

# Epilogue and Prologue: A National Picture of Senior Capstone Experiences

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Experience and Students in Transition

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Students in Transition  
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# Goals of this Session

- Have an understanding of the national picture of senior capstone experiences
- Have an understanding of how senior capstones can meet institutional goals for seniors
- Develop a perspective on how broad viewpoints can inform practice at institutions

# Organization of this Session

- Background on Senior Year
- Data from 2016 National Survey of Senior Capstone Experiences
- Discussion

# Seniors



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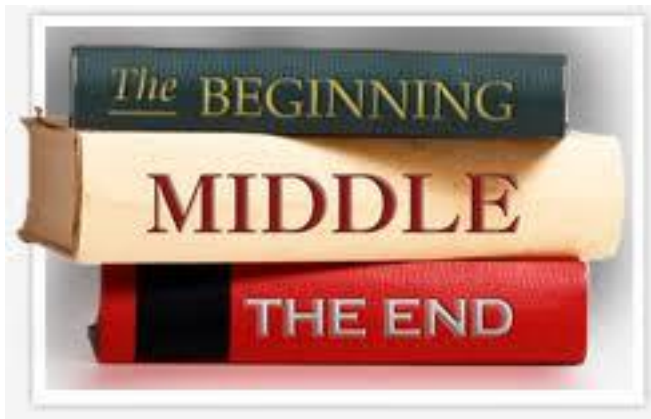
Senior year represents the final opportunity to serve students to prepare them to face the demands that lie ahead.



(Chickering & Schlossberg, 1998; Cuseo, 1998; Gardner, Van der Veer, & Associates, 1998).



# Students think about undergraduate experience in 3 phases:



- Entering
- Middle
- Exiting

Lane (2014)

# Timing of Student Success Programs

## First-Year

Orientation  
Common  
Reading  
Programs  
First-Year  
Seminars  
Student  
Engagement



## Senior Year

Capstone  
Experiences  
Job Fairs  
Professional  
Licensing  
Graduate and  
Professional  
School  
Applications

**Junior Year** Internships  
Study Abroad  
Peer Leadership



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# What are the opportunities for intervention in the Senior Year?

- Developmentally ready for higher-order thinking
- Integrate learning across curriculum and experiences
- Final determination and demonstration of competency
- Career preparation and placement
- Others?



# 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 cutting-edge 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 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

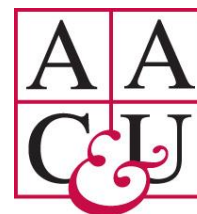
In these programs, field-based "experiential learning" with community partners is an instructional strategy—and often a required part of the course. The idea is to give students direct experience with issues they are studying in the curriculum and with ongoing efforts to analyze and solve problems in the community. A key element in these programs is the opportunity students have 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 benefit of supervised learning from professionals in the field. If an internship is taken for course credit, students 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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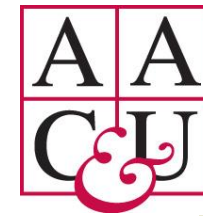


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# Capstone Courses and Projects

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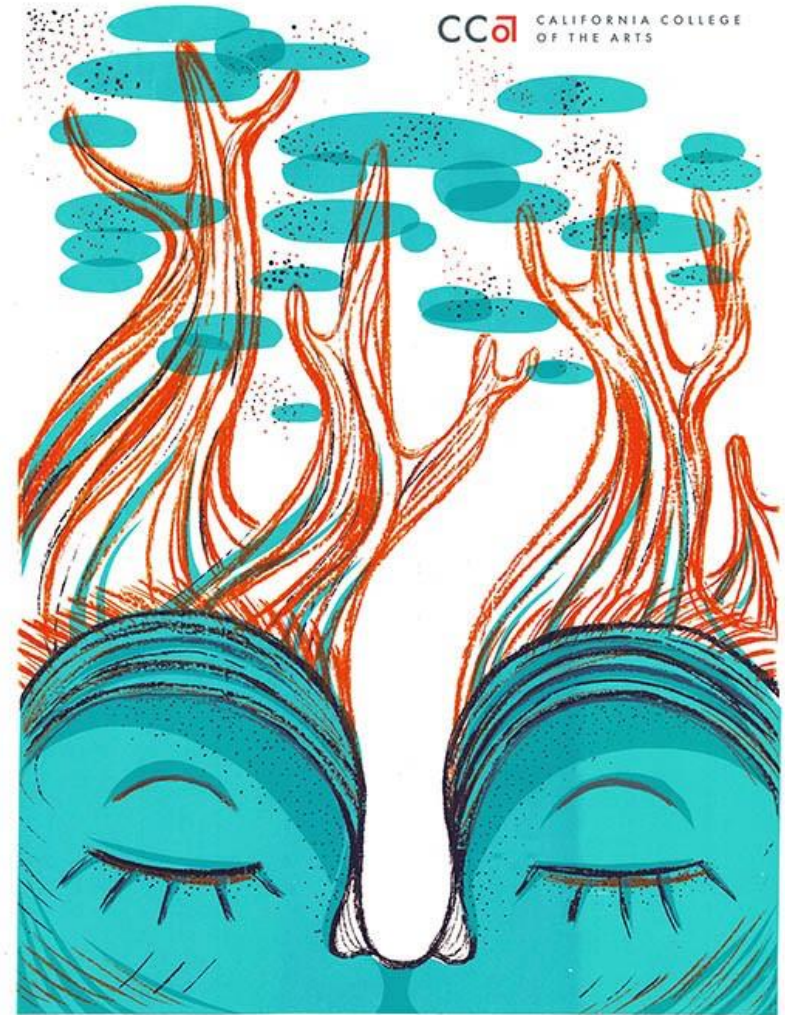


# Senior capstone experiences

connected to gains in:

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

Brownell & Swaner, 2010,  
Kuh, 2008; NSSE, 2009



SPRING 2016 CCA ILLUSTRATION PROGRAM

**SENIOR THESIS SHOW**

May 3-15, 350 Kansas St. San Francisco Reception May 5, 6:30pm

Illustration by Alex Campbell

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# Senior capstone experiences

## Contested areas: Diversity

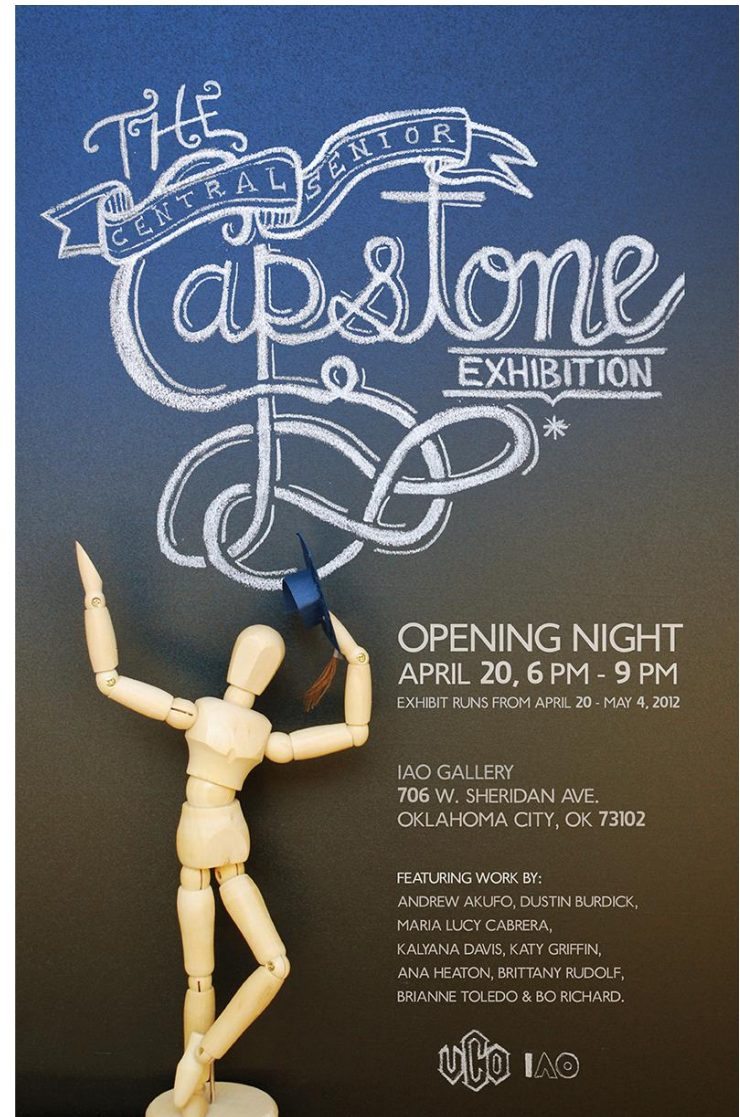
- Kilgo et al. (2015): Positive relationship between capstone participation and openness and orientation to diversity
- Eagan (2016): no relationship between capstone participation and pluralistic orientation



# Senior capstone experiences

## Contested areas: Academic Engagement

- Kilgo et al. (2015): Positive relationship between capstone participation and “Need for Cognition”
- Eagan (2016): no relationship between capstone participation and “Habits of Mind”

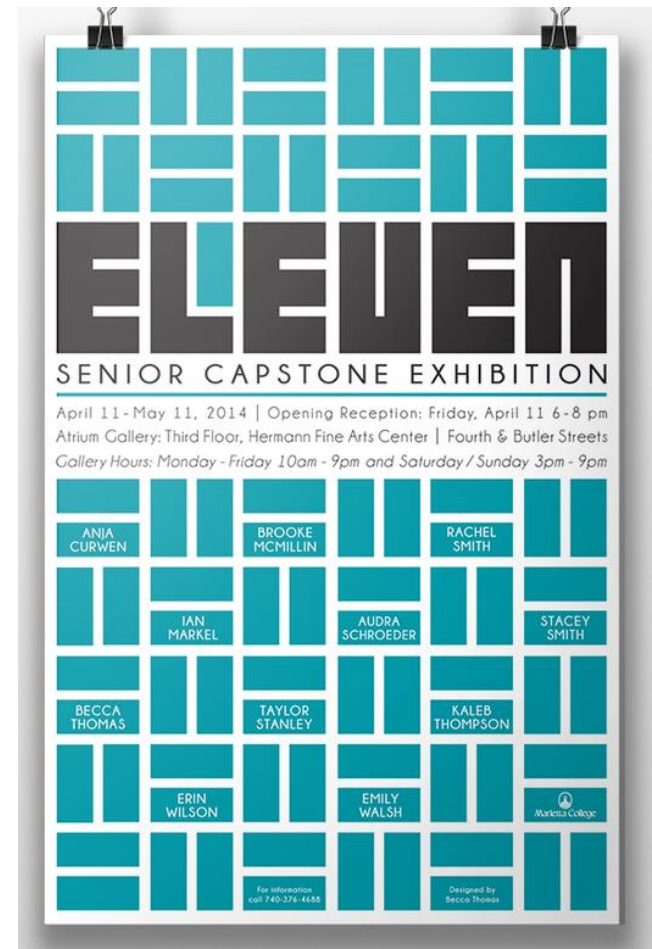




# Senior capstone experiences

## Contested areas: Critical Thinking

- NSSE: Positive relationship between capstone participation and self-rated critical thinking
- Kilgo et al. (2015): Negative relationship between capstone participation and critical thinking module of CAAP



# **2016 NATIONAL SURVEY OF SENIOR CAPSTONE EXPERIENCES**



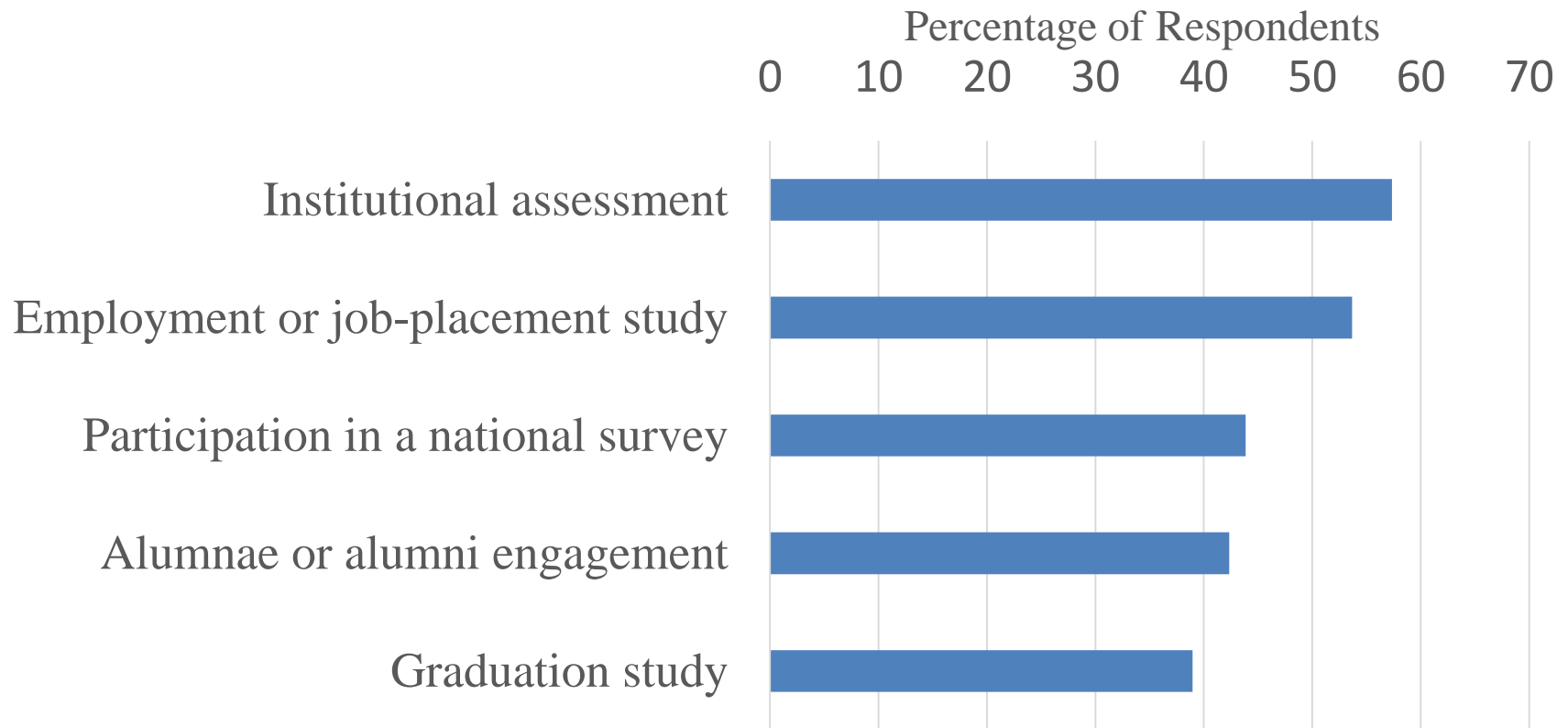
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# National Survey of Senior Capstone Experiences

- 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



# Top 10 Campus-wide Objectives for Seniors

Objective	%
Career preparation	71.1
Employment or job placement	62.6
Graduation	61.3
Graduate or professional school enrollment	50.5
Critical-thinking skills	43.3
Preparation for graduate school	39.7
Writing skills	37.0
Alumni/ae support	36.4
Leadership development	35.1
Student satisfaction	34.8



# Types of Capstone Experiences



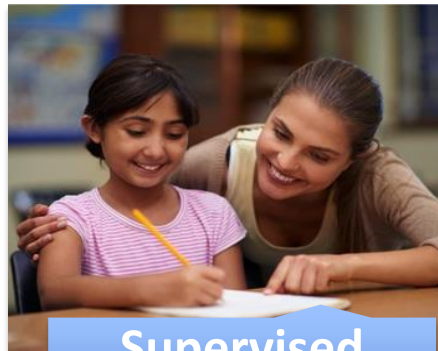
Capstone course



Exam



Arts performance  
or exhibition



Supervised  
practice



Project



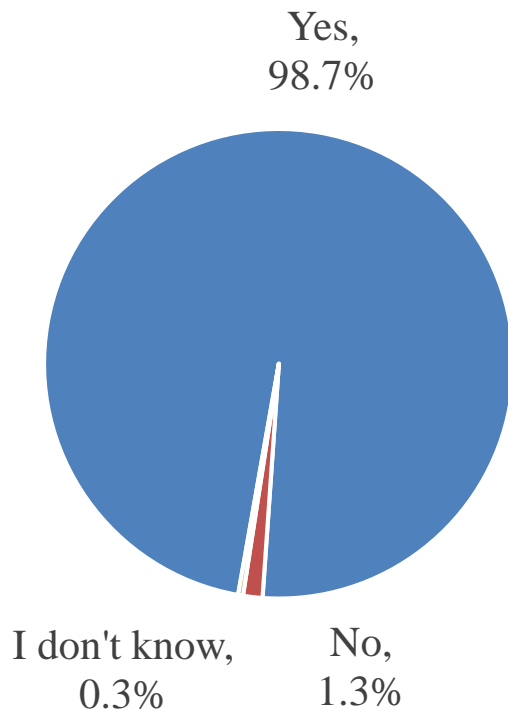
# Types of Capstone Experiences

- Capstone course
  - Department or discipline-based
  - General education focused (Campuswide 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

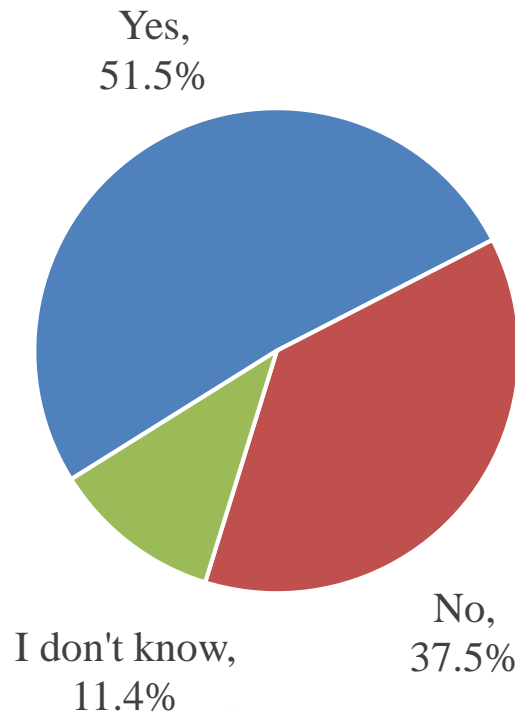


# Where are Capstones Offered on Campus?

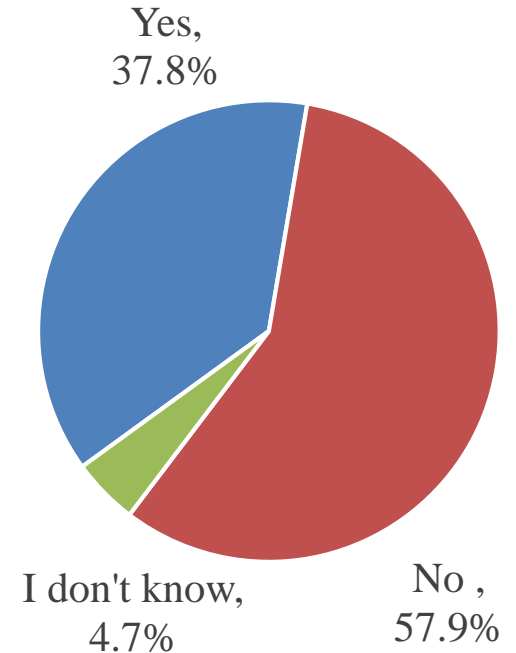
## Academic Department



## Co-curricular Program



## Campus-wide Capstone

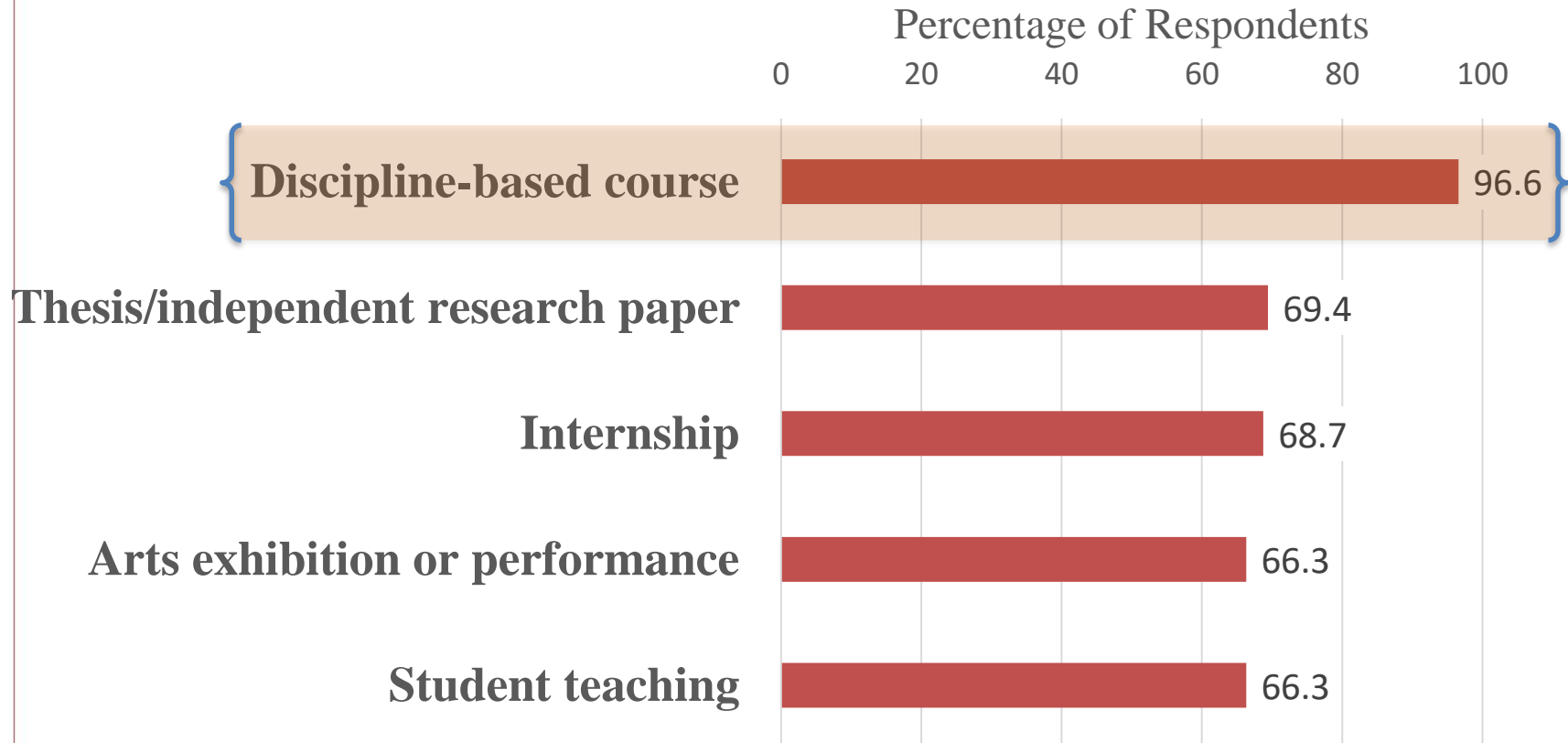


# Capstone Courses

- Most predominant form of capstone on campus
  - Discipline-based course top academic-based capstone
  - General education capstone course top campuswide capstone

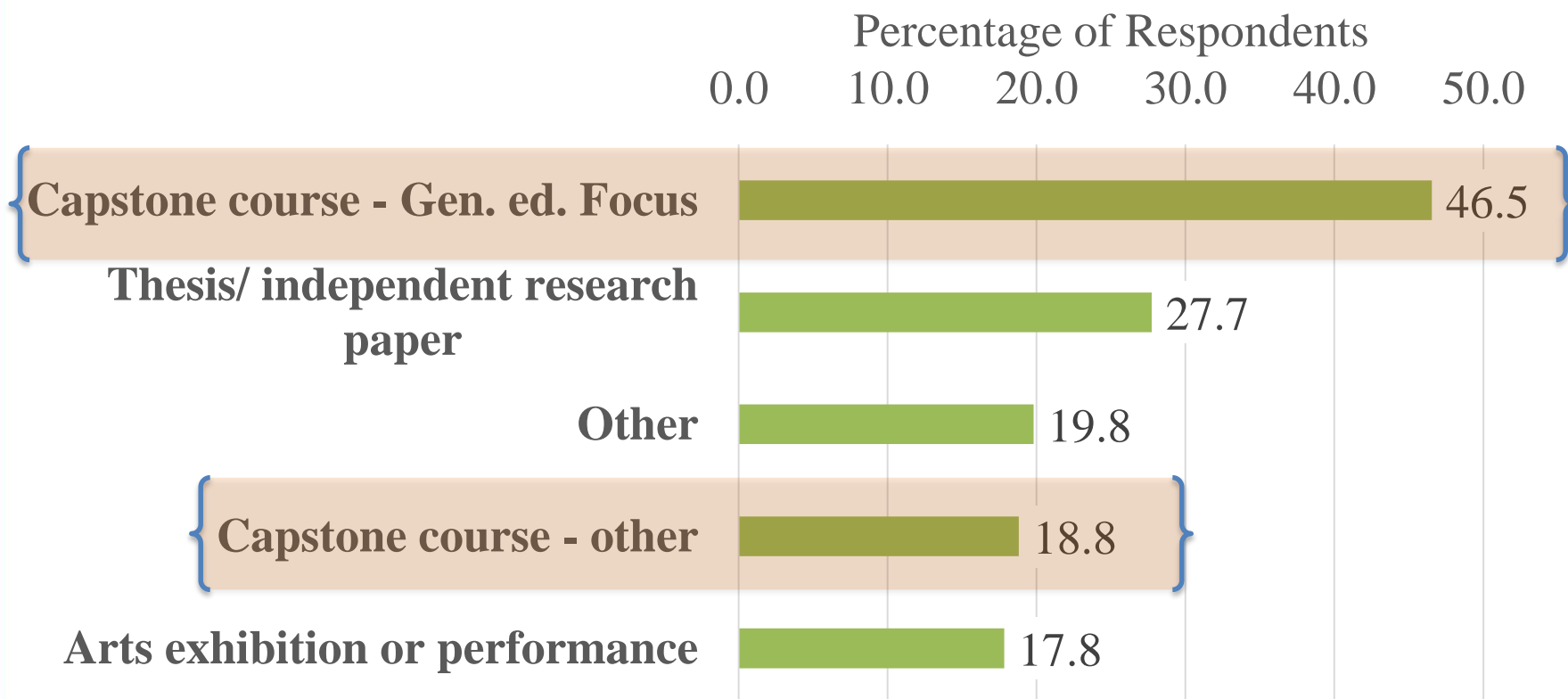


# Overall Capstone Experiences Offered in **Academic Department**

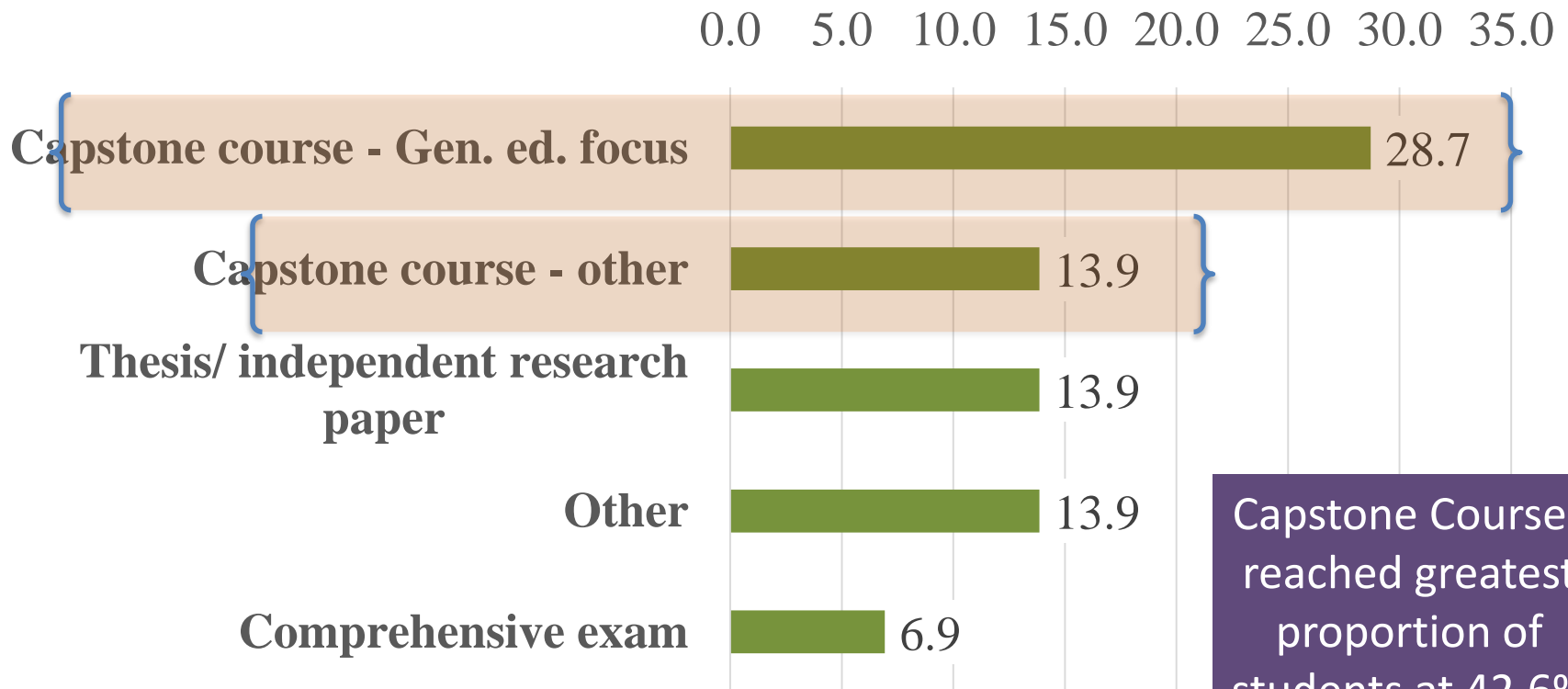




# Overall Capstone Experiences Offered **Campus-wide**



# Primary Capstone Experiences Offered **Campus-wide**



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

# Capstone Courses

## Discipline-Based Capstone Predominant in Academic Departments:

- Biological Sciences, Agriculture, and Natural Resources
- Business
- Communications, Media, and Public Relations
- Engineering
- Physical Sciences, Mathematics, and Computer Science
- Social Sciences



# Most Common Capstone by Field of Study

Field of Study	Type of Capstone
Arts and Humanities	Exhibition of performing, musical, or visual arts
Biological Sciences, Agriculture, and Natural Resources	Department or discipline-based course
Physical Sciences, Mathematics, and Computer Science	Department or discipline-based course
Social Sciences	Department or discipline-based course
Business	Department or discipline-based course
Communications, Media, and Public Relations	Department or discipline-based course
Education	Supervised practice - student teaching
Engineering	Department or discipline-based course
Health Professions	Certification or professional licensure exam
Social Service Professions	Internship

# Capstone Courses

- Discipline-based course closely aligned with Arts & Humanities (82.4%)
- More than half of respondents used discipline-based capstone courses in all but two areas of study (social services and engineering)





# Most Common Field of Study by Capstone Experience

Type of Capstone	Field of Study
Department or discipline-based course	Arts and Humanities
Capstone course - other	Arts and Humanities
Exam - comprehensive	Physical Sciences, Mathematics, and Computer Science
Certification or professional licensure exam	Health Professions
Exhibition of performing, musical, or visual arts	Arts and Humanities
Senior integrative portfolio	Arts and Humanities
Senior integrative or applied learning project	Arts and Humanities, Business
Senior thesis or independent research paper	Arts and Humanities
Service-learning or community-based learning project	Social Sciences
Supervised practice - internship	Business
Supervised practice - student teaching	Education
Supervised practice - other	Health Professions

# Co-curricular Capstone Courses

- When they show up in co-curricular programs:
  - Honors – 47.2% (#2)
  - Pre-professional organizations – 22.2% (#3)
  - Service-learning – 22.7% (#4)



# Capstone Courses

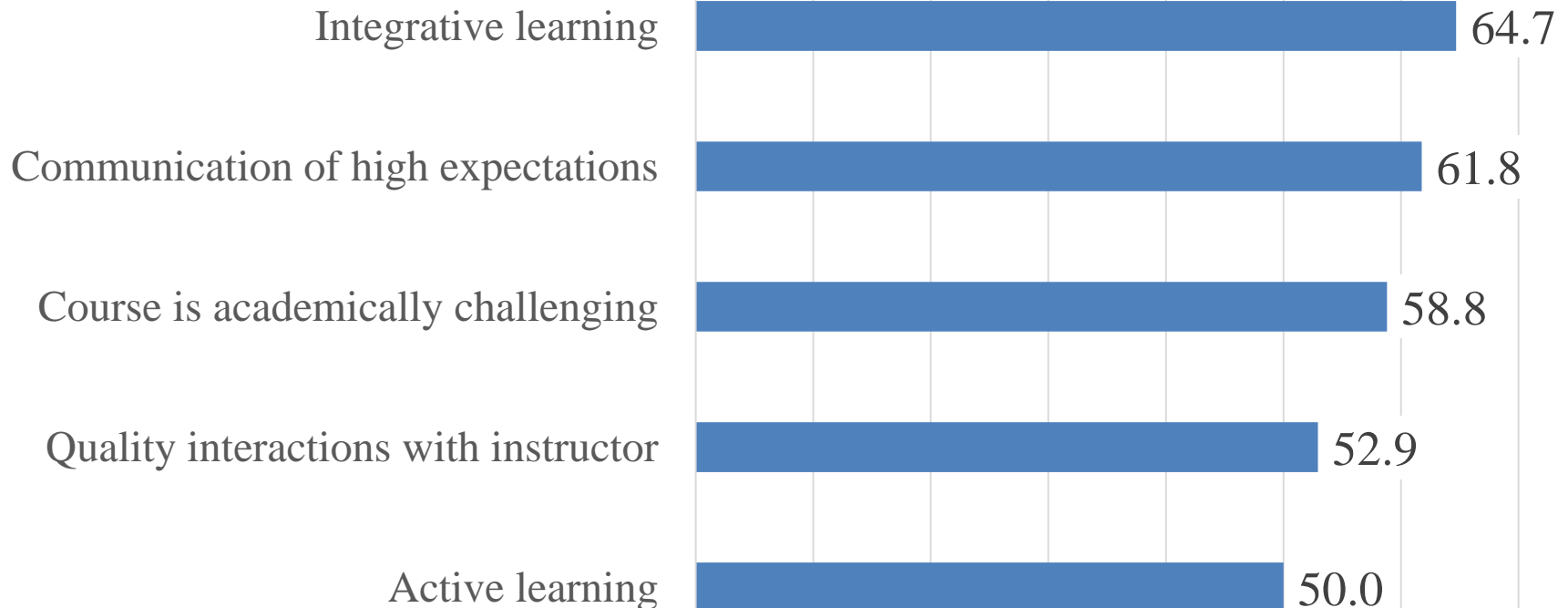
- 91.2% of Campuswide capstones with courses carry academic credit
  - Applied as:
    - Gen. ed: 43.5%
    - Major: 56.5%
    - Elective: 4.8%



# Educationally Effective Practices in Campuswide Capstone Course

Percentage of Respondents

0 10 20 30 40 50 60 70



# 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 1/2 used them in all other areas but social services and engineering



# Campus-wide Capstones

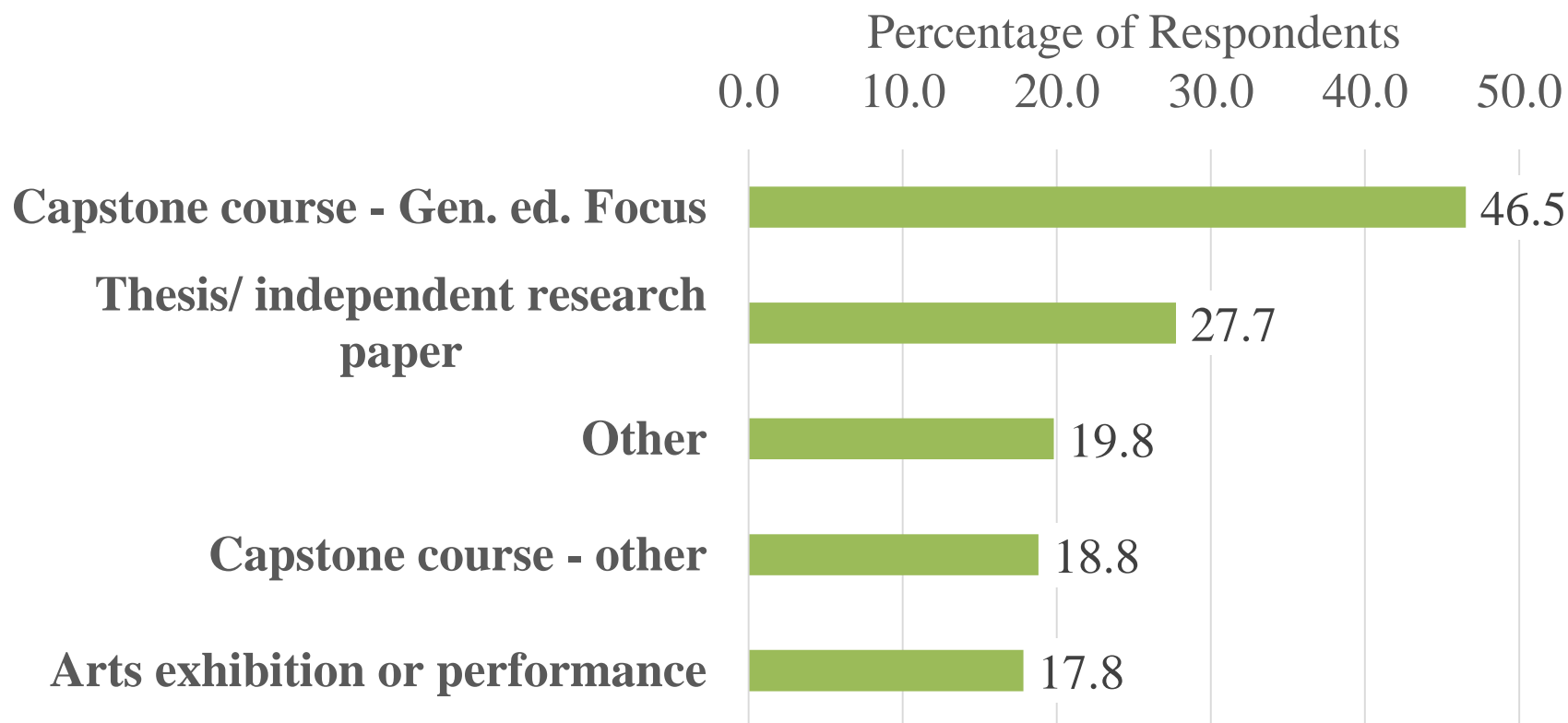


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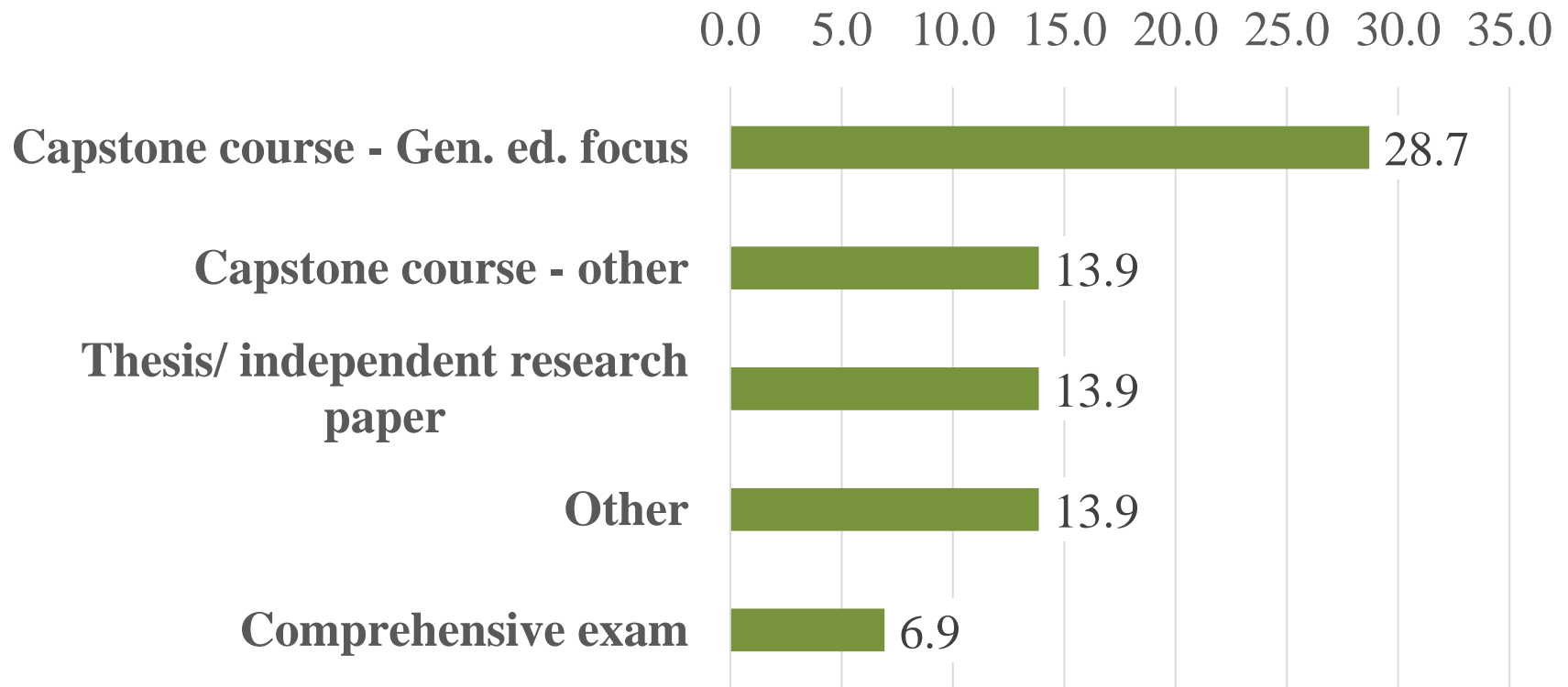
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# Overall Capstone Experiences Offered **Campus-wide**



# Primary Capstone Experiences Offered **Campus-wide**



# Primary Campus-wide Capstone Objectives

Objective	%
Critical-thinking skills	43.0
Integrative and applied learning	32.7
Academic skills	19.6
Career preparation (e.g., internships, co-ops)	16.8
Writing skills	16.8
Analytical or inquiry-based skills	15.9
Self-exploration or personal development	13.1
Graduation	12.1
Employment or job placement	11.2
Ethical reasoning	11.2

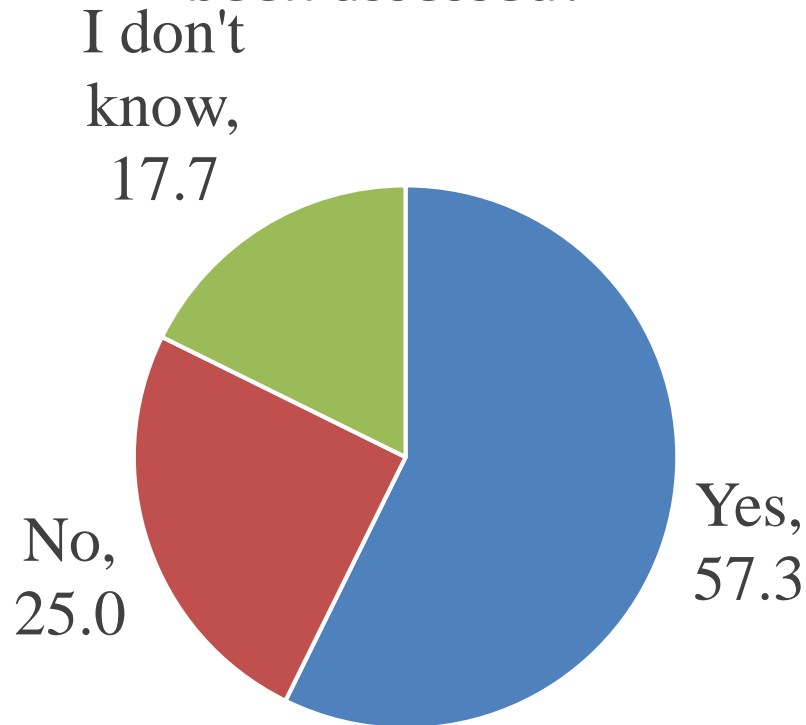
# Administration of Primary Campus-wide Capstone Experience

Campus Unit	%
Academic affairs	40.6
Academic department(s)	42.7
Career center	2.1
College or school (e.g., college of liberal arts)	7.3
Student affairs	3.1
Other, please specify	4.2



# Assessment of Primary Campus-wide Capstone

Has capstone experience  
been assessed?



Most Frequently  
Named Outcomes  
Measured:

- Critical-thinking skills
- Academic skills
- Writing skills
- Analytical or inquiry-based skills
- Problem-solving skills



# Capstones in the Co-curriculum



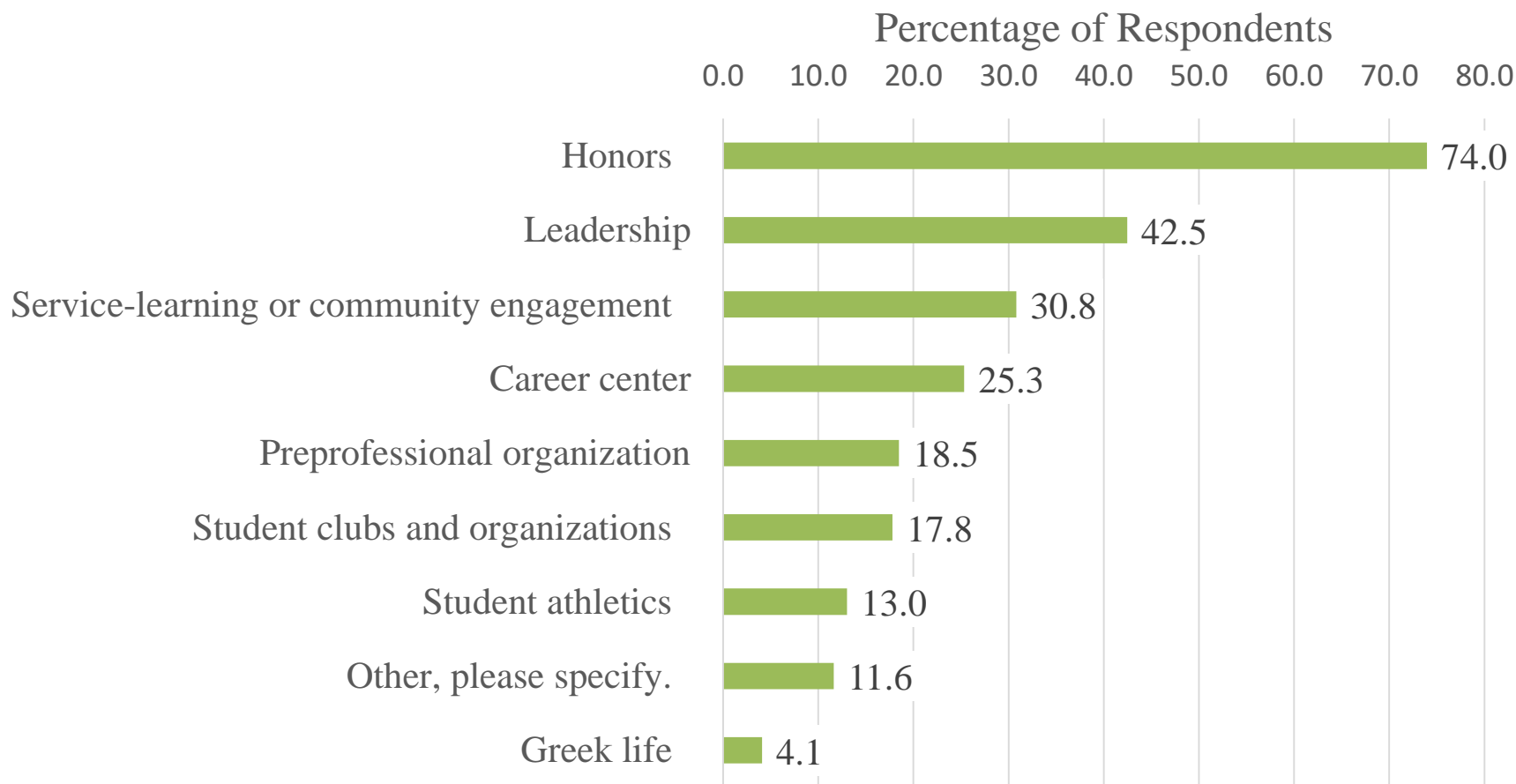
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# Capstones in the Co-curriculum

- Present on slightly more than half of responding campuses
- Most prevalent in Honors programs
  - No other co-curricular program present on more than half of campuses

# Overall Co-curricular Programs Offering Capstone Experiences



# Capstones in the Co-curriculum

- Service-learning the capstone most frequent in co-curricular activities





# Most Common Capstone by Co-curricular Program

Program	Type of Capstone
Career center	Supervised practice - internship
Honors	Senior thesis or independent research paper
Greek life	Service-learning or community-based learning project
Leadership	Service-learning or community-based learning project
Preprofessional organization	Supervised practice - internship
Service-learning or community engagement	Service-learning or community-based learning project
Student athletics	Service-learning or community-based learning project
Student clubs and organizations	Service-learning or community-based learning project

# Capstones in the Co-curriculum

- Greek Life:
  - Frequently used service-learning or community-based learning
- Service-learning:
  - Nearly 7 in 10 used service-learning as senior capstone



# Capstones in the Co-curriculum

- Honors Programs:
  - Frequently used senior theses and discipline-based courses
  - Used multiple formats for culminating experiences
- Career Centers:
  - More than half used internships
  - No other co-curricular program used internships at more than 15% of institutions



# Most Common Co-curricular Program by Capstone Experience

Type of Capstone	Co-curricular Program
Department or discipline-based course	Honors
Capstone course -other	Honors
Exam - comprehensive	Honors
Certification or professional licensure exam	Honors, Preprofessional organization
Exhibition of performing, musical, or visual arts	Honors
Senior integrative portfolio	Service-learning or community engagement
Senior integrative or applied learning project	Service-learning or community engagement
Senior thesis or independent research paper	Honors
Service-learning or community-based learning project	Service-learning or community engagement
Supervised practice - internship	Career center
Supervised practice - student teaching	Service-learning or community engagement
Supervised practice - other	Other, please specify.

# Discussion



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# Calls to integrate undergraduate experience

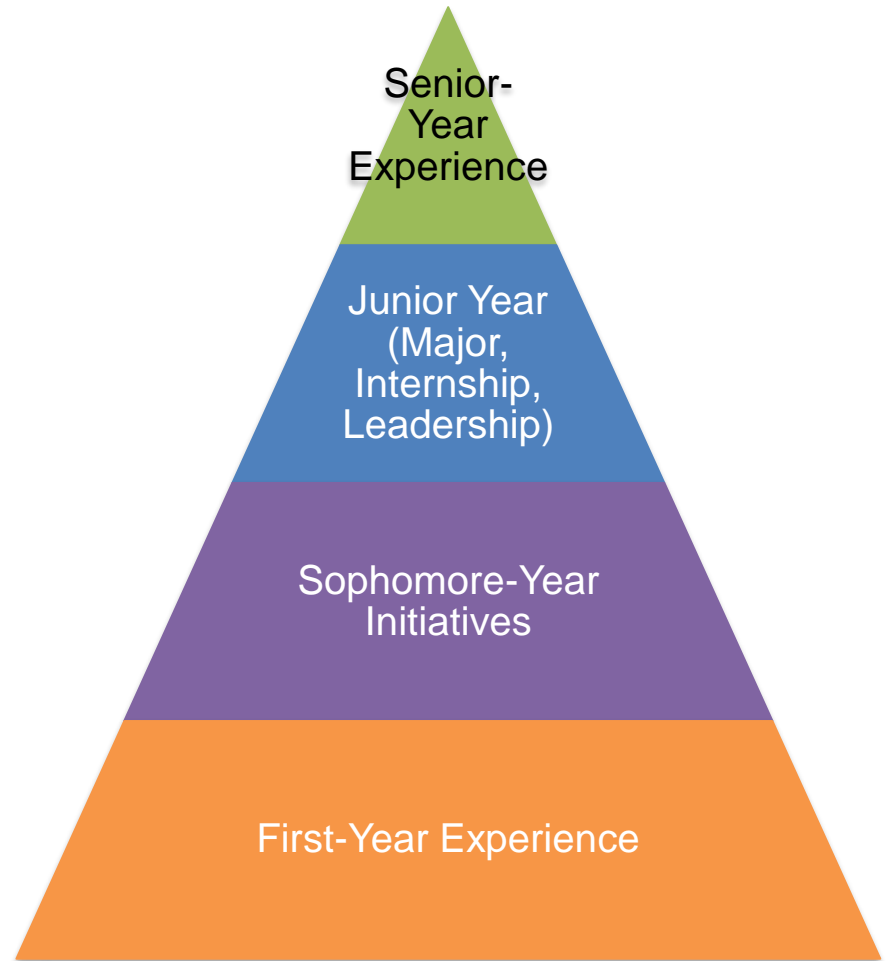
- Achieving and Sustaining Institutional Excellence in the First Year of College (Barefoot, et al., 2005)
  - Criterion 1: An intentional, comprehensive approach to improving the first year
  - Description of Criterion 1 suggests an overall integrated approach to student success
- Boyer Commission - Reinventing Undergraduate Education (1998)
  - First-year seminars and programs form bridge from HS on one end to “more open and more independent world of the ...university on the other”

# Calls to integrate undergraduate experience

- Helping Sophomores Succeed (Gardner, et al., 2010)
  - A need to create a “seamless approach” to the administration of support initiatives across the undergraduate experience
- Scott (2012) – Supporting Student Success in South Africa
  - Initiatives should be like the Janus face, looking forward and backward simultaneously
  - Programmes supporting students in transition should be a special but not discrete part of the educational process.

# Vertical Alignment

What students learn in one lesson or course prepares them for the next lesson or course. Educational experiences are purposefully structured and logically sequenced so that students gain the knowledge and skills to progressively prepare them for more challenging, higher-level work.



# Top 10 Campus-wide Objectives for Seniors

Objective	%
Career preparation	71.1
Employment or job placement	62.6
Graduation	61.3
Graduate or professional school enrollment	50.5
Critical-thinking skills	43.3
Preparation for graduate school	39.7
Writing skills	37.0
Alumni/ae support	36.4
Leadership development	35.1
Student satisfaction	34.8

# Discussion/Questions



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# Thank You!

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