The Future of Higher Education

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Abstract

Higher Education has been subject to a number of disruptive forces in the last few years: budget cuts; declining registrations in many subjects; a crisis in the humanities; a growing skepticism about its usefulness; a sense of disenchantment from the standard academic career path; distance learning; free on-line courses; micro-accreditation and alternative paths to academic degrees; commercialization; and most recently Artificial Intelligence. Most literature dealing with the future of higher education deals with one of these phenomena, sometimes with a few of them. What is lacking is a macro, or bird's eye view, of the whole system, trying to foresee the road ahead, shaped by these forces and by the prevailing mood and attitudes, and imagining where a new equilibrium might be.

It seems quite obvious that the current turmoil may cause this important branch of human activity to be inexorably drawn into a whirlpool, spiraling rapidly down, resulting in one of two possible solutions – either a collapse of the higher education system as we know it today, or a new equilibrium which, almost by definition, means a reengineered system (Raanan, 2017). This paper will present the author's concept of an equilibrium of the higher education system, one that will be stable for a period.

To reach the foreseen new equilibrium, two critical factors are needed: a political leadership that understands the importance of the issues at stake and, on the other hand, academic leadership capable of transcending the narrow view and cooperating, without condescension, with society at large. The political issues are beyond the scope of this paper; an outline of the desired academic leadership will be presented.

Purpose

To start a process of thinking about the future of higher education rather than be surprised by the evolving events. Then, hopefully, action will follow on all level – institutional and governmental.

Methodology

Review of recent discussions on the topic and then an independent, educated forecast of the coming developments in the field of higher education.

Findings

Higher Education is at a crossroads. It is threatened by a variety of disrupting forces and must change.

Research limitations/implications

The limitation of this work is that the disruptive force that has the most potential to upend higher education is AI, particularly Generative AI, and its development and evolution cannot be predicted. Thus, the conclusions presented below may change.

The implications of this work are that all bodies involved in higher education, mainly the institutions of higher education and the governmental agencies, must immediately start to envision the future of this very important segment of society.

Originality/Value

This is an original work.

Keywords

Higher Education, Disruption, AI, Life-Long Learning

Paper type

Theoretical

1. Introduction

Higher education, as is well established, is undergoing major changes over the last years. Baird (2012) discusses the financial crisis of higher education; Bates, T. (2019) deals with Teaching in a digital age. Other authors deal with other disruptive forces that arrive every few years (with shrinking intervals between them) that threaten to upend it: budget cuts, dwindling enrollments in certain disciplines, and a crisis particularly pronounced in the humanities have cast doubt on its traditional role and relevance. Concurrently, there's a growing skepticism regarding the utility of higher education, exacerbated by a disillusionment with academic career prospects. The advent of distance learning and the proliferation of free online courses have further altered the educational paradigm, while commercialization has introduced market-driven pressures. Most recently, artificial intelligence has emerged as a transformative force, posing new challenges and opportunities. As the president of Northeastern University wrote in early July 2024: "we have reached a moment of reckoning about what artificial intelligence means for the human experience. This is a moment of reckoning, too, for higher education. It's not enough for colleges merely to transfer knowledge and skills to AI's future programmers and stewards. Colleges have a pivotal role to play in preparing all students for life *with* AI, and advancing human well-being in a digital world." (Aoun, 2024)

Existing literature on the future of higher education often addresses some of these phenomena in isolation, like those mentioned above and others, lacking a comprehensive, bird's-eye view of the entire system and its potential future trajectories. What is needed is a macroscopic, indeed panoramic perspective that anticipates the road ahead, shaped by these multifaceted forces and prevailing societal attitudes, envisioning a new equilibrium.

It is evident that the current upheaval could potentially lead higher education into a vortex, spiraling towards either a collapse of the current system or the emergence of a reengineered equilibrium. This paper aims to articulate a concept of such an equilibrium—a stable configuration that can sustain itself over time.

Achieving this equilibrium demands critical factors. Firstly, political leadership must grasp the gravity of these issues and prioritize them accordingly. Simultaneously, academic leaders must transcend narrow institutional perspectives and engage with broader society collaboratively, without elitism or condescension.

In conclusion, navigating these turbulent waters requires foresight, cooperation, and a willingness to reimagine the role and structure of higher education in a rapidly changing world. Only through such visionary leadership and collaboration can we steer towards a sustainable future for higher education that meets the evolving needs

of society and individuals alike. The next section presents a brief history of higher education. Section three describes the most current disruptive forces that threaten the existing model of higher education, and section four offers the author's vision regarding the evolution of the higher education system. Section five provides a summary.

A final note is due here: while there are many differences among various institutions of higher education – by type, size, scope of undertaking, financial stability and many more – but the fact is that, as Bok says in his seminal book (Bok 2013) "In the last 25 years… higher education systems in most advanced nations have been gradually growing more alike".

2. The History of Higher Education: A Brief Overview

Higher education has played a pivotal role in shaping societies, fostering intellectual growth, driving innovation and greatly improving human welfare. From ancient academies to modern universities, the evolution of higher education reflects broad cultural, economic, scientific and political changes. Human society, at least in the modern era, had its development, progress and prosperity inexorably linked to knowledge. It also realized, quite early on, that knowledge must be shared in order to provide maximum utility. Consequently, methods of dissemination had to be created. Academies, universities and other organizations were created in order to achieve this goal.

The roots of higher education can be traced back to ancient civilizations. In ancient Greece, the Academy founded by Plato around 387 BCE and the Lyceum established by Aristotle in 335 BCE were among the first institutions dedicated to higher learning. These institutions focused on philosophy, mathematics, and natural sciences, emphasizing critical thinking and inquiry.

Lest we think (as we frequently do) that higher education is an artifact solely of western civilization, it is important to acknowledge the fact that India had institutions of higher education before the west had them. There, the ancient universities of Takshashila[1] (circa 700 BCE) and Nalanda (5th century CE) were renowned centers of learning, attracting scholars from across Asia. They offered a wide range of subjects including philosophy, medicine, mathematics, and astronomy.

The medieval period saw the rise of universities in Europe, beginning with the University of Bologna (established in 1088) and the University of Paris (circa 1150). These institutions were primarily ecclesiastical, focusing on theology, law, and medicine. They introduced the concept of academic freedom and were structured around faculties and colleges, which became a model for future universities.

Universities such as Oxford (1096) and Cambridge (1209) in England followed similar structures and contributed significantly to the development of higher education. The scholastic method, which emphasized dialectical reasoning and debate, was a hallmark of medieval higher education.

The Renaissance (14th-17th centuries) brought a renewed interest in classical knowledge and humanism, leading to the expansion of university curricula to include the humanities, arts, and sciences. Universities began to shift away from purely

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[1] There is a debate whether Takshashila was a university in the modern sense, but no debate exists that it was a center of learning.

religious instruction, embracing a broader educational mandate. Heidelberg University (established in 1386) is an early example of this development.

During the Enlightenment (18th century), the emphasis on reason, scientific inquiry, and intellectual freedom further transformed higher education. The founding of institutions like the University of Göttingen in 1737 exemplified this shift, with an increased focus on research and empirical methods.

The 19th century marked the beginning of the modern university system, characterized by the integration of teaching and research. Wilhelm von Humboldt's reforms in Prussia, which led to the establishment of the University of Berlin in 1810, emphasized the unity of teaching and research, academic freedom, and the importance of a broad, liberal education.

In the United States, the Morrill Land-Grant Acts of 1862 and 1890 played a crucial role in expanding higher education by establishing public universities focused on agriculture, engineering, and the mechanical arts. Institutions such as Cornell University (1865) and the University of California (1868) exemplified this expansion.

The 20th century saw a massive expansion of higher education globally, driven by increased demand for skilled professionals and the democratization of education. The GI Bill in the United States after World War II significantly increased university enrollment, making higher education accessible to a broader segment of the population.

The latter half of the 20th century and the early 21st century have seen the rise of global rankings, the commercialization of education, and the proliferation of online learning platforms. Universities have become centers of innovation, producing groundbreaking research and fostering technological advancements.

Yet, the wide spread of colleges and universities created opportunities for institutions of a type that was different than that of the established colleges and universities – for-profit institutions and distance-learning institutions. An academic degree became, in the western world and in many other countries quite commonplace, with degree-holding people comprising a high percentage of the population. According to UN data (UIS 2024) those percentages, provided here in a highly condensed form by groups of income levels of the countries in 2022 is shown in the table below[2].

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[2] The maximum rate is about 74.1%, in Australia.

Economic Classification	Average Percentage of Academic Degree Holders
Middle income countries	25.8
Upper middle income countries	35.9
High income countries	42.3

Table 1: Academic Degree Holders by Economic Clasification

As in many economic sectors, an abundant supply causes diminished value to be attached to the product or service of that sector, hence also lowering the esteem in which its practitioners are held. This, in turn, may reduce demand or bring about the development of substitutes – that is, generate disruptive forces. These are discussed in the next section.

3. Disruptive Forces Threatening Higher Education

Several disruptive forces are currently threatening higher education, leading to significant changes and challenges for traditional institutions. Below are some of the most prominent ones, listed in order of the risk they present – from the lowest to the highest. The parameters for determining the risks involved are composed of an assessment of the combination of impact and speed (which here serves as a proxy for probability of occurrence in the regular risk estimation models).

o **International Competition:** Institutions around the world are competing for the same pool of international students, faculty, and research funding.

o **Cross-Border Education:** Partnerships, branch campuses, and online programs from foreign institutions are offering more educational choices to students. So far, it is the prestigious institutions that act this way, thereby creating pressure on local institutions.

o **Lifelong Learning:** The rapidly changing job market requires continuous upskilling and reskilling, which traditional degree programs may not adequately address. Aoun (2024) also considers this issue: Since people live in a rapidly changing digital world that is as meaningful and consequential as the physical and natural worlds, colleges must do more than meet a tactical need for acquiring new skills through lifelong learning. They will need to prepare people for true *reinvention*." By not doing that, the higher education institutions are susceptible to disruption by organization that may start up providing short, customized courses, at a much lower cost, and then evolve into a lean institution of higher education and compete directly with the established institutions. While this is a risk, it is also an opportunity – if the institutions of higher education "reverse the trend" and start offering more micro-programs or micro courses[3].

o **Declining Enrollment:** Falling birth rates in some regions lead to fewer college-aged students, impacting enrollment numbers. This, in a way, is a double risk since the institutions of higher education frequently try to compensate for this decline in enrollment by trying to attract international students. While this contributes to the student population and creates a more diverse campus, it usually increases the costs per (international) student and thus may actually add to the problem.

o **Funding Cuts:** Reductions in public funding for higher education institutions force schools to find alternative revenue sources or cut programs. However, the alternative revenues create a risk of the institution losing its focus.

o **Non-Traditional Students:** An increasing number of adult learners, part-time students, and those seeking career changes require more flexible and varied educational offerings. Among their varied needs and demands is the reluctance to

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[3] It is worthwhile to reflect upon the following thought: institutions of higher education "discovered" marketing about two decades ago; yet they are the only sales organization the throws a big party when the customers leave…

show up on campus, for several reasons, thereby changing the operational model of the institution. They also prefer, in many cases, to accumulate diplomas/badges/certificates that can later be combined and converted to an academic degree. See, for example, CAEL (2020).

o **Bootcamps:** Coding bootcamps and other intensive, short-term programs are gaining popularity for their ability to quickly equip students with marketable skills. As students place more and more emphasis on those skills and less on general knowledge, they tend to avoid higher education. Since most of those who choose that career path never enter the higher education system, this decreases not only the undergraduate population but also the graduate-school candidates pool, leading to reduced enrollment to graduate school.

o **Government Policies:** Changes in government policies, funding allocations, and educational standards can significantly impact higher education institutions. Among these policies, the concept of credit transfers forces increased uniformity thus making it harder for the institutions to differentiate themselves from others. As a result, the competition among them is based on many non-academic features. For example, in the US, a thriving sports team is a major recruitment incentive.

o **Accreditation:** Shifts in accreditation standards and processes can affect the recognition and perceived value of degrees from certain institutions. This is a specific example of government policies in action. Also notable in this field is the growth of alternative paths to academic degrees, some of which replace academic credits with practical experience or knowledge acquired via different methods (UPCEA 2021).

o **Skills Gap:** Employers are increasingly focused on specific skills rather than degrees, expecting to receive graduates that can "hit the ground running" rather than require a long in-house training. These employers are pushing higher education institutions to adapt their curricula to meet industry needs. Some employers are even willing to pay for tailor-made education, increasing the pressure on the institutions.

o **Online Education and MOOCs:** Massive Open Online Courses (MOOCs) and other online education platforms offer affordable and flexible learning options, challenging the traditional campus-based model. The COVID-19 pandemic proved that online education, while not perfect, is definitely a very reasonable educational technology. With improvements that are bound to happen – both in technology and in pedagogy – this will become a major vehicle for delivering higher education.

And, last but definitely not least:

o **Artificial Intelligence and Automation:** AI-driven tools and automation can personalize learning experiences and streamline administrative tasks, potentially reducing the need for traditional faculty and staff. (See, for example, Technology News (2024) for a brief review of this and other technologies that will change higher education.)

Figure 1, below, presents a graphic map of the risks faced by higher education institutions. As we move north-east, we find increasing impact and rising speed. Clearly, the disruptive forces in that corner need to be dealt with first.
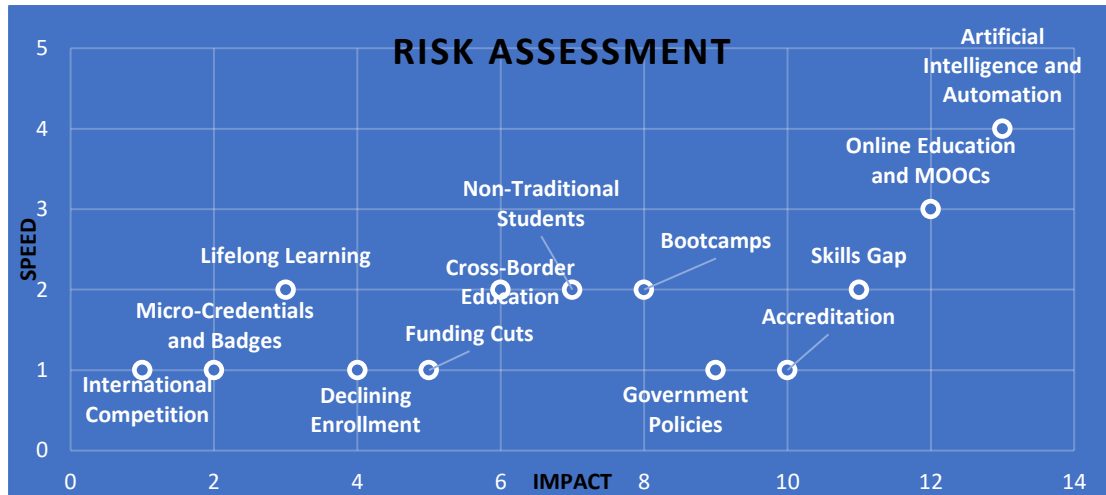

Figure 1: Speed vs. impact risk assessment

In addition to those external forces, there are some internal issues that affect higher education's ability to react, in a timely manner, to those disruptive forces. Notable among them are conservative thinking; rigid structures; tradition; slow response times. These issues make it very difficult to respond to today's rapidly changing world and so hamper the chances of successful responses.

Since many of those issues were discussed elsewhere, they will not be further discussed here.

4. The future of Higher Education

Higher Education is at a crossroads. With so many disruptive forces affecting it, and with its inflexible, slow to react constitution, it is in a vulnerable state. The non-inclusive number of closures of higher education institutions, from the American higher education system, was 652 in the period of 2015-2023. (NCES 1, 2024). Even compared with a total number of degree-granting institutions of 3,986 (NCES 2, 2024), over 14% closed.

The confluence of so many disruptive forces which tend to have stronger impact when combined, forces higher education institutions to act defensively, and in many cases they cannot avoid a "race to the bottom" – lowering admission criteria, lowering tuition, relaxing academic standards, often intimidated into non-academic behavior, and more.

Even before the explosive introduction of some of these new disruptive forces into academia and into society in general, there were clear signs of a major shift of higher education focus. The work by Slaughter, S., & Rhoades, G. (2020), for one, pointed to "…blurring of boundaries among markets, states and higher education". They discuss the rapid shift of higher education from the focus on education for educational purposes (and research) to a focus of revenue-generating activities, changing as the markets evolve.

A point to consider is the issue of Life-Long Learning. To an observer from outside academia, taking a birds-eye view, the picture seems absurd. On one hand, here is a great educational system, creating and imparting knowledge to millions of people worldwide and in many of is commencement speeches spurs its graduates to pursue Life-Long Learning; on the other hand, it does almost nothing to provide them with that learning throughout their remaining lives. It is obviously an idiosyncrasy which stems from many reasons, the foremost seems to be traditional: our predecessors only taught towards well-defined degrees (and it seems to have worked for them quite well) so why should we change that? Many other reasons exist for this idiosyncrasy, including employment arrangements for the faculty; strong inertial forces, to continue what we did in the past; inflexible administrative routines that are incapable of providing responses to any issues that are outside the usual rut; faculty attitudes; lack of proper, professional management, and more. Clearly, this gap between the need to provide continuous education to the adult population and the lack of will of the institutions of higher education to serve this ever-growing demand creates great opportunities for disruption. When combined with the blurring of boundaries mentioned above, we find higher education – as we know it today – in a perilous situation.

Higher education must, therefore, change its basic paradigm. It must shift the emphasis from higher to education. This may seem like trivial change, but in effect it is huge. With the emphasis on 'higher' the system:

- Thumbs its nose at 'ordinary' teaching
- Tries to maintain a very selective system (in many subjects)
- Prioritizes research over teaching
- Has a reward system based mainly on research
- Teaches only part of the year
- Behaves as if it holds the power

With the emphasis on 'education' the system:

- Sees teaching as an equal endeavor with research
- Fits its offerings to the demands of the markets
- Has a reward system that values teaching
- Disassociates between faculty time off \ vacations and teaching periods (that is, behaves as a savvy service provider).
- Understands that power has shifted to the students

When we add to these paradigm shifts the rapid advancement of generative AI, and the tendency of many organizations to prioritize skills over knowledge (that can easily be obtained as necessary with the aid of AI), we can paint a probable picture of the future of higher education, at least in the fields that are not regulated and that require state licensing for their practice (like medicine, nursing, engineering, therapy and the likes).

Higher education will be divided into two separate sub-sections – a research section and a teaching section. A blueprint for such a division was suggested by the author (Raanan 2016, Raanan 2017).

In order to bring this change about, it is highly recommended that higher education leadership and politician form a working group to discuss these issues in depth, assisted by experts, and chart a new course for this vital section of human endeavors. To form such a working group (or a national commission) will require both sides – government and academia to forego their mutual distrust and leave egos outside the discussion rooms. Given the institutions involved, this is no easy task. However, in the absence of such directed approach, we will be leaving the direction of the revolution to the prevailing winds and its likely chaotic outcome.

5. Conclusion

That higher education is in turmoil is a long-known fact. The rate of change in this section of human society is high, and it's applying a lot of pressure on the institutions of higher regulation and on the governmental agencies overseeing it or regulating it. Since the response time of the institutions of higher education and of the regulatory authorities is notoriously slow, it is imperative that they start thinking about how to best deal with the tsunami of disruptive forces that are exerting tremendous pressures on the basic structure – and mission – of higher education.

Both arms of higher education are under enormous pressure, for different reasons, but if a new paradigm is not found for the institutional composition and operation of these institutions, they face a bleak future.

Teaching, in particular, must respond quickly to the changing demands of society and make that mode of fast response and agility a leading feature of its operation. This will require a major redesign of the higher education system, a reengineering. (For more on that, see Raanan (2017). Hopefully, the advent of Generative AI will be enough of a shock to kick-start a massive response. One kind of response was mentioned above and that is to form a national commission, or working group, composed of both government and academia, that will be tasked to find the new equilibrium for higher education for the coming years.

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