

5 Going beyond your major



Students talk to departmental representatives at the Fall majors fair (UW-Madison, 2013)

“How should I choose my major?”

It’s a question that all college students confront — some even before they arrive on campus, and some only during their final year before graduation. When we survey students in the SuccessWorks career courses, generally two-thirds have not yet formally declared their major — in fact, among all new UW students, about one third arrive with no intended major in mind. And even those who have made a provisional choice may change their minds before they graduate — after all, among graduating UW students, only about 28% finish with the major that they intended when they started. This mirrors national trends: according to a recent UCLA survey, “By the end of their first year, a quarter of all freshmen change their mind about their field of study. Another half of first-year students say they plan to change majors,” and about 60% of all students who start out in STEM fields don’t end up getting a degree in one of those fields (Selingo 2013). This is not surprising; college students are in what sociologist Ann Swidler (2001) has called the **unsettled period** for young adults: “During this time, they are trying on different selves. Indeed, college students often switch majors, pursue seemingly contradictory goals, and reenvision their futures.”

Education researchers have found that students use a variety of simultaneous strategies to make this important choice, from reflecting on what they are interested in and what comes easily to them, to imagining what they want to do with their lives after college and what career opportunities might be available (Galotti 1999). And while studies from both 1994 and 2004 show that “genuine interest in the subject” is the main factor in major choice for around 60% of students, many students nevertheless find their major at the last minute by “backing into” a field that they have randomly earned enough credits in, after realizing that they were not interested in what they were previously pursuing (Beggs et al 2008).

At SuccessWorks, we treat choosing a major much like choosing a career path: one should be *reflective* about whether their interests and strengths match the major, gather information from their trusted *social network* about how the major works, and be able to *tell the story* of how all of their experiences in and out of the classroom contributed to, related with, or complemented that major. Pursuing a major is often the first opportunity that students have to delve deeply into a subject alongside lifelong experts in the material. Northwestern University professor Andrew Roberts, author of *The Thinking Student's Guide to College* (2010), put it this way: “After college your chances to pursue these fields—much less pursue them with the guidance of acknowledged and caring experts—drop considerably.” But at the same time, especially with majors among the broad liberal arts and sciences, we stress that choosing a major is not the same as choosing a career: **any given major can lead to many different careers, and any given career can be accessed through many different majors.** The challenge is to forge your own journey of experiences and accomplishments that can best connect your choice of major to your choice of career — and then to be able to narrate that journey to the next decision-maker who may have an opportunity for you.

A brief history of college majors

In 2015, UW-Madison, home to over 120 undergraduate majors already, introduced yet another new one: “neurobiology.” This was not unusual; across the US, between 2000-2010, the overall number of college majors increased by 20 percent (Selingo 2015). But college majors themselves are a relatively new invention, historically speaking, as a *New York Times* essayist recently pointed out: “Until the end of the 19th century, students took the courses that the faculty told them to take, and not only did these pretend to encompass most of what was then known, they were also intended to be good for you — to enhance your moral and spiritual development” (McGrath 2006).

Early in the twentieth century, at many universities, the college major emerged out of a combination of contemporary trends. The development of new departments, the hiring of new faculty, and the construction of new laboratories dedicated to research helped to specialize and professionalize the

academic landscape, resulting in new fields like sociology, psychology, information science and mass communication research. And fearing that universities without requirements simply produced “dilettantes” and not graduates prepared to take on professional leadership positions in an increasingly complex society, even Harvard University, long an advocate of open elective study, required students choose a major subject starting in 1910 (McGrath 2006).

Over the twentieth century, while the idea of pursuing a major has been relatively stable, the kinds of majors available and the numbers of students choosing them have shifted over time. When all college students across the country and at all different kinds of institutions are considered (two-year and four-year, small and large, for-profit and non-profit), “Over the past 40 years, the share of undergraduate degrees awarded in professional fields such as business, health, engineering, and computer science has grown dramatically, and the share of degrees awarded in the traditional liberal arts fields has declined” (Fogg et al 2012). However, when only students at four-year liberal arts or comprehensive research universities are considered, the picture is more stable: In the early 1970s, according to the National Association of Colleges and Employers, “41 percent of the degrees awarded went to students majoring in the liberal arts,” almost exactly the same percentage as in 2009 (Koc 2010). Yet even within this population of college students, there has been a shift away from some majors and towards others. For example, “The percent of graduates who majored in education fell from 21 percent in 1970-71 to just over 7 percent by 2004-05. By contrast, the proportion of graduates majoring in a business concentration grew from 13.7 percent in the early ’70s to nearly 22 percent today” (Koc 2010).

At UW-Madison, liberal arts and science majors remain popular. In fact, in recent years four of the five top majors, based on the number of degrees awarded each year, were part of the the College of Letters and Science:

- Economics (559 degrees awarded in 2017-2018)
- Biology (479 — shared with the College of Agricultural and Life Sciences)
- Computer Sciences (405)
- Psychology (376)
- Finance (317 — Wisconsin School of Business)

So while newer, more specialized majors will continue to come and go, students can still find value in pursuing broad majors based on disciplines that have been established for a century or more.

Choosing a major is not choosing a career

In the early 1990s, our expectations of how business, cultural, and political communication took place were overturned almost overnight by the rapid development of new “IT” (information technology) like the world wide web and the personal mobile phone. But according to the *Wall Street Journal*, “Only about 10% the people in IT jobs during the Silicon Valley tech boom of the 1990s, for example, had IT-related degrees” (Cappelli 2011). Even at Stanford University — a private, highly-selective research university located in the heart of California’s Silicon Valley — computer science was not the top major in the 1990s. According to business professor Randall Stross (2017), who recently published a history of Stanford interwoven with the career stories of several of its recent non-techie undergraduates, “in 1995, only fifty-one students majored in CS, about the same number as in history and half the number that majored in English. With the dot-com boom in the late 1990s, the department’s enrollment grew—in the graduating class of 2001, it more than doubled to 127—but when the tech bubble burst, enrollment fell back.” Today there is indeed a boom in CS enrollments at Stanford, but Stross argues that it was largely the result of the 2008 “Great Recession”: “Finance lost its allure, and the beneficiary was computer science” (2017). We may well be shocked to learn which major becomes the next popular pursuit in the 2020s.

This is not surprising to education researchers who investigate how one’s choice of major connects to one’s eventual career. Drexel University professor Neeta Fogg and her colleagues point out, “More than one-fifth of all employed college graduates with a bachelor’s degree work in a job that is not related to their undergraduate major” (Fogg et al 2012). That percentage may even be higher, according to a recent study by economists who “used data collected in the 2010 census to look at how well college graduates’ majors matched their jobs” and found “only 27 percent of college graduates with only a bachelor’s degree were working in a job that was linked to the graduate’s major by the federal government’s classification scheme” (Stross 2017). Researchers report similar findings when they survey employers about how they make hiring decisions. According to Cornell psychology professor Robert Sternberg, a recent *Chronicle of Higher Education* study found that “Only 19 percent of employers seek graduates from specific majors and are unwilling to consider candidates without those majors; the majority of employers — 78 percent — will consider students from any major” (Sternberg 2016).

What this means is that **students who graduate with one major can and do end up working in many other industries that might seem more related to other majors.** For example, a study based on the 2009 American Community Survey found that “Physics majors can be found in Computer occupations (19 percent), Management occupations (19 percent), Engineering occupations (14 percent) and Sales occupations (9 percent)” and that “Liberal Arts majors are found in Management occupations (18 percent), Sales occupations (15 percent), Office occupations (14 percent), and

Education occupations (13 percent)” (Carnevale et al 2011). In fact, for many students, the first or second job that they will find with their chosen major hasn’t even been invented yet.

Sample career paths which might follow an undergraduate Psychology major

Industrial Psychologist*	Organizational Psychologist*	Research and Development
Investment Banking*	Advertising	Real Estate
Human Resources	Broker	Salesperson
Financial Planner/Analyst*	Auditor	Market Researcher
PR Assistant	Training Specialist	Career Planning Specialist
Entrepreneur	Hotel Manager	Paralegal*
Travel Agent	Statistical Analyst*	Marketing

* Careers that require additional training/education

UW-Madison Department of Psychology (2014)

None of this means that your choice of major is unconnected to career outcomes; on the contrary, there are some interesting patterns that emerge from different kinds of majors. Researchers find that “social science majors are much less likely to work in jobs that are closely related to their major (20 percent), as are humanities majors (26 percent)” (Fogg et al 2012). But **the further you go with your education — pursuing graduate school or professional school beyond your undergraduate degree — the more likely you are to find a career related to your major.** And statistically, the likelihood that you will pursue graduate school is linked to the area of your major: “For example, bachelor’s degree holders who major in a physical science are very likely to earn an advanced degree. [...] Those who earn an undergraduate degree in education are even more likely to earn an advanced degree, although they earn a master’s degree much more frequently than a professional degree. In contrast, students who complete an undergraduate degree in business-related fields are less likely to earn any graduate degree. [...] Similarly, engineering majors are much less likely to earn a graduate degree” (Fogg et al 2012). In general, graduate school is an increasingly popular and important post-degree choice, according to the National Association of Colleges and Employers: “Nearly 40 percent of liberal arts graduates expect to continue on to another degree level before they begin looking for a job” (Koc 2010).

However, whether or not a particular major leads to a particular job, industry, or career is often less important to students (and their parents) when trying to choose a major than a second, more basic, underlying question: “regardless of the field I enter, will I be able to find adequate job security and salary?” As journalist Fareed Zakaria notes, “Since 1966, UCLA’s Higher Education Research Institute (HERI) has asked incoming college freshmen a set of

questions,” and “Over the last four decades, students have become more conscious of the need to make money” (Zakaria 2015).

As we saw in chapter 2, college students already enjoy a substantial wage premium in the labor market — their lifetime wages are higher than those of their peers without a college education. We know from the economic data on skills and salaries — and from interviews with employers themselves — that **this wage premium applies no matter what one’s major; organizations of all kinds value employees with the transferrable skills that come from a broad liberal arts and sciences education.**

These are the same skills as discussed in chapter 2, based largely on critical thinking and complex communication. Education reporter Jeffrey Selingo wrote that “Employers I interviewed in a variety of sectors understood the critical need for broad, liberal learning, even if they didn’t always use the language of higher education to describe it. Indeed, they told me that what will define success in the future is the ability of college graduates to tolerate ambiguity in their jobs” (Selingo 2016). Thus, whatever your major, as one Northwestern University professor described it, “keep in mind that there are four things you should take away from it. You should acquire a body of knowledge about a particular subject: what scholars have discovered. You should learn the standard methods of inquiry in your field: the ways that scholars gather information. You should gain the skills to analyze and process this information. And finally, you should get practice using these abilities to solve complicated problems in the field” (Roberts 2010).

But again, in terms of salary, some patterns emerge when considering broad types of majors. Immediately out of college, students with targeted professional or technical majors do tend to earn more, on average, than students with broader humanities majors; for example, “At the very top of the ranking are graduates with degrees in health-care and technical fields. These fields often require strong scientific and mathematical proficiencies” (Fogg et al 2012). But this differential disappears as one proceeds through their early career: “A longitudinal study conducted by the National Center for Educational Statistics found that the wage differentials that existed between career-oriented majors and academically oriented majors immediately following graduation were all but eliminated within 10 years” (Koc 2010). And of course, the type and scope of the organization you work for will likely have a much bigger effect on your salary and promotion path than your major: “An accounting major working for a small nonprofit organization in the Midwest will likely earn less than an English major working as an investment banker in New York City” (Brooks 2009).

Even though salary is reportedly more important to college students than ever before, the **millennial generation** (adults aged 18 to 34 in 2015) also considers quality of work to be more important than previous cohorts of graduates (Carlson 2017). Psychologists Jean Twenge and Stacy Campbell (2010) report that “Almost twice as many young people in 2006 rated having

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millennial generation

Adults between 18 and 34 years old as of 2015 (born between 1981 and 1997), who will compose 75% of the workforce by 2025.
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a job with more than two weeks vacation as ‘very important’ than did in 1976, and almost twice as many wanted a job at which they could work slowly. Nearly half now want a job ‘which leaves a lot of time for other things in your life.’” In other words, the current generation “is less likely to want to work overtime and is more likely to say they would stop working if they had enough

money.” Such choices remind us that not all jobs are to be found in the for-profit sector where the bottom line is money. In fact, “less than one-half of college graduates with a bachelor’s degree work as employees of for-profit business organizations,” because “Large shares of college graduates work for educational organizations, government agencies, and nonprofit foundations” (Fogg et al 2012). These outcomes are the result of students making academic and career choices on the basis of more than simply starting salary — such as how they want their work to affect the world. (It is likely that you are part of the “post-millennial generation” if you are reading this today ... what career choices will your generation make?)

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way of knowing

The shared concepts, theories, methods, and language that experts in your major use, not only to solve important problems in the world, but also to define what those important problems are in the first place.
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More important than choosing a major, perhaps, is succeeding in that major. This means developing an understanding of the **way of knowing** that your major represents — the shared concepts, theories, methods, and language that experts in your major use, not only to solve important problems in the world, but also to define what those important problems are in the first place. But grades matter too; in most cases, employers do screen applicants for low GPAs, according to surveys by

professional advising organizations (Curran et al 2006). As a result “the higher your grade point average, the more opportunities will be available to you,” reminds career expert Katherine Brooks: “Many prestigious programs, including White House internships, FBI programs, pharmaceutical sales positions, Wall Street jobs, and so on, screen candidates by GPA. And obviously, the better your grades, the better the graduate or professional school you will be able to attend. Good grades give you more freedom to select opportunities” (Brooks 2009).

Finally, it is important to remember that most organizations in the business and non-profit world who seek graduates in the college labor market don’t expect to hire someone who knows the job from day one and continues to simply do that same job throughout their career; rather, they expect to hire someone who is able to continually learn and adapt as the business or social environment changes unpredictably over time. As one professor put it, “Most

industries expect you to learn on the job, not to come already prepared. They would prefer to hire a brilliant and creative English major over an indifferent economics major” (Roberts 2010).

Outside your comfort zone — and off of the campus

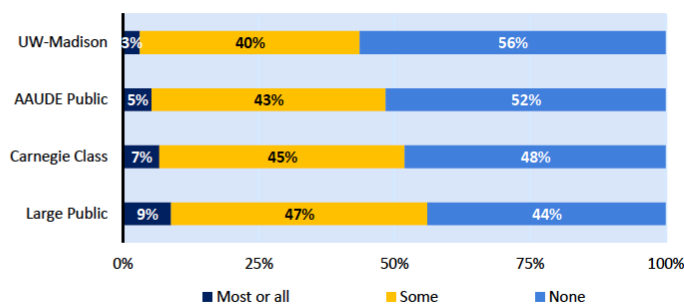
Even recognizing that any given major can lead to many possible careers, it is important to remember that one’s college education is not easily reducible to one’s major. What we call the **Wisconsin Experience** at UW-Madison refers to the holistic combination of your major with all of the other educational and extracurricular experiences that college entails at Wisconsin: general education requirements, certificate programs (known as “minors” at other universities), research experiences, honors courses and theses, service-learning and study abroad opportunities, and paid or unpaid internships, and volunteering and recreation, just to name a few.

At UW-Madison and other research or liberal arts universities, these kinds of supplements to your major are often called **high-impact learning practices** because of the way they force students to bring together all of their academic training in a collaborative problem-solving situation. And recent research shows that the more of these practices you can experience while in college, the better your chances of both success and happiness on the job market (or the graduate school market) after college. UW-Madison students generally do quite well compared to their peers on these measures, according to the 2014 National Survey of Student Engagement:

UW-Madison high-impact learning outcomes

Service-Learning

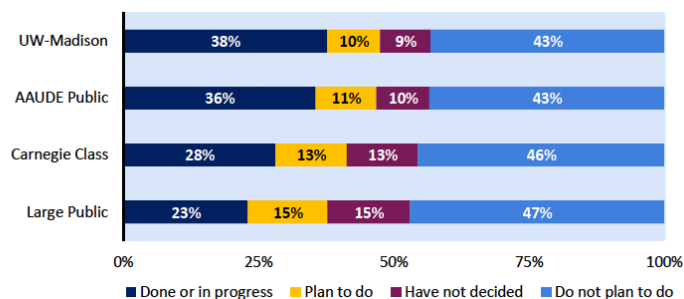
About how many of your courses at this institution have included a community-based project (service-learning)?



Research with a Faculty Member

Which of the following have you done or do you plan to do before you graduate?

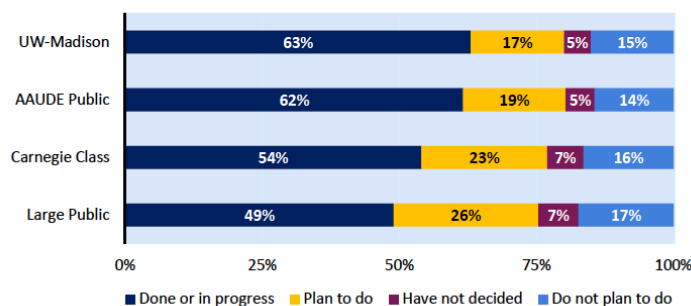
Work with a faculty member on a research project.



Internship or Field Experience

Which of the following have you done or do you plan to do before you graduate?

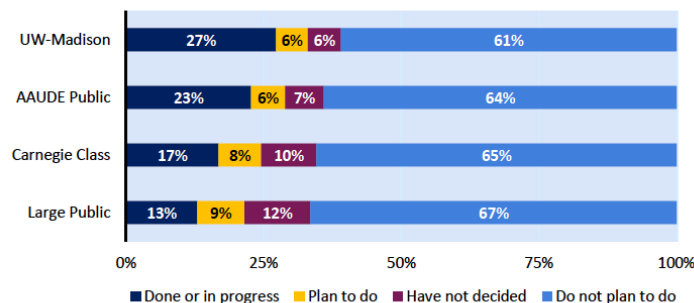
Participate in an internship, co-op, field experience, student teaching, or clinical placement.



Study Abroad

Which of the following have you done or do you plan to do before you graduate?

Participate in a study abroad program.



National Survey of Student Engagement (2014)

But why are high-impact practices considered so effective — and so essential? One reason is that these practices expand a student’s experience and force

them “outside of their comfort zone.” Take **service-learning**, for example. This kind of course brings outside volunteer work with a community organization together with classroom conceptual and theoretical training, to create what is often a life-changing educational and reflective experience. Students of the recent generation already engage in community service more than any previous

generation, according to a recent Nielsen study, *Millennials: Breaking the Myths* as reported by Fareed Zakaria (2015): “In 2011, 75 percent made a donation to a charity, 71 percent raised money for one, and 57 percent volunteered.”

Another extracurricular pursuit that will take you outside of your comfort zone — quite literally — is **study abroad**. According to education journalist Jeffrey Selingo (2013), “More than 270,000 Americans study overseas each year, nearly triple the number of two decades ago.” Such experiences range in

duration and intensity from one week spent working across the continental border to a full year spent living thousands of miles across the ocean. Here at UW-Madison, our rates of study abroad participation are among the highest in the US: over 2,000 students per year, making us first in the Big Ten among public universities. Why do so many of our students pursue this part of the Wisconsin Experience?

Selingo (2013) notes that “Those who study abroad often see it as a life-changing experience. In one survey of alumni, it was the most significant aspect of their undergraduate years, ranking higher than college friendships and courses.” And employers value these experiences too: “Global companies and organizations find qualified candidates in different countries with diverse backgrounds. These employers require previous international experience as proof that a student can work in a cross-cultural work environment and that the student has the skills to succeed abroad” (Kenyon et al 2014).

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ONLINE RESOURCE

Morgridge Center for Public Service
<http://morgridge.wisc.edu>
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ONLINE RESOURCE

International Academic Programs
<https://www.studyabroad.wisc.edu>
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Highest Participation: Top Ten Majors

Biology	134
Spanish	113
Political Science	86
Journalism	69
Psychology	64
International Studies	62
Economics	55
Communication Arts	53
History	48
Finance, Invest. Banking	42

Highest Participation: Top Ten Countries

Spain	177
Italy	169
England	131
China	71
Denmark	71
France	65
Australia	59
Costa Rica	54
Ecuador	47
South Africa	40

UW-Madison International Academic Programs (2015)

Or consider another opportunity that can expand your horizons a little closer to home: **undergraduate research**. Building on the longstanding vision of the “scholar-teacher model” of education — where “researchers are said to be more effective because they are instructors, and instructors are said to be more compelling because they are actively creating knowledge as researchers”

(Roth 2014) — almost all majors offer ways to engage in structured research experiences with faculty, whether through an independent study course or a senior honors thesis. Again, this is an important national trend, which has been growing for decades. Today roughly one-third of all college seniors produce some sort of final thesis or capstone project, and “Some three thousand students present their projects at the annual gathering of the National Conference on

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ONLINE RESOURCE

Undergraduate Research

[http://provost.wisc.edu/
undergradresearch.htm](http://provost.wisc.edu/undergradresearch.htm)
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Undergraduate Research, up from just a few hundred at its first meeting in 1987” (Selingo 2013). And you don’t need a formal class to find one of these opportunities; professors who work in collaboration with other faculty, graduate students, and postdoctoral researchers in a laboratory setting often have both paid and unpaid openings for undergraduate participation, where students can engage in firsthand discovery leading to peer-reviewed publication.

Finally, there are also **paid and unpaid internships** to consider. Dating back to World War I when they were first established by medical schools, internships broadened to occupations outside of health care in the 1960s, and today are almost mandatory for some highly competitive fields like finance and media. For example, at Goldman Sachs, “59,000 students apply for 2,900 intern positions each year,” with the peak recruitment period for summer internships falling between February and March (Selingo 2015). One recent survey of more than 4,000 employers indicated that 75% would be offering internships in 2017-2018, seeking students from across all disciplines (CERI 2017).

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ONLINE RESOURCE

L&S SuccessWorks Internships

<https://careers.ls.wisc.edu/ls-finding-an-internship/>

International Internships

<http://internships.international.wisc.edu>
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Internships can be a great experience, especially if they are both paid and provide direct exposure to or training in the career that you are interested in. But unpaid internships can be a burden, especially to students from low-income families, and especially if those internships really don’t offer any kind of direct exposure or pathway into the paid jobs of the profession. The good news is that on average, according to a Collegiate Employment Research Institute study, “employers hire as full-time workers around 50 percent of the interns who worked for them before they graduated” (Selingo 2015). So if you can find an internship that is affordable, and if afterward it reinforces your desire to follow that career path, it can often be a direct step into that career.

Here’s an example, as reported by L&S communications writer Katie Vaughn in 2017, of one student’s internship experience through SuccessWorks:

By any account, Grace Corry has an impressive resume. She’s a triple major in Political Science, International Studies and French. She’s spent hours volunteering, and she’s committed to a career that prompts positive change.

Yet there’s something else that sets the student from Shorewood, Wisconsin, apart from the crowd: her internships. [...]

In the fall of her junior year, Corry began researching internship opportunities. Inspired by her parents and older sister who work in the nonprofit sector, she set her sights on positions with community involvement in the description.

“I’ve seen how fulfilling it can be to give back in your job,” she says.

An internship within American Family Insurance's Community Investment Department piqued Corry’s interest. She interviewed in November, started in late May and decided to stay a full year. [...]

As one of roughly 70 interns at American Family, Corry participated in lunch-and-learn sessions and got to help her department partner with United Way of Dane County on a major conference.

While Corry understands that students already pack a lot into their schedules, she says they would be wise to make time for an internship.

“It’s training you to go out into the real world,” she says. “Seeing actual results of your work in a company or in the community, that’s really cool.”

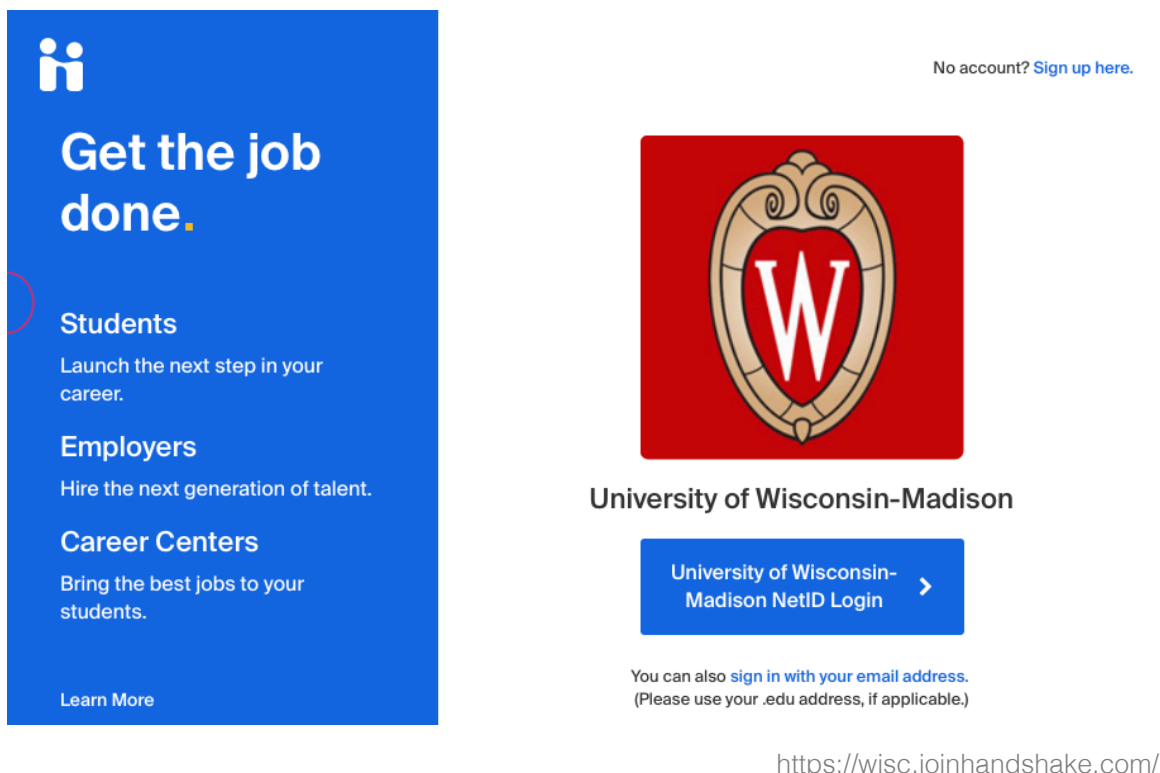
Grace Corry in the American Family Insurance Dreambank office in Madison.



(Sarah Morton)

At UW-Madison, we have a one-stop resource available for students seeking professional jobs or internships: the **Handshake** system at <https://wisc.joinhandshake.com/> comes preloaded with your information if you’re a UW-Madison student. Once you join Handshake and accept the Student Terms of Use, your information becomes visible to employers and you can use the system to explore opportunities from more than 200,000 employers worldwide. Sign up today!

Handshake login screen



The image shows the Handshake login screen for the University of Wisconsin-Madison. On the left is a blue sidebar with the Handshake logo (a white 'h' on a blue background) and the text "Get the job done." Below this are three sections: "Students" with the subtext "Launch the next step in your career.", "Employers" with "Hire the next generation of talent.", and "Career Centers" with "Bring the best jobs to your students." At the bottom of the sidebar is a "Learn More" link. On the right, there is a red square containing the University of Wisconsin-Madison crest (a gold shield with a white 'W' on a red background). Below the crest is the text "University of Wisconsin-Madison" and a blue button labeled "University of Wisconsin-Madison NetID Login" with a right-pointing arrow. Above the crest, there is a link "No account? Sign up here." Below the button, there is a note: "You can also sign in with your email address. (Please use your .edu address, if applicable.)" At the bottom right of the page is the URL "https://wisc.joinhandshake.com/".

Here are a few more places to look for internship, research, or service opportunities:

- **International Internships Program** database
<http://internships.international.wisc.edu/internships/database/>
- **Morgridge Center** volunteer opportunities database
<http://www.morgridge.wisc.edu/students-volunteer.htm>
- **Graduate School** summer research opportunity database
<http://grad.wisc.edu/diversity/srop>
- **WiScience** undergraduate research opportunity database
<http://biology.wisc.edu/research.htm>

While paid and unpaid internships cannot provide formal academic credit like most service learning, study abroad, and research experiences do, internships can be paired with UW courses, such as the **INTER-LS 260** one-credit internship course which is delivered entirely online, allowing a student to complete an internship anywhere around the country (or around the world) and still be enrolled in a supportive class with an instructor, a professional career adviser, and fellow students. This is the best environment to reflect upon whether or not your internship enables **transfer learning**, or “the

ability to generalize core principles and apply them in many different places” (Selingo 2015). With the support of your instructor, adviser, and fellow students, you can use the class to better articulate what aspects of your major have transferred into the internship work, and what aspects of your internship experience will transfer back into your academic success — and into your first full-time job.

Examples of recent UW-Madison student internships

Anug Saha

Hometown: Astoria, New York

Major: Civil engineering

Internship: Skanska Walsh Joint Venture, the entity leading a major modernization and redevelopment of LaGuardia Airport

Bonus perk: Assisting with the pouring of a major concrete bridge abutment, which involved conquering his fear of heights and climbing a 60-foot ladder.

More information: ecs.wisc.edu/students/co-op-and-internship



Ruth Lied

Hometown: Skopje, Macedonia

Major: International Studies and French

Internship: U.S. Embassy in Ljubljana, Slovenia, through the U.S. State Department

Bonus perk: Climbing peaks in the Julian Alps.

More information: careers.state.gov/intern/student-programs/



Andrew Strother

Hometown: Twin Lakes, Wisconsin

Major: Political science

Internship: Republican National Committee, Washington, D.C.

Bonus perk: Meeting Nikki Haley, U.S. ambassador to the United Nations.

More information: polisci.wisc.edu/undergrad/internships



Doug Erickson (2017)

Service learning, study abroad, undergraduate research, and even guided internships all suggest a second reason that high-impact practices are so important: they allow for **direct networking with instructors**. Education journalist Jeffrey Selingo (2013) argues that “Finding passionate, engaged professors is critically important in the first year of college, when it is easy to remain anonymous in large lecture classes.” He cites the work of professor George Kuh, one of the original authors of the “high impact practices” idea, whose large-scale research on the National Survey of Student Engagement has illustrated that “getting to know at least one faculty member well in that year improves the chances that students will get more from their college experience.”

But even more important than expanding horizons and networking with instructors is the third benefit of high-impact practices: increasing what education researchers like Kuh call **time on task** — opportunities to focus on a particular problem in a deep, active, and sustained way (Selingo 2013). It might sound counterintuitive, but the more time you spend on an academic or extracurricular project, the more likely you will be to encounter failure — and that’s part of the point. In his recent book *There is Life After College* (2015), Selingo reported “Recruiters repeatedly told me that today’s college graduates don’t have enough experience learning from failures or hardships, particularly on a job.” This feeds directly into Selingo’s advice for choosing a major: “find a major that will challenge you to work hard and one that will present you with opportunities to learn from the best professors and mentors.”

Major mix-ins and soft skills

Besides the broad high-impact categories of service-learning, study abroad, internships and research experiences, UW-Madison holds a host of other options that students can “mix in” with their education no matter what their major of study. These are targeted collections of courses and competencies which work together to bring a specific skill set to a student. Some of these are just bundled sets of two or three courses; some of them appear on your transcript as an official **undergraduate certificate** upon completion. And some are **professional capstone certificates** that you take after graduation. Here are just a few examples:

- **Digital Studies Undergraduate Certificate:** skills of searching, creating, and evaluating digital media in a variety of formats and platforms.
<http://digitalstudies.wisc.edu>
- **Business Fundamentals for Non-Business Majors:** skills of building, testing, and marketing a business plan in the for-profit or non-profit world.
<https://bus.wisc.edu/degrees-programs/non-business-majors/>

- **GIS Capstone:** skills of thinking spatially and assembling, analyzing, and visualizing patterns of activity across the natural and human world.
<https://www.geography.wisc.edu/giscertificate/>
- **Afro-American Studies Certificate:** skills of understanding, analyzing, empathizing, and communicating about the rich experience and crucial impact of African-Americans in historical and contemporary US society.
<http://afroamericanstudies.wisc.edu/programs/Certificate.html>

Employment recruiters sometimes call candidates with these sorts of unusual mixes of majors and certificates “**purple squirrels**” because such candidates who combine conceptual skills from one field and technical skills from another are both rare and valuable (Carlson 2017).

Beyond the specific technical or cultural skills that these kinds of certificates

.....
soft skills

Job-related skills gained through intensive, collaborative project experience like problem-solving, creativity, teamwork, perseverance, curiosity, and collegiality.
.....

offer, most of them can help you acquire and demonstrate what are sometimes called **soft skills** — skills associated with things like “curiosity, creativity, grit, digital awareness, contextual thinking, and humility,” and especially “how people get along with one another, communicate, and work in teams” (Selingo 2015). For example, here’s how one former student in the INTER-LS 210 career course described the soft skills learned from classwork in the UW-Madison Mead Witter School of Music:

I found that setting aside time to practice an instrument required discipline and self-motivation. Making sure I knew my part in choir and listening to those around me to achieve the best sound required effective teamwork skills. Befriending and convincing performers to play my pieces required top-notch communication. Building creative models of solo flute pieces in my composition course taught me how to extrapolate data from sets and think outside the box. Picking a piano piece to arrange for orchestra and meticulously proofreading each part showed me that the more time and effort I put into a project, the more pride I’d take in the final result.

We don’t call these skills “soft” because they are less valuable than other skills, or somehow easier to acquire; the so-called **hard skills** like technical or cultural knowledge that one gains from pursuing a university major in depth are simply easier to measure and standardize (Golinkoff et al 2016). In fact, some soft skills should be considered preconditions for even being able to develop hard skills. Take, for example, the soft skill of **executive function**: “being flexible in your thinking or finding another way to solve a pesky problem” while keeping your attention focused away from distractions or

dead ends. It is hard to imagine finishing any sort of extended scientific or literary project without having that skill. According to one education researcher, “these so-called ‘soft skills’ are not soft at all, but rather are more predictive of academic success than are the hard skills.” (Golinkoff et al 2016)

For all of these reasons, soft skills are increasingly important to for you to be able to consider, and demonstrate, in your job search. Consider the following study, as reported by Golinkoff (2016):

In April and May of 2006, a report titled *Are They Really Ready to Work?* was issued by a collaborative group including The Conference Board, Corporate Voices for Working Families, Partnership for 21st Century Skills, and the Society for Human Resource Management. More than 400 employers were asked what skills they considered most important and whether high school, 2-year college, or 4-year college graduates had these desired skills. It is interesting that the top five ranked skills were oral communication, teamwork, professionalism, written communication, and critical thinking or problem solving.

The consulting firm Burning Glass (2013) reported similar findings nearly a decade later: “by coupling a field-specific skill set with the soft skills that form the foundation of a liberal education [...] graduates can nearly double the number of jobs available to them.” They analyzed the skills requested in over 20 million job postings across a wide variety of industries (Selingo 2015). They concluded that “Employers report the greatest disparity between the skills they demand and those that recent graduates possess for written and oral communication skills, adaptability, and problem solving — all staples of a Liberal Arts education” (Burning Glass 2013).

Jobs available by skill and education combination

	Entry-Level Job Postings	Average Entry-Level Salary	Percent of Bachelor's Entry-Level Jobs
Jobs Traditionally Open to Liberal Arts Graduates	954,996	\$42,731	25%
Jobs Open to Liberal Arts Graduates with Additional Technical Skills	861,572	\$49,052	23%
Total Entry Level Jobs Accessible to Liberal Arts Graduates	1,816,568	\$45,729	48%*

Burning Glass (2013)

Together the four strategies we have discussed in this chapter — high-impact practices that challenge you and put you in direct contact with instructors, serious time-on-task in the major, targeted skills outside of the major, and soft skills like creativity, humility, teamwork and curiosity — all help move your career narrative into the form of the “T-shaped hire” that we talked about in chapter 2. As Jeffrey Selingo (2015) put it, though, “There’s more to being T-shaped than just having breadth and depth, however. It’s also about having balance and the agility to pick and choose from a set of knowledge and skills as they are needed.”

Ensuring equal access to educational opportunity

Providing these kinds of high-impact, “out of your comfort zone” opportunities is fundamental to what a liberal education is supposed to be all about. And universities that provide the cornerstone of liberal education in our society — especially the four-year, public universities attended by nearly a third of US high school graduates — are by definition intended to address concerns about economic disparity in society (Armstrong et al 2013). They are intended not only to provide equal opportunities to their talented and hard-working students without regard to socioeconomic status — claiming to be a **meritocracy** where the quality of one’s ideas, arguments and work is the only measure of success that counts — but also to provide the kinds of high-impact experiences and high-quality learning that will improve the lives of all students — contributing to overall **economic mobility** where graduates find a quality of life equal to or better than that of their parents. Many research findings support these hopes. In a recent article in the *American Journal of Sociology*, researcher Florencia Torche (2011) argued that a four-year Bachelor’s Degree still “offers equal opportunity for economic success regardless of the advantages of origins.”

Yet, like all of our other imperfect institutions, universities can fall short of their meritocratic and mobility ideals. Sociologists Armstrong and Hamilton, in their 2013 book *Paying for the Party*, studied decades of research on college outcomes to show that “There is strong evidence that parental resources (for example, money, social connections, cultural understandings, and educational aspirations) advantage affluent students in college access, admission, performance, and graduation.” They further argue that certain aspects of modern university life — especially what they call the **party pathway** through college, emphasizing televised spectator sports, alcohol-fueled social life, and conspicuous personal consumption over rigorous studying outside of classes — “systematically disadvantages all but the most affluent” (Armstrong et al 2013). If universities are to be sites of meritocracy and engines of mobility, they must reduce barriers to success that are based on socioeconomic class, not perpetuate them.

UW-Madison has not shied from this challenge. For example, recognizing that high-impact experiences like internships can pose a unique economic challenge to students from low-income families, UW announced a three-year partnership with the Great Lakes Higher Education Guaranty Corporation which would provide over \$360,000 to support over 200 new paid internships for “first-generation, low-income and multicultural, underrepresented students.” (UW-Madison 2016). Similar efforts to provide scholarships for study abroad students and to provide free transportation for service learning students show a commitment to making these “outside of your comfort zone” experiences accessible to the widest range of students possible. As we shall see later in chapter 9, these kinds of programs can help us build a more diverse and inclusive workplace for all.

REVIEW QUESTIONS

1. What happens during the “unsettled period” in a student’s development?
2. What kinds of considerations should one bring to their choice of major?
3. Name three different “high impact learning practices” available to students at the University of Wisconsin.
4. What is “transfer learning” and how can extracurricular experiences support it?
5. What is “time on task” and why is it important to student learning?
6. What are “soft skills” and how does one acquire them?
7. Why should colleges ensure that they offer more than just a “party pathway” for undergraduate education?

READ MORE ABOUT IT

Richard Arum and Josipa Roksa, *Academically Adrift: Limited Learning on College Campuses* (Chicago: University of Chicago Press, 2011). Research behind time on task.

Association of American Colleges & Universities, *High-Impact Educational Practices* (2008). Data on what high-impact practices are and how many students take advantage of them.

Anthony P. Carnevale, Jeff Strohl, and Michelle Melton, *What's it worth? The economic value of college majors* (Georgetown University Center on Education and the Workforce, 2011). Based on the 2009 American Community Survey, concludes that a college degree is clearly still valuable no matter what your major.

Bill Coplin, *10 Things Employers Want You to Learn in College* (Berkeley: Ten Speed Press, 2012). Good advice on mixing in technical and soft skills with your major.

Neeta P. Fogg, Paul E. Harrington, Thomas F. Harrington, and Laurence Shatkin, *College Majors Handbook*, 3rd ed. (St. Paul: JIST Publishing, 2012). A comprehensive look at the various industries and careers that link to all sorts of college majors, including recent salary data.

George D. Kuh, Jillian Kinzie, John H. Schuh, and Elizabeth J. Whitt, *Student Success in College* (San Francisco: Jossey-Bass, 2005). Research behind high-impact practices.

Sherrie Nist-Olejnuk and Jodi Patrick Holschuh, *College Rules! How to study, survive, and succeed in college* (Berkeley: Ten Speed press, 2011). Good advice on choosing a major.

Ross Perlin, *Intern Nation: How to earn nothing and learn little in the brave new economy* (New York: Verso, 2012). Ross Perlin is a contemporary critic of the practice of for-profit organizations employing unpaid interns, and his cautions are worth considering.

Andrew Roberts, *The Thinking Student's Guide to College* (Chicago: University of Chicago Press, 2010). Written by a Northwestern University professor, provides advice on making the most out of your undergraduate years using critical reflection.