

NCARB/ACSA

A Joint Initiative of the National Council of Architectural Registration Boards (NCARB) and the Association of Collegiate Schools of Architecture (ACSA)

Research Goals

Identify current professional practice course curricula requirements and its relevance and impact with respect to current and anticipated requirements for the independent practice of architecture in protecting the health, safety, and welfare of the public in the built environment.

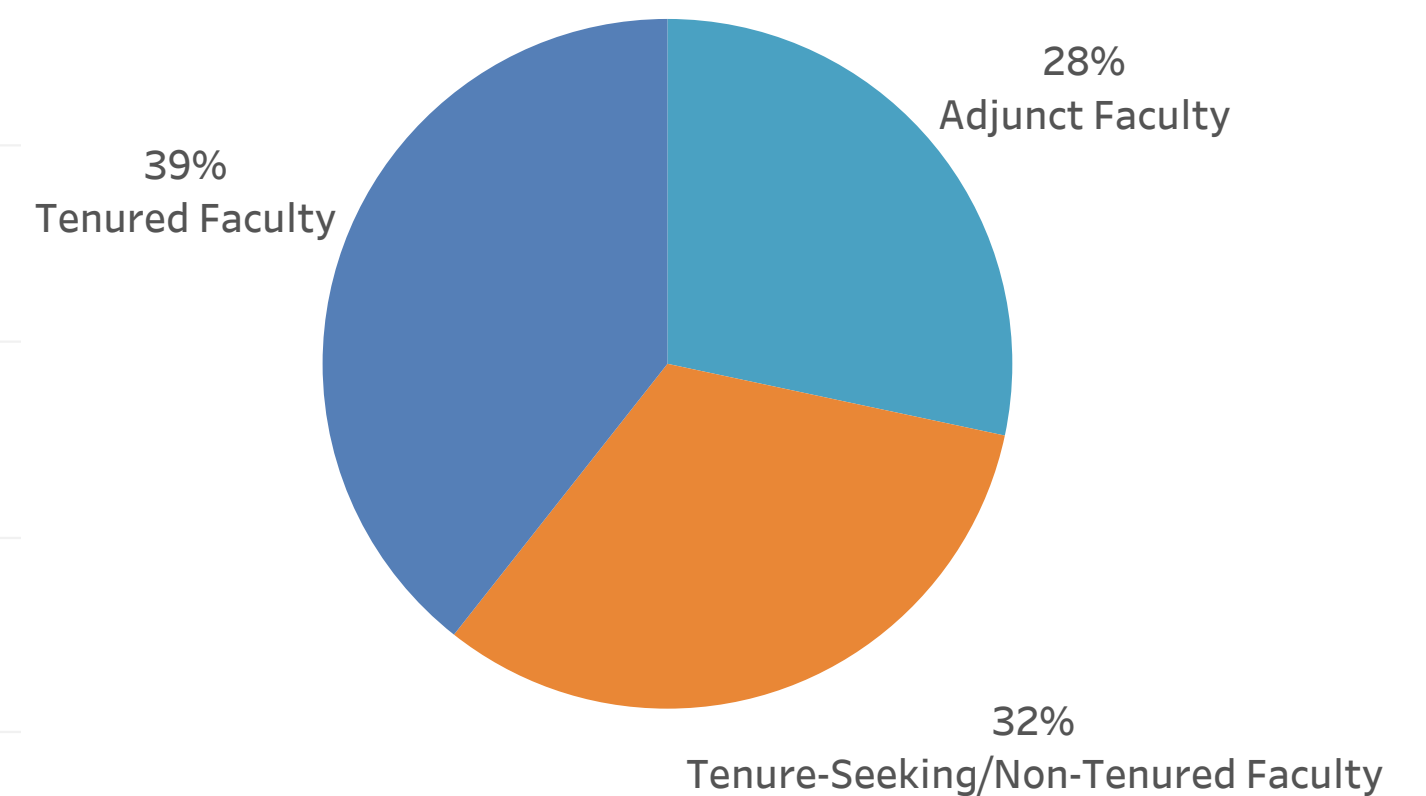
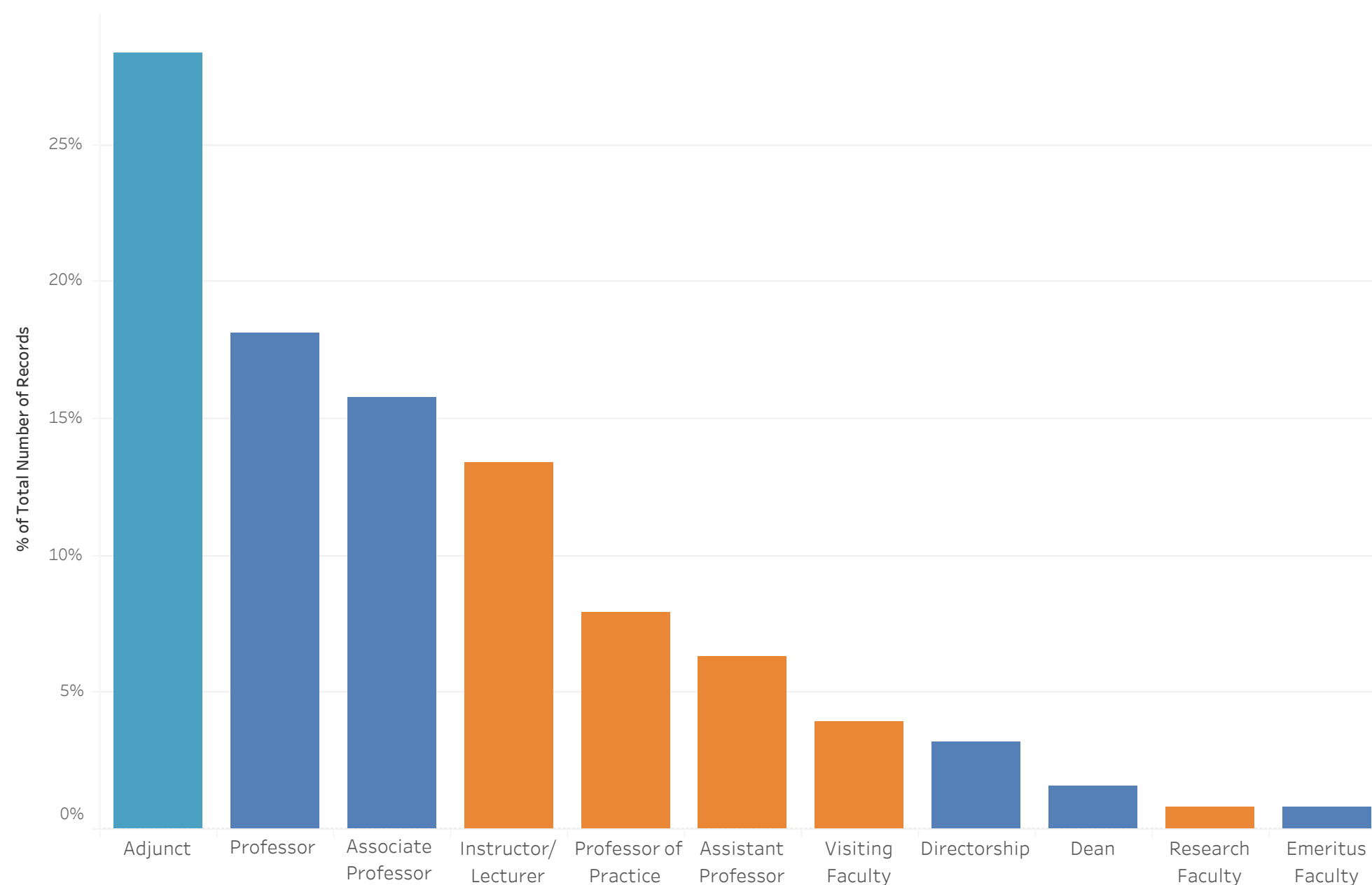
Collect data to support the development of proposed syllabi for gaining the necessary knowledge and skills to practice architecture through academic study and practical experience as all elements of the profession of architecture evolve.

Target Population

We sent the survey to all NAAB and CACB accredited and candidate schools, and received 134 responses from 111 schools, a very high response rate based on our survey experience. We asked that the faculty who teach professional practice fill out the survey and send us their syllabi.

What is your college/university title?

Adjunct faculty proved to be the most popular title/rank but the majority of professional practice professors were full-time faculty.



For which of the following degrees do you teach a professional practice course?

56 of our respondents teach in B.Arch programs

109 of respondents teach in M.Arch/D.Arch programs

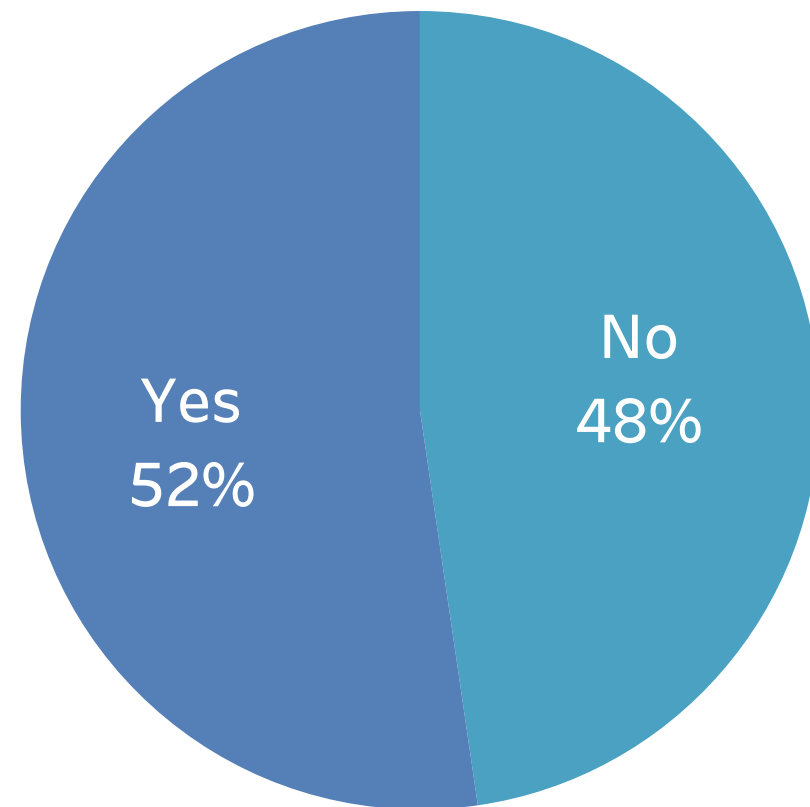
How many years have you taught a professional practice course?

Average years of teaching experience: **9 years**

How many years have you worked in an architectural practice?

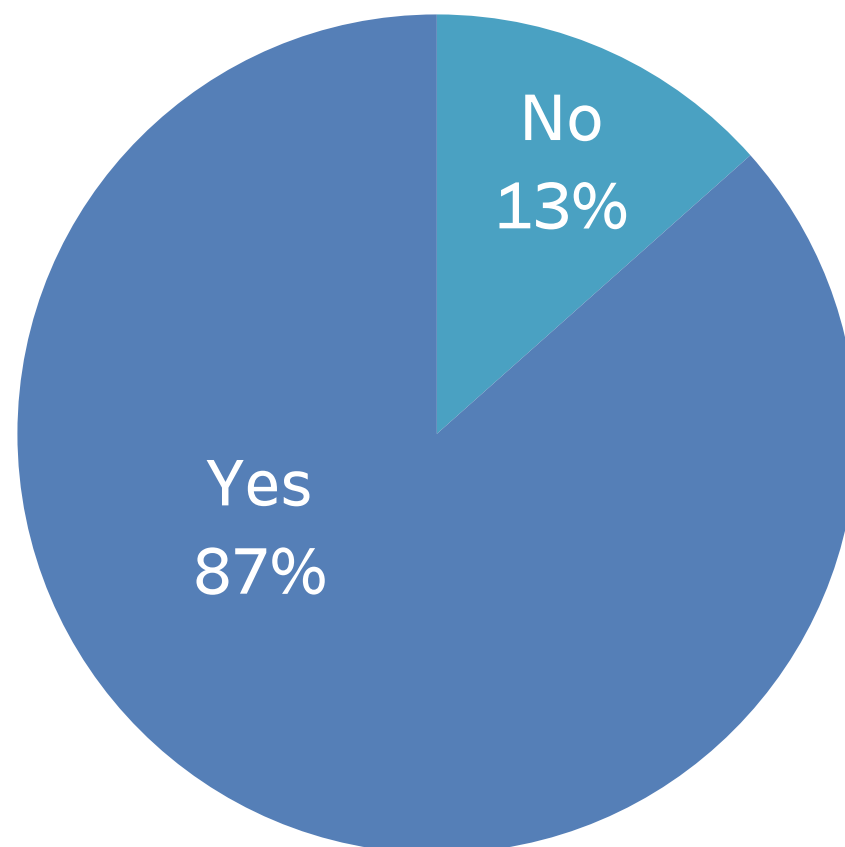
Average years of firm experience: **25 years**

Do you also teach a design studio?



Percent who teach professional practice course and design studio: **52 %**

Are you a licensed architect?



Percent who are licensed architects: **87%**

Where are you currently licensed?

The survey gathered responses from 134 professors.

102 professors are licensed in the US

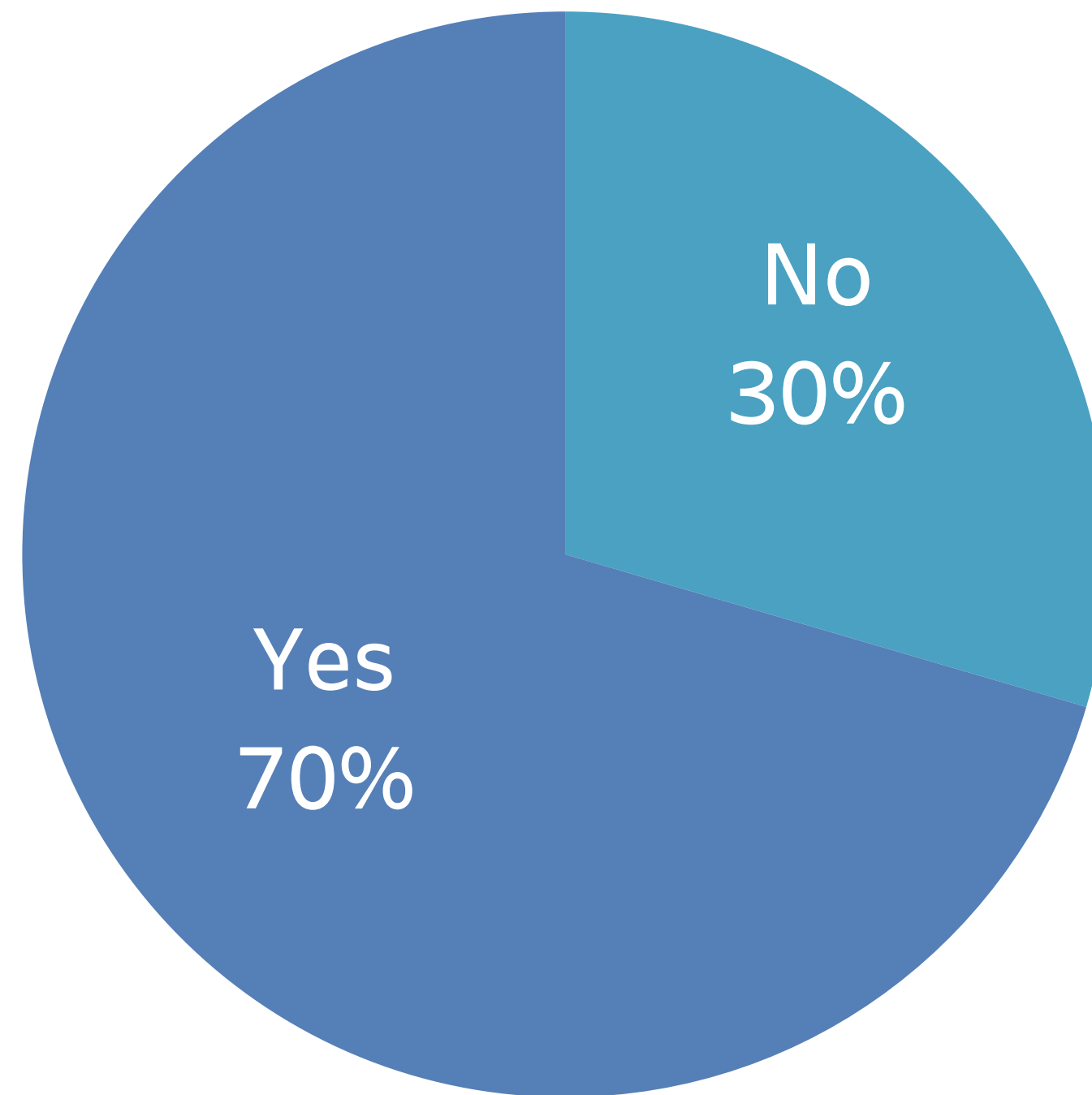
18 professors are not licensed

8 professors are licensed in Canada

4 professors are licensed in another country

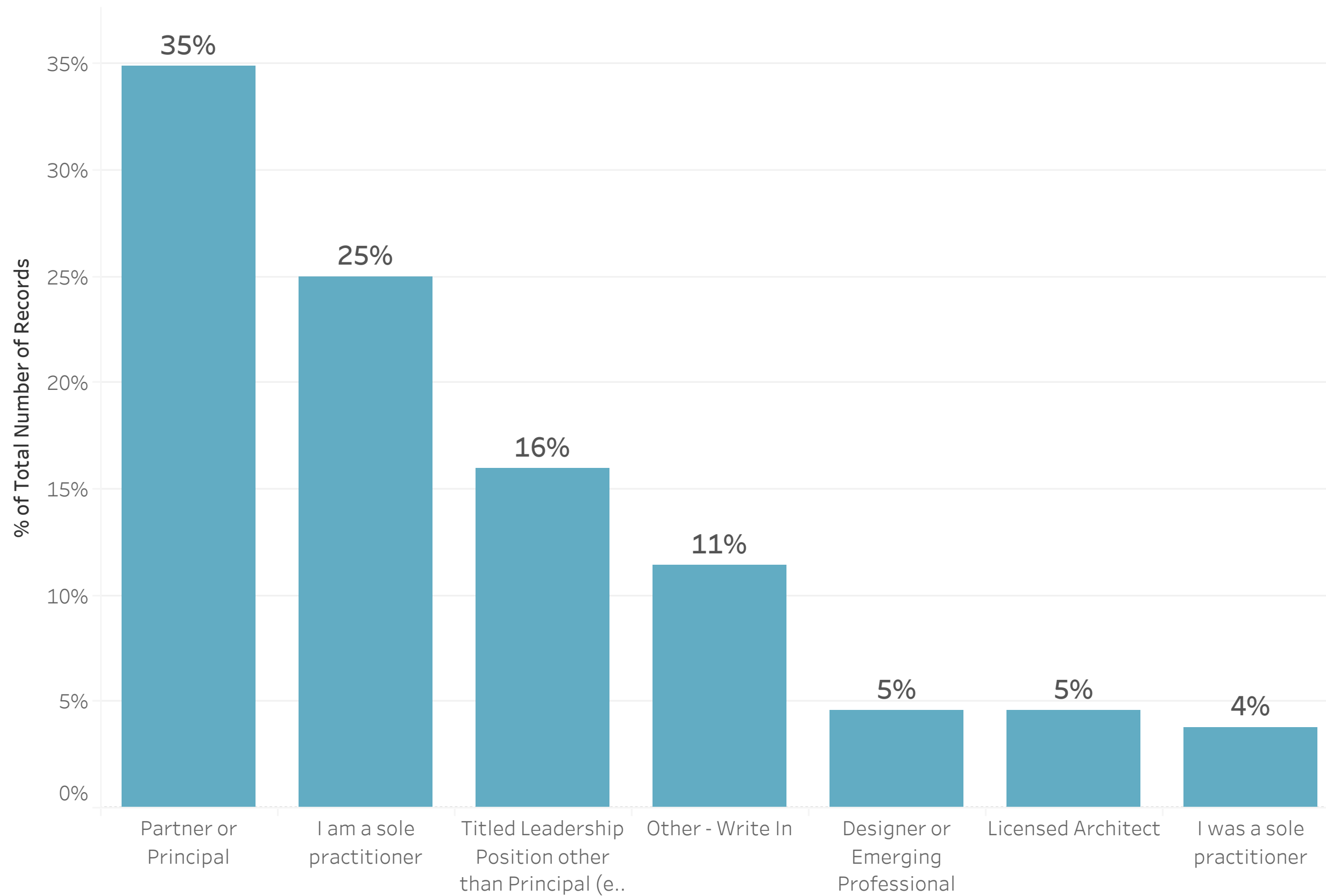
3 professors no longer use their license

Are you still currently professionally practicing architecture?*

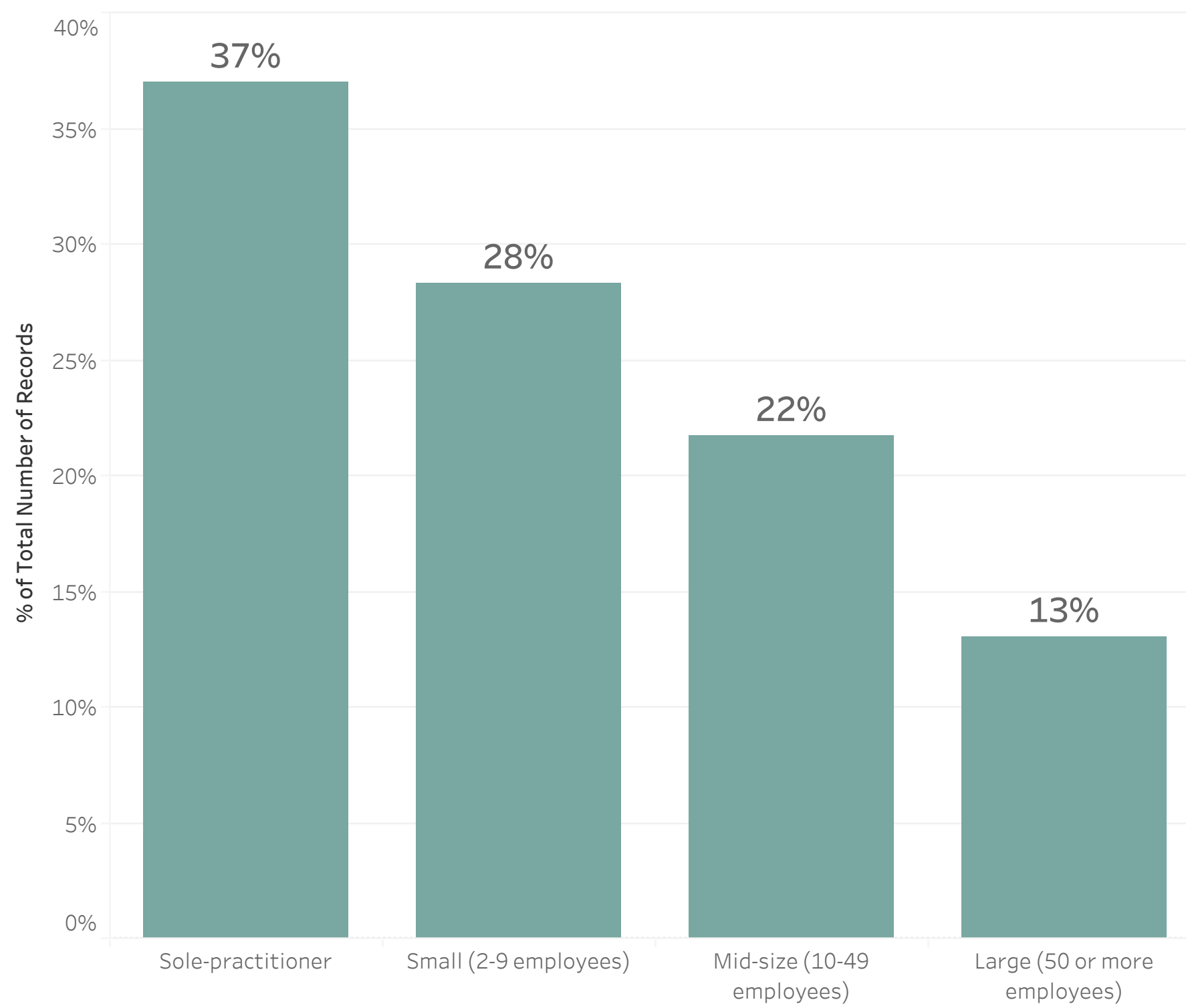


*Defined as having at least one active architectural project in the last 12 months.

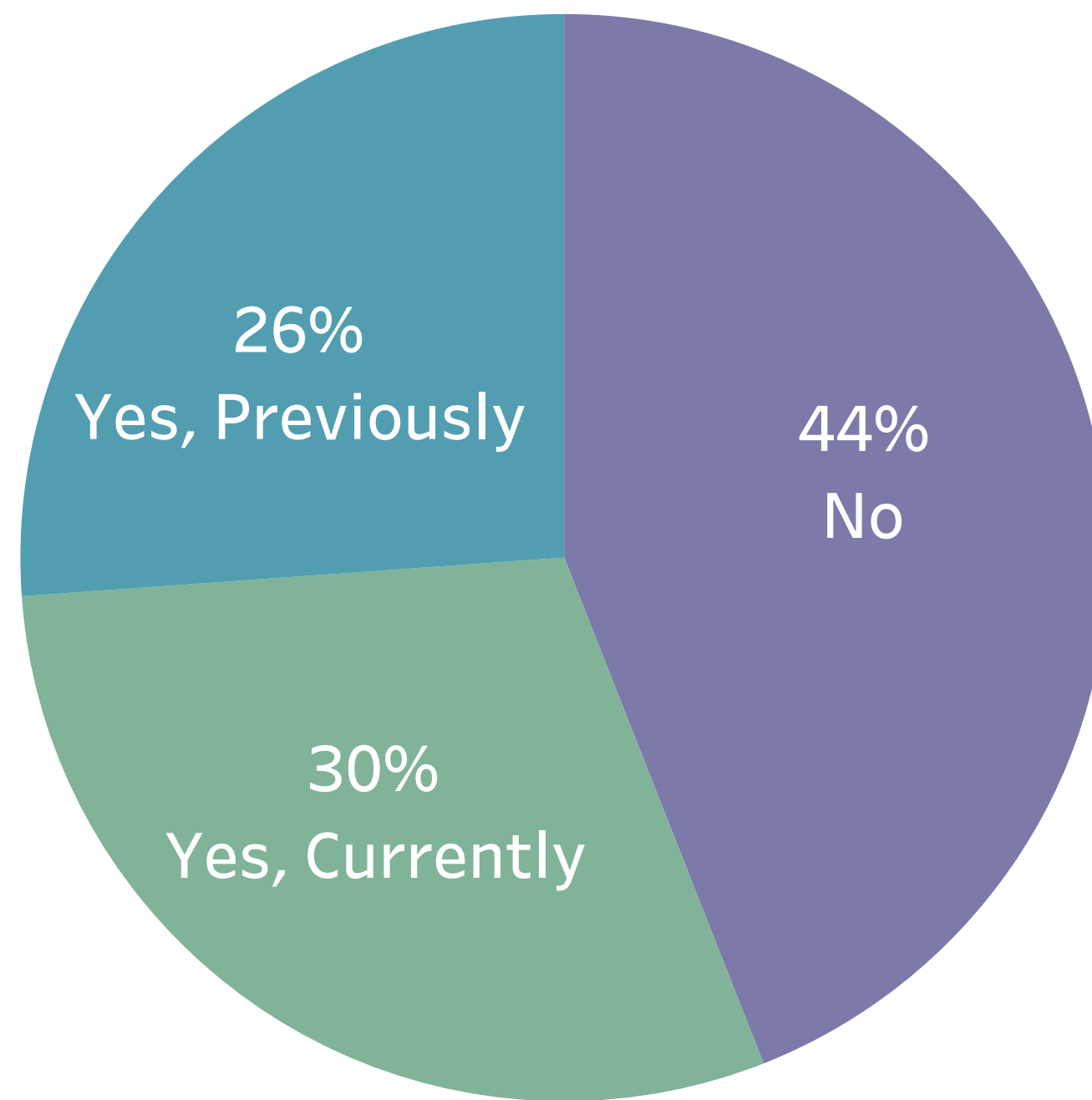
Select the most appropriate job title you held in architectural practice.



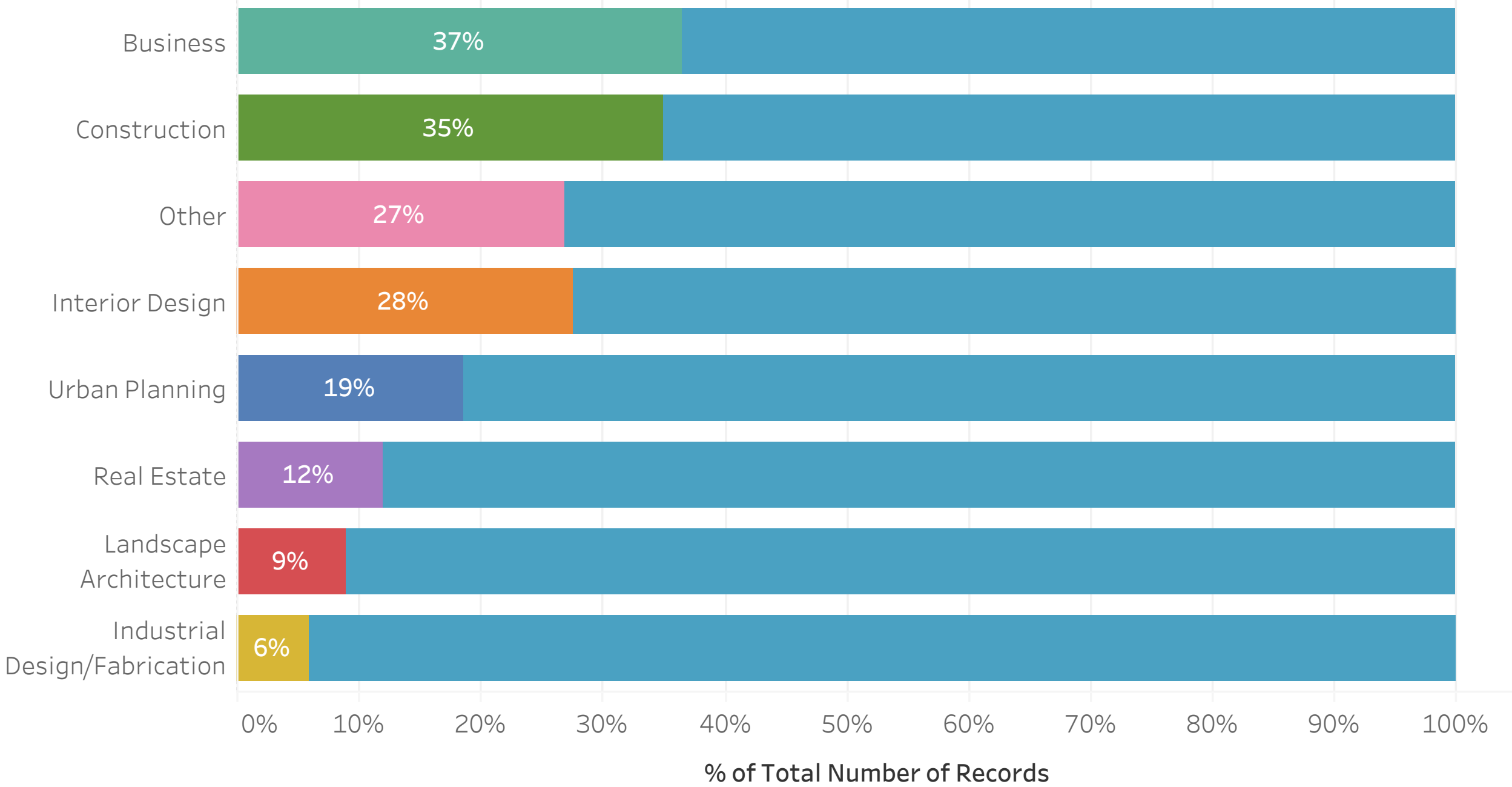
What size is your firm?



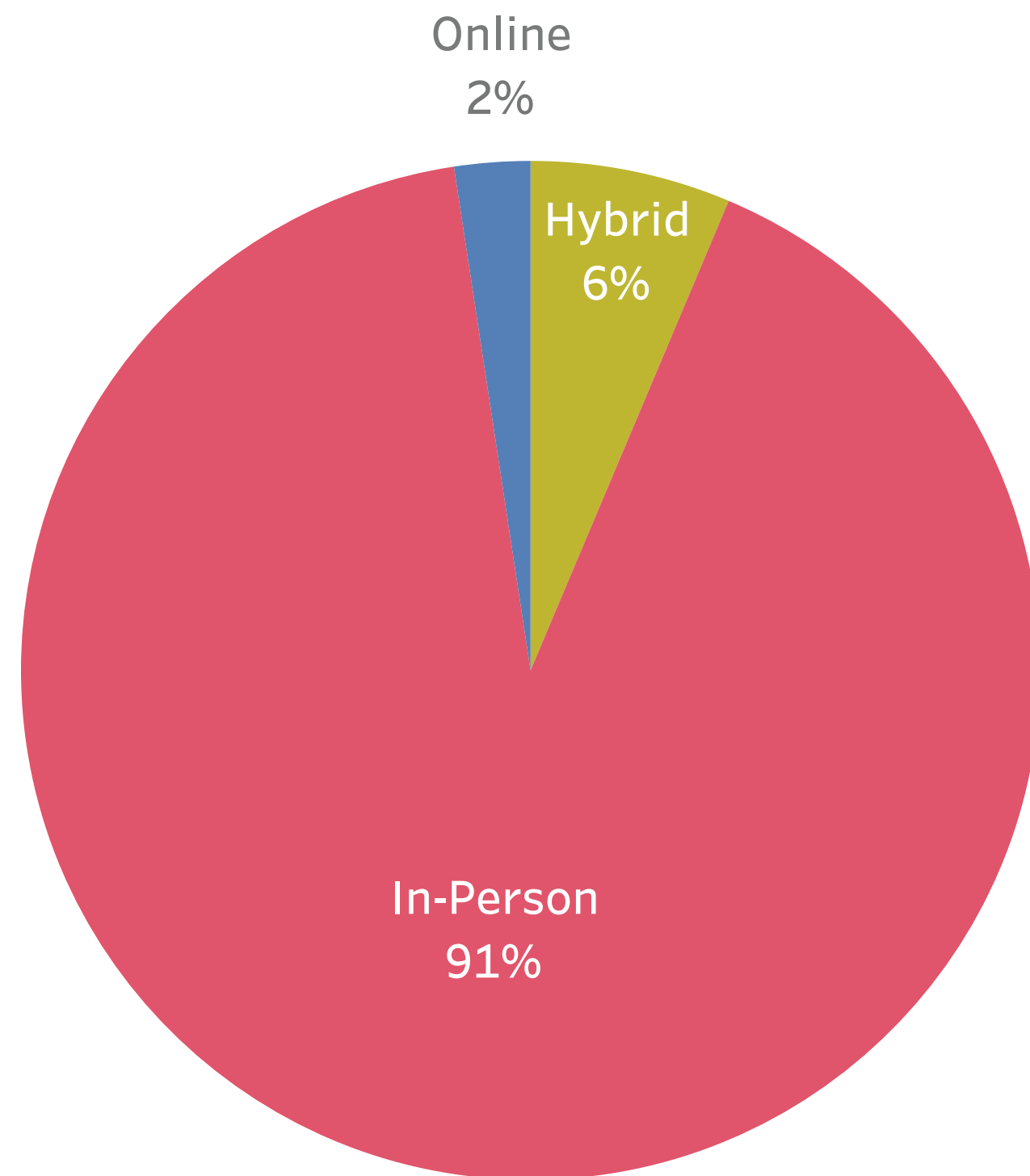
Have you ever been an Architect Licensing Advisor or IDP Coordinator?



In addition to architecture, do you have any professional experience in any of the following fields?

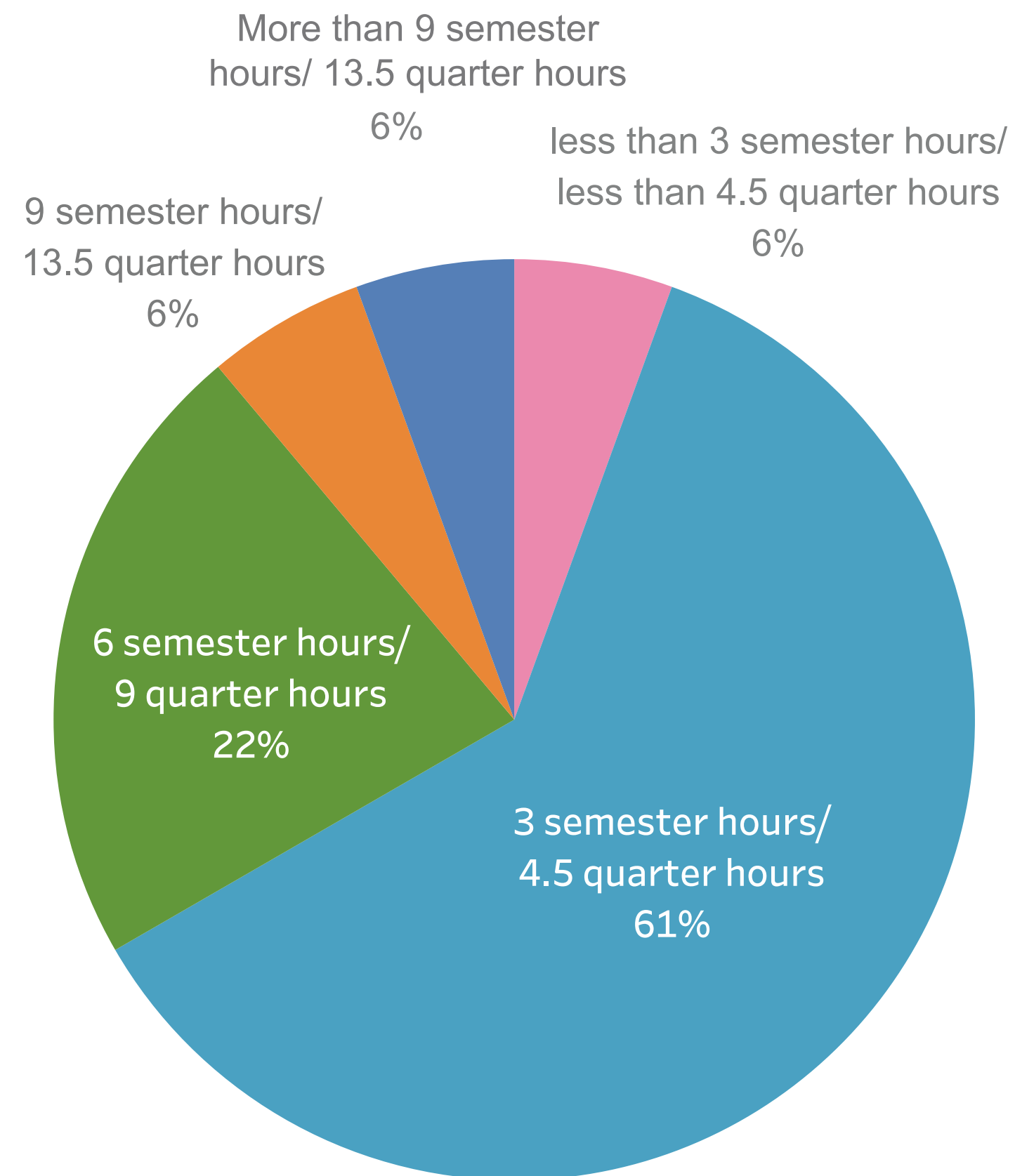


How is your professional practice course delivered?

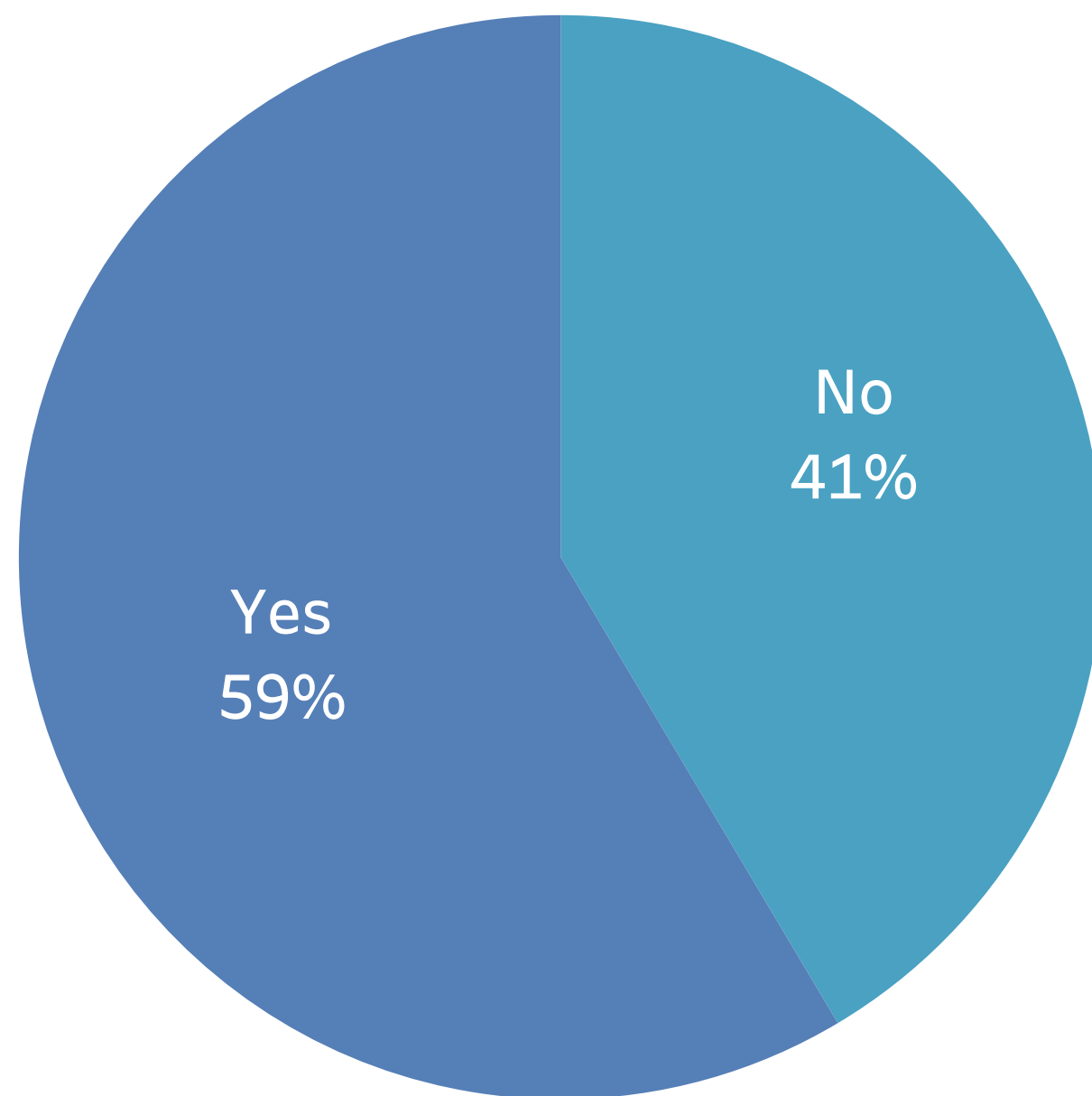


While the majority of courses are delivered in-person, the vast majority of those courses mention site visits, firm visits, guest lectures, and incorporating a myriad of multimedia resources such as videos and podcasts that can be accessed online.

How many credit hours is the required professional practice curriculum at your school?

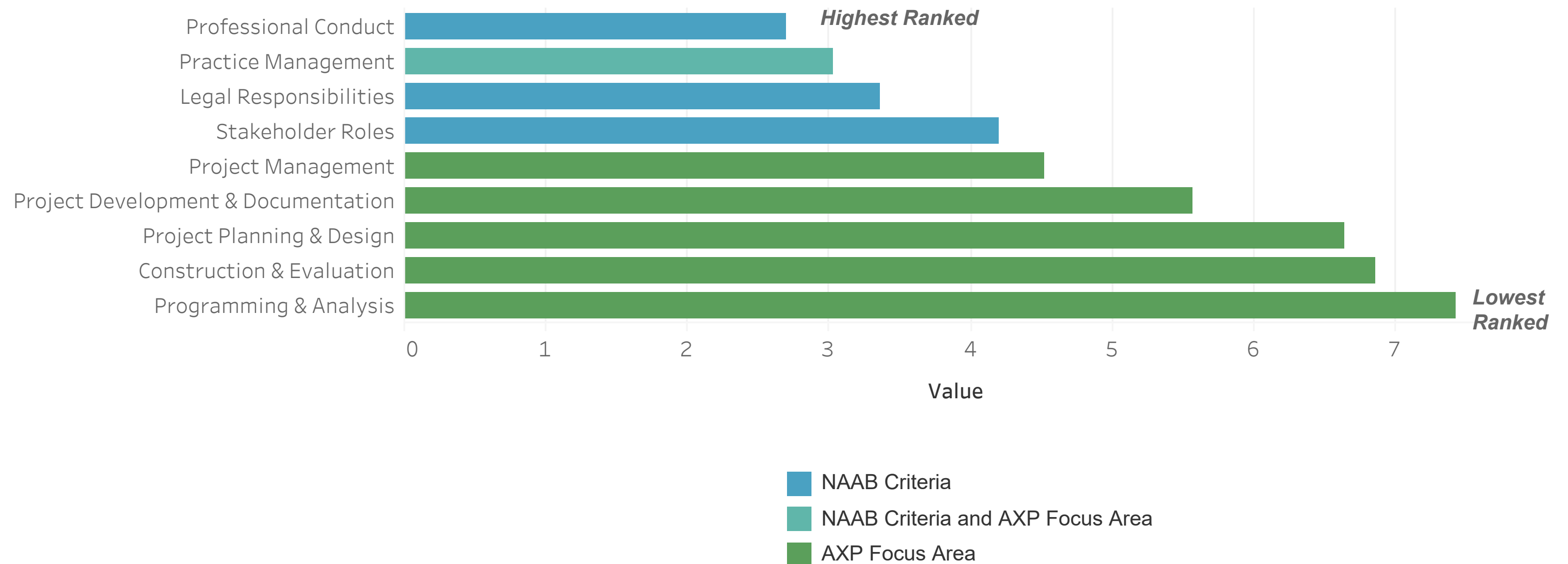


Do you presently have the ability to vote on curriculum issues, either at the committee or faculty level?



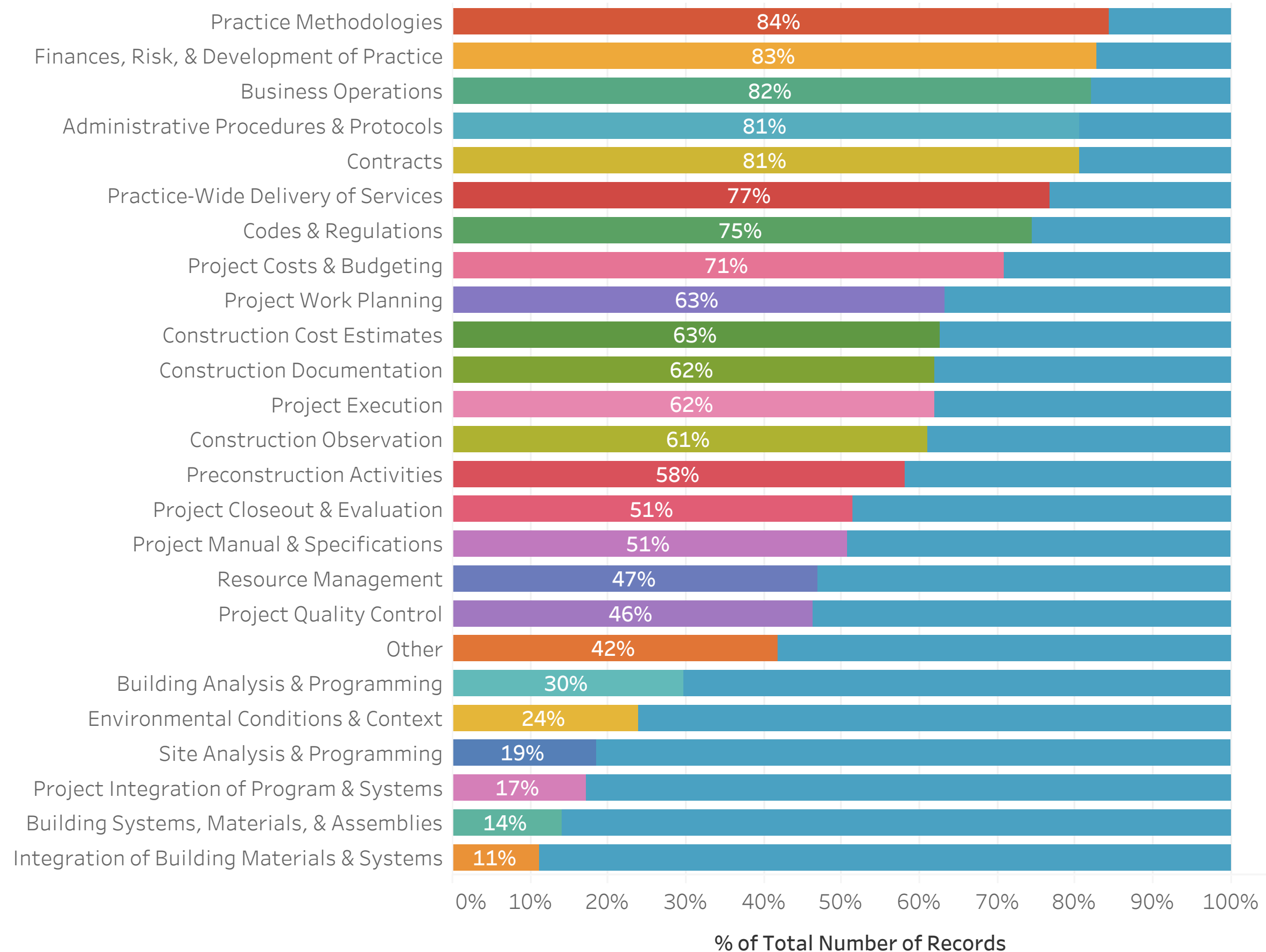
Professional Practice is an essential part of every accredited architecture program. The ability to vote on curriculum issues as a professional practice faculty member is an indication of how much, or how little, professional practice is considered in the greater context of a degree program.

Please rank the following categories from most to least emphasized in your professional practice course.



This question blended NCARB AXP categories and NAAB Criteria to gain a better understanding of how course content relates to both educational frameworks.

Which of the following topics does your professional practice course cover?

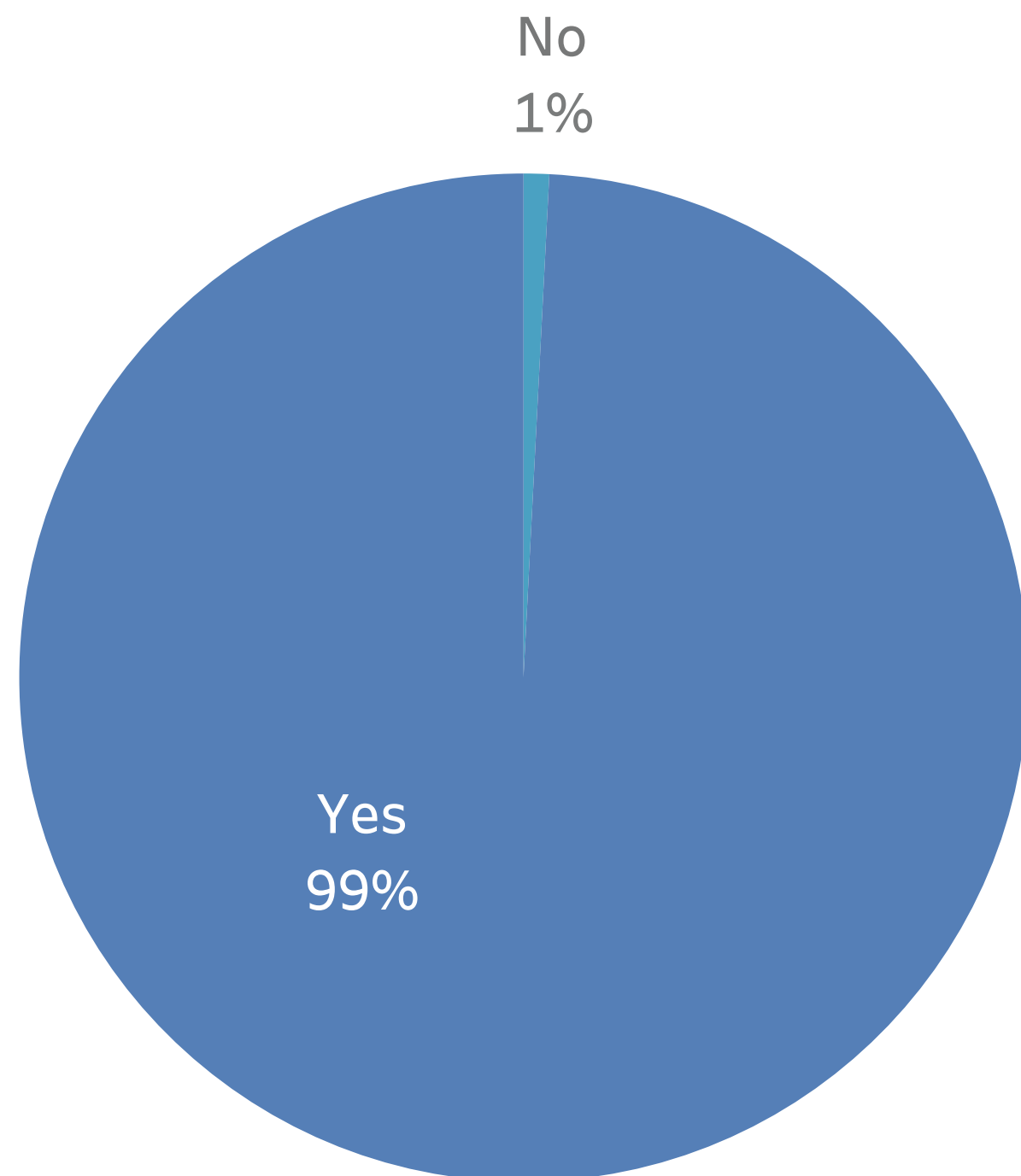


Which of the following topics does your professional practice course cover?

The previous list of professional practice topics were appropriated from the list of NCARB AXP topics. Professors were asked to select the topics they covered in their respective courses. Categories like **Practice Methodologies** (84.3%), **Finance, Risk and Development of Practice** (83.8%), and **Business Operations** (82%) proved to be most popular. On the contrary, categories such as **Integration of Building Materials and Systems** (11.2%), **Building Systems, Materials and Assemblies** (14.2%), and **Project Integration of Programs and Systems** (17.2%) proved to be the least likely to be covered.

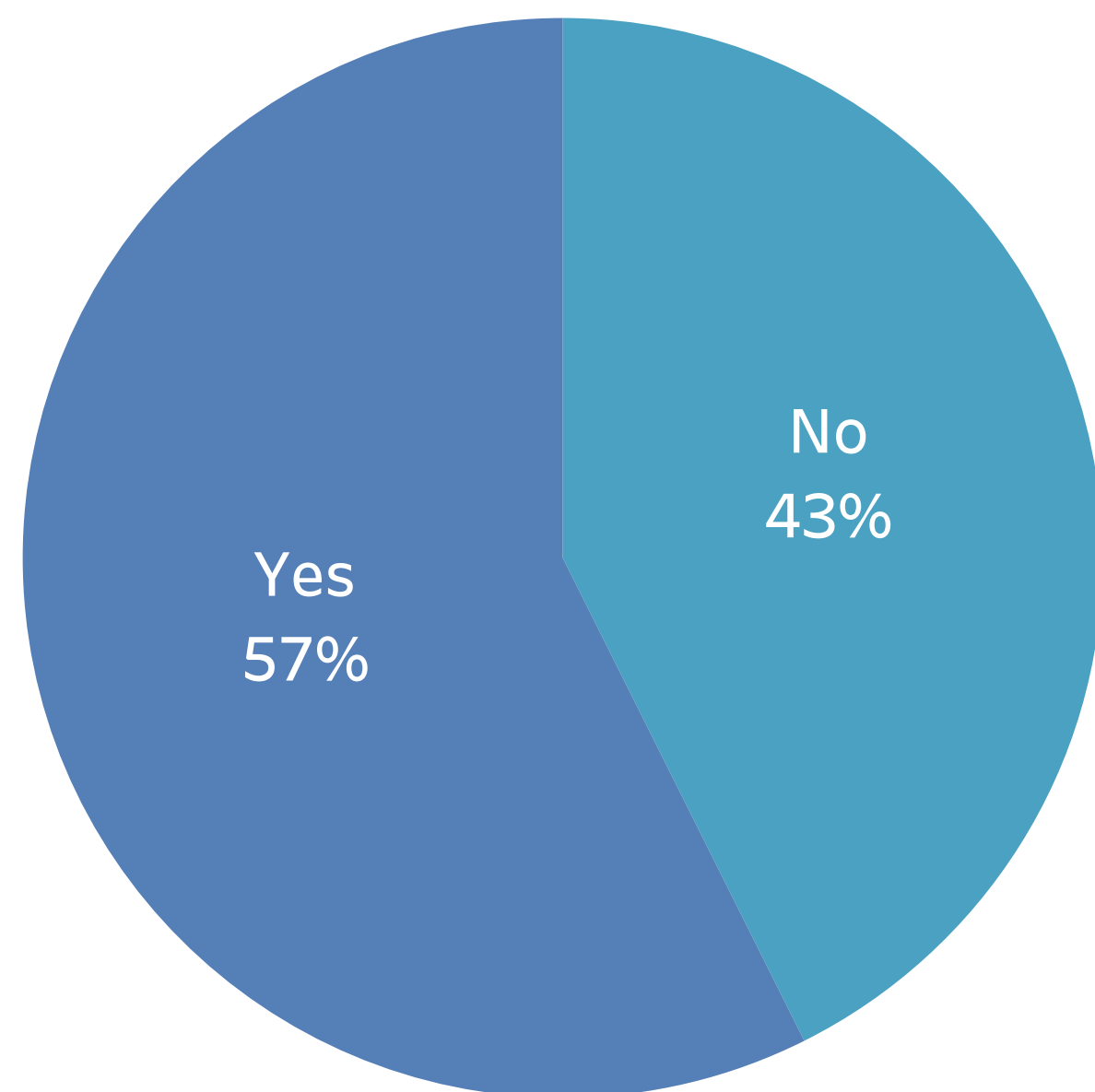
Additionally, 53% of the professors who marked “Other” stated "ethics" as a area of focus in their classrooms. Those results are further explained on the following page.

Does your course content cover ethical issues in professional practice?



As shown by the accompanying chart, nearly all (99%) of the courses included content concerning the ethics of architectural practice. Just over one-third of responses (35%) cited using case studies to teach ethics. Another third (32%) explicitly noted using the AIA Code of Ethics and Professional Conduct and/or the NCARB Rules of Conduct as a way of teaching ethics. Many professors also utilized general lecture and classroom discussion (18%) to address this topic within other content areas of the class.

Does your course content cover equitable workplace practices in professional practice?



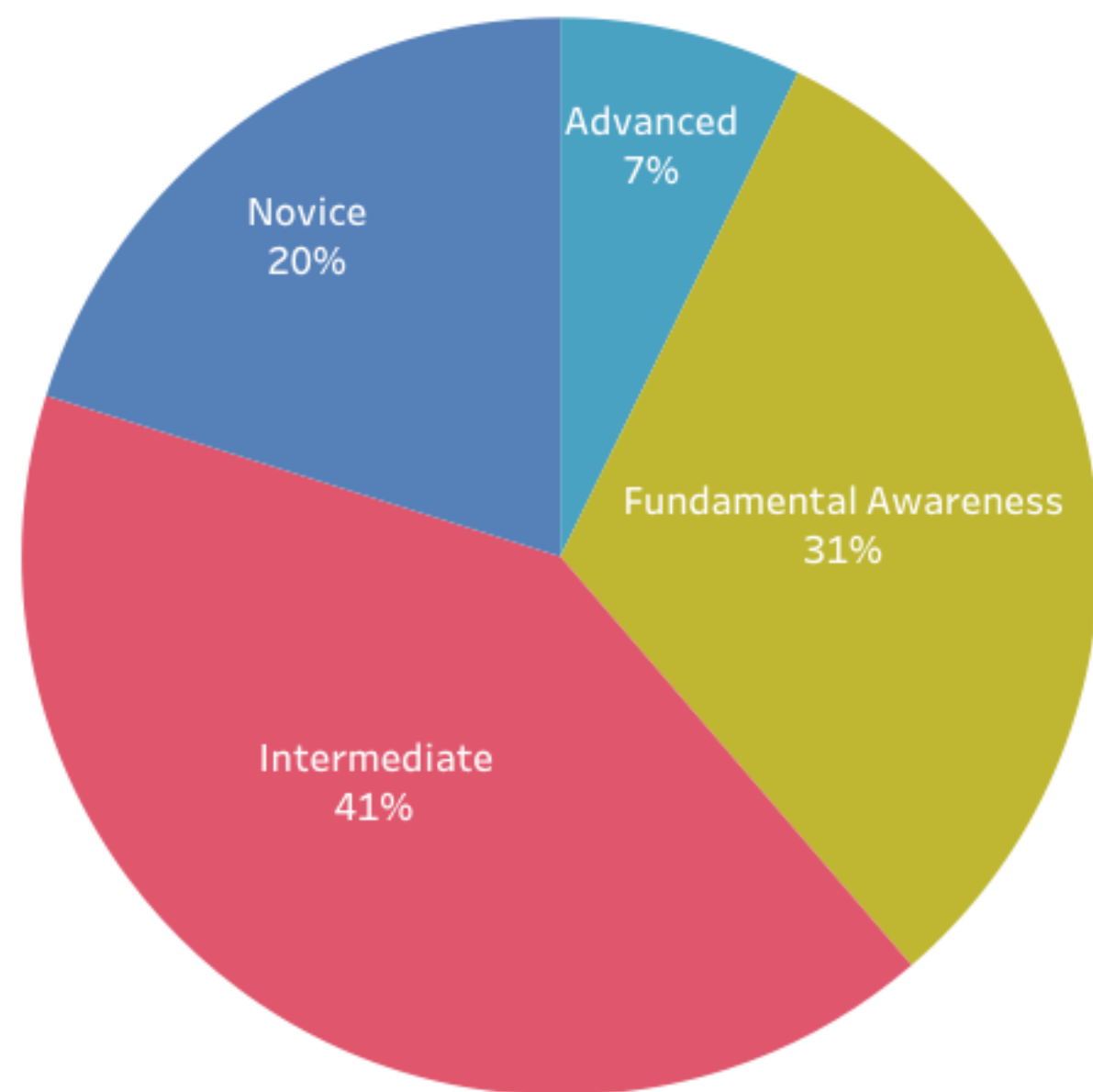
Fifty-seven percent of the respondents noted covering equitable workplace practices in their teaching. These professors utilized guest speakers, hosted discussions on diversity and equity, covered human resource policies such as equal opportunity, non-discrimination and sexual harassment, and used workplace scenarios/dilemmas to provide a real-world context to the conversation.

Thinking about your professional practice course, how do you discuss the future of professional practice?

For Professional Practice faculty, the “future of practice” is of great importance. Responses to this question coded to identify 6 areas of discourse, the most popular being **“Technology as a change agent”** (27%). Responses in this area highlighted BIM software, advancements in building science and the use of data to operate a successful architecture firm. The second area **“Developments in project delivery”** (18%), covers integrated project delivery (IDP) and design build and was often cited in support of the **“Architect as one actor”** (10%). This area highlights the increasing demands for architects to either specialize and be a part of the larger cast or be a jack of all trades and expand his/her capabilities.

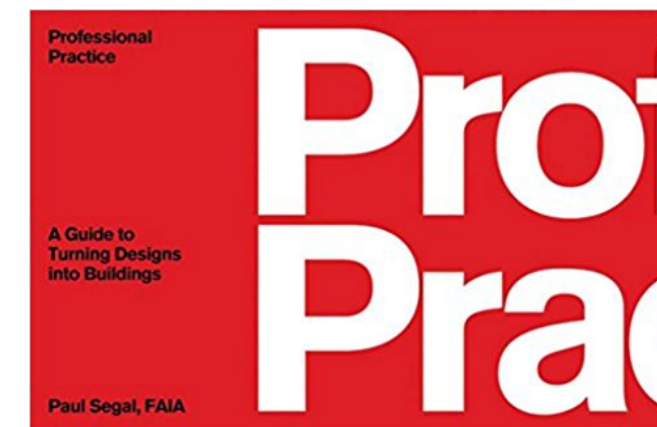
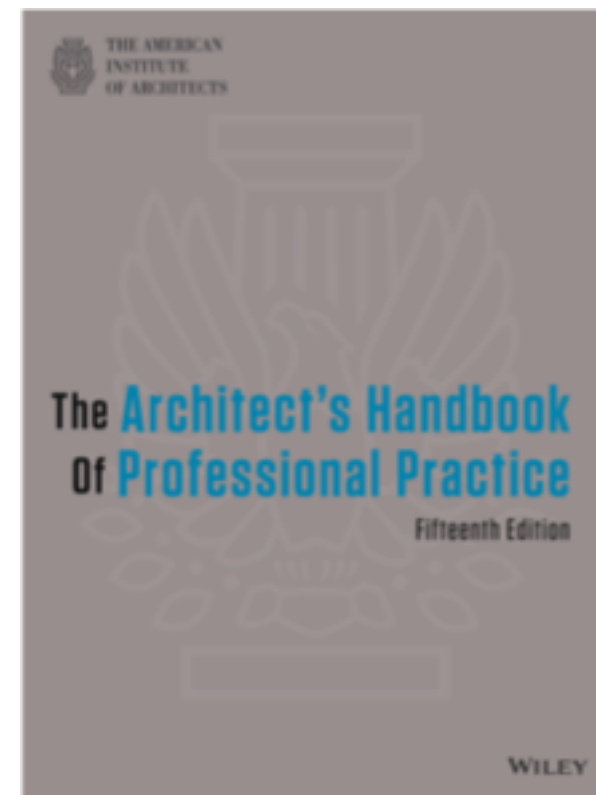
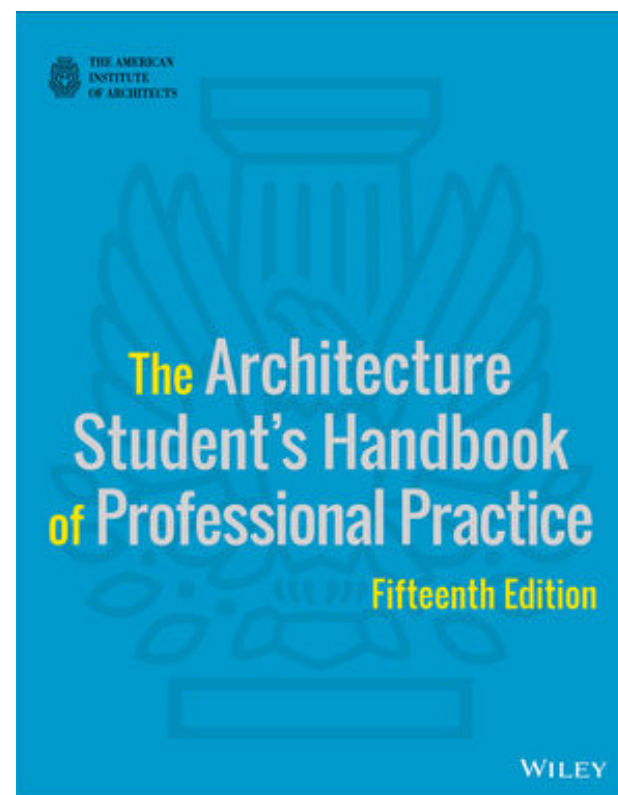
Additionally, professors noted utilizing the **“Practitioner’s Perspective”** (14%) as a way of discussing the **“Past, Present, & Future”** (9%). The former area captures the importance of sharing professional experiences from either the professor’s own experience or invited guest speakers. The latter takes note of the time continuum when thinking about the future with the idea that identifying trends over time will help students predict and improve on current business models. Lastly, each of these 5 areas of discourse feeds into the sixth which covers **“Society, Policy and Economy”** (9%). This area calls attention to the role of the architect in society and how he/she responds to the changes beyond our control.

At the end of the professional practice course, what is the target level of competency for your students?



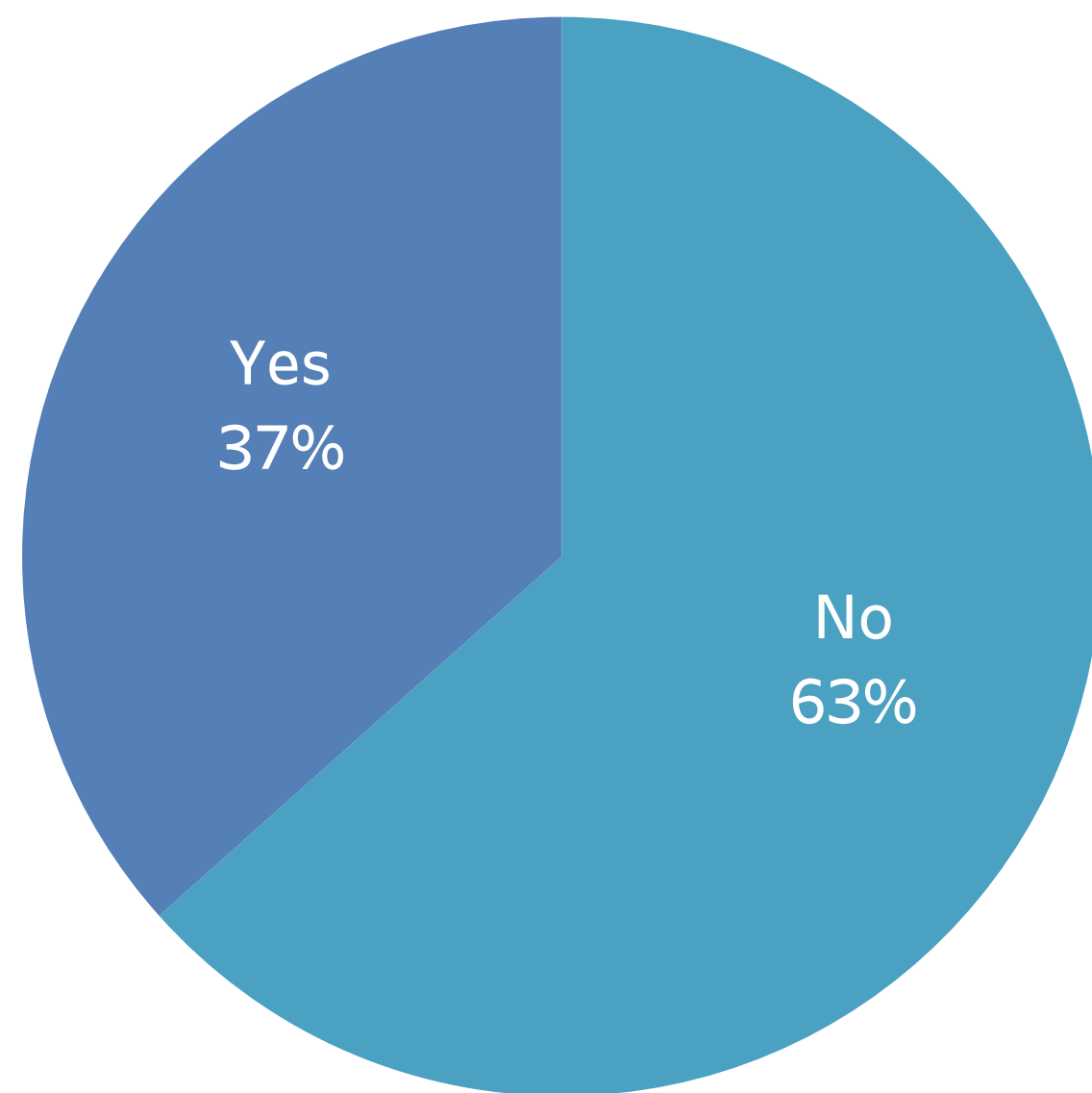
This question was born from conversations held at the 2017 ACSA Administrators Conference in a session hosted by NCARB. The discussion followed the place of professional practice in the NAAB Conditions for Accreditation: Realm D. The areas, previously noted on page 18, require students to demonstrate an *understanding* of professional practice. Considering that the majority of professional practice curriculums are 3 semester credit hours or less (as shown on page 15), it is not the goal of this course for students to develop expertise but rather to be knowledgeable and aware of the critical issues relevant to the practice of architecture.

What are the required texts or reading lists for your course?



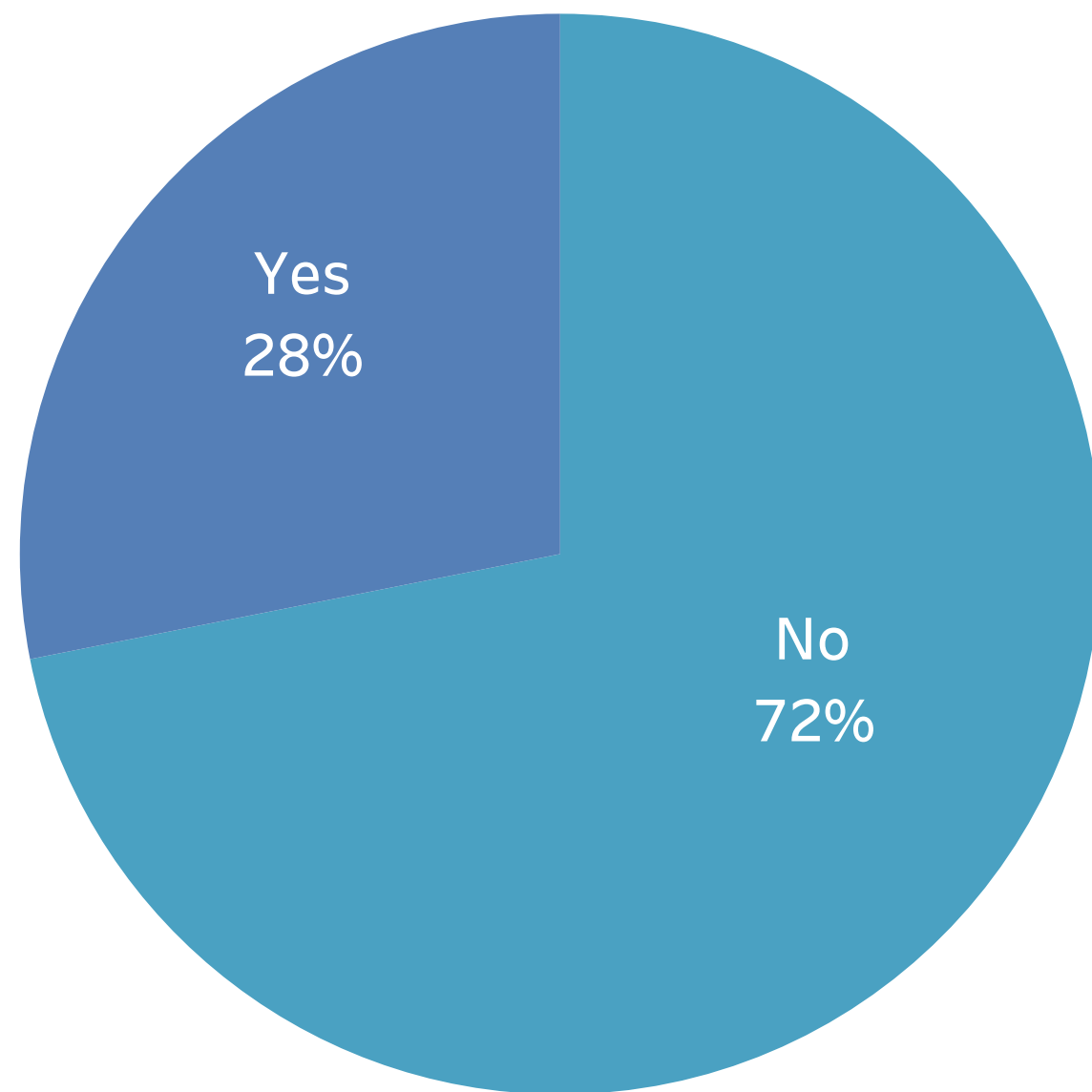
The most popular (74%) texts cited are handbooks issued by The American Institute of Architects (AIA). *The Architecture Student's Handbook of Professional Practice* (56%) and *The Architect's Handbook of Professional Practice* (18%) appear to be valuable resources in professional practice courses across the United States. *Professional Practice: A Guide to Turning Designs into Buildings* by Paul Segal (15%) was also noted to be a staple in guiding course content. Other books include *Ethics and the Practice of Architecture* by Barry Wasserman, Patrick Sullivan & Gregory Palermo, *Architecture: The Story of Practice* by Dana Cuff, *Ethics for Architects* by Thomas Fisher, and the *Canadian Handbook of Practice* issued by the Royal Architectural Institute of Canada.

Is there a relationship between the professional practice course and design studio courses?



When asked about a connection between design studio and professional practice courses, only 37% responded that there was a relationship. When asked to expound, responses most often fell into one of three categories. The first, and most often connection, was by way of a coordinated assignment between the two courses. The second was slightly more comprehensive in that students took a specific design studio concurrently so the pacing and content was aligned. The third is that the professional practice course is, in fact, a studio course.

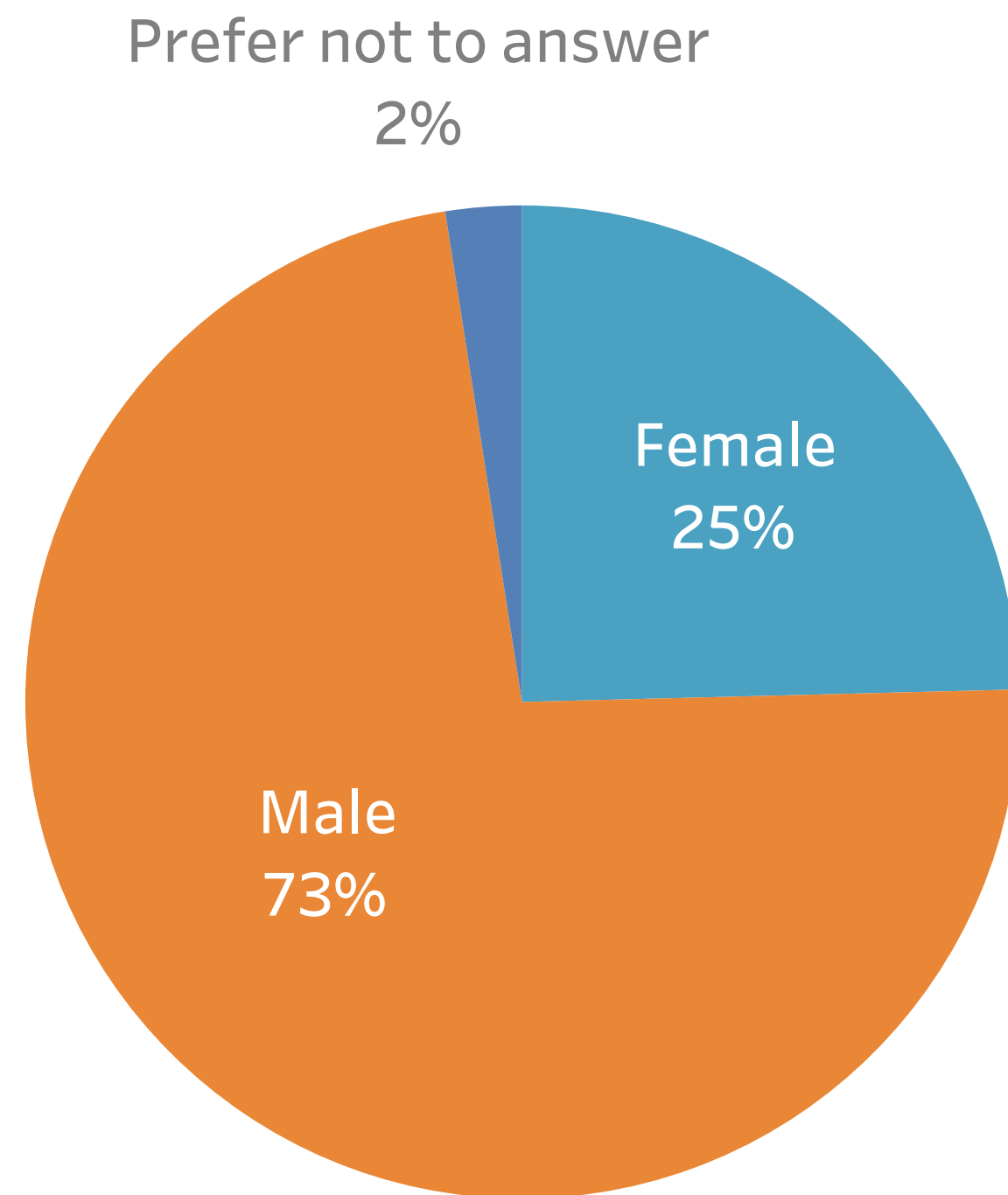
Is there a relationship between the professional practice course and practical experience* during the first semester/quarter?



A relationship between internship and professional practice coursework seemed to be even more of an anomaly with only 28% answering yes to the question above. Most professors noted the connection being part of the greater degree program's curriculum (sometimes as a prerequisite). Others cited the connection in that students are required to draw on work experience for class discussion and assignments. There was very little evidence that courses were connected to internship in a formal way.

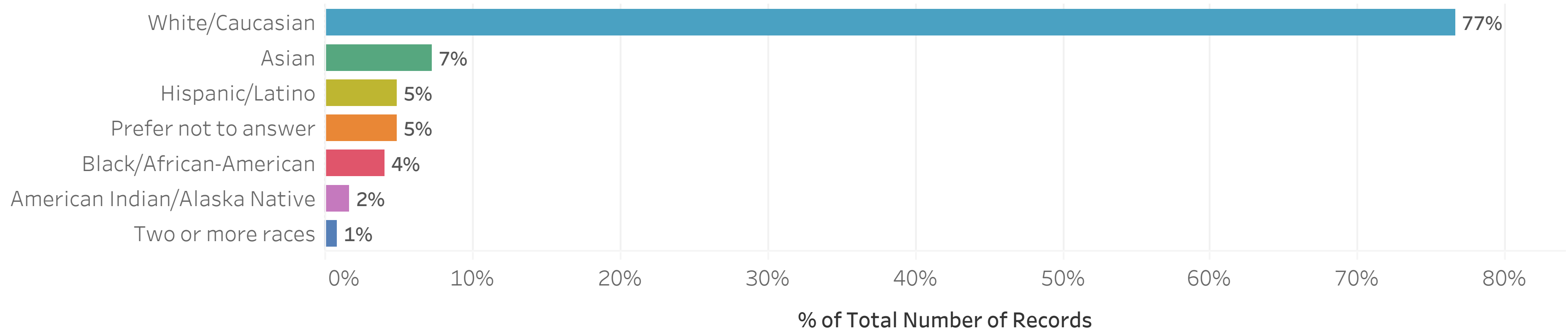
* Formerly known as internship.

What gender best describes you?



The gender breakdown for this group of faculty is slightly more male dominated than the 69% male and 31% female population of faculty as surveyed by the National Architectural Accrediting Board (NAAB) for the 2016-17 school year.

What race/ethnicity best describes you?

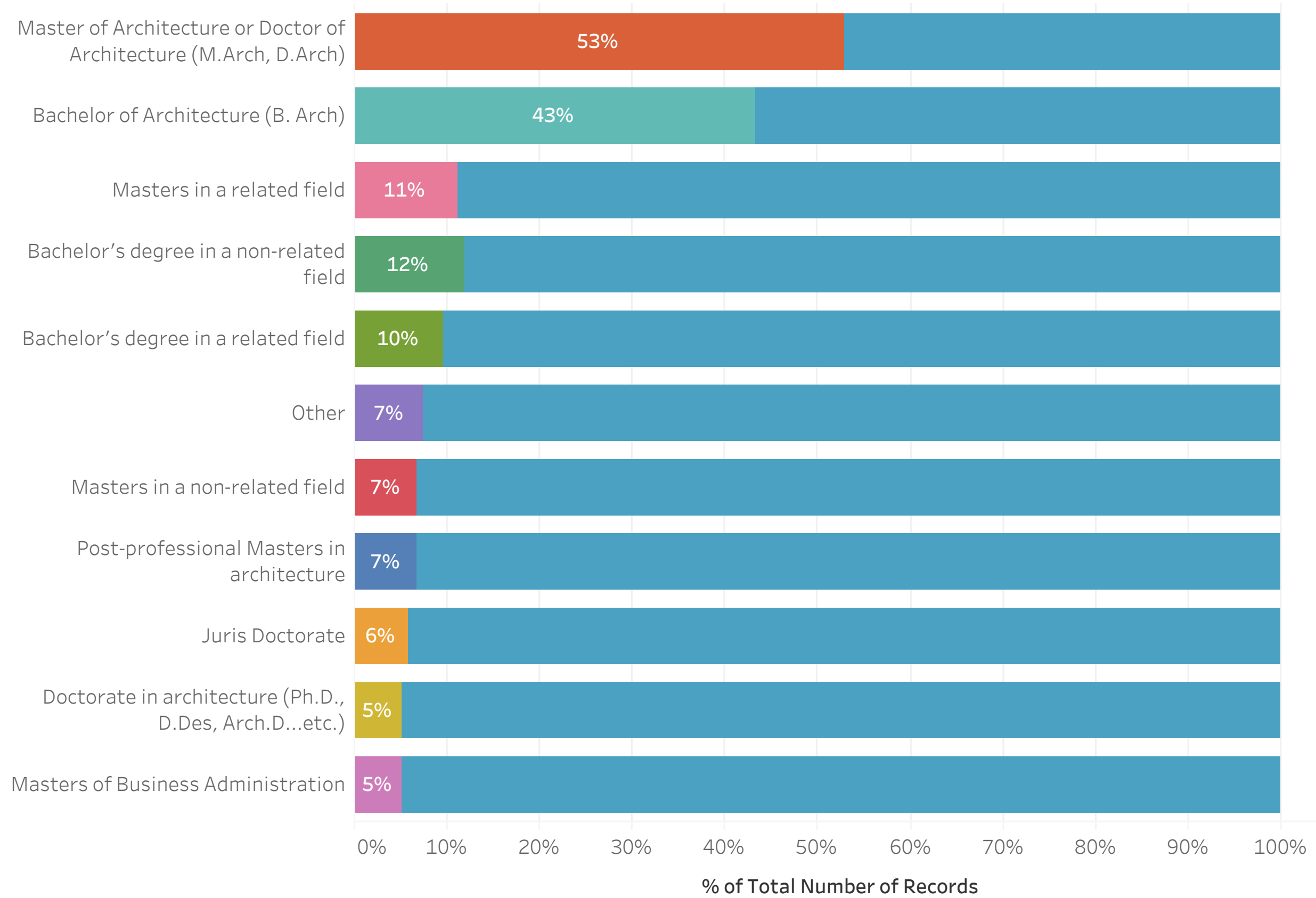


The ethnicity breakdown for this group of faculty reported higher percentages of **American Indian/Alaskan Native, Black/African American** and **White** than the total population of faculty as surveyed by the National Architectural Accrediting Board (NAAB) for the 2016-17 school year.

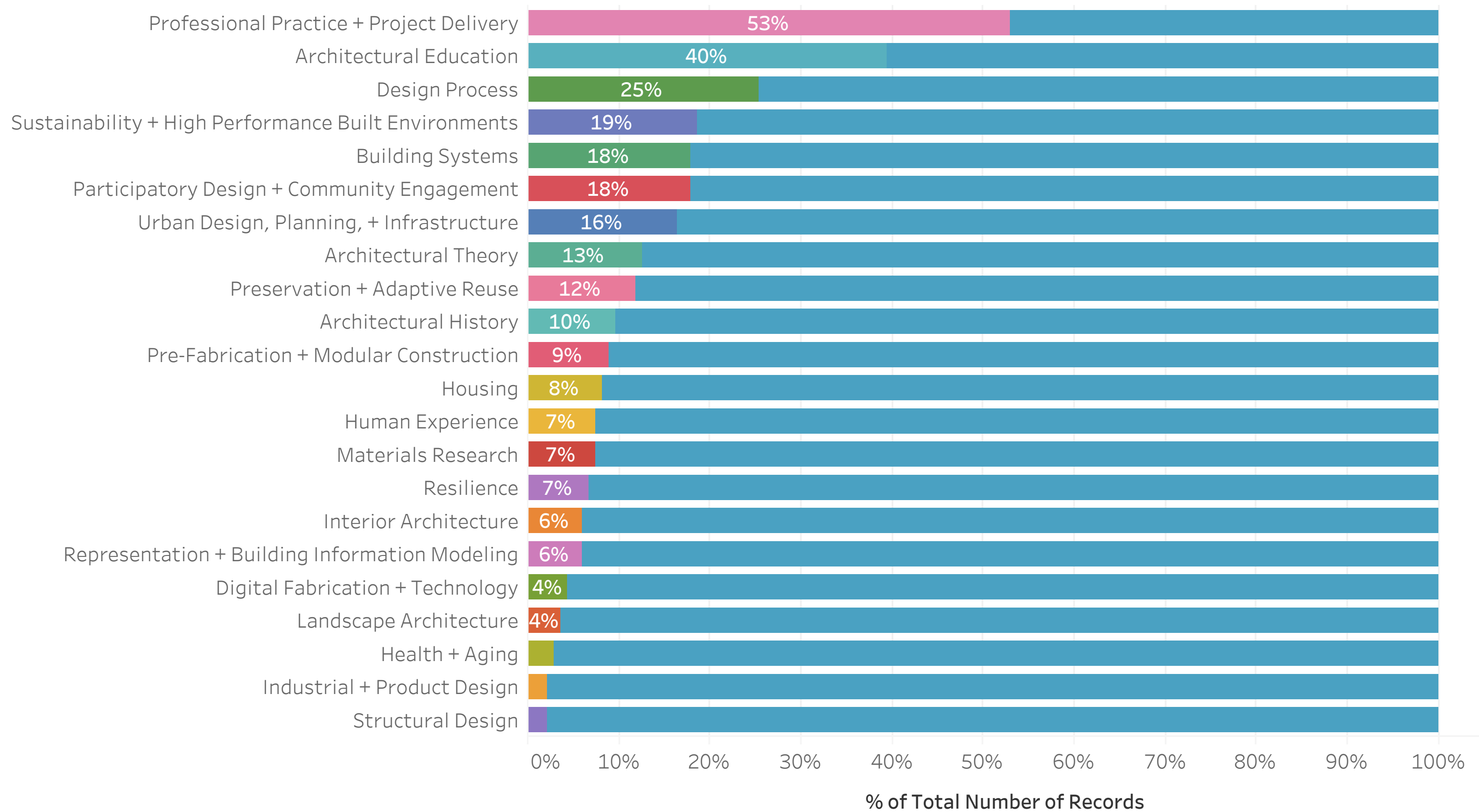
NAAB reports the following statistics:

71% identified as White; less than 1% identified as American Indian or Alaskan Native; 7% identified as Asian; less than 1% identified as Native Hawaiian or other Pacific Islander; 3% identified as Black or African American; 8% identified as Hispanic; 1% identified as Two or more races; 2% identified as nonresident alien; and 6% were classified as race and ethnicity unknown.

Which of the following degrees have you completed?



Please select up to three primary areas of research interest.



Qualitative Research Collection

In addition to the data collected via the survey, faculty were asked to submit their course syllabi. Architectural education is quite diverse, and that, coupled with the complexity of course dynamics, made it important to analyze course syllabi from a range of institutions and survey courses taught by a range of professionals to understand the breadth and depth of professional practice instruction. This qualitative data analysis yielded 3 major themes.

1. Practice as a Design Challenge
2. The Business Landscape
3. The Ethical Imperative

Theme 1: Practice as a Design Challenge

The first theme, Practice as a Design Challenge, captures the pedagogical approach where students are asked to approach the current and future state of practice as a design problem. This task requires student to not only understand business practices but to also have an awareness of 1) current and future project delivery methods, 2) the implementation of research and technology, and 3) ways of providing a value to the public.

The deliverable for this assignment was often a paper, case study or presentation and afforded students the opportunity to think critically about the profession of architecture. In most cases, this assignment forced students to explore current firm dynamics and apply newly gained insight from course readings and discussion.

In other cases, this evaluative approach focused on the relationship between stakeholders and the place of the architect within society. Some courses combined the evaluation of practice with a practical application to a specific project or program.

Theme 2: The Business Landscape

All of the syllabi submitted had an element of understanding general business practices. Questions and discussion on this topic included firm business models, legal structures, contracts, annual revenue and expenses, organizational structure, hiring practices and marketing and firm development. While courses varied in their level of breadth and depth, some courses included guidance on resumes, cover letters and the interview process.

This area of investigation was most often the most knowledge building subject of each course. Generally, courses are structured with the idea that incoming students have no knowledge of the business of architecture. Moreover, courses aim to give students all of the necessary information and resources needed to start a firm of their own after licensure. This learning curve requires professional practice professors to cover all aspects of practice and consequently can present as a “how-to” course. One way courses countered this was by allowing some student autonomy in assignments. Assignments that allowed students to investigate a personally relevant business model or explore a specific specialization or niche appeared to provide some depth and diversity in the discussion of business practices.

Theme 3: The Ethics of Architecture

Most of the courses covered ethics in architectural practice in a way that was not only based on realistic scenarios but was also multidimensional. The topic of ethics covered professional conduct between stakeholders, ranging in scale from the client to the community. Professors used articles from journals, magazines, books and videos to teach this topic.

As previously mentioned, the AIA Code of Ethics is by-in-large the most frequently referenced resource on this topic. The Code is supplemented by the NCARB Rules of Conduct, texts and articles by Thomas Fisher, Barry Wasserman, Patrick Sullivan and Gregory Palermo as well as texts about general business ethics.

Assignments on the topic of ethics often involved case studies and were discussion based. The majority of the syllabi focused specifically on ethics in architecture. Very few courses appeared to discuss ethics outside of architectural practice but a few referenced the National Society of Professional Engineers (NSPE) Code of Ethics and/or the American Society of Landscape Architects (ASLA) Code of Professional Ethics and the ASLA Environmental Ethics code.

Other Findings: IPAL Schools

- Of the schools that participated in the survey, 16 were schools offering the Integrated Path to Architectural Licensure (IPAL).
- The survey found that professional practice faculty at IPAL schools were much more likely to be adjunct faculty (44%) than non-IPAL schools (26%).
- Faculty from IPAL schools were also more likely note a relationship to AXP/Internship (+10.8%) and to studio (+5%).
- IPAL faculty also had more more experience in practice (almost 2.5 years more) and more years in the classroom (almost 1.5 years more on average).
- When examining only IPAL schools, the percentage of respondents whose professional practice curriculum is 9 semester credit hours or longer increased from 2.9% for non-IPAL schools to 5.6% for IPAL schools.
- When compared to non-IPAL schools (59%), IPAL schools (47%) were significantly less likely to cover equitable workplace practices.
- On the whole, IPAL schools also had a higher target level of competency for professional practice students, with those expecting Intermediate/practical application rising +13.7% above non-IPAL schools.

Other Findings: Professor Population

- Female faculty were slightly more likely than males to cover equitable workplace practices in their courses, 63% to 58% respectively.
- Faculty who were sole practitioners (41%) were slightly more likely to cite a relationship with a design studio than faculty who were principals or partners (38%).
- When asked to rank order a list of course topics from most emphasized to least emphasized, average rank ordering remained consistent (as shown previously) for everyone except for adjunct faculty. On average adjunct professors ranked project management above stakeholder roles.