Part 3

Reflections on learning and teaching

Diversifying the university menu

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In his engaging book on the future of higher education, Bert van der Zwaan argues his preference for a multiform and flexible system of higher education that can adapt to every future societal and academic challenge:

> In their vision of the future, universities should focus on having a diversity of forms, rather than striving for a uniformity that is grafted onto the Anglo-Saxon model. (...) In the diverse university system of the future, there must be room for each university to develop its own individual profile, leading to the emergence of a multiform and flexible system that is able to adapt to almost every change. (Van der Zwaan 2017: 243).

If universities want to survive the next 25 years, they should diversify their menus and offer a mix of proven and experimental approaches to teaching and research. We are currently training students for future jobs that, to a large extent, do not even exist today, many current jobs will be taken over by self-learning intelligent machines, and new jobs may require a range of skills that we cannot even imagine right now. Diversifying the education ecosystem is indeed an important precondition to train workers to keep training themselves. So what mixture of old and new forms can universities offer to prepare the next generation of knowledge workers?

We can already witness today how technology companies are increasingly taking over parts of the learning trajectory from schools and universities; digital courses and online training programmes often serve to select the brightest minds from the sea of talents. Universities will likely no longer have a patent on

learning and credentialing systems, as alternative credentialing mechanisms will arise to assess and accredit the skills that people acquire along the way. Where campuses once used to be the place for scouting young talents, tech campuses (mostly in Silicon Valley) have themselves turned into places of continuous learning. In the campus model of the future, there will be a coming and going of students, employees, faculty, and personnel in high-density brainports. University campuses may still be the primary playground for young adults, and yet these campuses will increasingly also cater to learners of all ages and all levels of experience. If switching careers two or three times during a professional lifetime becomes the new norm, universities need to be adapting rapidly to new contingents of learners. Some tech executives dream of a future university campus where students each follow their own personalized learning trajectory, buoyed by their own digital personal assistants. It is easy to fantasize how, by the year 2030, each student will have his or her own AI tutor and mentor — an app-voice not unlike Samantha's in Spike Jonze's 2013 movie *Her* who personalizes each student's learning experience. Such an encouraging AI assistant may be equipped to review Statistics 101 assignments while also engaging in dialogues to test a student's understanding of Plato's *Republic*. A scenario in which the 'automated' part of learning is taken over by algorithms and the basic part of teaching is taken over by programmers may be regarded as a welcome reduction of teachers' workload to some, while others think it signals the beginning of the displacement of teachers. In whatever form, personalized digital environments are going to be part of the university's offerings in 2040, if only because large numbers of working professionals are in need of constant training upgrades.

Indeed, the diversification of education does not mean that the university should give up on its proven methods of learning. On the contrary, the old-style monologue lecture by the erudite teacher in front of 200 students will still be part of the menu some 22 years from now. Just as theatre was never replaced by film or

television, students can still learn from the eloquent professor mesmerizing an audience with her voice. One thing that should never disappear from a student's diet is the opportunity to engage in the social activity of learning with their peers. In a world that is inundated with data and information, interpretation and rational arguments are more important than ever. And the best contexts in which to learn such skills are small college classes where students are not just beneficiaries of expert knowledge shared by their teachers but where they also acquire the necessary social skills to engage in dialogue with each other. As much as digital tutoring can help students become better learners, education is fundamentally a social activity where students and teachers need to interact.

Much has been said about the need for students to become experts in one specific discipline or one type of knowledge; at the same time, though, they need to be trained more generally in various subject areas. So universities need to offer both highly specialized education and broader training. The so-called T-shaped professional will be the best insurance for future employability. Ideally, the expertise and skills a student acquires in college would be transferable to other applications in the workforce. The ability to adapt easily to new areas of expertise is something students need to learn at universities. Therefore, it is important to pair off disciplinary training with interdisciplinary learning and dialogue. Over the past ten years, professors have increasingly become engaged in cross-disciplinary research projects. Exposing students to, and engaging them in, such efforts will prove crucial to strengthening students' adaptability. Collaborations across disciplines not only prepare students for future professions, they also help them become better problem-solvers.

Finally, let us reflect a little longer on the most crucial asset that makes most university-based curricula still relevant and valuable today: an emphasis on *Bildung* and on basic academic skills such as critical, independent thinking and analytical acuity. To start with the former, the best colleges have always

prided themselves in offering a coherent curriculum: not just a dinner table filled with appetizers, entrees, and desserts but a carefully timed meal with the right amounts of knowledge offered at the right time in the right order. *Bildung* and digital environments are not necessarily rivalling goods, but it is certainly true that while the former has always been firmly curriculum-based, the latter thrives on the contingency of de-bundling courses from curricula and decoupling assignments and degrees from institutions. Taking in bits and pieces from a personalized menu seems so much more efficient than waiting out a formal dinner at a perfectly set dinner table. And yet it is important to realize why the latter has been so valuable and effective as an educational experience for many centuries. Perhaps the most crucial ingredient of any future university education will be students' ability to think independently paired off with a curiosity-driven mind-set and a tolerance towards considering new insights and knowledge. Each and every part of a student's education should centre on his or her abilities to raise questions, to articulate what kind of knowledge is needed to solve a problem, and to leverage this knowledge without pandering to special interests. There is not one single module or course that can train students to adopt such an academic attitude; instead, it is the primary task of a university to instil an appetite for independent and analytical thinking in every single student's brain during every minute of their education. Training students in *how to acquire* valuable knowledge, even as the *type* of knowledge they acquire will certainly change over time, may be the best investment in future wisdom. Whereas knowledge ages, wisdom prepares for rejuvenation.

While there is no ultimate recipe for the best university in 2040, the strategy to offer a diverse and balanced meal to students may be our best bet: keeping all-time favourites while adding the most promising of new flavours. One thing the university of 2040 cannot do without is a rector who can act like a visionary chef: a leader who simply knows when to embrace

innovations and when to take them with a grain of salt. It is too bad that Bert van der Zwaan has to leave the kitchen when we need him most!

Bibliography

Bert van der Zwaan, *Higher Education in 2040 — A Global Approach* (Amsterdam: Amsterdam University Press, 2017).