Case Study: Hochschulforum Digitalisierung, Germany

Key Learnings:

- Active learning spaces are a hot topic in German higher education
- Interdisciplinary teaching and teaching of 21st Century competences are helping to drive this need
- There are many lighthouse projects and prototypes but challenges to make these sustainable
- Peer to peer support networks are emerging to help professors use new methodologies but professors are more incentivised towards research than teaching practice innovation.
- Flipped classroom models are important to make the best use of classroom time for more in-depth learning and coaching
- Learning and prototyping labs with 3D printers are being used especially in engineering departments
- LMS are widely used as a baseline utility as in the other countries ~~studied~~ but there are opportunities to provide better digital platforms supporting personal learning experiences and better learning outcomes
- A nationwide digital learning platform is currently under political consideration in Germany
- Teaching and Learning Technology is not yet a primary differentiator for students when selecting a university, except for very technical courses
- Trends to on-the-job Masters degrees and lifelong learning are driving growth of blended models
- Universities are motivated by growth and differentiation. Areas of differentiation include internationalisation, applied sciences, research orientation, life-long learning and academic degrees for professionals in work.

About Hochschulforum Digitalisierung

hochschulforum digitalisierung

Hochschulforum Digitalisierung (HFD) is an independent national platform, providing a framework for discussing the wide-ranging impact of digitalisation on higher education institutions, and especially on higher education teaching. HFD supports Higher Education Institutions (HEIs) in making digitalisation an integral part of their institutional strategy, incorporating it in their teaching activities. Together, HFD and HEIs develop forward-looking scenarios for higher education institutions in the digital world.

Based on this collaboration, Hochschulforum issues recommendations to decision-makers in German higher education policy. Figure 1 on the next page highlights the main aims and goals of HFD. Founded in 2014, HFD is a joint initiative by Stifterverband für die Deutsche Wissenschaft, CHE Centre for Higher Education and the German Rectors' Conference (HRK). It is financed by Germany's Federal Ministry of Education and Research (BMBF).

Hochschulforum Digitalisierung has three main objectives:

1. Implementing strategies for higher education institutions
2. Building competence in teaching
3. Generating new ideas and developing scenarios for the future

Implementing strategies for higher education institutions

Digitalisation cannot be considered in isolation from the existing basic challenges the German higher education system is facing. These include rising student enrolments and the corresponding increase in student diversity, the slow growth of international student mobility, and high student drop-out rates among bachelor's students in some areas. The rising demand for highly qualified specialists and

academic further education programmes will require new solutions with regard to the looming demographic changes. Digitalisation can help address these fundamental challenges confronting German higher education institutions. Rather than developing only a digitalisation strategy, therefore, HEIs should think of larger strategies for the digital age – strategies that emerge from an institution's individual profile and are guided by its specific needs. HFD supports HEIs with developing and implementing their strategies by identifying emerging trends and by developing perspectives for the future.

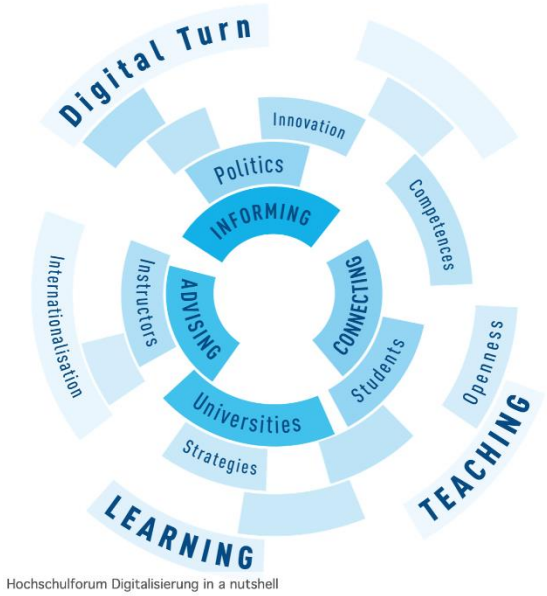

Figure 1: Main aims and goals of HFD

Building competence in teaching

Teachers need the competences to actively shape digitalisation and to use it for their own teaching. But although there are pioneers who already make deliberate use of digital teaching and learning formats, for instance to enable students to pursue more individual and more flexible courses of study, most higher education teachers still do not take full advantage of these new opportunities.

Using technology in teaching is not an end in itself. Rather, the emphasis is on using digital teaching and learning formats to create added educational and didactic values. Teachers must be empowered to recognise the added value of digital formats, and they must be supported in proactively employing these new opportunities in the classroom. Furthermore, higher education institutions or HEI consortia must establish or expand centralised support structures. The goal is to make digital teaching formats an integral part of teaching wherever they create added educational and didactic values. HFD supports higher education teachers and administrators with competence building in this area and helps promote the widespread use of digital media in higher education classrooms by developing scalable professional development modules.

Generating new ideas and developing scenarios for the future

The range of issues addressed by HFD evolves dynamically. As a key agenda setter, we focus on flexible processes to help shape the discourse and the successful implementation of digitalisation in higher education teaching in Germany. Current issues are addressed by ad hoc working groups, formed for one year to explore concrete questions and problems to develop new solutions and courses of action. The findings of the working groups are made available to the public through studies, guidelines and other publications.

Active Learning Spaces

Active learning spaces are currently a hot topic for higher education institutions in Germany, despite research in this area for over 20 years. Drivers for new investments are usually interdisciplinary teaching and learning approaches and the need to teach competencies required for the 21st century such as collaboration, communication, critical thinking and creativity (4 Cs). Highly motivated professors are gaining experience with digital learning formats within their existing classroom settings. To improve the situation HFD has created learning labs as lighthouse projects. such as Hochschule der Medien in Stuttgart where Professor Richard Stang has established a Learning Research Center with a focus on future learning worlds and mobile learning in pedagogy, organisational design of learning spaces, both physical and digital as well as blended learning spaces. There will be a major expert conference at Hochschule der Medien in March 2019 on the future of learning worlds in higher education.

There are several lighthouse projects on active learning spaces underway in Germany. Most are not yet sustainable due to their project based and prototyping approaches. Active learning spaces require professional competences from relevant stakeholders in the university such as management, teaching staff, the IT department, campus and facility management as well as experts in fire protection. Pragmatic solutions are needed to overcome these hurdles.

Another interesting example of a lighthouse project is the learning lab at TH Wildau in Brandenburg where 3D printers have been installed to allow engineering students to develop prototypes with different functionalities. Usually universities with a research focus in technical disciplines are better equipped than others with technologies such as 3D printers in their learning or fablab spaces.

Changes in teaching approaches

Many professors find it challenging to adapt their teaching styles to the new demands of students and the world of work. One reason is the lack of incentives to drive personal motivation. Professors are focused on research and usually earn their reputation from innovations in research and not necessarily from innovative teaching practices. Their focus is clearly research and not teaching. Of course there are professors who aim to be thought leaders in innovative teaching practices like Jürgen Handke, a Professor of Lingustics at University of Marburg, and a well-known ambassador for digital classroom concepts. He started experiments with Robot Pepper to explore if *robots are the better teacher?* According to Prof. Handke Inverted or Flipped Classrooms are an important direction for higher education institutions to take to ensure that high-quality learning content is made available to students online, allowing time in classroom to be used for more in-depth learning experiences in exchanges and discussions with professors and assistants in their new roles as learning coaches. More thought leaders with the mindset of Prof. Handke are required to adapt teaching styles for the digital age. According to HFD's own research, clear commitment from a university's leadership is needed to deliver on digital teaching.

Continuity of active learning spaces across campus and off campus

Scaling of new learning spaces is seen as critical. One option to accelerate this is the exchange of ideas and developments between teaching peers so they can learn from and with each other. The Hochschulforum Digitalisierung "Peer to Peer Consultancy" is a service for university leaders. In this programme HFD invited highly motivated professors to come and share their experiences with others. A summary of those experiences with guidelines for effective change management processes is provided in HFD's research paper "Strategies for universities in a digital age"

Digital Learning Environments

LMS like Moodle or ILIAS became commonplace on university campuses in Germany many years ago, although many are still mostly used for administration and to store data. The ability to sort classes and track student data makes a huge difference in the daily administrative duties of a professor. However,

there are clearly possibilities to create digital learning environments comprised of learning tools with digital platforms that professors and students both access to design lessons aimed at personal learning experiences and better learning outcomes. The investment into Digital Learning Environments represents significant efforts for each university. This is why HFD believe that collaboration between higher education institutions could be an effective solution to support these efforts. Another interesting approach is a nationwide digital learning platform which is currently under political consideration in Germany. HFD have just published a feasibility study with recommendations for a nationwide platform with a focus on life-long learning.

Student recruitment

So far in Germany technology does not play a major role in students' early learning experiences in school, so it is not yet a major a consideration for most students when making their choices to study at a certain university. They would not have developed an expectation and need. This picture changes where students apply for more technical disciplines like bio informatics; sufficient technology is then an important requirement.

An increasing number of students see university as an opportunity to achieve qualifications that will help them to earn a good salary. In such cases a clear profiling of universities becomes more critical. Universities seek to differentiate from each other through, for example, internationalisation, applied sciences, research orientation, life-long learning or academic degrees for professionals who are already in jobs. Universities should clearly focus more on life-long learning concepts and address individual study needs especially in the context of digitalisation and the requirement for individuals to continuously adapt to change.

Examples of publications

20 Theses on the Digitalisation of Higher Education https://hochschulforumdigitalisierung.de/en/20-theses-digitalisation-higher-education
Reinventing Education in a Digital Age https://hochschulforumdigitalisierung.de/en/report-reinventing-education-digital-era
Learnspace: lessons learned from the accelerator program for European Edtech Start-ups http://www.learnspace.fr

Interview with Anne Prill, Project Manager at the Centre of Higher Education (CHE) by phone on December 6th, 2018