The Digitalization of Higher Education

Proving the value of tech for ed

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Executive brief

Technologists have spruiked ‘platforms’ or ‘solutions’ to educators since the advent of ideas. **In this briefing we look at the educational value of such ventures.**

1. After three decades of unbridled digitalization, it is time to check what value is being created and captured for higher education, and how this can be proved and improved.
2. Given that education excellence is what matters, we articulate a three-phase model to help universities evaluate quality, efficiency, and difference.
3. More transparency and evidence of efficacy, especially around big money and platforms, will improve future progress.

At first blush it feels crazy to question the value of expensive technology to higher education. Not so. **If all university problems are forever being ‘solved,’ why then are further platforms necessary?** Why, every other year, does an emergent, genuinely amazing and existentially threatening platform/solution get swallowed instead by universities?

The global tech business thinks it has the whole ‘value proposition’ wrapped up, solved. Many educators beg to differ. This matters enormously, as it is educators who define, do, and in important respects are the ‘value proposition.’

To yield education benefit, platforms must provide quality, efficiency, and difference. These parameters are relevant for executive leaders, education analysts, investors, and the public. **The public should care as it is usually their money on the table, and they should be shaping future of education.**

Clearly, no amount of analysis is going to halt technology creation, purchase, or use. Electrons and coding are out of the gates, and away. As platforms develop, so too should the sophistication and strength of education evaluation.

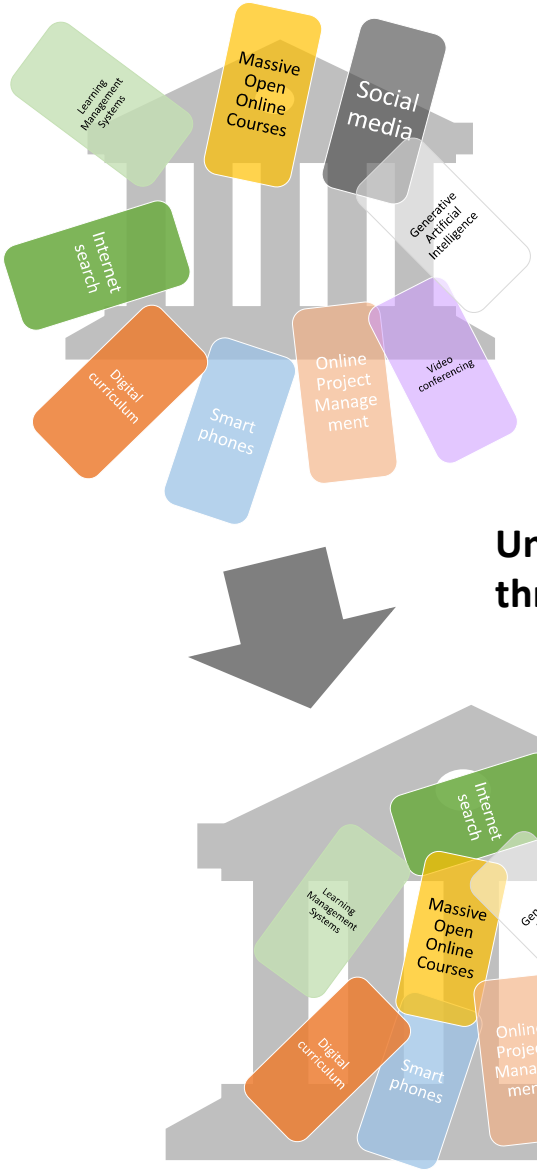
Where are you now

- Socrates apparently never wrote anything down, as is often the case with today's most prestigious education. Yet most universities today opt for far more than rhetoric or even luxury Swiss fountain pens. Instead, they delve into multimillion dollar algorithmically pulsing slices of silicone. **A few decades after wide deployment of ambitiously branded 'learning management systems,' the rise and wobble of various forms of 'online,' and growth of 'artificial' and 'edtech,' it is very reasonable to ask if it's worth it, if it is for who, or at the very minimum, to ask how anyone could tell.**

- **Technologists have spruiked 'platforms' or 'solutions' to educators since the advent of ideas. In this briefing we advance an important mechanism for establishing the educational value of such ventures.** After clarifying contemporary dynamics shaping the awkward dance between software education, we articulate a three-part framework for determining education value, and explore its application in four areas. We argue that more robust evidence of efficacy will improve future digitalization.

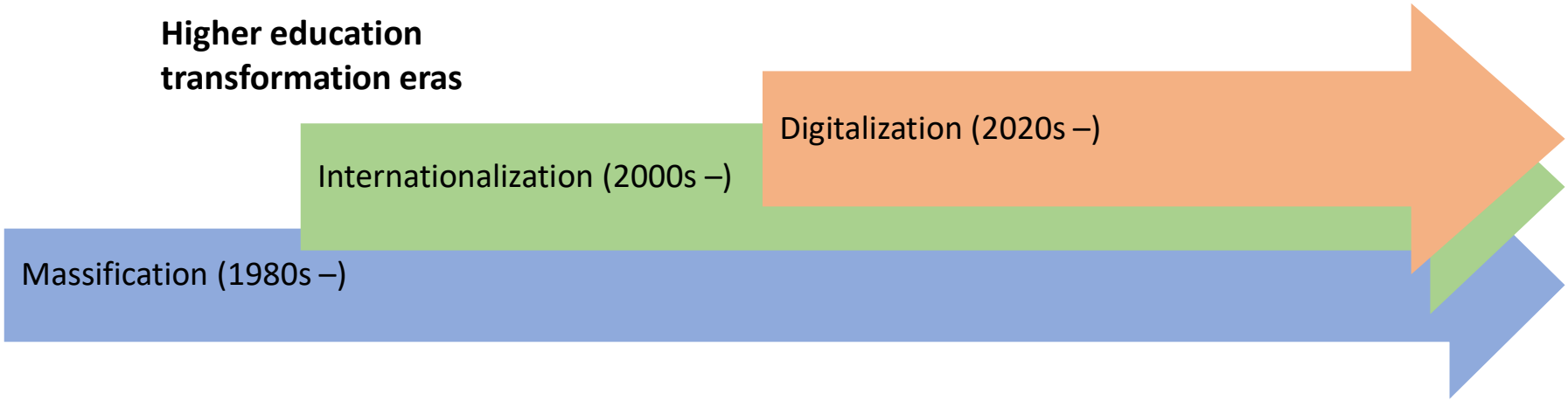
Does it add up

- **At first blush it feels cringey or even crazy to question the value of expensive technology to higher education.** Tech conferences hum and swing as millions network, enthuse about change, and foster collaborations. So much talking, coding, downloading, investing, and presenting has been had. So much valuing, including by wise experts, has already been done.
- **Thinking just a moment longer, however, affirms at least a slither of value undergirding such inquiry**. With such angst and uncertainty scattered around higher education, it is fanciful to insist that all is made good by a fondant of tech. If all university problems are 'solved,' why then are further platforms necessary? Why, every other year, does an emergent, genuinely amazing and existentially threatening platform/solution get swallowed instead by universities? The world of higher education has certainly 're-humanized' after recent pandemic distancing, signaling limits in the tech promise. Beyond smart marketing and attractive images, what evidence is there of improved learning? Indeed, what evidence is there that digitalization hasn't resulted in the conflation of education into only those facets which can be compressed into code? In the name of 'education innovation' have algorithms actually spurred transformation, or entrenched unproductive practice?



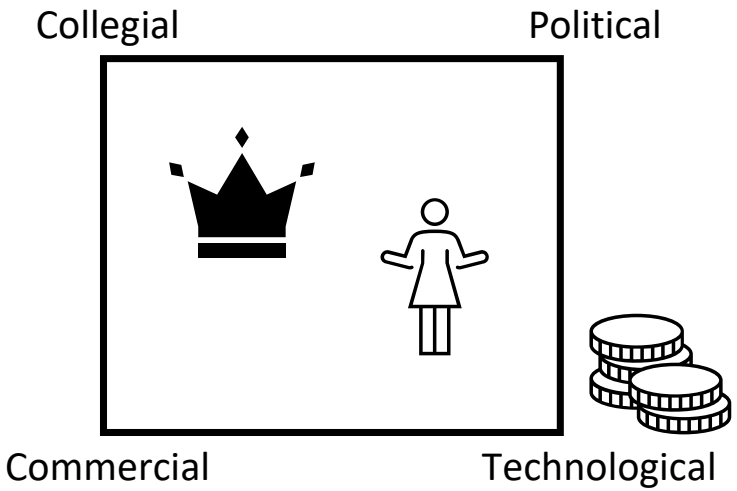
Prove it real

- **How can the value of digital learning technology to higher education be proven, and improved? The global tech business thinks it has the whole 'value proposition' wrapped up, solved. Many educators beg to differ. This matters enormously, as it is educators who define, do, and in important respects are the 'value proposition.'** Education technology has quite evidently furnished many enhancements in administration and 'delivery.' Curiously, however, it remains difficult to attest with certainty whether edtech has improved education itself.
- The digital transformation of higher education is now a mainstream topic, and a serious and prudent dialogue for higher education. Indeed, building on prior eras of massification and internationalization, it is not too courageous to conjecture that digitization may be the major driving and even transformational force.



Framing education's techno dance

- We must acknowledge huge and entwined engagement. **Seemingly every university has an SMS, LMS and CMS, plus more. The scale of software investment has been magnificent, many hundreds of billions.** This is of course only part of the equation given additional customization, implementation and innovation. Complex education systems are rarely purchased straight off the shelf. Thousands of learning scientists, developers and support staff are employed, spurring ongoing flows of cash and expertise. Money is important, but far from the most important facet of education. It signals value, but it is not as valuable as learning and innovation.
- **The scale of engagement stimulates questions of an 'ontological' or 'operational' nature, if not of an existential nature – these questions run deeper than strategy.** In the 1980s Burton Clark famously distinguished three forces shaping higher education. Does digital technology forge a fourth vertex? Is the medium that influential? Or does it transform any or all of the existing three forces?

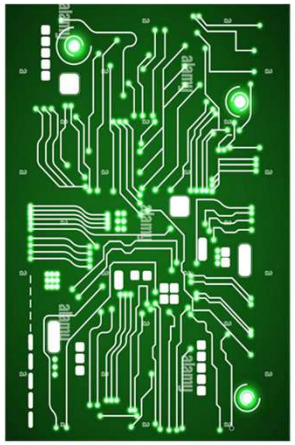


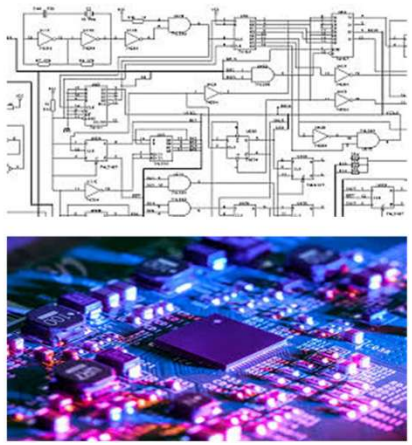
Fr/agile developments

Framing education's techno dance

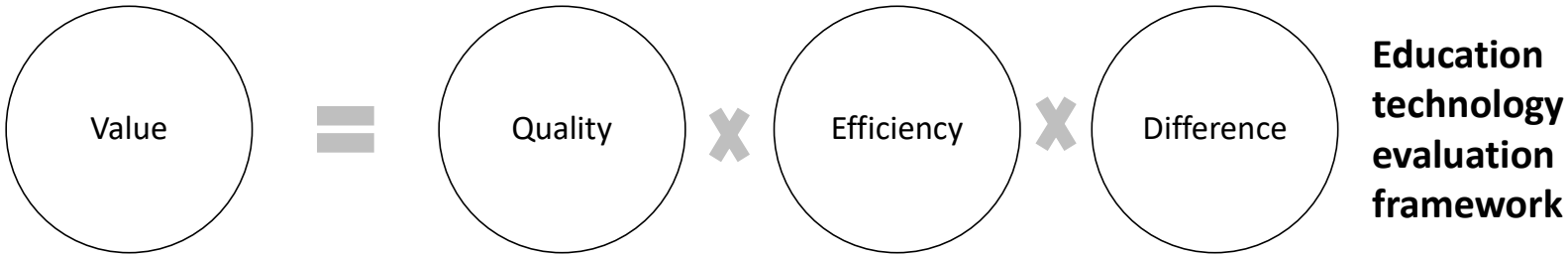
- **The scale and penetration of education technology raises serious questions about governance.** Understanding tech is pivotal to governing universities if it holds that algorithms and system settings control learning and teaching, determine how students and teachers interact, and shape the character of teaching resources and student work. It could be argued either that understanding education procedures, or keeping suitable distance from practical matters, have long underpinned effective governance. But pervasiveness and particularity of contemporary platforms prompt novel concerns. There is value in efficiency improvements which remove waste and bad practice, but governors must be able to discern when standardization tips into conflation, which makes their own institution the same as many or even most others. Academic learning, even in tightly accredited fields, means intellectual play with ideas.
- **These points prise open deliberation of precarious interplays between platforms and academic work. As the Socratic reference makes clear, it is a deliberate decision to code education into the binary logic of digital technology, such that everything – and potentially every university – converges on sameness.** Dangers can arise when eager coders bust through complex deliberations around education. The recent eruption of generative artificial intelligence poses substantial questions for production of learning resources, and authenticating student assessment.

Digital logic for education





Skewers in the fire

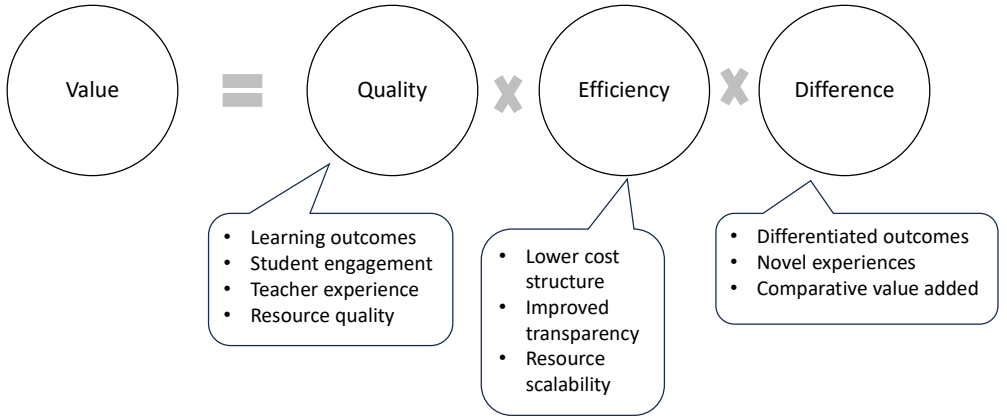


Education technology evaluation framework

- **How can the value of digital technology to higher education be proven, and improved? We advance a three-part framework.** Three dimensions construct a framework. The lens extended here is straightforward and educationally established. Commercial analysts are adroit at poking around financial valuations, which are important, but it is education, after all, that edtech is all about.
- **Quality is up the top. While obviously a complex topic in higher education, on face value there is not much to be said for adopting any technology which reduces quality.**
- **The second dimension, efficiency, is influential in a variety of ways, from lower costs to improved scalability. Efficiency is nice, but neither necessary nor sufficient to spur an embrace of education technology.**
- **Third, does the technology make a difference?** Does it add new dimensions to student learning? Does it transform how teachers teach? Does it transform how students learn?

Proving it’s alright for learning

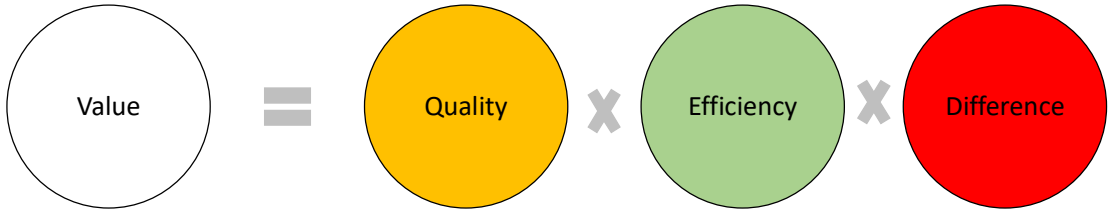
- **Executive leaders who make procurement decisions need decision support.** Even before commercial due diligence, does the platform make education sense? Does it boost productivity and make a difference?
- **Just outside the C-suite lie deeper concerns about productivity.** Productivity implies quality maintenance or improvement. Digital platforms may be shown to enhance efficiency through cost reduction, operational simplification, risk mitigation, or process control. But what about quality?
- **Assuming education value – quality, efficiency, and difference – is ascertained, what options are there for sharing the spoils?** Universities are accustomed to their standing as large prestigious players, backed by governments, talent, and tradition. Yet just the top two United States tech firms match total revenue estimates of all that country’s universities. There is intense global debate about privatizing publicly funded research and the need for open publishing. No such debate yet about education.



Executive leader analysis blueprint

Deep-dive on LMS

- For nearly three decades LMS firms have promoted platforms with claims that they improve efficiency, expand access, provide management information, support users, and enrich learning.
- Given the stakes and investment, it is imperative to step back from smooth marketing rhetoric and clarify value.



- **Quality:** Clearly, after three decades of ubiquitous deployment, there is ample evidence swinging in all directions about LMS and quality. It is doubtful, however, that the impact of quality is uniform and universal – education is too diverse and complex. Rather, the impact is likely to be much more circumstantial. Yet, evidence is not produced in every education setting, even in a general sense. If it was produced it would be complex given variations in LMS use, disciplines, cultures and participants. Such analysis would have to advance the mammoth assumption that much (if not most) curriculum and learning can be coded into digital formats. The best that might be concluded, therefore, is that there is mixed evidence for quality.
- **Efficiency:** From a corporate perspective, LMS bestow evident efficiencies. Assuming quality is not degraded, then capturing, organizing, replicating, and scaling learning resources is improved. This efficiency gain is typically countered by locked-in technology and specialist staffing costs.
- **Difference:** In terms of 'difference' LMS do add new experiences and opportunities to education. Students and teachers invariably build digital literacy simply through using platforms and the hybridization opportunities offered. LMS provide capacity for structured individual learning, which likely provides benefits in, say, revision and rehearsal. Compared with personalized individual teaching or live in-person groupwork, evidence is needed that distinctive education value is generated. That is so particularly given standardized and extensible nature of LMS platforms.

Analog for education

- **After three decades of unbridled spending on digital technology, it is time to check what value is being created and captured. Has widespread digitalization of higher education made any difference, and for who?**
- Clearly, no amount of analysis is going to halt technology creation, purchase, or use. Electrons and coding are out of the gates, and away. **As platforms develop, so too should sophistication and strength of education evaluation.**
- **Stirring dialogue around technology almost inevitably provokes interest in more transparency. Digitalization of higher education undoubtedly moves universities in a commercial direction, not least as the smallest teaching interactions are sewn into proprietary platforms owned by big global capital.**
- There is value in public disclosure about these ideas. Vendor research exists in many cases, but while informative it is obviously conflicted. Commercial intelligence platforms exist, as do advocates, and local or large-scale platform/education evaluations. But there is a large gap between sources of information.

Further reading for inquiring minds

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Next steps

1. What three actions can you take from this briefing?

2. What work is already underway?

3. Connect to engage:
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