

# BEYOND CLASSROOM BORDERS

Linking Learning and Work Through  
Career-Relevant Instruction



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Through Career-Relevant Instruction

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## PREFACE

During a professional meeting of academics in fall 2019, I engaged a tenure-track professor from a large private research university in a conversation about the present white paper topic. In response to the idea of faculty embedding career guidance in the classroom, this professor shared that they send their students to the career center for that type of advice. I replied that my co-author and I believe the more important charge for faculty is to make their classroom instruction more career-relevant by way of making explicit connections between disciplinary knowledge and practice to broader skills that students need to acquire to make them more employable. The career-ready knowledge, skills, and attitudes students need to succeed in the work environment can and should be called out within a traditional academic course. The professor replied, “We have adjuncts who have outside careers, so they bring that perspective.”

This particular conversation struck me as indicative of how we [faculty] perceive our roles as content experts in the classroom. More often, career-relevant aspects of learning are entrusted to student success (academic and career advising) and student affairs professionals. Placing career-relevance solely outside the purview of the classroom misses an opportunity to help students describe how their classroom experience has prepared them to be valuable employees. As my co-author and I discuss in this paper, there is a collaborative approach that leverages the strengths and knowledge of faculty and student success professionals to integrate career exploration and planning into students’ classroom experience.

As we set out to write this paper, we did so with an appreciation for the work faculty do to share their discipline with students. We examined the scholarship of evidence-based teaching, career exploration and planning, and motivation, among other related scholarship to investigate what faculty need to enhance the career-relevance of classroom instruction. We argue that career-relevant instruction will facilitate students’ ability to adapt to future work and learning demands and environments. Further, we posit that if faculty feel prepared and supported to implement uncomfortable new techniques to make classroom instruction more career-relevant they need to achieve some level of teaching and occupational self-efficacy and exhibit career engagement behaviors. We conclude with implications for instructional practice and future research, but with an eye toward academic leaders and ways they can support these efforts at their institutions.

Reflecting on my undergraduate experience, some of my amazing community college and university professors pushed me and others to embrace a feeling of discomfort as a way to instigate what I now know as deep learning, sense-making, exploration, and discovery. As faculty, we should walk the talk, and if we expect our students to feel a sense of discomfort in a way that spurs deep learning, then we too should embrace this within our professional realm and see what we might learn!

Finally, it is our hope that readers will approach this topic, not with a critical eye, rather, with a constructive view to exploring the question, “How might we better prepare faculty and students for success in future work and learning?”

—Steven C. Taylor

## INTRODUCTION

Higher education has made a substantial impact on society and democracy as a whole. From its nascent stages, higher education in the United States has been aimed at developing engaged, mindful, and conscientious citizens who could contribute to society. A college education has historically been lauded for the depth and breadth of knowledge students acquire through a robust liberal arts education.

Beyond a liberal arts education, and outside of the academy, employers now place increasing pressure on colleges and universities to more clearly align credentials with industry and workforce-specific competencies and skills (Everhart, Bushway, and Schejbal 2016), herein referred to collectively as career-relevant skills (see Figure 1).

This continuing call for greater alignment with career relevancy has been interpreted by many in the academy as a shift away from the liberal arts to vocational and technical education, and thus a reductive view of the rich possibilities of college. The assumption here is that market forces undermine the university's knowledge function. However, market forces are not denying that higher education prepares individuals for success outside of the classroom, rather, they are pushing for greater contextualization of classroom learning to nonacademic settings that build one's repertoire of knowledge, skills, and attitudes to be successful and engaged workers and learners. This work has never been more pressing, as the very nature of work is changing at a rapid pace and students are being called to professions that may not yet exist.

### FIGURE 1: Broadly Applicable Career-Relevant Skills

There are many efforts underway to codify what we discuss in this paper as career-relevant outcomes; these sets of knowledge, skills, and attitudes take on various terms and manifest themselves differently in how they are applied to student learning.

- The Association of American Colleges and Universities, in its Valid Assessment of Learning in Undergraduate Education (VALUE) initiative, outlines a set of “**Essential Learning Outcomes**” that all students need for success in work, citizenship, and life” (McConnell and Rhodes 2017, 7).
- The Quality Assurance Commons for Postsecondary and Higher Education (QA Commons) established a set of **Essential Employability Qualities** (EEQs) that are broadly applicable and equip students for immediate and future success in employment and participation in the rapidly changing workplace of the twenty-first century (Humphreys 2017).
- Strayer University has identified **10 Soft Skills** needed by students to thrive in any work environment and is reimagining its core curriculum to embed the acquisition of these skills across all degree programs (Strayer University 2019).

- The U.S. Department of Education Office of Career, Technical, and Adult Education has identified a set of general, cross-cutting abilities crucial to college and career readiness, deemed **employability skills**, that cut across the workforce development and education sectors (Perkins Collaborative Resource Network n.d.).

These collections of skills, though not an exhaustive list, share a commonality. For one thing, they are not just skills; they also include habits of mind and social abilities. Common attributes include **adaptability, communication, creativity, critical thinking and reasoning, ethical decision-making, leadership, problem identification and problem-solving, and teamwork**. Broadly speaking, these sets of skills cut across any single discipline and can be developed through intentional curricular experiences, regardless of the content being taught. Many of these are already being taught in the classroom—but there may be a lack of awareness by students as to how these skills, as they are currently taught, relate to community and workplace settings.

Employers and the academy both recognize the need for graduates to attain and demonstrate broader skills that enable their success in the workplace, yet, there is a disconnect between how higher education structures college attainment—the learned knowledge, skills, and attitudes associated with a degree and a particular major—and what employers say they require of graduates in a changing workplace. The value of nonprofessional majors has not been represented to employers the way that professional majors have, which creates intense faculty backlash, especially from the liberal arts (Neem 2019). Employer preference for pre-professional majors can be seen in trends that show these majors initially earn more than graduates in arts and sciences; however, that gap erases by midcareer. This is perhaps because critical employability factors sought by employers go beyond any single major or profession. The World Economic Forum (2016) *Future of Jobs Report* lists creativity, complex problem solving, and emotional intelligence among the top attributes needed for work in 2020. Arguably these are dispositions that undergird a liberal arts curriculum. The issue is that liberal arts are often contextualized within the confines of academia and have yet to fully embrace their relevance in the workplace, and in a language that speaks to employers (and students).

**Critical employability factors sought by employers go beyond any single major or profession.**

Against this disconnect is a society that is now, unalterably, supercomplex, that is, so complicated that it is beyond the capacity of any one discipline to broker or solve. The term “supercomplexity,” coined by educational philosopher Ronald Barnett (2000a, 2000b, 2000c), most certainly influences the meaning of a college degree. To be able to navigate the supercomplexity present in social and market forces, students must develop more than just a knowledge base acquired by spending

time in the discipline as majors—they must *become*, both personally and professionally (Leadbeatter and Peck 2017). The very act of becoming involves deep learning in which students understand and can contextualize what they are learning and can perceive ways in which they might apply the knowledge, skills, and attitudes they acquire to current and future contexts.



This paper is not an appeal to interdisciplinarity, which tends to reinforce existing academic structures (Kleinberg 2008). Nor does it privilege discipline-specific and vocational education over the liberal arts, or vice versa. Rather, the conversation instead focuses on increasing the depth and range of students' pre-professional repertoires—looking beyond the content of a single major or discipline to achieve mindfulness and acquire broader, career-relevant skills, if not socially conscious behaviors. The broader career-relevant skills and qualities (see Figure 1) are acquired not through a single curricular experience or course, rather, they are achieved through a blend of learning experiences that occurs within and across disciplines. The either-or binary argument between discipline-specific or liberal arts education is false, but so is the presumption that skills acquisition will alone equip students for robust professions. It is not a choice between both; rather, it is a necessity to acquire both to be successful in immediate and future work and learning. We touch on the intentionality of identifying, practicing, and acquiring these habits and skills later in the paper.

While embedding career relevance into the classroom is offered as a solution to this gap, it is important to acknowledge that faculty may perceive such work as ancillary to their formal roles as researchers and disciplinary experts, viewing career relevancy as a function of student services, not the classroom. This begs the question, “Why isn't it the role of faculty to relate teaching to students' life and career outcomes?” After all, students are likely to spend more time with faculty than with academic support professionals on campus, thus giving faculty the most influence over a student's trajectory during, and post-college. If faculty are not aware of the important role that their teaching has on students' employability and readiness for future work and learning, gaps will continue to exist between disciplines; this, despite growing evidence that employers place a high priority on students' demonstrated proficiency of cross-disciplinary knowledge and skills (Watson and McConnell 2018).

This paper offers an exploratory approach for enhancing career-relevant learning in the classroom. It places faculty—the single greatest influence on student success (Umbach and Wawrzynski 2005)—at the center of the work. This approach mines, then aligns, disciplinary values with post-college expectations and outlooks. Here we encourage faculty to reframe the significant contributions they make to students' ability to contribute as informed and engaged citizens in their communities, the workplace, and as lifelong learners. We approach the topic of career-relevant instruction first with a lens toward what students need to succeed in future work and learning, followed by critical elements that faculty need to enhance the career-relevance of instruction, and finally, with an approach academic leaders can take to support faculty in achieving greater career relevance in the classroom.

## WHAT STUDENTS NEED TO LEARN

### What Is Adaptivity?

As disruptive technologies and innovation rapidly alter the requirements of a skilled workforce, employers and education and training providers of the future will need to focus on individuals' readiness and preparedness to acclimate to the changing nature of work. Current students will be expected to demonstrate their capacity and capability to adapt and learn new skills on a more or less continuous basis. Similar to changes in the workplace and to how jobs will

be done, the learning environment will itself likely change; curriculum will require adaptation to how faculty teach and facilitate learning, and to how students transfer this learning into their civic and work lives. Career relevant curricular transformation is akin to the profound pedagogical changes that have resulted from the emergence of online learning in the past decades. This ability to adapt to a changing work and learning environment goes beyond disciplinary expertise.

The liberal arts are in a unique position to assist. They are naturally adaptive—broad and deep. A liberal arts education uniquely prepares students as lifelong learners, essential to maintaining relevancy and currency within work and learning environments that are and will continue to change at a rapid pace. This ability to learn over time, in changing environments and in different contexts, is important to the ability to adapt to contemporary work. As important as acquiring the ability to learn is one's ability to contribute to others' learning, and in a way that contributes meaningfully to a vibrant, civil, democratic society (Flores and Rogers 2019).

The demand for greater adaptivity is driven by an increasingly supercomplex environment that requires students, faculty, employers, and insti-

"The liberal arts are uniquely poised to produce graduates who have the skills and habits of adaptability. This happens as students engage deeply in specific courses and broadly across disciplines in ways that help them develop the curiosity, intellectual drive, empathetic thinking, and humility that leads to life-long learning. A liberal arts education also produces graduates with the critical thinking, problem-solving, communication, and team-work skills needed to adapt successfully and to help those around them do the same. As the pace of change speeds up and employers need this capacity more, liberal arts graduates will thrive professionally. But we need to do a better job helping students understand and articulate the relevance of the skills and habits they have acquired. We also must be more intentional in helping them understand how to put these skills and habits to use once they are in the workforce."

—Adam Weinberg  
President, Denison University

tutions to constantly evolve. It is quite possible that student-driven demand for greater career readiness, fueled by the need to upskill and reskill to remain competitive in the workforce, will spur institutions to adapt the teaching and learning experience.

Until recently, colleges had limited insights into how the student experience they provided promoted the long-term success of their graduates. However, the focus on how adults perceive the value, relevance, and quality of their postsecondary education experience is gaining momentum since the release of the first Strada-Gallup Alumni Survey in 2014 (Strada Education Network and Gallup 2018). This national survey examines college graduates' perceptions about how their college experiences prepared them to succeed in their lives after graduation, including measures of life and job fulfillment. The survey found that nearly two-thirds of recent graduates who had a mentor said their mentor was a faculty member, not a career counselor or academic advisor (Strada Education Network and Gallup 2018). In the Strada-Gallup Education Consumer Insights survey of more than 340,000 individuals conducted between June 2016 and April 2019, researchers found that career-relevant coursework, not wages, had the strongest link on American adults' perceptions about the value of their education experience. In the same study, survey respondents placed the highest value on career-relevant education programs, which lead the researchers to suggest strengthening the connections between coursework and jobs, regardless of field of study or degree (Strada Education Network and Gallup 2019).

Faculty are likely key implementers of changes needed to provide students with career-relevant educational experiences. We are not advocating for faculty to do more work; instead, we argue that teaching requires a mental shift—moving from disseminating knowledge about one's discipline to engaging students in deeper conversations about why the discipline matters—and making clearer connections between the discipline and its relevance to future work and learning. We recognize that faculty will also need to navigate a supercomplex environment, one where teaching and learning also change, similar to shifts that occurred with the advent of online learning. Later in this paper, we explore elements we demonstrate enable faculty to embed career relevance into their teaching.

The nature of how work and learning manifest in the future will be shaped by today's generation and those who follow, and higher education has a responsibility to help students build the skills to lead the change for the future they want to see. Regarding how colleges and universities prepare students to be successful in future work and learning, we propose two concepts that are important to consider—learner adaptivity and job crafting behavior.

**AAC&U's Essential Learning Outcomes represent not only higher-order cognitive, behavioral, and affective skills in an academic setting: they are the very skills that employers—from CEOs to hiring managers—tell us are critical in professional settings.**

## Developing Adaptable Learners

Learner adaptivity focuses on measuring an individual's confidence in his or her ability to adapt over time to a changing environment and anticipate and consciously prepare for future job transitions with the need to continuously upgrade knowledge, abilities, and skills (Hung, Lim, and Lee 2014). This confidence allows one to anticipate and consciously prepare for future job transitions with the need to continuously upgrade knowledge, abilities, and skills. Assessing learner adaptivity can aid in planning for learning activities or credentials that prepare individuals to succeed in future work and learning environments.

Colleges and universities are already concerned with helping students achieve the levels of proficiency needed for future educational and professional success.

Since 2009, many colleges have turned to the Valid Assessment of Learning in Undergraduate Education (VALUE) rubrics developed by the Association of American Colleges and Universities (AAC&U). The VALUE rubrics help to demonstrate, share, and assess students' learning progression across learning outcomes aligned with students' intellectual and practical skills, personal and social responsibility, and integrative and applied learning (Rhodes 2010). AAC&U's Essential Learning Outcomes represent not only higher-order cognitive, behavioral, and affective skills in an academic setting: they are the very skills that employers—from CEOs to hiring managers—tell us are critical in professional settings (Kathryne Drezek McConnell, personal communication, November 22, 2019).

To enable students to translate classroom learning into readiness for learning and work in nonacademic settings, faculty will need to make explicit connections between instructional activities and how these specifically equip students to navigate a supercomplex work and learning environment.

“Too often there is a mismatch between what our brochures promise and what employers think we deliver. Graduates cannot articulate what they have learned in an academic setting when they interview, onboard into their first job, or go for their first promotion. Whether the perceived gap is truly a “skills gap” or a failure of communication and translation is immaterial. Both represent a critical opportunity for creative reconsideration of classroom pedagogy, where faculty can leverage what we know from the learning sciences about good teaching to make things more relevant and meaningful to students' future selves without sacrificing the tenets and rigor of the discipline.”


—Kathryne Drezek McConnell  
Assistant Vice President for Research and Assessment  
Association of American Colleges and Universities

## Seeking Authentic Work Opportunities

Students' own adaptability will be important in order to successfully navigate careers. Students who demonstrate adaptivity are able to craft highly personal career paths and thereby optimize their work environment. To do this, they align their preferences, motives, and passions with jobs, otherwise known as *job crafting behavior* (van Wingarden and Niks 2017).

The ability to engage proactively in job crafting behavior is evident with the emergence of the gig economy, in which employees trade-in their nine-to-five jobs for project-based work tailored to unique knowledge, skills, and expertise (Istrate and Harris 2017). The gig economy, along with the increased frequency of job transitions throughout careers, makes it more important that we help students reframe their thinking. Rather than focusing on which careers are worth pursuing, students should also be given agency to develop career-relevant skills they know they need to be successful at finding any number of jobs, creating future work opportunities and prepared to direct their own learning along the way.

Building the capacity to engage in job crafting behavior fuels individuals to find or shape a job in a way that allows them to achieve a better person-job fit, which is believed to result in higher levels of motivation and work authenticity (Van den Bosch and Taris 2018). Improving individuals' ability to engage in job crafting behaviors is a core element to reskilling and redeploying workers to fill critical labor shortages and close talent gaps across specific regions and sectors of the U.S. economy. Faculty, along with student support professionals, play a key role in developing adaptable graduates confident in their ability to make decisions about immediate and future work opportunities.



“Employers are looking for people that possess both the depth to be productive in a specific job role, but also a set of enabling “soft skills” that will sustain them throughout their careers and contribute to both the employee’s and organization’s long-term success. Skills like communication, teamwork, problem-solving and collaboration are frequently developed in degree programs, but not explicitly tracked or assessed in a way that employers can recognize them. Employers are shifting their hiring toward a “what do you know,” rather than “where did you go” model of assessment; stackable credentials offer the prospect of better recognizing these work-ready skills.”

—Michael King  
Vice President and General Manager  
IBM Global Education Industry

## WHAT FACULTY CAN DO

### The Role of Faculty in Linking Work and Learning

Faculty remain the single greatest influence on students, and this influence largely happens inside the classroom (Umbach and Wawrzynski 2005). As accomplished professionals in their fields, faculty act as professional role models. Frequent student-faculty interactions have substantial and beneficial outcomes, including academic achievement and satisfaction, which in turn extend to other educational activities beyond the classroom (Kuh and Hu 2001). Faculty also promote feelings of belonging among students, regardless of socioeconomic status (SES) or first-generation status (Kim and Saks 2007). And while in-class interactions with faculty are beneficial for all, they have stronger impacts on students of color relative to retention and persistence than do out-of-class interactions (Anaya and Cole 2001; Kezar and Maxey 2014). Thus, faculty wield an understated influence on students' careers.

Faculty mold students' professional ambitions. Student-faculty relationships are significantly associated with psychosocial and academic outcomes, including increases in career aspirations. Komarraju, Musulkin, and Bhattacharya (2010) found that faculty attention to, for example, career development, predicted students' self-confidence, motivation, and achievement. Research also points to the relevance of classroom content vis-à-vis explicit connections between education and future careers as a mediating factor for student success, particularly for low-income students (Rose and Akos 2014).

Faculty raise the standard for effort in the classroom when they define and expect good work from their students. In one large study (N=4,501) of college students, relationships with faculty were stronger predictors of learning than student background characteristics, and strongest for students of color; the quality of faculty-student relationships included the belief that students can meet faculty expectations (Lundberg and Schreiner 2004), a predictor of the work world. "Faculty ought to understand the implications of their actions, both overt and subtle, on how students view their place in the world," write Kim and Saks (2007). Students specifically value interactions with faculty that involve group activities and business-like (entrepreneurial) relationships (Komarraju, Musulkin, and Bhattacharya 2010) and develop orientations to their origin communities depending upon how much effort faculty expend and how sensitive faculty are to feature these areas (Kim and Saks 2007). These attributes all describe professional sensibilities.

### Career-Relevant Outcomes: A Gap Remains

Career-relevant instruction already occurs on many campuses but remains an informal practice, unmeasured and not signaled in ways that students (or employers) may recognize. What needs greater attention is how faculty draw explicit connections between the discipline and careers, which allows students to recognize and signal to employers what they know and can do, including their ability to succeed in the workplace more generally.

Faculty tend to frame career relevance via their own research, and as a path to graduate school. For faculty, being career-ready means scholarship. Some faculty provide research opportunities to students as a type of career-relevant

education (it is also natural for faculty to use research as a means of deepening student awareness of the discipline). Undergraduate research, a demonstrated high-impact practice (HIP), is an especially powerful motivator of student success, and faculty who engage students in voluntary research promote degree aspirations for all (Kim and Saks 2007; Kuh 2008). Unfortunately, access to such research opportunities is uneven. Many HIPs, including research, are less accessible to all students (Struthers, MacCormack, and Taylor 2018). This is especially true for students of color, a group overrepresented in the first-generation population yet underrepresented in the literature on first-generation students, and who are often excluded from undergraduate research experiences because of inherent exclusionary practices and deficit perspectives regarding their ability and interest (Nuñez 2017). Nor do most undergraduate students go on to earn advanced degrees. One 2015 survey found that only 37 percent of all U.S. undergraduates went on to get a graduate degree, and most did not enroll in graduate school immediately following graduation (Baum and Steele 2015). Moreover, low-SES students, women, and students of color disproportionately enrolled themselves in master's degree programs, which have lower completion rates overall than doctoral and professional programs, incur greater debt, and generate lower earnings premiums (Baum and Steele 2015). Kim and Saks (2007) also report that women and students of color describe different levels of engagement with faculty at the undergraduate level, producing dissimilar outcomes for different groups depending on race or gender. While faculty can and do provide career-relevant instruction by engaging students in research, access to this opportunity—and by extension the scholar model—is uneven by race, gender, and income.

Unlike their students, faculty (especially tenure-track faculty) can expect a fairly prescribed career path via research and scholarship. The academy is itself a unique workplace: faculty are not asked to do things that other professionals routinely do. They remain uniquely tied to apprentice models fostered by the culture of the discipline (Becher 1989; Biglan 1973b). Faculty, through rigorous graduate study and research coupled with apprentice-like faculty or research positions, acquire further learning and a deep disciplinary knowledge base in the hope of attaining a coveted career faculty or research position. Faculty are affiliate members of the campus community and operate with unique independence. Many, especially those who are tenured, remain in one career (if not on one campus) for most of their professional lives. This means that faculty do not have to apply many of the skills that we would describe as career-ready, and so would have trouble teaching them.

The trajectories of faculty careers are qualitatively different from others, even within academic settings (e.g., non-faculty academic and student affairs professionals), and prepare them differently to provide career advice to students. However, while faculty are independent, they are also members of a department community and a discipline. They adhere to disciplinary norms and must abide by campus standards. While many faculty feel greater allegiance to a discipline than a campus where they work (Bamber 2012; Pifer and Baker 2016), they are increasingly called upon to collaborate within and across their colleges and institutions.

Because of the outsized influence that faculty have as role models, they are still in the best position to help students explore values, interests, skills, and future goals through relevant instructional experiences. These experiences are powerful; they can help inform future decisions students make about next-level learning and careers. Decisions typically include choosing a college major or minor, seeking internships, and challenging assumptions about career options. In other words, faculty already play a role in students' determination of utility value, that is, the perceived use of applying a learned task to the completion of other goals (Rose and Akos 2014). As students judge the utility of what they are learning, measured against other areas of their life, faculty are well-served to pique interest and

establish links via career-relevant instruction. Rose and Akos (2014) define relevance in the instructional setting as, “teaching practice that explicitly ties content and tasks learned in the classroom to potential uses outside of the classroom,” and which “challenges conventional norms of pedagogy” (539).

The literature on students in secondary education settings confirms, if not anticipates, the importance of career relevance in teaching practice, particularly for low-income students—and suggests that career planning has a substantial effect on the ultimate value students place on school (Rose and Akos 2014). Studies conducted by Destin and Oyersman (2010) as cited in Rose and Akos (2014) confirm that when students make real connections between their current education and realistic but hopeful futures, their level of academic effort increases.

Contemporary research demonstrates the need for career relevance in college student formation, for example, work-integrated learning (WIL) in which workplace learning is implemented formally in higher education curricula (Cooper, Orrell, and Bowden 2010). However, these laudable programs often rely on resource-intensive partnerships to develop and are often beyond the scope, ability, or interest of any single faculty member. There are few studies on how faculty can deliver these types of instructional experiences in the classroom by themselves. Without engaged professional development, faculty may feel challenged to reimagine career-related coursework or feel unsupported or unprepared to teach this way.

## Work Begins in the Classroom

We place career-relevant instruction in the classroom, which leverages the legitimacy that faculty already have with students. We suggest that students, through exposure to a discipline, develop or confirm interest in an area and begin to construct professional identities in the classroom. Students in one study reported only minimal contact with their instructors outside of class (Cotten and Wilson 2006), while Umbach and Wawrzynski’s 2005 analysis of two large National Survey of Student Engagement (NSSE) data sets found that faculty out-of-class interactions with students had little or no relationship with student perceptions of a supportive environment, or students’ perceptions of college gains. In framing likely gains inside the classroom, we are also sensitive to the needs of first-generation and Latinx and other students of color, who are less likely to benefit from certain interactions outside of class (Anaya and Cole 2001; Kezar and Maxey 2014). It therefore makes sense to locate career-relevant instruction within the coursework. What might this look like?

Good teaching matters during faculty-student interactions. Well-documented research continues to positively correlate instructional quality with student engagement, support, and learning outcomes (Stupnisky et al. 2018). Students are more engaged on college campuses where faculty use active and collaborative learning techniques (Umbach and Wawrzynski 2005). The NSSE data demonstrates that student-faculty interactions are especially critical to ensuring a curricular experience that fosters career and workforce-ready connections (Kuh 2008). The Association of American Colleges and Universities identifies 10 high-impact educational practices, adapted from the work of George Kuh (2008), including service learning, internships, diversity/global learning, ePortfolios, and undergraduate research (AAC&U 2011). Most of these HIPs anticipate student careers, even if LEAP does not primarily frame them this way. HIPs are positively associated with student persistence, better grade point averages, deeper-level thinking, learning increased analytical and critical cognitive development, better writing ability, and higher rates of student-faculty engagement. All 10 practices demonstrate evidence of being particularly benefi-




cial for underrepresented student groups (i.e., low-income, students of color, first-generation) (Kuh and O'Donnell 2013). Certain HIPs are applicable to both curricular and co-curricular experiences.

However, as described earlier, not all HIPs are accessible to all students due to personal, financial, or resource barriers. Several of these HIPs are resource-intensive, requiring high levels of coordination and communication with outside actors. Five HIPs that do *not* require this level of coordination *are* grounded in the classroom and are therefore accessible to nearly all learners include 1) the first-year experience (FYE), 2) common intellectual experiences such as core curriculum or general education, 3) learning communities, 4) writing-intensive courses, and 5) collaborative assignments (Struthers et al. 2018). These five are transformative for all students, regardless of campus or students' personal, financial, or resource barriers. These HIPs can be scalable, generally cost-effective, and widely implemented.

Transformative learning (Mezirow 1997) occurs when students discover something about themselves in the process of doing classwork (“Who am I as a student in this major?”) through personal reflection and social interaction. Faculty may assume that students learn teamwork when they put students in groups, critical problem-solving when they ask students to solve problems, and writing in the discipline when they assign students to write. But disciplines solve problems differently and value distinct writing genres. Experts often work alone. Faculty forget what it was like to be novices and may not explicitly teach agreed-upon disciplinary forms of teamwork, problem-solving, and writing. These habits, ingrained in experts, are often opaque to students, and many worthy practices only hint at the possibility of their use in future work. Faculty should make their discipline's ways of knowing obvious to students through practice, so much so that students can understandably signal their application to (nonacademic) employers. For example, in group work, student reflection (self-awareness) plays a key role in helping students understand how teamwork prepares them to coordinate with others. Ideally, the group assignment itself would be transparent, reflection would feature prominently, and the ability to form a good team—not just the quality of the project—would be assessed.

Faculty can begin to make their courses career-relevant by asking: What habits of mind does my discipline value? How do people work in my discipline? What are the threshold concepts that define my discipline? How is my discipline creative? How do we make judgments? How do we solve problems? What types of communication does



“Recognizing the critical connections between instruction and post-graduation outcomes, SEI is creating a new vision of what it means to support students in their student academic and career success efforts. Strayer University, for example, is launching in the states where approved, a completely reimaged, employability-focused general education curriculum to explicitly and transparently introduce, teach, and begin to assess students on 10 essential employability skills through the context of the liberal arts.”

—Andrea Backman  
Chief Employability Officer  
Strategic Education, Inc.

my field recognize and reward? How does my discipline negotiate the world? Attention to such questions can make for a more vibrant course. Faculty will also help students to situate themselves in the college classroom, in many ways a pre-professional setting. People construct working identities in college and take these with them into the future. In Figure 2, we offer a menu of suggested techniques that faculty might employ in the classroom to make these connections more explicit.

There is a lack of literature that explicitly engages faculty in how to embed career relevance in the classroom using the existing framework of the discipline, in ways intentional and transparent. Many faculty can and do build classroom practices that emphasize more than course content, whether they are cognizant of this or not. Personal attributes, not just knowledge, will come into greater relief. These can be developed through coursework that integrates self-awareness, including attention to emotional and ethical domains, with foundational knowledge and technical skills (Leadbeatter and Peck 2017). We have suggested that these so-called affective, non-cognitive skills are absolutely key to career success, already matter deeply to disciplines, and can be positioned around a field of inquiry and called out in ways obvious to students.

The scholarly literature is robust with regard to “career readiness” in the classroom setting; however, most research is situated in the secondary school curriculum or as an extracurricular activity. Educational scholar David Conley (2010) has extensively researched and proffered guidelines and practices for secondary school teachers to enhance high school students’ college and career readiness through curricular and behavioral interventions. Scholarly work exploring the infusion of career exploration, readiness, and preparation in the postsecondary classroom setting is less prevalent. This creates an opportunity and a need for future studies on career-relevant instruction in college settings.

## **FIGURE 2: Suggested Techniques to Make Instruction More Career-Relevant**

With any new classroom intervention, faculty will need to make changes to instructional practice. The following suggested techniques, although modest, go a bit deeper to build career relevance. Each builds upon a high-impact practice (see *Work Begins in the Classroom*) and is easy to implement in coursework. This list is by no means exhaustive. However, all of these affirm disciplinary norms and beliefs, while making them discoverable for students.

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### **THRESHOLD CONCEPTS**

A threshold concept is a transformative idea found in a discipline that defines a discipline’s key pre-occupations, and that once understood, propels the learner to deeper understanding. The threshold concept is akin to a door’s threshold; Meyer and Land (2003), who pioneered the term in their work with economists, describe threshold concepts as liminal and a rite of passage where once stepped over, there is no going back. Examples include *limits* (mathematics), *opportunity costs* (economics), *the subaltern* (history), and *musicianship* (music), although a discipline usually has many threshold concepts.

Threshold concepts are a powerful way to bring students into the discipline and are useful at any level of the undergraduate curriculum. They could be used to help students define:

- Disciplinary values, helpful when students decide on their majors but also useful in both GE and courses in the major
- Habits of mind of scholars: (FYE) framing what being a college student means
- Framing what a discipline does and framing what an expert is (expert-novice differences)
- Skills and attitudes that a discipline routinely uses

*Associated HIPs: FYE, common intellectual experiences, and writing intensive courses*

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### **METACOGNITION**

Daily routines of scholars mimic good professional work routines; faculty have more impact than they know; for example, how students understand what their instructors do or how they manage their time. Faculty will need to be explicit in describing to students how they approach common work, such as reading and writing and problem-solving. Metacognition bridges the expert-novice divide and fosters self-awareness, a highly desired professional skill (Fox and Hackerman 2003). Faculty can help students by making their thinking visible, promoting engagement and independence for their students in and outside of the classroom (Ritchhart, Church, and Morrison 2011):

- “Think-aloud protocols” (Jourdenais et al. 1995), discussion protocols like the Question Formulation Technique (Rothstein and Santana, 2011) and other instructional routines such as Reading Apprenticeship (Schoenbach, Greenleaf, and Murphy 2012) all employ metacognition to reveal habits of mind and get students to see themselves in the course material.

*Associated HIPs: FYE, common intellectual experiences, and writing intensive courses*

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### **WRITING GENRES**

Writing genres employed by a discipline reveal subtle ways that the discipline communicates; these ways need to be thoroughly unpacked for students. Faculty can reflect on why they assign the writing assignments they do, how these are structured, and what writing assignments are meant to reveal to students about the discipline (and themselves). The ability to tackle a text and to write to specific audiences is central to the reading and writing that employers ask for. Writing is also uniquely metacognitive and builds self-awareness. Assignments that are impactful for students give them the opportunity to engage with instructors, peers, and text—and build future aspirations and identities (Eodice, Geller, and Turner 2017).

*Associated HIPs: Writing intensive courses*

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### **TEAM-BASED LEARNING AND GROUP WORK**

Team-based learning or group work is most connected to the reality of work, which demands workers who can function in teams. Faculty need a teaching strategy that promotes critical thinking, collaboration, mastery of discipline knowledge, and the ability to apply these. Team-based learning

or TBL (Michaelsen, Bauman Knight, and Fink 2004) is especially useful for gregarious disciplines that work in groups, but a helpful challenge for disciplines who do not. Faculty who work alone may be challenged to think about their role as facilitators during class discussions, and how group and individual performances intersect and should be evaluated.

*Associated HIPs: Collaborative assignments*

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### **FIVE-STEP PROBLEM-SOLVING METHOD**

Students often experience their general education courses as mini seminars for disciplines in which they typically lack interest. A department may consider restructuring GE or survey courses for career relevance. One early-stage concept being tested at California State University, Los Angeles, is the five-step problem-solving method, repurposed from the AAC&U's (2009) problem-solving VALUE rubric. The modified five-step process (which was designed to meet a GE community engagement requirement) uses the discipline to structure a way to solve a problem of benefit to the larger society. The VALUE rubric measures the quality of a process, rather than a finished assignment. Any discipline can use the rubric, and the skills students learn are transferable. The problem-solving method engrosses students in meaningful work (students help to name the problem and must demonstrate their critical thinking) while authentically engaging disciplinary frameworks.

*Associated HIPs: FYE, common intellectual experiences*

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### **EXPLORING CIVIC AND ETHICAL ISSUES**

Reflecting on over two decades of developments in the educational and social purposes of higher education, noted scholar Arthur Chickering (2010) argued that higher education's concern for cognitive and moral development waned and gave way to short-term goals oriented to post-graduation employment. Whether Chickering is right, or to what extent he is right, is not for debate in this paper; rather, his suggestion begs the question, "How is higher education helping students to develop higher-order cognitive and interpersonal skills necessary to navigate ethical decision-making in today's supercomplex, socially divided, and politically divisive society?"

Colleges and universities have a role in preparing students to be engaged citizens adept at identifying, articulating, and pursuing the common good in the course of their pursuit for personal and professional success (Alger and Goldberg 2019). A number of campuses are leading on this front, apparent through the accounts of academic leaders and scholars in *Democracy, Civic Engagement, and Citizenship in Higher Education* (Flores and Rogers 2019). This renewed call for higher education to reclaim its civic purpose is, in part, a response to the perceived threat to democracy in our current age of political divisiveness, and arguably a response to eroding public trust in higher education. Many of the schools represented in these accounts share how they have taken a cross-curricular approach that marries a robust interdisciplinary education grounded in good pedagogy with opportunities for students and faculty to engage in civic education and activism outside of the classroom.

## Harnessing the Power of the Discipline

The power of any discipline can be successfully harnessed in the college classroom to achieve lasting impact at scale. Faculty members who emphasize a range of habits—students’ intellectual skills, practical skills, or personal and social responsibilities—appear to have higher levels of student-faculty interactions (Wang, BrckaLorenz, and Chiang 2015). This means that faculty can and should structure coursework for student growth and development beyond course content, as well as value on-campus supports, often provided by student development professionals, to support students’ development outside of the classroom. Efforts that radiate from the classroom, where the locus of faculty influence remains strongest, are likely the most successful in the long term. Here, faculty have real ownership and can take the lead to create meaning from experiences within a course, drawing explicit connections between instructional relevance and the future work lives of their students.

No one can predict what future work will look like. However, determining how to embed students’ attainment of career-relevant skills—adaptability, communication, creativity, critical thinking, ethical decision-making, leadership, problem-solving, and teamwork—in the classroom and across all disciplines makes it more likely that students will be successful professionals.

## HOW INSTITUTIONS CAN SUPPORT FACULTY

### Unleashing a Culture of Career-Relevant Teaching

To maximize teaching effectiveness, academic leaders should consider the opportunities they afford faculty to acquire, practice, and reflect on the use of evidence-based teaching practices, including techniques to embed career relevance into curriculum. A supportive teaching culture allows faculty to experiment with new teaching practices and refine their teaching based on reflection and student and peer feedback. Such a culture might manifest itself through a visible and engaged teaching-focused faculty community (Rawn and Fox 2018).

Adjusting teaching to embed career-relevance across the curriculum requires changes in how faculty are prepared to teach and facilitate learning in the classroom. Similar to faculty concerns and experiences with teaching online during its early stages (Mitchell, Parlamis, and Claiborne 2014), support for experimenting with career relevance in the classroom will be an important component to get faculty buy-in and engagement. Most faculty either do not have a solid understanding of what is meant by career-relevant teaching or do not have the expertise to help students practice for the future; many classrooms are still dominated by lecture. Embedding career relevance in the classroom (an activity once viewed as being only within the purview of student affairs) will require a significant shift of institutional and teaching cultures to become a reality.

As noted earlier, faculty professional identities are often defined as research identities at the expense of teaching, and professional identity is at the heart of any discussion on change (Brownell and Tanner 2012). This identity-conflict between faculty as researchers and not teachers proves to be a barrier to faculty participation in educational development (Brownell and Tanner 2012). This leads us to believe that faculty, depending on rank, may perceive the fusion of career relevance in the classroom—currently understood as career guidance or career planning activities—as a further incursion on their faculty roles. This perceived scope creep may vary based upon faculty appointment type (i.e., tenured, tenure-track, or non-tenure-track).

A place to begin socializing the concept of career-relevance of classroom instruction would be to develop a community of faculty from different disciplines to explore and share how career-relevant skills are or could be embedded into the curriculum and in a way that naturally aligns with the work faculty already do in the classroom. Faculty development (teaching and learning) centers can assist with this work. The ultimate goal would be to make career-relevant instruction systematic across disciplines. Faculty who are successful in this effort demonstrate greater relevance of the curriculum to students, and this may peak greater interest in the subject matter and drive course enrollment.

## Faculty Motivation and Career-Relevant Teaching Outcomes

The way colleges are structured, that is, organized into academic and administrative departments focused on specific sub-problems or goals they aim to solve or achieve, is intentional to minimize conflict (Birnbaum 1989; Morrill 2007). However, this tends to create a transactional culture of short-term commitments, self-interest, and self-promotion (Bass and Avolio 1993). For faculty, this can be seen by professional identities shaped more by affiliated discipline-specific cultures and norms than by an academic institution (Clarke, Hyde, and Drennan 2013; Swarat et al. 2017). These discipline-specific norms and values can lead to subcultures within the institution that must negotiate competing priorities or outcomes (think competing priorities between academic departments and among academic and administrative units) (Schein 1990).

Given the stronger affiliation faculty have with their discipline or academic department, academic leaders might consider tapping into this motivation as a hook to engage faculty in cultivating curricular experiences that prepare students for future work and learning. Expectancy theory suggests that individuals will be motivated if they are capable, believe their efforts contribute to a certain outcome, and believe their work is worthwhile (Northouse 1997). Expectancy theory has been used as a promising measure to examine faculty motivation to adopt new teaching tools (Turcan 2010), as well as participate in their own educational development (Wood 2015; Taylor 2019).

One approach academic leaders might take to attract faculty in conversations about career-relevant instruction is to tap into faculty's desire to embrace and showcase their disciplines. These conversations can also center on the promise that career-relevant instruction could have by cultivating students' appreciation for the discipline.

Transforming teaching from the sharing of disciplinary expertise to the facilitation of academic inquiry (with career exploration and planning grounded in experiential learning) will take time and a commitment to support faculty as they hone their teaching skills, and in some cases experience a sense of role confusion. Supporting faculty as they implement changes to their teaching practice is more readily enabled by consistent opportunities for robust professional development for all instructors, including regularly anticipating demands on curriculum caused by social complexity, which spurs growth, practice, and experimentation. Faculty should be able to see the promise of promoting students into work outside of the academy.

## Faculty Efficacy and Engagement

This paper has demonstrated that teaching can be career-relevant if it focuses on the methodology of the discipline rather than just content. For faculty to shift from delivering discipline-related to career-relevant instruction, we propose there is a necessary progression that one must go through in order to build and transform teaching capacity. Faculty must first achieve a strong sense of teaching self-efficacy before they can develop strong occupational self-efficacy—which in turn leads to faculty demonstrating positive career engagement behaviors. We propose the faculty efficacy-to-engagement pathway (see Figure 3) as a promising model to understand the interpersonal development that faculty will experience as they embed career-relevance in the classroom. Academic leaders can use this model to consider how to facilitate and best support faculty's teaching and disciplinary-related career development.

**FIGURE 3: Faculty Efficacy-to-Engagement Pathway****Teaching Self-Efficacy**

**Teaching Self-Efficacy** refers to one's beliefs about his or her ability to successfully perform specific teaching and learning-related tasks in the classroom (Dellinger et al. 2008). Faculty need to feel confident enough in their ability to implement basic effective teaching practices,<sup>1</sup> before they can introduce deep pedagogical changes (career-relevant curriculum). A strong sense of teaching self-efficacy is essential here; faculty who have a positive perception of recommended changes to instructional approaches are more likely to make those changes (Condon et al. 2015). Additionally, teaching self-efficacy is an element we think is necessary for faculty to take stock of their broader occupational academic identities.

**Occupational Self-Efficacy**

**Occupational Self-Efficacy** refers to the perceived ability to successfully navigate occupational challenges and work-related tasks in various types of work environments, which has been shown in the secondary education setting to enhance teachers' task performance, organizational citizenship, and work engagement (Klaeijnsena, Vermeulenb, and Martensa 2018). Much of the literature on occupational self-efficacy focuses on workplace settings outside of postsecondary education; however, the concept can be applied to college settings. We propose that occupational self-efficacy is intimately linked to teaching self-efficacy. Building from the demonstrated outcomes of occupational self-efficacy research in non-postsecondary education settings (Guarnaccia et al. 2018; Rigotti, Schyns, and Mohr 2008), we think faculty who gain confidence in their employability (e.g., feel secure in their ability to teach and move through the teaching ranks), will find they are also ready to engage in career planning activities. They may also increase their perceived competence to fulfill associated job tasks. For college faculty, occupational self-efficacy is critical to their ability to innovate and experiment with career-relevant instruction.

**Career Engagement**

**Career Engagement** refers to the degree to which an individual engages in self-directed career management behaviors. Career engagement helpfully explains proactivity in career development as expressed by diverse career behaviors (Hirschi, Freund, and Herrmann 2014); it can be useful in understanding faculty career behaviors more broadly, that is, beyond specific constructs like work commitment or motivation. For college faculty, success in their teaching roles may be shaped by their level of teaching self-efficacy and occupational self-efficacy, which may impact how they engage with the institution outside of their specific teaching role. Career engagement for faculty is a culminating outcome of teaching- and occupational self-efficacy.

<sup>1</sup> ACUE is one example of a faculty development program that equips faculty with evidence-based teaching practices to enhance classroom instruction. ACE endorsed the ACUE Course in Effective Teaching Practice following a rigorous peer review of the effective teaching modules that comprise the Course. ACE is invested in ACUE's success and entered into a collaboration with ACUE to enhance student outcomes through online professional development programs for college instructors.




What if faculty who teach do not fully embrace a teaching role? Notably for some, despite having teaching responsibilities, teaching is not where faculty invest in their career engagement. Career engagement for these faculty may be defined as the level of investment in and contribution they make to their disciplines by way of research, service, or involvement with a disciplinary association, and not through demonstrated teaching achievement. Still, connections to professional work in the field could enhance faculty's ability to make stronger connections between the theoretical underpinnings of the discipline and the practical applications of theory in work- and community-based settings.

## Leveraging Expertise Across Campus

Student success does not reside within one particular academic or administrative unit of the institution; it must be ingrained in the DNA of every aspect of an institution with faculty, academic and student affairs professionals, and academic leaders each owning their role in contributing to students' positive experiences during and beyond their college career. A shared approach to student success allows faculty and academic and student affairs professionals to leverage each other's expertise and create an infrastructure that capitalizes on the leadership of multiple people in the organization (Kezar and Holcombe 2017).

Embedding career relevance in the classroom, while being faculty-driven, does not have to be an isolated faculty effort. Rather, this becomes an opportunity for academic leaders to identify and shore up resources and expertise across campus to support career-relevant instruction. Leveraging cross-campus expertise could manifest itself through academic and career advisors acting in a consultant-like role to faculty and departments, providing them with resources to embed career-relevant information into their curriculum. Chen (2005) shares the example of a career counselor providing career planning tools for faculty to use in the classroom, and where the faculty might offer suggestions on revising these very same tools. The relationship among faculty and their campus colleagues should lead to sharing ideas that leverage the influence faculty have with students in the classroom, and the career exploration and planning resources student affairs professionals have at their disposal.



“When institutions place students at the center we can more easily break down silos and facilitate the sharing of best practices across departments. Faculty and staff also begin to see student success as a critical part of their job; this includes ensuring student readiness for a meaningful career. I’ve seen successful programs where faculty engage in “faculty Internships” to stay abreast of industry trends and embed workplace-relevant examples and lessons into the classroom and share their experience with peers. These faculty indicate that the industry experience makes them better teachers and advisors for their students.”

—Bonita Brown  
Vice President and Chief Strategy Officer  
Northern Kentucky University

## HIGHLIGHTED INITIATIVE

### The CIC Consortium for Instructional Excellence and Career Guidance

In 2017, the Council of Independent Colleges (CIC) and the Association of College and University Educators (ACUE) launched the Consortium for Instructional Excellence and Career Guidance.<sup>1</sup> With support from Strada Education Network, nearly 500 faculty at 26 CIC member institutions completed an ACUE course in effective teaching practices and earned an ACE-endorsed certificate in effective college instruction with a concentration in career guidance and readiness.<sup>2</sup> Faculty developed a comprehensive set of instructional practices shown to improve student outcomes and close equity gaps. Faculty also learned how to make courses more relevant to students' career aspirations and how to create assignments that develop students' career-related skills.

"Since CIC first announced the Consortium, member institutions have been enthusiastic," said David Brailow, CIC vice president for development. "There is a hunger to improve teaching in ways that will help students engage more deeply in their studies while simultaneously guiding them toward career pathways that will lead to success after graduation" (CIC 2019).

Across the Consortium, 95 percent of participating faculty find the experience relevant, are implementing dozens of evidence-based teaching practices, and are more confident in connecting their courses to careers.<sup>3</sup> Over 80 percent of students reported that their instructor helped them develop career-related skills. In related research, such leading indicators are associated with closed achievement gaps, higher rates of course completion, and deeper levels of learning among students taught by ACUE-credentialed faculty (ACUE 2019).

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#### Institutions Participating in the CIC Consortium for Instructional Excellence and Career Guidance:

Albertus Magnus College (CT)	Goshen College (IN)	Regis College (MA)
Albion College (MI)	Husson University (ME)	Roanoke College (VA)
Alderson Broaddus University (WV)	Lebanon Valley College (PA)	Sacred Heart University (CT)
Bloomfield College (NJ)	Lourdes University (OH)	Stillman College (AL)
Briar Cliff University (IA)	Lynn University (FL)	Talladega College (AL)
Butler University (IN)	Maryville College (TN)	Tiffin University (OH)
Concordia University Texas	Mills College (CA)	University of La Verne (CA)
Dillard University (LA)	Mount Saint Mary's University (CA)	Wesleyan College (GA)
Elmhurst College (IL)	Nebraska Methodist College	

1 To learn more, see "Creating Value," by Penny MacCormack, Kevin P. Reilly, and David Brailow, in *Change: The Magazine of Higher Learning*, July 2019, and CIC's *2017–2018 Annual Report* at <https://www.cic.edu/a/AnnualReports/CIC-Annual-Report-2017-2018.pdf>.

2 ACE endorsed ACUE's Effective Practice Framework and its courses in effective instruction following an independent peer review of course content, learning design, and basis in research. ACE has also provided investment support for ACUE in order to provide tools and resources to instructors and institutions that enhance student outcomes through quality instruction.

3 Presentation to the CIC Presidents Institute, Marco Island, Florida, January 2020.

## Leading the Change

Academic leaders have a significant impact on the change efforts of the institution. Thus, it is critically important for leaders to understand the type of change to be undertaken and to recognize that not all change is of the same magnitude, nor is change always perceived at the same magnitude by different people in an organization (Waters, Marzano, and McNulty 2003). To help understand the magnitude of change that faculty and others on campus might experience, Waters, Marzano, and McNulty (2003) define change efforts on two levels: first-order change and second-order change.

First-order change is transactional, generally accepted by the team, consistent with already established values and norms, and is implemented with existing human resources (Waters, Marzano, and McNulty 2003). Second-order change is disruptive, can be fluid and will challenge current structures and processes, will require some re-aligning of job roles and skilling-up to proficiently carry out the task, and in some cases will directly conflict with individual values and connection to their academic role (Waters, Marzano, and McNulty 2003).

Leaders across the institution will need to determine the magnitude of the change experienced by members of the community and the effects change will have on faculty as well as other student success professionals. Asking faculty to orient teaching toward career-relevance and asking student success professionals to more closely align their efforts with classroom instruction may to some be perceived as disruptive or threatening to their roles and professional identities.

Academic leaders should position changes to expectations of teaching outcomes in a way that is not alienating for faculty, and leaders should be honest about the level of change that their institution is capable of. Efforts to transform teaching from the sharing of disciplinary expertise to the facilitation of academic inquiry with career exploration (grounded in experiential learning) will take time and a commitment to support faculty. Some faculty may experience a sense of role confusion. Finally, it is essential that academic leaders recognize that faculty must be confident in their teaching capacity and capabilities—engaged with their own career development—in order to see the value of career-relevant instruction (see Figure 3). Faculty who are interested and invested in their own careers are more likely to be open to and successful in meeting the academic and career-ready needs of their students.

## CONCLUSION

Universities have long made attempts to understand the world via multiple, often competing, frameworks of knowing. To the time-honored function of discipline-specific knowledge, the academy can respond to encroaching complexity by offering new ways of knowing (Barnett 2000c), which anticipate multiple careers of graduates, foster in students a tolerance for ambiguity, and give them the capacity to live purposefully in an unimagined world. Ronald Barnett (2000c) foreshadowed this almost 20 years ago, when he wrote: “The world needs the university more than ever but for new reasons.” Institutions of higher learning are called to respond to the charge for relevant curriculum that manages change on a perennial basis. Curriculum itself must become adaptive.

Supercomplexity shows up right away in the work environment after college, with only 27 percent of college graduates employed in a field related to their major (Abel and Deitz 2014). This compounding trajectory, where students move in different career paths immediately following graduation, can be seen in the 2019 report *Degrees at Work*, by Emsi, a labor market analytics firm affiliated with Strada Education Network. The Emsi report highlights the diversity

of career outcomes of undergraduates, noting that baccalaureates are immediately dispersed across a broad range of careers outside of original majors, between first and third jobs (Coffee, Sentz, and Saleh 2019). In such a scenario, the student who majors in psychology and ends up working in marketing is seen as performing well beyond her field of study—even though much of the practice of marketing applies principles initially found in psychology. Historically focusing on content-heavy curriculum, equally relevant skills and dispositions have been assumed only as educational by-products. Students are likely the last to make explicit connections about what a discipline has been designed to do and where and how they work.

“There is a significant overlap in the skills students need for the twenty-first century workforce—for example, critical thinking, communications, teamwork, problem-solving, and ethical reasoning, with the skills needed for meaningful community and civic engagement.”

—Jonathan Alger  
President, James Madison University

This exploratory paper describes how faculty can make subtle shifts in their classrooms—identifying implicit beliefs, skills, values, and habits of mind that develop better majors and extend comfortably beyond an initial field of inquiry. Faculty might teach with the assumption that they are no longer solely preparing undergraduate students for next-level learning in graduate school but developing learners who enter the workforce equipped with the ability to succeed in widely ranging settings (which could better position them for future graduate education, where they can benefit from academic and relevant life experience perspectives). Faculty have a role in contributing to the public good by developing high-quality, relevant curricula that equip students with broad life and career

skills, as well as discipline-specific knowledge that prepares them to contribute meaningfully as civically engaged citizens in their communities and the workplace (Alger and Goldberg 2019).

Institutions play a key structural role in shaping faculty-student interactions. But, what is the quality of these on a campus? Minority students at predominantly White or more selective institutions tend to have infrequent or impersonal relations with faculty, whereas Black students at HBCUs report having more (Hurtado et al. 2011). Liberal arts colleges tend to give more time to their students relative to large campuses (Wang, BrckaLorenz, and Chian 2015). Differential effects of faculty-student interactions based on gender are observable across campuses as well (Sax, Bryant, and Harper 2005). Ongoing educational development is an institutional responsibility. Colleges and universities can recognize and encourage what have become dual-professional identities of their faculty (i.e., teachers and scholars), then work to enhance faculty efficacy (see Figure 3) to build stronger engagement with all students.

Changing learner demographics and the destabilizing nature of work necessitates a different type of teaching and learning environment. Equipping learners to be successful in immediate and future work is more critical than ever to ensure social mobility for individuals to move up and through their careers. Beyond the positive impacts that career-relevant pedagogy can have on student outcomes, enhancing the life and career relevance of instruction has significant pragmatic value, that is, to graduate more students who are prepared to contribute fully in the workforce which impacts long-term productivity and economic prosperity for individuals and the economy (Taylor et al. 2017).

Finally, employers can reflect on sometimes utilitarian expectations they have for the skills of college graduates. Skills alone will not increase workforce capacity. Describing these in such terms is limiting. Employers also have a duty to keep up and contend with the wide-ranging changes to disciplines that far outpace the public's understanding of them.

High-quality instruction has and continues to be at the core of the American higher education system. It is a critical component to preparing students to be successful in future learning and the workplace, and as engaged members of society. Universities may feel unable to respond to social supercomplexity when curriculum remains constrained by disciplinary boundaries (Barnett 2000b); however, there will always be several ways to structure an education (Staley 2019). A trans-disciplinary approach will be key to equipping students with ways of knowing that have currency across academic and civic settings and that equip students with employability skills to succeed. Absent a complete redirection of curriculum, career-relevant education can make its way to the classroom, where faculty harness the power of their discipline, with effective pedagogy and collaboration with student success colleagues, to make more explicit the life- and career-relevant outcomes of a college education.

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