

# Online Teaching and E-learning at the University of Mannheim 2022 until 2026

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## Strategy Paper as of April 2022

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# 1 Objectives: Facilitating Online Teaching and E-learning

## 1.1 Status quo

The University of Mannheim creates excellent conditions for students. The university supports students in their technical and personal development in a way that will enable them to fulfill their social, ecological, economical and civic responsibility. To this end, it offers, among other things, modern teaching and learning opportunities that address individual perspectives as well as current public debates and social developments. The programs are both international and interdisciplinary and have a considerable practical relevance. It is part of the University of Mannheim's identity to keep developing teaching and learning opportunities and to adapt them to current challenges.<sup>1</sup> To that end, the university already recognized online teaching and e-learning as key instruments in 2013. The support services for teachers and the technology required have been constantly expanded since. The coronavirus pandemic accelerated these developments significantly, increased the approval of digital teaching and learning formats considerably and enabled the university members to acquire further skills in using digital learning and teaching methods. During the semesters affected by the coronavirus crisis, we learned that we need to approach the topic of digital teaching and learning in a holistic way. In many regards, that also concerns the university as an organization. There are some essential prerequisites for fulfilling this task: the strategic incorporation of the task, the comprehensive cooperation of the organizational units, a stable infrastructure, the continuous development of the digital teaching and learning formats in use as well as qualified teachers.

This document provides a general framework for the university's digitalization strategy for teaching. Keeping it general and short was an intentional decision. The next steps will be to identify the particular, school-specific needs, combine them in the comprehensive catalog of measures currently being developed and, lastly, implement the measures in due time. The University of Mannheim undertakes to help reach the goals in the framework of the fields specified in this document.

## 1.2 Strategic goals

The University of Mannheim uses new digital technologies to generate and spread knowledge in the best way possible, to allow for the (lifelong) acquisition of competencies and to fulfill its social responsibilities. In this regard, the university serves as a role model and aims to continue being a modern, forward-looking and attractive place for teaching and learning. By exploring digital technologies, the University of Mannheim breaks new ground for teaching and learning.

Digitalizing teaching and learning is necessary to

### **(1) Create modern conditions for studying**

The best possible conditions and offers for individual study are created by combining on-site and online teaching. The combination takes into account that the student body is becoming increasingly heterogeneous and that life situations vary.

### **(2) Promote new forms of internationalization**

Digital teaching and learning formats are necessary to strengthen and advance international cooperation. Digitalization allows teachers and students to engage in activities anywhere, anytime and beyond their home institutions.

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<sup>1</sup> Please also see Institutional Mission Statement on good teaching of the University of Mannheim:  
[https://www.uni-mannheim.de/media/Einrichtungen/Organe\\_und\\_Gremien/Dokumente/Senatsrichtlinien/Leitbild\\_Lehre\\_Universitaet\\_Mannheim\\_en.pdf](https://www.uni-mannheim.de/media/Einrichtungen/Organe_und_Gremien/Dokumente/Senatsrichtlinien/Leitbild_Lehre_Universitaet_Mannheim_en.pdf)

### **(3) Enable lifelong learning**

Teachers, students, staff members and those interested from outside of the university, can benefit from educational resources offered online and thereby develop their professional skills in a target-oriented, easily accessible and individualized way. Thanks to digitalization, available knowledge can be accessed from anywhere in the world.

## **2 (Infra)Structural Fields of Action**

Online teaching and e-learning is a wide-reaching task that requires collaboration inside and outside of the university. In order to reach strategic goals, adequate structures need to be established and maintained. Those need to include administrative processes in teaching and learning as well as the technical, didactic and legal conditions for online teaching.

### **2.1 Structured exchange and coordinated collaboration**

Teaching is constantly developing and therefore requires the responsible bodies of the university management, the administration, the schools, University IT and University Library to collaborate closely and to continually exchange information with teachers and students. Regular exchanges and close collaboration enable the university to identify new challenges and trends early on and make use of synergies when implementing measures. Collaboration also fosters the development and implementation of new ideas and teaching projects, supports the schools in (further) developing their curricula and provides the Vice President's Office for Student Affairs and Teaching with impulses to further advance teaching. This will encourage a cultural change in teaching and learning towards using digital teaching solutions in a natural and target-oriented manner.

### **2.2 Teaching and learning environments on campus**

Online teaching and e-learning pose new demands for classrooms and self-study spaces on campus. Blended learning courses aim at interactions during the time spent at the university and require more flexibility regarding the way spaces are used – both inside and outside the lecture halls and seminar rooms. User-friendly add-ons and adjustments to the technology in the rooms are prerequisites for conducting hybrid classes and recording them in high quality. Existing study spaces need to be adjusted to allow for active and uninterrupted participation in online classes using video conference systems. To develop the campus and make it more attractive, those new requirements are considered in terms of architecture, equipment and design of classrooms and study spaces. In addition, the rooms need to be maintained, serviced and constantly upgraded with new, modern technology that allows for the implementation of didactically innovative learning scenarios. Ultimately, in order for the hardware and software to be used successfully and efficiently, comprehensive didactic and technical advice and training opportunities for teachers and students are essential.

### **2.3 Online teaching and e-learning environments**

(Further) development of a user-friendly digital learning system that allows for presenting and imparting knowledge, tailored tests and asynchronous collaboration of course participants is essential for online teaching and e-learning. Such a system can, for example, provide students with material for self-studying which they can use in various contexts such as bridge courses, courses with international cooperation or inverted classroom formats.

Furthermore, digital examination systems need to be further improved so teachers can conduct competence-oriented, secure and technically stable examinations both on-premise in the lecture halls as well as remotely, including in international contexts. In the short term, great importance is placed on BYOD examinations (bring your own device).

In addition, new technologies are required for synchronous communication and collaboration online, particularly in the context of digital international exchange. To that end, there need to be incentives to use the systems provided and to integrate digital media for teaching and learning more into everyday practice. All new set-ups and software solutions are checked in terms of data security and copyrights.

## 2.4 Room for developing innovative digital teaching formats

Challenging teaching projects and developments in online teaching are accompanied by significantly more work for teachers in terms of time and/or money. To allow for the development and testing of appropriate concepts all the same, it is necessary to support and relieve teachers during development and implementation.<sup>2</sup>

## 2.5 Continuous evaluation and development of teaching and learning processes

Digitalizing teaching in higher education allows for innovations. The effects and potentials of such innovations have not yet been fully researched and are thus not yet well known. For instance, they require students to increasingly engage in self-learning processes. That is why the efficacy of new and innovative learning methods must be consistently evaluated and analyzed using an evidence-based approach. That especially entails the definition of quality development processes for new (digital) teaching formats that lead to established quality assurance procedures. In that regard, it is important to collect actual usage data of the students ("Make learning visible") and correlate it to their learning success.

## 2.6 Sharing knowledge and encouraging collaboration

Lasting structures for knowledge management are required to exchange ideas on the opportunities of online teaching and the experiences gained so far. Promising and established collaborations with external partners can also foster the exchange on online teaching. The collaboration with the state universities of the network for digitalization in teaching of higher education institutions in Baden-Württemberg (*Hochschulnetzwerk Digitalisierung der Lehre in Baden-Württemberg, HND BW*) as well as with other university think tanks and task forces shows that the pace for developmental stages is increased, for example, when it comes to creating continuing education opportunities or answering legal questions.

To drive this exchange in other dimensions as well, the goal is to have an international discourse of the kind already established with partner universities and universities of the ENGAGE.EU alliance, for example. Teachers and students at the University of Mannheim, in particular, benefit from an international network for digitalization in teaching.

# 3 Target-Group-Specific Fields of Action

To reach those goals, the following target-group-specific fields of action for teachers, students and extended target groups (especially in the field of lifelong learning) ensue.

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<sup>2</sup> Based on the experiences gathered in the "InnoMA" project, teaching methods can be specifically supported and their implementation can be observed scientifically.

### 3.1 Teaching staff

#### 3.1.1 Online teaching skills and individualized learning

Online teaching formats enable teachers to create learning opportunities regardless of time and place that suit the individual students' learning status. Moreover, digital tools enable teachers to access student data and to give (individual) feedback on the learning progress in much less time than usual. That way, students have the opportunity to study independently and to receive feedback on their progress at any time. This way, they can detect possible deficits or needs for assistance early on and meet them using individual support programs. Applying those methods is desirable, particularly in undergraduate courses that aim at acquiring factual knowledge.

Creating digital environments that promote learning requires the further development of didactic and methodological skills, technical know-how on implementing online teaching methods as well as knowledge of the legal framework for teaching.

#### 3.1.2 Digital examinations

The goal of examinations is to test students' knowledge and skills acquired in a class. To that end, examination formats that are based on digital media may be useful, for example the creation of videos, blogs, databases or programming codes. Digital Media also allow for the implementation of examinations off-campus in different formats (open-book exams, proctoring formats, etc.). Digital examination systems provide teachers with the opportunity to reduce their workload by creating and evaluating exams automatically. In connection with bring-your-own-device (BYOD) concepts this allows for digital examinations to be held in person at the university. Digital examination options must be useful and reasonable from a didactic, strategic and/or sustainability perspective, for example with regards to the further (digital) internationalization. Integrity and comparability must be ensured for those examinations.

#### 3.1.3 Flexibility for the benefit of accessibility and family-friendliness

Students who have family responsibilities on top of their student workload can access study material that is indispensable for being a successful student by using digital material anywhere and anytime. Regarding accessibility, that especially entails being able to access learning content flexibly as well as designing the learning materials in a way suitable for the needs of students with a disability to ensure ease of use. Teachers can support accessible and family-friendly learning by designing the digital elements of the courses accordingly. The design and extent of the courses are discussed individually with the responsible schools.

#### 3.1.4 Digital open educational resources

Open educational resources (OER) enable collaboration in the production of learning content on the global education market and offer lasting and open access to such educational resources. Offering accessible OER material is increasingly made a requirement for receiving funding from the EU and from the federal and state governments. There already is a wide range of open educational resources that teachers and students can use. Extending the production and use of OER allows for the purposeful application of teaching and learning resources already available and for meeting the requirements for future funding.

### 3.2 Students

#### 3.2.1 (E-)Learning skills

Having the skills to independently organize one's own learning processes is decisive for being a successful student. Especially for learning scenarios like inverted classrooms, which require increased self-organization,

students need to develop self-learning skills they can draw from if needed. In that regard, digital elements can help create self-learning opportunities independent of time and place. To ensure that everybody has the same knowledge as a foundation, providing support in acquiring certain skills is valuable, especially in the first semesters. In addition, making proper use of digital tools in the different (course) scenarios is vital for learning success.

### 3.2.2 (Preparatory) Field-specific skills

To ensure that every student can study successfully, it is necessary to tackle existing study-related deficits in the transition from school to higher education institution. In that regard, it can help to make e-learning tools available before the start of the program. They can also be used throughout the program to fill knowledge gaps or to recall course contents.

### 3.2.3 Future Skills

Digitalization, automation and artificial intelligence are shaping future living and working conditions. Future Skills, like data literacy or agile working procedures, teach the use of these technologies, finding one's way in a digitalized environment and working out the right solutions for complex issues. Such skills are not only relevant for succeeding professionally but also for participating in society. Students acquiring or sharpening Future Skills during their studies will benefit from it in the future.

## 3.3 Extended target groups

### 3.3.1 Open science & transfer

Open access, open research data and open (digital) educational resources (OER) provide the wider public easy access to research results and educational content.

The University of Mannheim wants to make contributions based on scientific evidence to this important social development and, in doing so, fulfills its educational mandate.

### 3.3.2 Continuing education for external target groups

Knowledge from research and teaching can be transferred from the university to society through continuing scientific education (e.g., in the form of microcredentials or certificates). Thereby, the University of Mannheim addresses the changing needs of the labor market and society, reaches new target groups and forges lasting bonds with them through network activities. Digitalization is necessary to create modular programs that allow for a quick adaptation to existing needs for continuing education in business and society. That way, skills can be acquired in the course of (professional) life based on current needs and studying can be reconciled with work and family responsibilities. The reasonable use of digital resources in scientific continuing education as well as in standard teaching and in other contexts needs to be reviewed with regards to sustainability and efficiency.

### 3.3.3 Continuing education for internal target groups

Dynamic and fast developments in teaching and learning call for staff members to adapt and improve their (digital) skills. Training and support programs increase staff members' satisfaction with their jobs and the quality of teaching and learning. Such measures therefore benefit the development of the organization.

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