Design thinking in Higher Education: preparing the next generation of graduates

Higher education institutions are often accused of not preparing students well to join the workforce. With the advance of artificial intelligence soft skills such as problem solving, creativity and empathy will gain in importance, as collaboration will be in high demand. ***Tony Morgan*** *and* ***Lena Jaspersen*** *suggest that centring training courses around interdisciplinary team-based projects is the best approach for universities to face this challenge.*

Professional bodies and industry leaders often suggest there's a mismatch between the theoretical knowledge students acquire at university and the skills they need to succeed in a job after graduation.

For example, Denise Jackson has described how higher education institutions have been consistently blamed for soft skill deficiencies, while Fatima Suleman's work highlights the growing body of literature which illustrates the pressures on higher education institutions to better prepare their graduates for the world of work. Indeed, while gaining in-depth knowledge of a core degree discipline and demonstrating the ability to learn is important, more foundational 'employability' skills are key for graduates' success when entering the labour market.

There are many uncertainties about what the future of work may hold. What will a graduate role in 2030 or 2040 even look like? One thing seems certain: there will be more currency for things people can do that machines and artificial intelligence cannot (or at least cannot do as well). Creativity, problem solving and empathy, for example. With the world facing huge challenges, the ability to collaborate across disciplines and cultures will be in high demand.

A 2020 survey by the World Economic Forum (WEF) highlights a range of skill areas that become increasingly important, including 'critical thinking and analysis,' 'problem-solving,' 'self-management' and 'working with people'. An analysis of UK graduate recruitment vacancies concurs. The most frequently requested skill areas in recent vacancies include 'communication,' 'organisation,' 'problem-solving' and 'teamworking'.

So, how can universities (and employers who hire graduates) enable and support their students (or early career professionals) to develop such skills?

We believe one of the most effective ways is by designing and delivering training courses which centre around interdisciplinary team-based projects, where diverse team members work together to address real-world problems. In addition, the set of techniques collectively known as Design Thinking offer an incredibly versatile approach for supporting this. Used by companies like Google, Apple, IBM and many others, Design Thinking is a user-centric and iterative approach to defining and tackling problems.

For the past five years, we've been running the 'Innovation Thinking and Practice' module at the University of Leeds. The module was developed working directly with industry to gain insight into the skills graduate recruiters were looking for but felt were often lacking in their graduate hires.

In the module, students from across the university are assigned to work in diverse teams. Each team is assigned a real-world challenge to solve. The challenges are developed in partnership with industry experts from local, national, and international private, public sector or third sector organisations. Increasingly, the challenges include a sustainability aspect.

During the module, the student teams work through a series of facilitated activities following the design thinking process: they research the challenge, develop empathy with those facing it, generate and evaluate ideas, develop prototypes, and articulate value.

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Each team encounters problems along the way. Some of these problems may occur naturally. Others have been designed into the module for students to solve, so they can learn about the importance of iterative approaches in innovation and problem solving. This also helps them to build resilience, which is one of the top skills for 2025 highlighted by the WEF.

Students complete the module by pitching their projects to a panel of industry and academic experts and by writing an individual report, reflecting on what they've learned and how they can apply this learning in the future. Each year, we document some of the students' achievements (see 2020, 2021, 2022). We hear from alumni who have used their learning to great effect in graduate roles as well as setting up their own businesses; and the module was shortlisted at the 2021 UK Times Higher Education awards.

Keen to do something practical to enable others to benefit from our experience, we have written a book that walks students and practitioners through all the steps necessary to deliver a team-based project to address a real-world innovation challenge and, critically, to develop key employability skills, along the way.

One of the many inputs we've taken on board was that students want direct insight from a range of industry and academic experts. As a consequence, each chapter includes expert interviews on specific topics. Interviewing expert practitioners like Doug Dietz (whose ground-breaking design thinking work in healthcare has transformed the experiences of child patients), Jeanne Liedtke (who has written and taught extensively on the topic), and others.

To close, we're not arguing the case for non-subject-specific degrees. However, universities can do more to supplement and improve them by giving their students access to interdisciplinary team-based modules. The opportunity to be immersed in a work-like environment, creatively solve problems, and develop the skills needed to impress during recruitment and at the start of their careers can only benefit students and their future employers.

Having obtained funding for further pedagogical research, we are now working with our colleague Louisa Hill on evidence-based guidelines for developing or improving interdisciplinary team-based modules with a focus on developing employability skills. So, watch this space as we will soon be able to tell you even more about the benefits of interdisciplinary team-based and challenge-driven learning! Until then, feel free to contact us on if you are interested in finding out more or collaborating on this or a related initiative.

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Notes:

- *This blog post is based on the book Design Thinking for Student Projects.*
- *The post expresses the views of its author(s), not the position of LSE Business Review or the London School of Economics.*
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