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Michael J. Stebleton & Lisa S. Kaler

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Preparing College Students for the End of Work: The Role of Meaning

Michael J. Stebleton, University of Minnesota^a

Lisa S. Kaler, University of Minnesota^b

Abstract

This article explores the complex future of work and how projected changes in the workplace will inevitably influence college students. We examine workforce trends and predictions with a focus on the rise of automation and artificial intelligence, including how an increasing reliance on machines will replace and reshape millions of jobs. In response, we argue that higher education professionals need to initiate conversations with students about how to deal with “the end of work.” In particular, if students possess a strong self-understanding of the meaning and values they assign to work, they will be in a better position to prevail against the constant unpredictability of the future workplace. We discuss recommendations for students and workers in an attempt to reframe the necessary skills to thrive in the future workplace and provide several suggestions for higher education professionals to facilitate the learning and relearning of these skills. We conclude with student self-reflections from an undergraduate course focused on technology, ethics, and the future of work. Student narratives emphasize the importance of meaning as it relates to work and career planning.

Writer Drum (2017) wrote that robots will take everyone’s jobs within the next 40 years. According to Drum, “the two most important problems facing the human race right now are the need for widespread deployment of renewable energy and figuring out how to deal with the end of work” (Drum). In other words, mass unemployment awaits society. Although some may consider robots best suited for manufacturing and physical labor, Drum argued that advances in machine learning paved the way for artificially intelligent (AI) robots to fulfill traditional white-collar jobs requiring critical thinking, training, and expertise. Job loss will affect professionals in law, publishing, business, and medicine (Ford, 2015). For example, AI image technology frequently outperforms radiologists (Merkow et al., 2017). Drum

^aMichael J. Stebleton (steb0004@umn.edu) is associate professor and coordinator of higher education at the University of Minnesota-Twin Cities. His research and teaching interests focus on college student development, career development, and college student success.

^bLisa S. Kaler (smit8896@umn.edu) is a PhD candidate in higher education at the University of Minnesota-Twin Cities. Lisa’s dissertation research explores college student suicide. Her research interests include undergraduate and graduate student mental health.

contended that robots might even become the CEOs of the future. Work as we know it will change significantly, a phenomenon Rifkin (1995) dubbed “the end of work.” Of course, Rifkin and Drum did not imply that college graduates would cease to work. Rather, a fundamental shift in the labor force will continue due to automation and the transference of labor from humans to machines. We argue that thoughtful and strategic preparation for these changes needs to occur now, and higher education professionals must assume the lead.

In this article, we discuss the projected trends that will affect the future of work. Higher education professionals, including student affairs practitioners and faculty, should prepare students for these changes through intentional dialogue. We offer several recommendations to challenge students to develop competencies that will serve them in the uncertain future. Finally, we provide students’ reflections from an undergraduate course focused on the future of work. The student narratives we share demonstrate the importance of the meaning and values students self-assign to future work roles. Challenging students to develop their awareness around the meaning of future work is critical. As these monumental changes occur and the concept of work shifts, it will become paramount for students to ground themselves in their own meaning of work, thus preparing them to negotiate new roles and spaces.

The Changing Landscape of Work—and the Need for Dialogue

Predictions abound regarding the number of jobs forecasted to be displaced by automation and the rise of technology. Students will work in varied contexts in the future, and past perceptions about work and careers will “end.” Fuentes and Leamer (2019) claimed that society is moving from manufacturing to *neurofacturing*, defined as intellectually intensive white-collar jobs that can be completed 24/7. Many neurofacturing jobs potentially risk elimination especially since many of the required skill sets, such as decision making, will become increasingly automated due to enhanced technology. Because of these shifts, Drum (2017) predicted that approximately 800 million jobs might be lost globally by 2030. Frey and Osborne (2013) found that almost 50% of U.S. jobs will be automated within the next 20 years. An IBM Institute for Business Ventures survey reported that 120 million people globally will need to retrain in the next three years due to automation (Kilbride, 2019). A McKinsey Global Institute report projected that by 2030, 16–54 million Americans will need to retrain for new jobs as a direct result of automation (Lund et al., 2019). Other forms of technological advances related to the Internet of Things (IoT), augmented reality, and virtual reality will all likely impact future work for students (West, 2018).

Automation is not the only variable in the future of work. Long-term careers with a single employer, a bastion of the 20th century, continue to disappear as more companies seek contract workers for gig work. Individuals freelancing for various apps such as Uber and TaskRabbit continue to reshape organizations, the nature of work, and career planning (“The Future of Work,” 2014). Approximately 36% of workers currently engage in some form of contract or gig work, and this number will likely increase in the future (McFeely & Pendell, 2018). Recent regulatory challenges have affected these predictions (Irwin, 2019), but the fact remains these apps present opportunities for individuals to work in previously unimaginable ways, including undertaking multiple entrepreneurial pursuits rather than working for a single employer. Future workers will swirl in and out of different positions and industries. In a report by *New Work Mind-Set*, students entering the workforce today can expect to have as many as 17 different jobs in at least five different industries. Currently, about 27% of graduates work in their major,

and approximately 65% of future workers will be employed in jobs that do not currently exist (McGowan & Shipley, 2017); this change may create new opportunities. Job loss and change will serve as the new normal, and students will need to be prepared (Harman, 2019).

Despite the varied forecasts for dramatic change due to technological advances, career educators have done little to prepare workers for these seismic shifts. They remain mostly silent on how to address the problems (Hirschi, 2018; Lent, 2018). Lent (2018) contended that more conversations need to be initiated by those employed in career development areas. We extend this call to action to other higher education professionals, including student affairs practitioners, faculty, and administrators. Furthermore, we need to intentionally prepare students for significant changes and engage them in finding meaning related to work. We concur with Lent (2018) and Hirschi's (2018) positions about the need to incorporate the predictions about the future of work into higher education praxis, not just research.

The Role of Higher Education: Shifting Perspectives

Higher education professionals, including student affairs educators, can initiate conversations with students around work issues. Student affairs educators in their interactions with students can utilize *New York Times* Columnist Thomas Friedman's perspectives on learning and the future of work. Friedman argued that workers need to be open to new opportunities and not expect organizations to play by old rules, mainly that organizations will take care of their employees. He stressed in an interview in 2017 that "Whatever can be done, will be done. The only question is, 'Will it be done by you, or to you?' but it will be done" (Englebert & Hagel, 2017, p. 98). He urged students and workers of the future to be proactive, innovative, and productive—even more so than in the past. Friedman shared suggestions to recent graduates entering the evolving workplace.

First, Friedman encouraged workers to "think like an immigrant" (Englebert & Hagel, 2017, p. 106). He contended that new immigrants enter new spaces and immediately need to figure out what is going on; they have to navigate new cultures, environments, and work opportunities immediately. Another piece of advice Friedman offered was "always think like an artisan" (p. 106). He advocated for workers to bring personal value, empathy, and creativity to work processes and functions that are less likely to be automated or displaced. Next, Friedman stated that workers should always be in *beta* mode. Beta mode means that a person, product, or service is never fully complete: "always think of yourself as if you need to be reengineered, retooled, relearned, retaught constantly. Never think of yourself as 'finished'; otherwise you really will be finished" (p. 106). Last, Friedman advised workers to think like an entrepreneur, focusing less on variables that are outside one's control, and thinking creatively about what is within one's power.

The promotion of creativity, hybrid-thinking, and integrated entrepreneurship models is evident at some institutional programs (e.g., Lehigh University, Drake University, among others), many of which incorporate liberal arts and business with technology (Gallagher, 2019). More intentional efforts, however, need to occur in terms of preparing students for the future of work. Higher education professionals play an important role in encouraging individuals to reflect and plan for these changes as Friedman suggested. According to Aoun (2017), higher education models must shift quickly to better prepare students. He contended that educators must move away from facilitating the development of convergent thinking skills (i.e., "this is the right answer") toward an emphasis on divergent thinking skills (i.e., "there are multiple innovative ways to reach multiple answers"). He proposed a new learning model for the

future, one in which humans and robots would work cooperatively. In other words, human traits such as empathy and interpersonal skills would integrate with technology; workers would need both sets of skills. Interestingly, Friedman (2016) called these “STEMpathy” skills (a combination of STEM knowledge and empathy traits). Empathy and caregiving-type skills would likely be more difficult to replace with technology. Aoun (2017) termed these skills the “new literacies,” and they focus on three main competencies: technological literacy (i.e., knowledge of coding and mathematics); data literacy (i.e., handling and analyzing large amounts of data); and human literacy (i.e., being able to work with others). He stated, “human literacy equips us for the social milieu, giving us the power to communicate, engage with others, and tap into our human capacity for grace and beauty” (Aoun, 2017, pp. 58–59).

Recommendations to Prepare Students for New Competencies

As student affairs educators, numerous practices exist that challenge students to develop the competencies discussed above. Students should be encouraged, if not required, to complete experiential learning. This hands-on experience can be an internship, co-op, or service learning. Many institutions offer coursework in which instructors embed or incorporate these opportunities into the curriculum (e.g., required internship). For example, colleges in the University System of Georgia introduced “nexus degrees” that integrate internship experiences with a flexible curriculum (McKenzie, 2020). These hybrid options hold much potential.

Faculty members often opt to disengage from the discussion of preparing students for the workforce, claiming responsibility for content and disciplinary knowledge alone. We disagree with this notion and challenge faculty members and other instructional staff to integrate disciplinary content with the skill sets that will be needed in the future (Stebleton et al., 2019). Collaborating with student affairs professionals can help build these important partnerships between student affairs and academic affairs.

Finally, student affairs practitioners need to initiate conversations with students about preparing for work, including how their classes and developing competencies match future objectives (Koerner, 2018). Increasing technological advances require us to focus on “learning agility” and the ability to learn and re-learn constantly in new and diverse learning environments (Levine, 2018; Zaloom, 2019). Emphasizing the importance of continuous learning can support students to feel more comfortable in these transitions. We can also assist students’ transition to becoming “generalists” rather than “specialists” by encouraging them to explore interdisciplinary majors and experiential opportunities and integrate the liberal arts with other technically-oriented curricula (Burke, 2020; Epstein, 2019).

Course Case Example: Meaning and Work

Conversations about preparing for work of the future can take place in multiple contexts and learning environments. Some of these interactions will occur in the classroom through structured curriculum, including first-year experience classes like *Ethnographies of Work*, offered at Guttman Community College in New York (Gatta & Hoffman, 2018). Using our experiences as an example, we describe a three-credit course offered through the College of Education and Human Development at the University of Minnesota-Twin Cities. The course title is *OLPD 2811 – Societies of the Future: Changing Work Contexts*. The lead author (Stebleton) serves as one of several faculty members who teach the course, primarily to upper-division students. Applying Drum’s (2017) call about the end of work, we challenge

students to think about “what does the end of work actually mean?” We examine, speculate, and analyze this question and others as they relate to the changing nature of work. Furthermore, we consider the psychology of work and the meaning and value of work (Blustein, 2019).

The topic of the course concerns the significant shifts in the way work will be conducted in the future, including the role of advancing technology, artificial intelligence, and the ethics of technology (West, 2018). Faculty structure the course around three main units, each guided by questions. Unit 1 explores the questions, “What is work?” and “How do we pursue and find work that is personally meaningful to us?” Unit 2 investigates “How do we work currently and how might that change in the future?” Unit 3 examines “How do we best prepare ourselves for these workplace changes?”

Students engage in a variety of learning activities with a focus on small and large group discussions. The Self-Analysis Work Narrative project requires students to write about early messages they received about work and career. Where did these teachings come from initially? What motivates you? We ask students to consider the role of technology and how technology may influence their decisions about work. Finally, we ask them to discuss future personal and professional objectives. In the other projects, we require students to select trends as they relate to technology, and then analyze and integrate core concepts from readings and current events.

Meaning of Work: In Students’ Own Words

When we offered this course in fall 2019, students discussed the differences between passion and purpose related to work choices (Stebbleton, 2019). Additionally, they self-analyzed their current and future choices as they related to their intended major(s) and goals. We investigated the implications of trends related to the “gigification” of the new workspace (i.e., workers taking on more part-time, contract work often out of necessity), and examined the merits and shortcomings of the sharing economy, including Lyft, Uber, and Airbnb (Hyman, 2018; Kessler, 2018; Slee, 2017). Near the end of the semester, we returned to the concept of meaningful work and asked students to respond to a writing prompt: *What does meaningful work look like?* Students shared their own definitions about work, including objectives related to career planning. Several of the students wrote about the importance of personal values and alignment with work and career choices.

Hamna, a junior, wrote

To me, engaging in meaningful work means doing something that will leave a positive impression or impact on the world. Ideally, I would want to work somewhere that aligns with all my core values ... it is important to me that I am doing work that makes a difference.

Alyssa, a second-year student, echoed this focus on values as it relates to purpose. She explained

Engaging in meaningful work means participating in work that fulfills a purpose in one’s life. It’s work one can experience flow in. Meaningful work is more than a job; it’s an activity that the worker believes is beneficial to themselves and other[s] around them.

Many college students want to believe in the organization and the mission. Riley, a senior, articulated this idea:

The concept of meaningful work relates to my future because I want to have meaning in my life and make a difference in this world, whether it’s working for a company that works to create products that save energy, or one that takes donations to charities. Seriously, I want to be proud of where I work.

Jacob, a senior, reflected on how his perceptions of work and meaning changed throughout the semester:

I used to always think that meaningful work was for me was something I could see in a company. I wanted to know my work was actually being utilized within the organization for purposes that could advance the company. However, now I want more than that in my jobs. Although I do find that important, finding “meaning” in what I am doing will only happen if it is work I am actually connected to.

Sahra, a junior, wrote about serving beyond the workplace, her community:

When I am able to represent my communities in ways that haven’t been done before, (that) is meaningful to me. In the future in my HR path, creating safe spaces for diverse communities to thrive in is meaningful in my life and career. I hope to always be doing something meaningful to me, otherwise, why are you doing what you are doing? I may not *love* what I’m doing, but I can find meaning in it. It’s worth it.

Alison, a senior, stated succinctly:

A large aspect about engaging in meaningful work comes from finding purpose as an individual. Without a driven purpose to your work (and even your life), it can be hard to engage in meaningful work if there isn’t a reason for doing so.

Students provided insightful reflection on what mattered to them as it related to meaning and work. For most, meaningful work tied to both purpose and engagement. Most of the students embraced this concept of finding work that mattered. A potential downside of this pedagogical approach might be negotiating with students who do not resonate with these ideas, and/or students who opt not to fully engage in the process of self-exploration. Largely, this problem does not exist in this particular course.

Projections about the millions of lost jobs and perpetual change need not lead to paralyzing fear but rather to opportunity. As higher education and student affairs professionals, we must initiate these important discussions about work, meaning, and career decision-making with our students. When spaces are made for students to reflect on values and meaningful future work, we can support them to think more intentionally about how they will situate their choices given the uncertainty of the future. Frequent change will inevitably occur; yet students will be well positioned to pivot and adapt to these new work conditions. While we will never be able to predict the future, higher education professionals must recognize that our understanding of work and career must evolve as the workplace does. More importantly, we can develop new strategies and initiatives to educate and support students as they prepare for these inevitable changes.

Authors’ Note

The authors wrote and submitted this article before the COVID-19 pandemic of spring 2020. The future of work, and the meaning of work for students, will continue to evolve and be relevant as a result of these events.

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