, however, has been most prominently used in science disciplines. With strong support from the National Science Foundation and the research community, scientists are reshaping their courses to connect key concepts and questions with students’ early and active involvement in systematic investigation and research. The goal is to involve students with actively contested questions, empirical observation, cutting-edge technologies, and the sense of excitement that comes from working to answer important questions.

Diversity/Global Learning
Many colleges and universities now emphasize courses and programs that help students explore cultures, life experiences, and worldviews different from their own. These studies—which may address U.S. diversity, world cultures, or both—often explore “difficult differences” such as racial, ethnic, and gender inequality, or continuing struggles around the globe for human rights, freedom, and power. Frequently, intercultural studies are augmented by experiential learning in the community and/or by study abroad.

Service Learning, Community-Based Learning
In these programs, field-based “experiential learning” with community partners is an instructional strategy—and often a required part of the course. The idea is to give students direct experience with issues they are studying in the curriculum and with ongoing efforts to analyze and solve problems in the community. A key element in these programs is the opportunity for students to both apply what they are learning in real-world settings and reflect in a classroom setting on their service experiences. These programs model the idea that giving something back to the community is an important college outcome, and that working with community partners is good preparation for citizenship, work, and life.

Internships
Internships are another increasingly common form of experiential learning. The idea is to provide students with direct experience in a work setting—usually related to their career interests—and to give them the benefits of working closely with professionals in the field. An internship is taken for course credit to complete a project or paper that is approved by a faculty member.

Capstone Courses and Projects
Whether they’re called “senior capstones” or some other name, these culminating experiences require students nearing the end of their college years to create a project of some sort that integrates and applies what they’ve learned. The project might be a research paper, a performance, a portfolio of “best work,” or an exhibit of artwork. Capstones are offered both in departmental programs and, increasingly, in general education as well.
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Gains from Senior Capstones

- student satisfaction and self-rated gains
- active and collaborative learning
- student-faculty interaction,
- critical thinking skills
- understanding of global problems
- acquisition of work-related skills

(Brownell & Swaner, 2010, Kuh, 2008; NSSE, 2009)
Section 2:

2016 NATIONAL SURVEY OF SENIOR CAPSTONE EXPERIENCES (NSSCE)
National Survey of Senior Capstone Experiences

- Designed to identify senior-specific practices and characteristics of senior capstone experiences
- 2016 Administration (third; previous in 1999, 2011)
  - Online survey
  - 3,419 institutions were invited to participate
  - 383 responded (11.2% response rate)
  - 332 (93.2% of sample) currently offered at least one capstone experience
    - 99.3% of 4-year institutions (n = 297/299)
    - 61.4% of 2-year colleges (n = 35/57)
Institutional Attention to the Senior Year

- Institutional assessment: 57.4%
- Employment or job-placement study: 53.7%
- Participation in a national survey: 43.9%
- Alumnae or alumni engagement: 42.3%
- Graduation study: 39.0%
# Top 10 Campus-Wide Objectives for Seniors

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<td>Alumni/ae support</td>
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<td>Leadership development</td>
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<tr>
<td>Student satisfaction</td>
<td>34.8</td>
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</table>
Types of Capstone Experiences

- Capstone course
- Exam
- Arts performance or exhibition
- Supervised practice
- Project
Types of Capstone Experiences

• **Capstone course**
  – Department or discipline-based
  – General education focused (campus-wide capstones only)
  – Other

• **Exam**
  – Comprehensive
  – Leading to certification or professional licensure

• **Exhibition of performing, musical, or visual arts**

• **Project**
  – Senior integrative portfolio
  – Senior integrative or applied learning project
  – Senior thesis or independent research paper
  – Service-learning or community-based learning project

• **Supervised practice**
  – Internship
  – Student teaching
  – Other
Section 3:

FIVE MAIN TAKEAWAYS FROM THE SURVEY DATA
Takeaway #1:

Capstone courses are the most predominant form of culminating senior experience on campuses.
Overall Capstone Experiences Offered in Academic Department

- Discipline-based course: 96.6%
- Thesis/independent research paper: 69.4%
- Internship: 68.7%
- Arts exhibition or performance: 66.3%
- Student teaching: 66.3%
Capstone Courses

• Discipline-based course closely aligned with Arts & Humanities
• More than half of respondents used discipline-based capstone courses in all but two areas of study (social services and engineering)
Discipline-Based Capstone Courses

- Arts & Humanities (82.4%)
- Social Sciences (76.2%)
- Business (72.5%)
- Education (67.0%)
- Biological Sciences, Agriculture, and Natural Resources (66.3%)
- Physical Sciences, Mathematics, and Computer Sciences (62.6%)
- Communications, Media, and Public Relations (56.0%)
- Health Professions (50.9%)
Takeaway #2:

The co-curriculum is becoming an important venue for senior capstones and culminating experiences.
Overall Co-Curricular Programs Offering Capstone Experiences

- Honors: 74.0%
- Leadership: 42.5%
- Service-learning or community engagement: 30.8%
- Career center: 25.3%
- Preprofessional organization: 18.5%
- Student clubs and organizations: 17.8%
- Student athletics: 13.0%
- Other, please specify: 11.6%
- Greek life: 4.1%
Co-Curricular Capstone Courses

• Capstone courses are most often in the disciplines
• When courses show up in co-curricular programs:
  ➢ Honors: 47.2% (#2)
  ➢ Pre-professional organizations: 22.2% (#3)
  ➢ Service-learning – 22.7% (#4)
## Most Common Capstone by Co-Curricular Program

<table>
<thead>
<tr>
<th>Program</th>
<th>Type of Capstone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Career center</td>
<td>Supervised practice - internship</td>
</tr>
<tr>
<td>Honors</td>
<td>Senior thesis or independent research paper</td>
</tr>
<tr>
<td>Greek life</td>
<td>Service-learning or community-based learning project</td>
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<tbody>
<tr>
<td>Department or discipline-based course</td>
<td>Honors</td>
</tr>
<tr>
<td>Capstone course - other</td>
<td>Honors</td>
</tr>
<tr>
<td>Exam - comprehensive</td>
<td>Honors</td>
</tr>
<tr>
<td>Certification or professional licensure exam</td>
<td>Honors, Preprofessional organization</td>
</tr>
<tr>
<td>Exhibition of performing, musical, or visual arts</td>
<td>Honors</td>
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<tr>
<td>Senior integrative portfolio</td>
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<td>Honors</td>
</tr>
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<td>Service-learning or community engagement</td>
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<tr>
<td>Supervised practice - internship</td>
<td>Career center</td>
</tr>
<tr>
<td>Supervised practice - student teaching</td>
<td>Service-learning or community engagement</td>
</tr>
<tr>
<td>Supervised practice - other</td>
<td>Other, please specify.</td>
</tr>
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</table>
Takeaway #3:

Senior capstones and culminating experiences are no longer the domain of only one area of the campus.
Where are Capstones Offered on Campus?

Academic Department
- Yes, 98.7%
- No, 1.3%
- I don't know, 0.3%

Co-curricular Program
- Yes, 51.5%
- No, 37.5%
- I don't know, 11.4%

Campus-Wide Capstone
- Yes, 37.8%
- No, 57.9%
- I don't know, 4.7%
Overall Capstone Experiences Offered Campus-Wide

- Capstone course - Gen. ed. Focus: 46.5%
- Thesis/ independent research paper: 27.7%
- Other: 19.8%
- Capstone course - other: 18.8%
- Arts exhibition or performance: 17.8%
Primary Capstone Experiences Offered Campus-Wide

- Capstone course - Gen. ed. focus: 28.7%
- Capstone course - other: 13.9%
- Thesis/ independent research paper: 13.9%
- Other: 13.9%
- Comprehensive exam: 6.9%

Capstone Courses reached greatest proportion of students at 42.6% of institutions

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# Primary Campus-Wide Capstone Objectives

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<tr>
<td>Analytical or inquiry-based skills</td>
<td>15.9</td>
</tr>
<tr>
<td>Self-exploration or personal development</td>
<td>13.1</td>
</tr>
<tr>
<td>Graduation</td>
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<tr>
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Educationally Effective Practices in Campus-Wide Capstone Course

- Integrative learning: 64.7%
- Communication of high expectations: 61.8%
- Course is academically challenging: 58.8%
- Quality interactions with instructor: 52.9%
- Active learning: 50.0%
Educationally Effective Practices in Campus-Wide Capstone Course

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Characteristics of High-Impact Practices
Takeaway #4:

To fully understand senior capstones and culminating experiences, we must disaggregate the data by discipline, major, school, and/or area of study.
## Most Common Capstone by Field of Study

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<th>Type of Capstone</th>
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<td>Arts and Humanities</td>
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<td>Engineering</td>
<td>Department or discipline-based course</td>
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<tr>
<td>Health Professions</td>
<td>Certification or professional licensure exam</td>
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<td>Social Service Professions</td>
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## Most Common Field of Study by Capstone Experience

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Connecting Capstone Type to Curriculum: Specificity

• 95.7% of institutions with arts performances or exhibitions offered to majors in arts and humanities
  – Second-most frequent major: communications, media, and public relations (16.0%)

• 97.9% of institutions offering student teaching did so in education
  – Second largest group: Arts and humanities (12.3%)
Connecting Capstone Type to Curriculum: Mass Appeal

• Internships
  – 2/3 reported offering to students in business
  – At least 1/3 offered to students in all other areas of study but engineering and physical sciences

• Discipline-based courses
  – 82.4% offered in arts and humanities
  – At least ½ used them in all other areas but social services and engineering
## Top 10 Campus-wide Objectives for Seniors

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Takeaway #5:

Capstone experiences are present at two-year colleges.
The 2011 NSSCE demonstrated that capstone experiences were offered at two-year colleges. The results from the previous survey found the presence of capstones at nearly two thirds of responding two-year campuses. Two-year colleges offered a variety of culminating experiences; however, discipline-based courses were offered by a majority of institutions.
Capstones at 2-Year Campuses

- 61.4% of 2-year campuses in the sample offered at least one capstone experience on campus.
- Reach fewer students: half of respondents indicated that < 30% of students participated.
- Most common objectives:
  - Career preparation (42.9%)
  - Critical-thinking skills (34.3%)
  - Integrative and applied learning (28.6%)
  - Academic skills (22.9%)
  - Analytical/inquiry-based skills (22.9%)
  - Professional certification (22.9%)
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  - Professional certification (22.9%)
Capstones at 2-Year Campuses

- Service-learning project: 22.9%
- Comprehensive exam: 28.6%
- Professional licensure exam: 34.3%
- Internship: 57.1%
- Discipline-based capstone course: 77.1%
Think, plan, do.
"Thought is action in rehearsal."
Sigmund Freud

Section 4:
IMPLICATIONS AND APPLICATION
Concluding Thoughts

• We need to expand our definition of “capstones” to include a variety of culminating experiences, which may attract a wider diversity of students
• Capstones are no longer the domain of one program or even one institutional type
• We have incredible potential to be more intentional in recognizing, offering, and engaging students in a wide range of capstone experiences
• Capstones do appear to be HIP
• Others?
Questions & Comments

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