Chapter 2
Labor Market Trends, EdTech, and the Need for Digitally Reengineering Higher Education

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ABSTRACT

The dynamics of the labor market have changed considerably and are currently experiencing a major shift. The skill levels that used to be enough in the workplace have become inadequate for the current workplace requirements. The lifecycle duration of technical skills has become shorter than ever before. Issues in innovation, demographic shifts, socio-cultural issues, aging population, and technological advances are driving educators, employers, and policymakers to re-examine higher education to address the skill gaps currently existing in the workplace. This chapter brainstorms some of these topics and propose solutions for policymakers.

INTRODUCTION

The dynamics of the labor market in the United States have changed drastically (Nucci & Riggi, 2013). More than unemployment figures, structural changes are driven by things like performance-based pay. And, like it or not, performance obviously is defined by the market (Ólafsdóttir, Hrafnkelsson, & Ásgeirsdóttir, 2015). Several job openings are staying available for long periods of time due to the lack of specialized talent in the market and universities are squarely blamed for this state of affairs. Skills are more important today than any other quality and countries and universities in them that can respond to these needs faster have a better chance to emerge as educational leaders in the new paradigm. Even countries like China have taken strides at this, with a marked shift in orientation from social stability

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to economic growth as the objective of higher education (Ngok, 2008). The skill level that used to be enough to navigate the labor market in the past has become inadequate for the current requirements (Shrestha, 2016). Due to the technological advances such as Artificial Intelligence, robotic innovation, and automation (SHRM, 2019), the definition of skill itself has undergone a fundamental revision.

The U.S. is witnessing a progressive decrease in the working population, due to the fast-aging population (TH & B, 2016). Countries like Germany and Japan are expected to have a relatively small labor force in the next 15 years. This may pose a recruitment problem for workers in the future. The possibility of remote working has made it easier to hire employees from different parts of the world (Walker, 2006). Migration, the second largest young population in the world entering the workforce, is being encouraged to support the labor force (George & Shyamsundar, 2007). Unfortunately, a significant number of these potential workers lack adequate training to meet the demand of companies around the world, making it difficult for companies to hire the right people (Martin, Morales, & Theodore, 2007).

Education has become market driven, but not to the adequate extent (Newman, Couturier, & Scurry, 2010). The labor market preparation to embrace the brave new world is questionable (Frey & Osborne, 2017). If students do know how to use tools and technologies employed in the workplaces, that is only because of their self-learning (Rieckmann, 2012). Contribution by colleges in this regard is very minimal, if any. Short technology life cycle means that skills need to be learned, adapted, and unlearned quickly (Glenn, 2008). College education should be all about that, with a strong general education foundation in the high school system. Flexibility, adaptability, agility, and resilience should be the hallmarks of the reengineered education system (Selingo, 2013). In this paper, it is aimed to sketch a reengineered higher education system that is reflective of these forces and their ramifications.

COLLEGE EDUCATION: CONTINUITY AND CHANGE

A recent poll predicted that nearly half of the jobs in the U.S. are at risk of being taken over by computers within the next two decades (Oxford, 2013). Only 37% percent of workers said that if they lost their job to a machine they would turn to a college or university for retraining. Higher Education is facing forces that are bound to affect how faculty teach and how students learn over the coming decades (Armstrong, 2016). Engagement in higher education should move outside of the internal stakeholder satisfaction. Currently, universities and other scholarship gatekeepers rank each other without due regard to external stakeholders and this is a major impediment to universities responding to changing demands of the environment (Fitzgerald, Bruns, Sonka, Furco, & Swanson, 2016).

There are implications for faculty and student demographics over the next ten years with new pedagogies and curricula, active learning, self-guided instruction and group work moving students away from traditional lectures and passive audiences (McCaffery, 2018). Student-faculty interactions are changing in that the instructor is not limited to one role and instead serves multiple roles through interactions with students as a teacher, mentor and adviser. Universities continue to educate students to be full-time students for full time jobs but studies show otherwise (Zhu, 2015). Say, Google's workforce is an example of the rapid transformation of the corporate workforce; it is made up largely of independent and temporary workers rather than full time employees.

There is much opportunity for institutions of higher learning to collaborate with the public sector in order to define and implement career skills sets within academic programs that meet the needs of a changing workforce (SHRM, 2019). Higher education institutions might resort to the hiring of more