Universität Basel

Strategy
Digitalization in Teaching.

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Purpose.

Digitalization presents both challenges and new opportunities for university education. Access to new forms of communication technology and unprecedented volumes of data are changing the way in which information is handled. Increasingly, the internet is becoming a place in which knowledge is stored and transferred. This changes the way in which knowledge is handled and the skills required to acquire, classify, and use it. This in no way devalues knowledge for educational institutions, which remain places of knowledge production and transfer, but brings profound changes for the institutions themselves, their educational goals, and their requirements.
University graduates must be capable of navigating an ever more complex world fraught with great uncertainty due to ongoing changes. As well as imparting knowledge and facts and encouraging critical thinking, university education must enable students to embrace change proactively, use knowledge flexibly, and solve problems collaboratively. Graduates must also have the skills required to live, learn, and work in the digital society and to reflect upon this (digital literacies).

> *"In the age of digital transformation, reflective faculties, orientational knowledge, and classification skills are more important than ever – and this is where universities come in."*
> Professor Ada Pellert, President of the FernUniversität in Hagen[1]

Students at the University of Basel should become confident and active members of an increasingly digital society and be able to acquire specialist and interdisciplinary skills. With a wide-ranging "Digitalization in Teaching" strategy, the University of Basel aims to establish a suitable framework and offer the necessary qualifications. The aim of the strategy is not to set out specific, long-term approaches, but to offer principles that will act as strategic decision-making tools and to open up the greatest possible prospects, both in terms of structure and for individual students.

Principles.

The University of Basel is a leading university combining humanities, social sciences and natural sciences.
- As a traditional university with seven faculties, the University of Basel promotes networked learning, teaching, and education beyond narrow specialist knowledge.
- The potential of cultural and academic diversity for networked learning and teaching in interdisciplinary contexts is reinforced by the opportunities of digitalization.

The University of Basel is a campus university.
- As a campus university, it places particular value on personal exchange and, therefore, on face-to-face studies onsite. To achieve this, it offers a modern and appealing teaching and learning environment on campus.
- Digital offerings increase the appeal of the location and campus. Virtual/digital and physical spaces are viewed as one entity and complement one another.

The University of Basel is a modern research university with an international reputation.
- As a modern research university, it strives for a close relationship between research and teaching.
- Research-oriented learning and teaching as well as international networking are promoted through digitalization.

The University of Basel has a strong regional presence.
- As a university with strong regional ties, it supports academic and non-academic career profiles within the tertiary education system.
- Through "Digitalization in Teaching", it is preparing for increasingly digitalized work in academic and non-academic fields and creating links with the local economy and society.

[1] "Universities in Times of Digitalization" conference (Hochschulen in Zeiten der Digitalisierung), Berlin, 22 March, 2018.

Core objectives.

The University of Basel aims to help shape and take responsibility for the digital development of university-based learning and teaching. As part of their education, students should acquire skills that equip them to live, learn, and work in a digital society and to reflect on digital transformation. To this end, the University of Basel pursues the following core objectives:

– **"Connected" – networked learning and teaching in digital environments closely aligned with research and practice**

Students learn in digital environments connected to the world in which they will later work. The use of digital resources promotes discursive networking as a core element, creating links between the disciplines, between research and teaching, as well as between academia and society.

– **"Open" – navigating open virtual worlds with confidence**

Students learn in environments that are as open and realistic as possible. They are taught to properly navigate the openness of digital environments. Open learning resources available across the campus and freely accessible tools are used wherever possible.

This means:

Students

– use their own, everyday devices wherever possible (Bring Your Own Device) along with open learning resources and freely accessible tools, taking into consideration the requirements of data protection, data security, and copyright
– develop a professional approach to the topic of "openness" to ensure competent and confident behavior in internet environments and on academic social networks with varying levels of openness and public accessibility
– are able to discuss and reflect critically upon their personal knowledge and understanding in open forums within their studies

Teaching staff

– familiarize students with traditional approaches to learning and with learning in open and interactive digital environments
– support cooperative learning formats, discursive discussion of the course content, collective tackling of questions, and collaborative problem-solving
– use freely available digital teaching/learning resources and open tools in their teaching where appropriate and possible
– make innovative teaching/learning services available as open educational resources where appropriate and possible to promote the global exchange of knowledge; they also make students aware of issues of data security, copyright, the protection of personality rights, and of the quality, origin, and completeness of information

During the study program

– critical reflection on the handling of information is a core competence – particularly for internet sources
– students learn to responsibly handle data, large volumes of data, and new digital opportunities; this is a core skill in all fields of study
– students are encouraged to reflect on society's digital transformation
– students acquire digital literacies in the context of their specific field of study; courses in the individual subject areas are made as open as possible for students from other subject areas
– (e-)assessments are performed in digital environments that are as open and practical as possible

The University

– promotes and supports teaching development projects related to the core objectives of "connectedness" and "openness"
– identifies opportunities to implement such teaching scenarios and establishes the necessary framework conditions
– offers relevant qualifications and the necessary infrastructures and services
– formulates and communicates data protection, data security, and copyright guidelines to be applied when using open educational resources and freely available tools within teaching
– creates learning environments and teaching spaces with infrastructures that enable digitally supported, collaborative learning with mobile devices beyond face-to-face teaching
– uses students' digital data (learning analytics) in anonymized form only in line with data protection

[2] "Learning analytics" refers to the analysis and interpretation of a wide range of data "produced by and gathered on behalf of students in order to assess academic progress, predict future performance, and spot potential issues" (Horizon Report 2012).

Fields of action.

Digital literacies

The digital literacies of all university members (students, teaching staff, and other employees) are to be enhanced.

"Digital literacy" goes beyond purely functional IT skills and encompasses all skills required to live, learn, and work in the digital society and to reflect on this. What it means to be "digitally literate" changes over time and depends on the (specialist) context. Digital literacies are therefore to be regarded as a set of academic and professional practices supported by diverse and changing technologies (see JISC 2014).

The University of Basel establishes suitable services to boost the digital literacy of its students, teaching staff, and employees.

Students in all subject areas earn credit points in "digital literacies" as part of their studies.

Basel students should acquire digital literacy skills that go beyond purely functional IT skills. To help them achieve this, subject areas should offer their own or interdisciplinary courses that examine digitalization topics from their specific perspective but are also interesting and open to students from other areas. Digital literacy courses should be listed in the course directory and therefore visible. Students should be able to earn credit points in this area as part of their free electives.

Blended learning

Blended learning and online teaching/learning formats can be incorporated into study programs on the same footing as face-to-face learning and included within the teaching load.

Blended learning (or hybrid learning) is a teaching/learning concept in which classroom-based and virtual learning is combined in a pedagogically appropriate manner on the basis of new information and communication media. The need to complement classroom-based learning with online teaching and digitally supported phases of learning is currently experiencing strong growth overall (online learning groups, online exercises, study-related online platforms, etc.) Digital technologies should be flexible and used in a way that meets educational needs.

Since 2001, the University of Basel has adopted an approach of integrating online aspects into classroom-based teaching. In line with this principle, online courses have been developed as part of the Swiss Virtual Campus (2000–2007) along with Basel MOOCs (Massive Open Online Courses) integrated into the curriculum and various flipped-classroom models already in practice (to impart knowledge online with in-depth discussion in the classroom). Digital elements are to be considered equivalent to classroom-based study. The value of and interplay between classroom-based and online study as well as between independent and teacher-led study are therefore to be recognized and the necessary institutional conditions established.

Open education

The University of Basel will formulate and adopt a policy for open educational resources in line with its open access strategy.

Open educational resources (OER) are teaching and learning materials of any form that reside in the public domain or have been made available with a free license. These open materials may be reproduced, used, adapted, and distributed legally and free of charge by anyone. OER includes textbooks, curricula, course concepts, lecture notes, assignments, tests, projects, and audio, video, and animation formats (UNESCO 2012).

As a joint signatory of the 2003 "Berlin Declaration", the University of Basel has declared itself in favor of open access to academic knowledge . A corresponding policy is also to be developed for open educational resources. Accordingly, binding guidelines are to be developed for and communi-cated to members of the University of Basel regarding data protection, data security, and copyright, along with a code of conduct for exchanges in public forums and academic networks.

Open educational formats will be established to promote global exchange of knowledge and showcase innovation and excellence in teaching.

Open educational formats are teaching/learning services offered online that are open to anyone with an interest, often free of charge, and have no formal restrictions on access . Open educational formats offer great potential for higher education institutions. Teaching and the quality of teaching are visible and comparable, and help to boost the University's profile.

[3] https://www.jisc.ac.uk/guides/developing-digital-literacies

[4] One example is the open online courses offered by the University of Basel on the FutureLearn platform: https://www.futurelearn.com/partners/basel.

The University of Basel wishes to establish open educational formats in order to increase its visibility and to share content. In doing so, it will build on previous experience, use the available resources, and consistently develop these open formats in a dynamic environment. Open online courses (MOOCs) aim to foster outstanding teaching staff or teaching concepts and to make them visible beyond the University. Other open educational formats, which are less complex and in some cases newly devised, aim to meet the great demand for digital resources within teaching. The University helps its teaching staff to make innovative teaching/learning services available in a wide range of formats as open educational resources where appropriate and possible.

Standards for digital teaching

Digital tools will be applied to support discursive and collaborative forms of learning.

Complex learning requires continuous dialog between teachers and students to make explicit the various perspectives on the subject of study and to facilitate negotiation between these perspectives . In a "community of inquiry", a collaborative and participatory learning culture is to be maintained and both individual and collective knowledge is to be established. At the University of Basel, digital tools are used to enable and/or support social and collaborative learning in this regard. This also involves solving problems and addressing questions as a group.

Digital tools and learning environments will create and strengthen links between the disciplines, between teaching and research, as well as between academia and society.

Research universities have the potential to network student education with research. The "connected curriculum" provides a framework for contact between students at different stages of study and research: (1) Students affiliate themselves with researchers and the research conducted at the institution; (2) research activities form part of their studies; (3) students network across disciplines and throughout the world; (4) students combine academic study with workplace learning; (5) students achieve results aimed at an audience; and/or (6) they connect with fellow students in all phases of study and with alumni. Digital tools are used in the study programs at the University of Basel to support one or more of these dimensions.

(E-)Assessments will be conducted in authentic environments; electronic resources may be used where appropriate (e.g. open-book or open-net assessments).

Using digital tools and information available online to solve problems (such as programming, diagnostics, using computer programs, accessing subject-specific data, dealing with large volumes of data, etc.) will be one of the core competences in the academic and non-academic professions of the future.

Previously, it was extremely difficult to test skills in authentic environments. However, the use of computers, digital tools, and access to online resources in examinations offer opportunities for more skills-based assessment. To test skills in a specific situation, the testing environment should allow the use of electronic resources (e.g. in open-book and open-net assessments); this environment should be as open as possible. The aim should be to choose the most suitable option from a range of electronic resources to solve a problem, complete a task, or demonstrate the relevant skill – not to reproduce knowledge in artificially isolated e-assessment environments.

[6] Laurillard, D. (2002). Rethinking University Teaching. A conversational framework for the effective use of learning technologies, 2nd Edition. London: RoutledgeFalmer.

[7] Garrison, D. R., Anderson, T. & Archer, W. (2000). "Critical Inquiry in a Text-Based Environment. Computer Conferencing in Higher Education". In: The Internet and Higher Education, 2(2–3), pp. 87-105.

[8] Dilly Fung (2017). A Connected Curriculum for Higher Education. UCL Press, University College London; http://www.ucl.ac.uk/ucl-press/browse-books/a-connected-curriculum-for-higher-education.

Design of the learning environment

The digital learning environment will be as open as possible and as secure as necessary.

It is the open nature of the digital transformation that proves "disruptive": Through digitalization, knowledge can be accessed worldwide and used by everyone, new knowledge can be generated and reflected upon with others, and public social networks can be used to exchange knowledge with people working on similar problems and questions. This openness is to be seen as positive without losing sight of the risks it entails. These factors can be used to derive the target standards for designing the learning environment:

- Open environments used where possible, with a closed environment provided (a) to grant educators the freedom to use copyrighted material, and (b) to enable students to practice in a protected environment
- Students use their own end devices during their studies
- Standard software from research and practice used on study programs

Learning and teaching spaces on campus will be suitably designed and equipped.

New forms of teaching and learning that incorporate digital elements and are increasingly interactive in nature also require new physical spaces for teaching and learning. The supplementing of traditional, lecture-based course formats with discursive and practice-oriented scenarios will be taken into account when designing the campus. This will be undertaken with the entire university in mind and using appropriate planning and design processes. The University of Basel premises support a learning culture of collaborative debate and knowledge generation and may be used flexibly.

Students have access to standard software (preferably free software) from the worlds of research and work.

Using specialist programs is important when preparing for a future career. Today, the University of Basel offers its students an extensive range of general and specialist software that is provided by IT Services free of charge or at a discount as part of campus contracts. In the spirit of "connectedness", this service is to be supported and expanded where necessary. The needs of the different subject areas are to be canvassed and the services reviewed on a regular basis.

Overview: fields of action and implementation goals

Digital Literacies	– The digital literacies of all university members (students, teaching staff, and other employees) are to be enhanced. – Students in all subject areas are expected to earn credit points in "digital literacies" as part of their studies.
Blended Learning	– Blended learning and online teaching/learning formats can be incorporated into study programs on the same footing as face-to-face learning and included within the teaching load.
Open Education	– The University of Basel will formulate and adopt a policy for open educational resources, analogous to its open access strategy. – Open educational formats will be established to promote global exchange of knowledge and showcase innovation and excellence in teaching.
Standards for Digital Teaching	– Digital tools will be applied to support discursive and collaborative forms of learning. – Digital tools and learning environments will create and strengthen links between the disciplines, between teaching and research, as well as between academia and society. – (E-)Assessments will be conducted in environments that are as authentic as possible; electronic resources may be used where appropriate (e.g. open-book or open-net scenarios).
Design of the Learning Environment	– The digital learning environment will be as open as possible and as secure as necessary. – Learning and teaching spaces on campus will be suitably designed and equipped. – Students have access to standard software (preferably free software) from the worlds of research and work.

Strategy implementation.

The principle of agility
The strategy will be implemented by the various departments and service providers in an “agile” process in collaboration with all relevant University members. The goal is to act flexibly and proactively, taking forward-thinking and constructive steps to effect the necessary change. Agility – the ability to permanently optimize goals in an unpredictably changing environment – requires a team-based, goal-oriented, and iterative approach.
This draws on the potential of a proven tradition of diversity in subjects and in methodologies and seizes the new opportunities available. In the core subject areas, the different departments and people affected have different digitalization needs. We must start with the specialized and individual needs of the relevant persons, support various development steps and objectives, and pursue them together.