The Education Industrial Complex and The Future of Work

## Description

In a previous article I explored how workers and employers should approach the future and opined that both would be better off if they each understood the motivations and tactics that the other would employ to further their interests. Workers are concerned about achieving and maintaining marketability to employers and companies are concerned about acquiring the workforce they need to compete in the markets in which they do business. I assert that understanding whatâ€™s driving the approach each side will take to achieve its aims will be crucial to competing.

# The Education Industrial Complex (The EIC)



Education will be a crucial determinant of success or failure for both workers and companies and it is with this in mind that I look at the ***Education Industrial Complex***. The term is a take-off on the 1961 Eisenhower quote about the military-industrial complex and itâ€™s not new. Many authors have written about it, some quite recently.

What is the EIC? It is all of the entitiesâ€”schools, colleges, universities and non-profit and profit-making enterprises that purport to teach. The tension between public, non-profit, charter, private and for-profit schools begins with the elements of the EIC with which we interact earliest in life from pre-school through high school. Charter and Private Schools are alternatives to elementary-to-high school (elhi) Public Schools that many believe are inadequate. Degree-granting institutions of higher educationâ€”Community, Public and Private Collegesâ€”compete for students across a number of dimensions, including programs, prestige, cost-effectiveness, selectivity and their physical campuses, among others. Beyond these, there are innumerable programs, fee-based and free, many on-line, that teach a variety of subjects and may grant certifications for successful completion. Examples of these include the Program Management Institute (PMI,) various product and services companies, such as Amazon Web Services (AWS) and Salesforce and a variety of Massive Online Open Course (MOOC) providers, such as edX and Coursera.

At their best and for the right people, education provided outside of institutionalized settings can provide extremely cost-effective learning. I have taken programming language classes on-line that were excellent introductions for less than $20. At their worst, they can be predatory scams that do not screen students for suitability, do not lead to employment and ultimately land students in debt purgatory from which it is almost impossible to escape. Several of the worst offenders have been shut down and their studentsâ€™ debt cancelled but many others continue to operate.

Finally, there are commercial operations that provide just-in-time professional education, often company-underwritten and delivered at the workplace. This is an interesting sector of the market because it is designed to respond to companiesâ€™ immediate tangible needs and can be either a leading or trailing indicator of trends. It is, therefore, worth monitoring.

# EIC and FoW Context: What to Expect

I have a number of thoughts about how things are changing and what their potential impact on Education and its role in the Future of Work will be. Given the prominent impact that education will have on careers and the labor markets, itâ€™s worth exploring them.

## The Half-Life of Knowledge and Expertise

**Knowledge workersâ€™ expertise â€˜expiresâ€™ within 18 to 24 months of its acquisition, largely as a result of rapid advancements in technology and the evolution of business models and processes.** Workers that donâ€™t make a concerted effort to stay current will find themselves becoming unmarketable within their industry and area of specialization at about that point. Workers and companies must be aware of *both* what new technology does *and* how it is or may be applied. Doing this will require consistently monitoring trade and industry developments and acquiring and maintaining competence with new products as they come into the marketplace. Products are invariably built and evolve to solve problems and it is incumbent on workers to understand both the problems and the solutions to achieve the perspective needed to steer their learning efforts. A common concern for companies that are contemplating implementing new solutions is whether they have access to sufficient knowledgeable workers to be successful with them. In this gap, there is a need for and an opportunity to provide or consume educational services.



## Downward Pressure on Workforce Size

**A variety of forcesâ€”globalization, manufacturing and process automation and technology-driven productivity increasesâ€”are acting on companies, pressuring them to adopt operating models that reduce the number of workers they need.** Simply putâ€”new developments will wring the need for workers out of the workforce at many companies and non-knowledge workers will suffer the greatest losses. There have been several incarnations of this, each with its own cause. One is outsourcing or offshoring. This amounts to arbitrage in which work is moved to locales with the lowest costs of living and the least functional worker protections. Another is increasingly intelligent automation, which will simply decrease the need for whole classes of workers.

As companies adopt new technology and institute streamlined processes, fewer workers will be needed. While offshoring used to involve mostly manufacturing labor, it has come to involve more skilled jobs. A lot of medical scans are now screened by radiologists in Asia, who earn much less than their American counterparts but who are equally highly-credentialled and capable. (At some point soon, even *these* jobs will come under pressure as AI is applied to read and process scan images.) A number of companiesâ€™ healthcare benefits provide options for covered employees that need major surgery to travel overseas with a family member and have it performed there by US-trained and credentialled MDs with no copay. In many ways, this may be the ultimate in offshoring.

## The Shift to Contract Workers

**Businesses will shift toward contract workers over employees wherever possible.** Why? Achieving business agility is crucial to sustainability and large workforces and fixed asset bases can be antithetical to agility. Friction associated with adjusting a companyâ€™s workforce is dependent on

market conditions. If a company needs workers with skills that are rare and in high demand, bringing on workers with good precursor skills and training them may be an option. When companies find themselves with excess workforce, it is easier and less legally fraught to terminate contractors than employees. Optimizing a companyâ€™s workforce is a balancing act and an understanding of the demand and supply of the available workforceâ€™s knowledge and experience is critical to doing it well.

This will profoundly change the nature of job markets and influence the acquisition process to focus more on matching immediate needs and candidate experience and expertise than on perceived cultural fit or longer-term potential, which are concerns more applicable to employees than contractors.

## Workersâ€™ Increasing Responsibility to Set Their Own Course

**Individuals will have to proactively steer their careers more than ever.** The persistent boost that having gone to the right school or worked at the right company used to provide is diminished. Having graduated from an Ivy League school or worked at a leading company will never hurt, but smart companies are learning to look beyond individualsâ€™ credentials to see whether they match an immediate need.



One of the things I learned early in my career is that ***there are bad jobs at great companies and great jobs at bad companies***. It is more important to understand job content and opportunity to learn and grow when considering an opportunity than to rely on the reputation of the company. I am quite sure that many former employees of companies commonly listed in top places to work lists didnâ€™t learn, grow or succeed there.

In this vein, companies will have to be more concrete about their staff development plans and resources than they currently are, at least with respect to prospective employees and possibly to contractors, as well. Personal development opportunities will become a more important competitive factor in workforce acquisition as technologies and business model evolution accelerate and companies that offer opportunities for education will realize an advantage.

## Gaps in What Institutions Teach and What Companies Need

**Companiesâ€™ evolving workforce requirements are not consistently and proactively addressed by educational institutions.** At one time, invention and innovation emanated from colleges and universities, so they were uniquely positioned to provide a workforce ready to exploit them. This is less true today. Now, business models and innovative applications of technology are coming from people in the workforce or startup companies as frequently than they are from universities. This places an onus on educational institutions to identify, assimilate and develop curricula to address external developments more than they have previously. It also positions non-academic educators, such as for-profit training companies, software product companies or consultancies to compete for commercial clients and to deliver courses to workers who are self-educating.

Make no mistake, companies have a healthy relationship with academia. They have been contributing to, collaborating with, providing internship and employment opportunities to their students forever. However, the following quote from this article speaks to how Amazon, Google and other companies are ramping up their internal education programs:

The tech corporations create the content for these programs, determine the required competencies for students to master and say they are seeking to create standardized skill sets that apply beyond their payrolls, for job seekers across entire occupational fields.

â€œThe future of work is affecting basically every industry. This has become a CEO-level conversation,â€• said Catherine Ward, managing director of private sector strategies for JFFLabs, a division of the nonprofit group Jobs for the Future. â€œThey are taking action themselves because they are feeling an acute need that, frankly, they feel is not being met by the existing education system.â€•

### The Shifting Economics of Education

**The economics of higher education as currently constituted is untenable in the longer term.** The probability of achieving a positive ROI (return on investment) on a Bachelorâ€™s degree diminishes each year. As the rate of increase in the cost of attending college cost outstrips inflation and as cheaper alternatives to acquire the knowledge required to be marketable become available, the cost-benefit picture of a college education becomes less favorable to workers.



Workers must navigate both the demand sideâ€”the education they must acquireâ€”and the supply sideâ€”how they will make themselves attractive to employers. As I observed, above, a traditional path from High School to College to a career with intermittent professional development, thereafter, may well not be an option going forward.

The cost-effectiveness of the traditional path is becoming more and more questionable. According to several sources, the most expensive colleges currently cost more than $75,000 per year to attend. Given the short half-life of much of what a student would learn in a four-year degree program, the payback of such an investment is not so clear.

## Education as an Industry

Here are a few facts about the US education marketplace in 2020:

- Approximately $721 Billion is spent on education
- There are 56.4 Million K-12 students
- There are about 20 Million students in institutions of higher education
- There are between 3 and 4 Million students attending for-profit institutions
    - There is an interesting paper on this by the Brookings Institute

This article from five years ago has some interesting ideas about the future of education, as does this one and this one. Most of whatâ€™s been written about the future of education, though, seems to focus on its *practice*â€”the HOW of imparting knowledge, more than the market for education services that should determine an efficient allocation of labor and capital.

## Credential Wars

Offering certifications can be an increasingly common and evergreen business model. Organizations that successfully establish marketable credentials can realize a substantial stream of revenue from

training, certification examinations, membership fees and conferences, among other things. While credentials are often an entrÃ©e to opportunities making them a hiring prerequisite can also serve to constrain access to them, thereby propping up the value of existing credential owners. Credentials used this way include both academic and commercial varieties.

One way that academic credential requirements may be employed is to protect the domains of existing professionals and prevent incursion by people with lesser credentials who could perform many services at lower cost to society. Doctors have resisted allowing Physicianâ€™s Assistants (PAs) to perform minor procedures that they routinely perform and for which they charge substantial fees. PAs resist passing off duties to Registered Nurses (RNs,) who insist on maintaining their hierarchical position relative to Licensed Practical Nurses (LPNs.) Anesthesiologists (who are MDs) vs. Anesthetists (who are trained professionals, such as PAs or RNs), lab and radiology Technologists vs. Techniciansâ€”the list goes on and on. I wouldnâ€™t advocate having complicated surgery performed by a PA, with a nurse-anesthetist managing anesthesia but there are plenty of opportunities to rationalize healthcare and many other industries to obviate requirements for degrees and certificates that are not necessarily good indicators of fitness for particular responsibilities.



I raise this issue not to incite a discussion of healthcare, but to highlight that the EIC has long benefitted from and contributed to credential inflation. Employers have ramped up requirements for positions in such a way that many have become inaccessible to lesser-credentialled individuals, who are probably capable of performing in them. Workers have been in the middle of the two for as long as I have been in the job market. I donâ€™t want to make an us vs. them argument but it is pretty clear that this is unsustainable. The rise of Massive Open On-line Courses (MOOCs) and the explosion of paid on-line classes as well as the swell of remote learning resulting from COVID shutdowns is providing a wealth of information from forced experimentation that should inform where this all goes.

As more people are pushed or lured away from the higher end of the EIC and toward an ala carte model that might serve better, the future of the EIC may become clearer. In a future article, I will explore what this ala carte model might look like and what the implications of this on the Future of Work for both workers and companies might be.

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