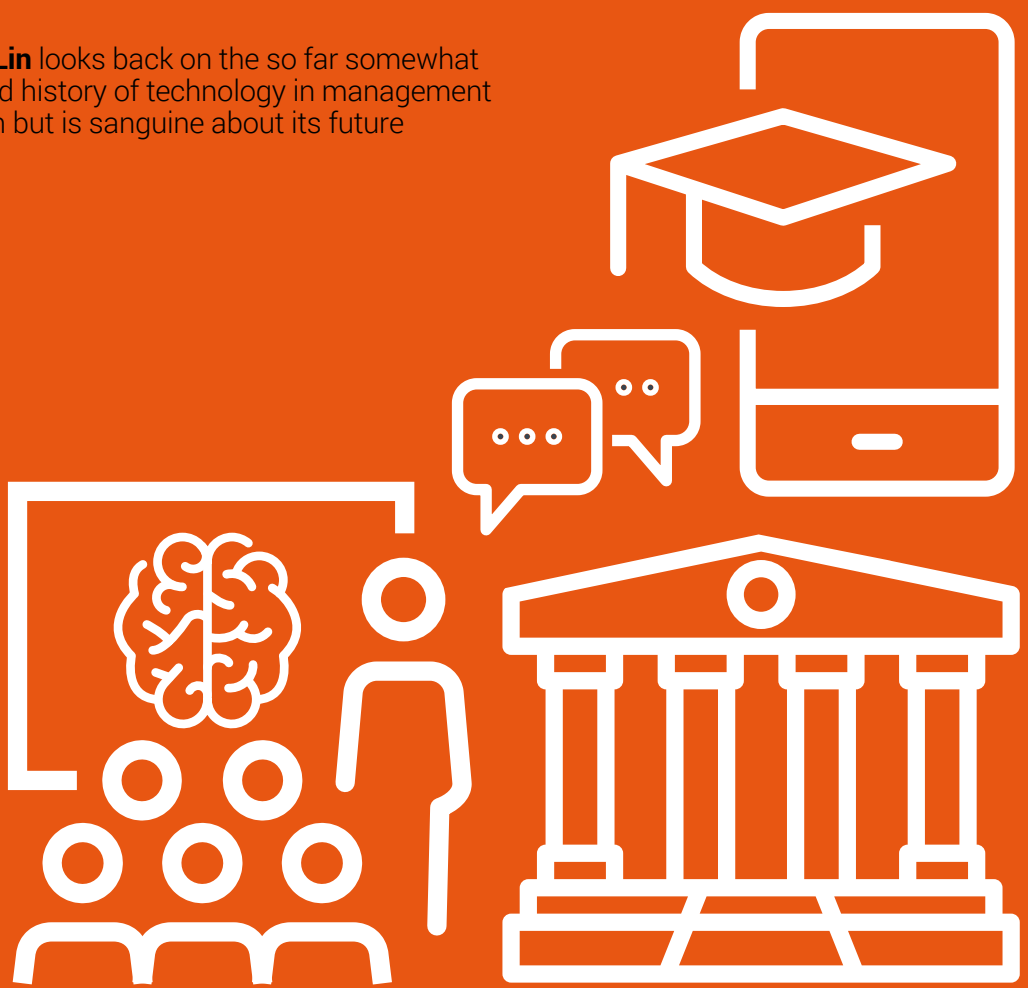
Digital Augmented Education - Are you ready to experiment?

Chengyi Lin looks back on the so far somewhat chequered history of technology in management education but is sanguine about its future



In 2018, total registered learners in the top MOOC platforms passed the 100 million mark. The total number of online courses was over 11,400. Roughly 18.2% of the courses are business related, a number that closely follow the 20.4% on technology. (Source 1) After seven years, the MOOC movement is starting to bear fruit from its root philosophy: providing education access to those who could not afford otherwise.

Even at this prototyping stage, the impact on many traditional bricks-and-mortar business schools can hardly be ignored. Recent shutdown of some US MBA programme indicates that MOOCs strongly challenge the business model of classic incumbents. (Source 2)

On the other hand, "the open classroom door", so to speak, also give a false impression to the general public that the MOOC experience captures all the values a traditional business school brings to its students.

If the impact continues as digital education technologies evolve, what will become the future of business education?

The ultimate impact of digital technology on education remains to be seen. What is becoming clearer, however, is the converging trends from the consumers.

"I hesitated before applying to business school", was a statement made by an MBA student during a conference panel discussion.

"My friend and I took many Coursera courses and loved them. We decided that we could start our own company and take the MOOC courses when we needed them. Why should we pay the large tuition fees, spend time in business school only to come out in debt?" Both the Dean and I sat very uncomfortably on the panel listening to this. Then it took an interesting turn.

"After the first month, I was so happy that I [had] decided to come to business school. The professors, my peer students, events with companies and leaders… all these enriched my learning experience. And I still use MOOCs to broaden my knowledge in my spare time."

With a sigh of relief, we were happy to be re-assured on the value proposition of business school and, by extension, the value of me as a professor. The curriculum design, the direct access to faculty, the proximity to cutting-edge research, the exchange with peers, and the exposure to business leaders and organisations were just a few added-values of a business school. At the same time, I couldn't help but feel concerned about this "slippery slope" we were riding with the new disruptive technologies.

Similar trends were observed in my conversations with learning professionals in the executive education market. Many companies have revamped their learning management systems in the past two to four years. The new internal learning systems aim at providing sustained, flexible and personalised learning in addition to the episodic skill- or strategy-based training contents.

"We understand the power of face-to-face interactions and the magic of the classroom. We will continue to use the classic format," commented a chief learning executive from a FMCG company. "But the environment is very uncertain and volatile. Our employees are diverse – [thus] the amount of new knowledge required is diverse. [In addition,] Everybody is busy and they need flexibilities. The traditional model doesn't work for everything."

It seems that our consumers (and customers) have started to embrace the new technologies and, more importantly, the new digital world.

And what about the conversations on the supplier side - the educators and educational institutions?

I started to reflect on my interactions with colleagues across various institutions. To my own surprise, the conversations tend to be more polarised. The classroom camp often highlights the benefits of F2F (face-to-face) interactions, the magic of P2P(peer-to-peer) learning in the classroom and the control we have as educators to craft the impactful learning journey for all the participants.

100m

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On the opposite side, the digital camp often raves about the flexibility for the learner, the personalisation based on learner style, the "time-saving" for educators and the incredible scale advantages. When both sides cannot agree, the conversations typically shifts to the disadvantages, which are also plenty on both sides.

The clear difference between the two formats often becomes the source of debate: which one is better? Interestingly, if one starts to look at this debate from a different perspective, one could argue that the differences between the two worlds can make them extremely complementary. Although many research and opinion articles have discussed the benefits of "hybrid" models that tries to combine the two, more often than not we still hold on to our mental model and position digital and in-person as archenemies.

I ask myself if instead of letting the two battle it out until one winner is left standing, wouldn't we all be better off imagining a world benefiting from both formats as the students and executive participants rightfully describe? A digital technology augmented learning future for all?

What would this new world look like? Let's image a simple scenario – designing a learning intervention for strategy.

In an ideal world, we may start with the baselining – assessment of learners' understanding of strategy concepts and frameworks. Based on the results, we may provide individuals with personalised learning materials to set the foundation.

We may also try to understand their "motivation to learn", learning objectives and individual learning styles. Once we have all the information, we can proceed to introduce new concepts and frameworks around digital strategy before we ask the participants to reflect, exchange and experiment in a low-risk or risk-free environment. To measure impacts, we may want the participants to apply the knowledge to their actual work and measure the improvements in results.

You may have variations of the different elements or sequence but the overall logic is quite universal. However, this plan is very difficult to implement if we only use tools from either camp. Simply put, the execution of the classroom camp would be costly; while the digital camp might be less effective.

What would the execution look like in a digital augmented future?

- Based on the existing and accumulative learner data, AI-powered (artificial intelligence) algorithms could extract: 1) learners' baseline understanding of the strategy concepts and frameworks (for example, past training programmes, education background, performance data, assessment results and so on) and 2) learning style (for example, behaviour pattern from previous digital training, past assessment and learning impact data, etc)
- Leaners and educators could use this information to inform their decision on personalised learning paths, including content, format and pace
- New training materials could be distributed digitally to allow personalised consumption. Individual exercises and social interaction could be conducted asynchronously. In-classroom sessions could be introduced to deepen the knowledge, share experience and conduct team activities
- Participants can be encouraged to experiment with the new learning via simulation or applied activities digitally or in-person
- Follow-up project works could be continued in the digital platform, where business and leadership impacts could be monitored and measured
- Any new learning needs could be gathered to inform future learning needs

As you can see, digital technology could augment traditional in-classroom formats and create a seamless integrated learning journey. At each step, educators could have the choice of digital or in-person delivery as well as the

80%

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PICTURE COURTESY OF INSEAD

insight generated from learner data. The journey also moves away from episodic training and provides continuity that could extend to lifelong learning. Most importantly, the vast amount of data generated by digital technologies could be harvested to inform individual and organisational learning strategy design.

How do we get there?

This seamless integrated learning future may sound too far from reach. The exciting news is that many educators, institutions and "edtech" enthusiasts have already started prototyping and piloting such an approach in many areas. Here we share a few promising experiments:

Knowledge and learning style assessment

Pre-assessment, or the lack thereof, is one of the weaknesses of the MOOC offerings. We continue to see a high drop-out rate of up to 80% at the beginning of a course. One factor accounting for this significant drop-out rate is the lack of appropriate assessment to match the course and participants.

Part of the complications comes from the fact that knowledge assessment does not directly corelate to skilful applications. Inspiration could be drawn from many learning-gaming apps such as Duolingo or Lumosity, which attempted to use various assessments to approximate "skilful applications".

With the further advancement of AI technologies, we can expect neuro-nets that do a better job at providing information that helps match courses and learners.

Personalised learning

Without a reliable pre-assessment tool, we are operating in darkness when it comes to designing personalised learning. Before we have the insight, one possible interim design to achieve a similar goal of baselining is to introduce flexibility and choices in content design to allow "personalised uptake".

Recently, I had an exciting opportunity to design such a programme for the INSEAD MBA students – a digital introduction course offered to all incoming students before they come on campus.

We took full advantage of the digital format and used a real-life INSEAD case – BlaBlaCar -- to illustrate how the subjects we teach in business school help entrepreneurs and leaders manage their businesses and organisations. The design was very flexible so that each participant could tailor his or her own learning based on their individual background.

Cascade – serving business needs beyond simple hybrids

Similar to our experiments in the degree programmes, I have run multiple pilots (some at fairly large scale) with executive education clients. The designs go beyond a simple hybrid model to reduce cost and increase learning outcomes; they also have a heavy focus on business needs and strategic impact.

The design for each level tailors the objectives, content and format to participants' needs linked to strategy. The strategic, business, leadership and organisational impact of such programme are visible and measurable (For details, see EFMD case studies - links to Microsoft, Telenor EiP Global Focus articles).

Learner engagement and immersive experience

Explicitly linking learning to impact through design is the first and key step to engaging learners. Once we unlock the internal motivations and understand the learner profiles, we can select the relevant technologies to make the content more engaging – gamification, simulation, social learning and the like. There remains great challenge in the area of social learning and application. At the same time, technologies could present exciting opportunities to change in the future.

Another experiment was run by my colleague at INSEAD Professor Ithai Stern. He has introduced Virtual Reality into the MBA core classes. This new technology transforms the traditional case teaching into an immersive experience.

Follow-up and measuring impact

This is another exciting area that is often mentioned and is in dying need of new development. Digital could open up opportunities to integrate training platforms with performance management system (such as API) to allow better data analytics. Some platforms started to experiment such integration in limited scope. The development of data analytic tools could further advance these developments. But the central challenge remains on how to select the right metrics to monitor and measure.

Having analysed disruptions at various times in the history of business and humanity, one conclusion is clear: it is not just the technologies that disrupt; the huge impact comes from new business models, way of working and mindsets based on disruptive technology.

If we extend the logic, digital alone will not necessarily disrupt business education. It is how we, collectives of educators and education managers, apply technologies to re-image business education will evolve and/or revolutionise our industry.

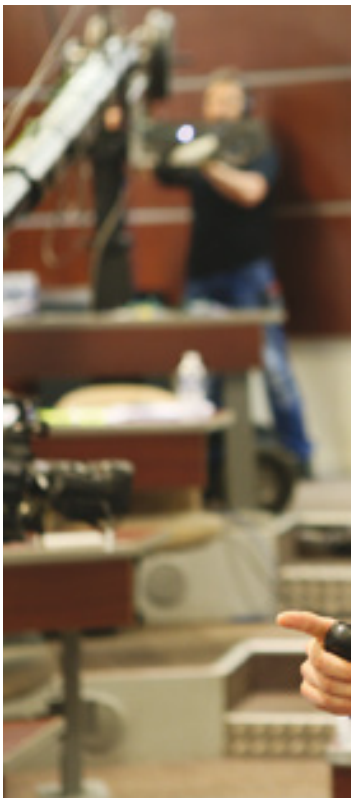
It takes vision, courage and means to disrupt.

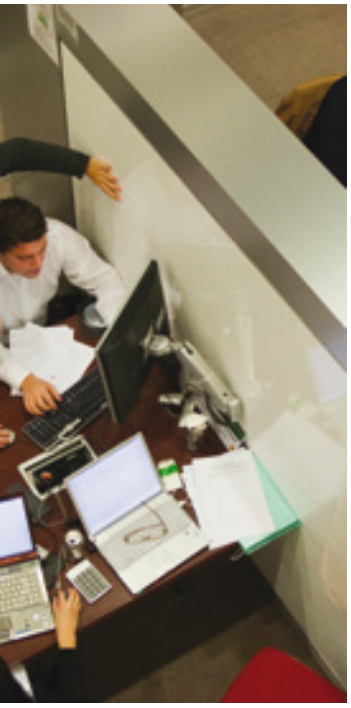
If we learned anything from the start-up world, especially the digital start-ups ,we need to start with experimentations focused on the consumer and boldly introducing new technologies. Naturally, some succeeded; some failed. But most importantly, many are on-going.

I had the great opportunities to lead our experiments at INSEAD for the past five years with the support of the dean. Along the process, I also enjoyed the many exchanges with peers in similar positions and with similar mindset across different institutions. I'd like to summarise (with my twist) and share some lessons learned from these experiences.

First, let's define a few guiding principles for the experiments. Here are some of ours:

- Put learning and the learners at the centre
- The experience of the educator is important but secondary to the learner experience (as you could imagine, this is quite provocative and generates some debate)
- Be obsessed with relevance and impact
- Connect to learners' individual career goals as well as to the company business goals





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- Make no compromise on quality; look for opportunities to delight
- Technology should be seamless; experience should be the highlight

Second, engage your key stakeholders in a collaborative innovation process

- Break the polarising view; collectively imagine the "ideal programme"
- Focus on value creation before value capture
- How can we collectively create more value for the business, organisation, participants and the provider(s)
  - Factor in the learning from experimentation in the cost-benefit equation
- Be open to digital and other technology; understand that they are only means to an end
  - Technology is neither your friend or enemy – there should be another tool you could provide
  - Technology is far from perfect but it is evolving – no platform can do everything you want, focus on the features that align with your main objectives
  - Technology is only as important as the learner needs it supports
- Focus on the process more than the outcome itself; pivot as needed and keep improving your solution

Third, keep evolving the solution as you periodically assess your progress

- Keep in mind that there may not be a single secret ingredient to success; success comes from the balance of multiple elements
  - A mix of interactions and formats could help make the overall solution more dynamic and interesting; learners may engage differently with the various interactions and delivery formats
- Beyond knowledge transfer and absorption, focus on application and contextualisation
- Push for meaningful social interactions whenever possible
- Engage the wisdom of the crowd; mobilise peer experts
- Use data to inform decision making

Finally, carefully manage the transformation beyond the new digital solution

- Apply the change management process and adapt it to the digital context
- Showing not telling
- Stay frugal but work diligently on the resources to support the transformation
- Measure and communicate impact

In five short years, we have come a long way from the initial philosophy of MOOCs. Many continue to be sceptical about them as they show signs of stagnation; while others paint a gloomy future for the traditional business schools.
The reality is that we are still at the infant stage of digitalisising education, especially business education. But the lessons are clear:

- obsess over the value creation for learners
- focus on impact enabled by technology
- innovate through associating and collaborating
- change mindsets and challenge the status quo

Happy experimenting for the digital augmented future!

About the Author

Professor Chengyi Lin is Affiliate Professor of Strategy at INSEAD. His research and teaching focus on digital transformation and innovation. He is a board member of multinationals and a member of the European Executive Council. He advises various global organisations on digital execution and mentors start-ups. In 2014 he successfully launched INSEAD Online Education with a unique strategy focusing on customised programmes for transformation. He has grown the business significantly globally. He holds a PhD from Northwestern University in the US, a business certification from Kellogg School of Management and a BSc from Tsinghua University.

Sources

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