

Education For The Next Economy – a personal view

The Goal

“In 2025, the metropolitan region of Rotterdam and The Hague will be the international market leader in the design, development, manufacture and marketing of solutions in the area of sustainable living in a heavily urbanised delta region. In the region, coherent solutions will be devised, tested and produced for global logistic, energy, food and safety issues.”¹

Strategic Agenda: Metropolitan Region Rotterdam The Hague (MRDH)

The Situation

'The Times' recently published its 2016 world rankings of universities. I was pleased to see my alma mater, Oxford, top of the global list for the first time since these rankings started.²

But more troublesome was the report that a key component of the evaluation research found that student satisfaction had dropped.

- ✚ A third of students don't believe their course is offering value for money
- ✚ Over a quarter believe feedback from tutors is poor and too many students end up regretting their choice of course.

In the recently published book, 'Overschooled and Under Educated'³ the author John Abbott asserts that education is about preparing children to become good citizens and adults who will thrive at unstructured tasks - not just successful pupils.

In 2014, The London School of Economics⁴ found a mismatch between what universities were providing and what businesses need. Their research among CEOs identified three core capabilities sadly lacking in recent graduates:

- ✚ Problem solving
- ✚ The ability to connect different parts of the business in a holistic way
- ✚ Collaboration and teamwork.

These capabilities are echoed in a Twente University paper entitled "21st Century Education"⁵.

As the eminent international advisor on education and creativity, Sir Kenneth Robinson⁶, has pointed out, our model of education was developed during the industrial revolution - fit for purpose in the 19th century. If you were to ponder who succeeds in the current system, he asserts - the answer is university professors.

But if we are to achieve the goals of the Road Map then what we don't want are more university professors.

¹ Available on <http://mrdh.nl/>

² <http://www.thetimes.co.uk/article/british-universities-cant-afford-to-rest-on-their-laurels-50n0gtmb3>

³ John Abbott with Heather Taggart 'Overschooled but Undereducated' Bloomsbury 2010

⁴ <http://blogs.lse.ac.uk/usappblog/2014/05/31/business-schools-have-lost-a-staggering-amount-of-credibility-in-the-business-community/>

⁵ Joke Voogt and Natalie Pareja Roblin "21st Century Skills" Discussion Paper University Twente for Kennisnet 2010

⁶ https://www.ted.com/talks/ken_robinson_says_schools_kill_creativity?language=en

We are living in what has been popularly described as the VUCA World. As with much of the modern language of business, VUCA comes from the military, in this case the US armed forces describing conditions in Afghanistan.

- ✚ V for volatile
- ✚ U for uncertain
- ✚ C for complex
- ✚ A for ambiguous.

The Rotterdam University Research Centre, Sustainable Port City, Duurzame Havenstad, known as RDM to most, has set out 21 trends that could have an effect on the way the Port functions all of which illustrate the potential VUCA.

These trends include the increase in the use of robots and drones, the impact of the circular economy with reverse logistics becoming as important as forward logistics, the rise in renewable energy, and self-propelled vehicles.

Simple arithmetic says that the interaction of these 21 trends adds up to a staggering number of potential combinations.

51,090,942,171,709,440,000!

If we are to achieve the goals of the Roadmap – then to paraphrase a quotation often attributed to Einstein, we need to have new thinking.

What do we need?

Of course we are going to need specialist skills, built on a foundation of facts and proven theories - so engineers of all types, scientists, and doctors.

We also need creativity, entrepreneurial spirits to foster new technological and business solutions:

- ✚ Basic skills and knowledge
- ✚ Collaboration
- ✚ Creative solutions.

In the new wave of innovation - described by some as the "6th wave"⁷ - by others as the "4th industrial revolution"⁸ - we see advances being made by specialists collaborating, e.g.:

- New health solutions combining basic medical knowledge with nano-robotics, engineering, and IT
- Engineers studying nature - zoology and botany to create new materials or new ways to harness energy from the sun.

What could education look like?

⁷ The Natural Edge Project, Australia 2004

⁸ <https://www.weforum.org/agenda/2016/01/the-fourth-industrial-revolution-what-it-means-and-how-to-respond/>

We need schools that start to encourage new capabilities. Pupils to learn basic facts and theories but also we need to encourage an entrepreneurial spirit, nurture and develop their imagination and creativity and not snuff out these innate capabilities.

We need to encourage young people to develop a flair for learning to learn.

This latter capability is going to be fundamental in the 21st Century. With knowledge changing rapidly, we are going to have to be continually re-learning.

I shall now focus on what I know best - and that is higher education.

My view of the future university is a kind of educational food court.

In a typical food court, you'll find there is a wide range of food options each served at a specialty outlet. Individuals can mix and match their selections and then come together in the centre and converse over their separate meals. Perhaps one will see that something another person is eating looks tastier and decides next time to try that. On the next occasion each is free to try a different food.

Similarly, the university of the future should allow students to mix and match topics of their choice. Not just choosing from a range of pre-structured, fixed degrees - but choosing from a wide range of subjects. Including the creative arts.

Why not a degree in which you study management, mathematics and music?

A food court serves food at all hours: breakfast, lunch, dinner and snacks from morning until late at night.

So - students will be encouraged to return to the university - throughout their lives - to learn new stuff.




In addition to degrees, I see the university of the future offering short, specialised courses. And as new technologies and new capability requirements emerge in the 21st century, universities will develop new very-focused courses perhaps only a week in length.

Perhaps studying for a degree might become obsolete for business.

Instead of degrees – business schools will offer shorter courses in specific skills and capabilities and award certificates attesting to achieved competencies. In the same way that boy cubs, scouts and girl cubs and guides collect proficiency badges. Right now I'd like to sign up for a Block Chain proficiency course and badge.

Businesses will send their managers armed with live problems to these courses - aiming to achieve solutions to their current business issues - collaborating with lecturers and full-time students.

The need for business education is clear

-  Encourage inter-disciplinary work - active interaction between researchers, lecturers, students, and business people
-  Develop stakeholder-engagement and cross-sectoral partnership building skills
-  Nurture creativity and entrepreneurship.

Right now our universities are too silo-ed. As David Grayson of Cranfield University writing in the 'Financial Times'⁹ asserted: "Part of the problem is the emphasis for academic career progression on publication in three- and four-starred academic journals which can encourage incremental development of academic theory."

The Roadmap may need such incremental development in basic sciences and technologies - but it also requires breakthrough, creative solutions.

Steps we are taking at RBS

In my experience, the current accreditation system in the Netherlands does not encourage rapid innovation. We need members of our education boards and administrators to return to school and study entrepreneurship and creativity - then return to their roles and transform the system.

At RBS - central to the structure of our one-year Master degrees is building in the capabilities of:

- ✚ Creativity - divergent thinking, and not just thinking but how to apply and operationalise
- ✚ Critical and analytical thinking - problem-solving skills, making judgements
- ✚ Collaboration - emotional intelligence, interpersonal communication, and teamwork (not just between known allies - but also between competitors and unexpected allies). We create cross-disciplinary teams of students to work with businesses to tackle real-life business issues.

We have just embarked upon a new innovative degree structure in partnership with Elisava University of Barcelona¹⁰.

This is a Masters degree where students are not required to be on a campus 100% of the time. Each student will have their own new business project they wish to develop during the course of the degree and will receive counselling and advice along the way.

There will be online courses, tutoring and mentoring. But there are only eight occasions where students will be face-to-face with lecturers on campus. These will be pressure-cooker weeks - intensive learning, specialist lectures focused on a specific topic And we are designing these to be able to be attended by local business people as well as students - one-week learning events open to students and SMEs.

Five of these one-week events will be in Barcelona and three here in Rotterdam.

In conclusion, in order to meet the needs of the new economy. Rotterdam's education system needs to become versatile, creative, and fleet of foot.

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⁹ <https://www.ft.com/content/63cf95b0-cd5f-11df-ab20-00144feab49a>

¹⁰ <http://www.elisava.net/en/studies/masters-degree-advanced-design-management-strategy-and-entrepreneurship>