



UNIVERSITÄT
DUISBURG
ESSEN

Open-Minded

***Strategy for Digitisation in Teaching and Learning
at the University Duisburg-Essen***

Adoption by Rectorate 6th December 2017

Strategy for Digitisation in Teaching and Learning

1. Introduction

In the trend toward digitisation, the University of Duisburg-Essen (UDE) recognises an opportunity to continue promoting teaching and learning at the university. For the UDE, digitisation in teaching and learning is a shapeable process reaching beyond e-learning. By using digital media and technologies this process changes the way of teaching and learning, provides potentials for innovation and opens new opportunities for flexibilisation and networking.

Fully aware that using information- and communication-technologies successfully depends not only on didactical aspects of teaching and learning environments but also on concerted processes involving committed teachers, students and those university employees working in advisory and service capacities, the university determines strategic goals to unlock the potentials of digitisation of teaching and learning, intending to enrich life on campus overall digitally.

For UDE, students have to be right at the centre of this development. Knowing how important it is today to consider professional, methodological and digital competences required by graduates in their later professional life, the university promotes digital offers holistically, going beyond singular teaching scenarios and including learning environments and conditions of studying. Especially, abilities of self-regulated learning and of social competences of students are emphasized.

On the basis of extensive expertise in implementing e-learning, and especially blended learning formats, the UDE now takes up current challenges in teaching and learning, which can be met with solutions gained from digitisation in these fields. This is built on considerations within our first E-Learning Strategy, now developed towards a Strategy¹ of Digitisation in Teaching and Learning, describing overarching objectives and fields of activity into a framework of orientation for subsequent detailed planning.

1.1 1.1.1 From the UDE's E-Learning-Strategy to a Strategy of Digitisation in Teaching and Learning

In the E-Learning Strategy of 2014, the UDE set its goal to anchor e-learning right across the University. This was defined as using information- and communication technologies in a media-didactically useful manner in teaching and learning, in order to improve and increase the flexibility of degree courses in a sustainable fashion through e-learning. This may include, for example, cooperative forms of teaching/learning (e. g. wiki-projects or online-simulation games), support for self-regulated learning (e. g. formative, adaptive online-assessments or interactive screen-experiments) and using learner-centred approaches (e.g. inverted-classroom-models, which use presence-phases qualitatively differently) to enable students to have more intensive exchanges between one another and student engagement. The strategy puts its highest emphasis on flexible blended learning-concepts, to link surplus values from presence- and online sessions, and to offer opportunities for time- and place-independent studies to students with professional and family duties. In addition, this emphasis will be maintained in the future, by respecting interdisciplinary differences.

¹ <https://www.uni-due.de/e-learning/strategie.php>

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By promoting pilot projects across departments, permanent exchange and a wide spectrum of different cooperations, the strategy already had a significant impact on the University's intention to create e-learning elements in each degree course until 2020.

In just two years, in this field the UDE managed to assemble a 'critical mass' of committed teachers and employees. With their expertise and groundwork, it is possible to run the set-up of activities as planned. For the UDE it is essential not just to focus on flexibility in learning events, but to broaden its strategic agenda qualitatively, from its profile to the current challenges the UDE is currently facing².

1.2 Superior Goals in Studies and Teaching

In accordance with its institutional basic understanding, and its regularly extended developmental planning, the UDE's self-conception is, as a location of multiplicity and openness, dedicated to promoting fairness in education and further development of quality-assured study and teaching³:

- a) By offering education and training the University grants chances for social ascent, while being confronted increasingly with very different needs, requirements and circumstances. Digitisation in studies and teaching contributes to shape teaching and learning processes diversity-equitably and to drive openness of the educational institution for new target groups. The need for flexibilisation of studies and teaching, caused by domestic or professional duties in addition to studying, is just as important for unfolding potentials of the UDE students as dealing with variety in educational backgrounds.
- b) As a learning organisation, the UDE strives towards continuous and quality-assured further development of studies and teaching. The university demands data-based systematic consideration of all courses, modules and complete curricula, in order to counteract drop-outs and time-lags in the course of studies, and to identify structural obstacles. Digitisation contributes to an extension of these data-bases and provides new opportunities to create and implement innovative teaching-learning-scenarios. Elaboration of appropriate concepts and approaches follows invariably specific student needs, meaningfully linking presence and self-learning phases and attention to the quality standards of good teaching formulated in our learning strategy⁴.

On the basis of these two superior goal complexes and the experiences made since the adoption of our E-Learning Strategy, current challenges, goal and strategic topics which the University wants to take care of in its digitisation of studies and teaching are identified in the next sections. Goals to be followed (Section 2) and corresponding planned activities (Section 3) have been chosen, in order to use the potentials of digitisation precisely, where they promise specific surplus values for further development in studies and teaching in the university. In the definition and elaboration of these goals and in their implementation (Section 4), data protection rights and interests of contributors have to be observed adequately.

² For specific project reports, see. <https://www.uni-due.de/e-learning/projekte.php>, also the volume „Flexibles Lernen mit digitalen Medien. Strategische Verankerung und Handlungsfelder an der Universität Duisburg-Essen“ (Waxmann-Verlag, 2018).

³ University Development Plan 2016-2020, S. 9f, 21-23.

⁴ These are: 1. Based on Science and Research, 2. Based on Disciplines – Openness for Inter- and Transdisciplinarity 3. Support Quality, 4. Orientation to Competence, 5. Awareness for Diversity and Educational Justice, 6. Orientation to Quality (Universität der Potenziale - Strategielinien zur Entwicklung der Qualität der Lehre, Fassung vom 27.02.2013)

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2. Challenges and Goals of Digitally Supported Teaching and Learning at the University Duisburg-Essen

Over the coming years, the University is faced with various challenges, where digitisation of studies and teaching can contribute to solutions in a targeted manner.

1. To assure teachers of high-quality support in expanding their e-learning activities

A great number of teachers have become quite aware of the potentials of e-learning and blended learning through the E-Learning Strategy. In order to extend proven concepts and to give support to innovation, each semester many seminars and lectures get set up in a new or re-worked media-didactic setting. For this, teachers can rely on a vast service-portfolio of services, consulting and further qualification. In their commitment they enable not only high-quality teaching, but at the same time they are increasing digital competences of students.

The challenge of the future is here to answer fairly to the ascending demand for this portfolio of services, to enable innovations and perfectly fitting further developments, keeping the reached quality for promoted courses at a high level.

2. To enable regular feedbacks in times of overload.

In recent years, university funding was not able to keep up with the increase in people interested to take up studies. The University acclaims increasing participation of young people in higher education, however this does mean to manage a worsening ratio between teachers and students. In many subjects we have reached a very disadvantageous faculty-student ratio, which may put individual success in learning and studies at risk.

Students should receive regular and high level qualitative feedback on their achievements up to their final exam, even in the context of large learning events. Digitisation in studies and teaching is to be used to improve support for students.

3. Implementing superior concepts, overarching teaching events, to deal with diversity relevant to learning and new target groups

The heterogeneity of students is one of the guiding principles of the University. Characteristics of diversity affecting learning, such as differences in socio-economic origin, educational background, psychic and physical capacity and gender are guiding attention towards shaping teaching and learning towards diversity fairness. By experiencing the starting phase of the E-Learning Strategy and additional practical examples, it was found out, that diverse temporal commitments of students require more flexibility in studies. Since then, the University has promoted many approaches to support students in elaborating knowledge autonomously, independently of time and place, and to open more space for exchange and discussion for teachers and students within attendance-tuition.

For the near future the challenge is to overcome existing limits linking these experiences to singular courses. Instead, students should be able to access structured and partially linked blended-learning units from most of their learning-units, which appreciate their diversity and orient towards their existing competences. New target groups, such as professionally qualified students or foreign academicians may benefit especially from these opportunities of learning. The conception of these measures needs to include considerations of spatial accessibility.

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4. Create Occasions for Joint Learning to Enhance Relations to the University and own Study Subjects

From research it is known that success in studying relies to a large extent on the personal motivation and identification of the student with their location and their subject of study. Occasions for interacting with other students and teachers may influence identification and motivation positively. The UDE provides much needed requirements in terms of virtual and physical learning spaces, recognising that the present status of faculty-student ratio and the need for flexibilisation should not jeopardise students' professional and social integration. Therefore, the University wants to work towards creating new occasions for communication and collaborative elaboration of professionally related teaching-learning contents on the basis of increased digitisation.

5. Further Improving Quality of Learning and Study Conditions through Digital Tools

Using digital tools has become self-evident in many areas of life. They allow people to access information at any time and everywhere, and to rely on support offered by mobile applications and networked systems to meet everyday challenges. For the University these technologies open potentials to improve the quality of learning and study conditions for students. Students in need of orientation or consulting or in search of specific services of the University can be supported in a targeted manner with integrated software solutions.

6. Promoting Networking and Exchange as Basis for Innovation and Cooperation

Innovations in studies and teaching are being promoted and honoured by the University. The commitment of its own Stakeholders to Good Practice examples developed at the University or elsewhere gain visibility and cooperation within the UDE or with external partners are supported. To back these developments even further, the University wants to create additional opportunities for networks of actors. Essentially, this applies to discipline-orientated exchange with persons engaged in the digitisation of studies and teaching from the Scientific Community, mostly carried out in various professional bodies, but equally cross-disciplinary exchange among teachers of the UDE in specially created formats.

7. Take Databased Decisions grounded on continuously developed Quality-Management

The UDE secures the quality of its student courses in the framework of system-accredited procedures. It keeps on looking for developmental perspectives to further optimise all relevant structures and processes. University members involved in decision-making on designing singular study courses, modules or learning events should do so by having a good foundation in information found in structured processes. Digitisation of studies and teaching results in learning processes happening online or on the basis of teaching-learning-technologies. The University will use the data resulting from this to improve information bases and the quality of decision-making.

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3. Strategic Topics and High Priority Measures

To meet these various goals, the University is focused on seven strategic topics and defined high priority measures.

3.1 Service-Offerings and Measures for Further Qualification and Networking

To deal with increasing demands and to promote exchange, activities in digitisation of studies and teaching shall be coordinated comprehensively. The University intends to consolidate its E-Learning-Service portfolio of central actors and to publish it as a concerted catalogue. Further qualification of teachers will be secured through fellowships, coachings and certificate programmes. To increase networking, an inner-university Community of Practice is going to be encouraged as much as disciplinary networks with partners outside the UDE in the framework of individual and structural cooperation projects, such as associations involving all higher education types.

3.2 E-Assessments

The University is committed in the area of E-Assessments for many years and fully aware of the potentials of these systems to accompany learning processes continuously, to provide feedback in various study phases and to improve support experiences. This is to be boosted further, especially to give flexible support through accompanied phases of self-learning to students in large study events. In the next phase of further development, new task types and more disciplines are going to be included. In addition, different student competence-levels and -profiles are to be considered. By increasing adaptivity, students will be able to pass individual learning paths, suggested from a diagnosis of existing competences.

3.3 Optimisation of Curricular Structures

To meet learning-relevant diversity also on superior levels above courses, more extended curricular entities are up for flexibilisation by digital media. To reach a higher level of compatibility of family, professional and other study-relevant obligations, selected modules are going to be reworked media-didactically. Particularly in practical and transitional phases, students are meant to benefit more than previously from e-learning- and blended learning formats, opening sufficient free spaces for their own development of competence. The highest priority is given first of all to curricula in teaching.

3.4 Collaborative and cooperative Formats

New occasions for joint learning are going to be created to increase identification and motivation. The UDE will do this first of all in the framework of its existing e-learning systems. Priority is given to joint elaboration and processing of teaching-learning-material and the systematic involvement of tutors and teachers into professionally related and study-event-centred communication. The University will accompany these activities with support-initiatives.

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3.5 Integrated Solutions to Orient and Support the Organisation of Studies

The University uses different software solutions to support students in their orientation and organisation of studies. Technical services, contact points for consulting, management of exams, learning environments and diagnostic tests are available to students already now, mostly as online services. To improve learning- and study-conditions further, the University will extend these offerings, especially accessibility from mobile terminal devices, easy operation and by integrating services into one architecture. Here it is important to maintain interaction of students and university employees, instead of replacing it with automated solutions. Digital and face-to-face offerings are to be developed in complementary ways and sensibly coordinated with one another.

3.6 Open Educational Resources (OER)

The University wants to use Open Educational Resources to enrich its own teaching in conformity with copyright regulations and, simultaneously, to offer its own teaching-learning contents on a low threshold to broader target groups. In this way, educational resources can be offered in a diversity-fair manner for professional orientation and competence development, even outside specific teaching events. This is also a path to new target groups and to promoting disciplinary networks between OER producers. The UDE emphasis is here on efforts to implement OER-deployment facilities interfacing to existing e-learning-tools.

3.7 Learning Analytics

Usage data drawn from e-learning-tools are to be used to improve studies and learning, but also for individual feedbacks for students (and teachers). Based on advanced procedures of data-editing and -analysis, the University will drive forward the development of adaptive learning. To evaluate the relevancy of different dimensions of diversity relevant to learning and the effectiveness of new instruments and formats, the UDE will promote scientific discussion on Learning Analytics. Insights gained from this can be used in further developing procedures of the quality management system of the University. Further, for students opportunities will be provided to relate their own achievements in our systems to comparable groups, in order to set alerts for support early on.

4. Structure and Implementation

The Strategy for Digitising Studies and Teaching is sketching out an agenda up to the year 2020. It is replacing the E-Learning-Strategy and will be implemented by the „Competence-Cluster Digitisation in Studies and Teaching.

The Competence-Cluster consists of the Center of Information and Media Services, the University Library, Center for Higher Education Development and Quality Enhancement (CHEDQE), the Center for Teacher Education, the Chair for Specification of Software systems and the Chair for Media Didactics and Knowledge Management. The Cluster can be extended in relation to projects to include additional actors committed to digitisation of studies and teaching. Strategic leader is the Prorector for Studies and Teaching. The Cluster is supported by a central Coordination Unit.

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The Cluster details all the topics and priority measures of the strategy into a plan of action, which is to be adopted by the Rectorate. Further, it votes upon the service-catalogue mentioned in 3.1, and also on the standards for evaluation and documentation of all proposals and singular promotions implemented under the strategy.

The introduction of new systems and procedures, required by the strategic measures sketched out here, is done in close coordination with the relevant data-protection officer. If it is necessary to process data of university employees, the involvement of staff council has to be assured.