

## CHARTER FOR DIGITAL EDUCATIONAL INNOVATION

Ready to scale – boldly envisaging digital educational innovations in higher education institutions in collaboration with external partners and paving the way for their experimentation and implementation in an impact-oriented manner

### PREAMBLE

The systematic further development of our education system requires the linking of didactic competences, contemporary teaching concepts, and open learning content as well as innovative digital technologies and critical (media) reflection. The goal is to (further) develop an education system characterised by openness, cooperation and permeability, and to include the groups of stakeholders in politics and universities, EdTechs and open-source communities and their needs. Digital educational innovations<sup>1</sup> contribute to better (digital) skills acquisition, to an effective, flexible and inclusive learning experience, as well as to individualisation and permeability of the learning process. They help learners acquire media skills and methods to master the challenges of the future.

The Charter for Digital Educational Innovation<sup>2</sup> initially focuses on institutions of higher education, but many topics equally apply to schools and other areas of education. The opportunity (as well as the challenge) lies in putting digital and, if possible, open, combinable solutions to use much more quickly and broadly in German institutions of higher education and to assess or measure their impact through accompanying research.

In order for German higher-education institutions to succeed in remaining internationally compatible in the medium term, they must now systematically and critically engage with digital educational innovations. These innovations must then be integrated step by step into teaching, research, higher-education development and administration. Collaboration with external partners, especially EdTechs<sup>3</sup> and open-source communities, enables higher-education

» This charter was developed by the Stifterverband as part of a participatory multi-stakeholder process with numerous education experts.

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<sup>1</sup> Educational innovations offer new learning-teaching solutions based on technological and didactic findings and are adapted to the needs of the target groups. Educational innovations ensure openness, cooperation and permeability in the education system, and a sustainable society with relevant (media) competences.

<sup>2</sup> Further information on the charter is also available online at: <https://stifterverband.org/edtech-charta>

<sup>3</sup> The term EdTech covers innovative and technology-oriented companies and start-ups that offer application-oriented solutions, services, and products in the field of learning and educational applications and thus support or enable innovative learning and teaching concepts. This can also include social enterprises active in the field of education.





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institutions to provide overdue boosts to innovation. At the same time, they can respond to the changing needs of learners and teachers as well as administrative staff and strengthen application-oriented research and transfer. These external solutions can also link different phases of education and, for example, smoothen the transition from school to university with the help of organisational tools and platform solutions.

The collaborative and open development processes do not herald a commercialisation of the education market, but rather ensure innovative capacity and advance the organisational development of educational institutions. For this, higher-education institutions need adequate strategies, structures and processes that promote innovation, as well as framework conditions and competences to improve teaching, studying and research with innovative solutions. This can be achieved, for instance, within the framework of experimental spaces and real laboratories and should be accompanied by scientific research. This also involves guidelines and technical requirements (interfaces, platforms, data protection and security) as well as the broad use and at the same time critical evaluation of digital educational media and their use in the context of teaching and learning processes.

We, the signatories of the Charter, call on stakeholders in politics, universities, EdTech companies and the open-source community to join us in defining and implementing measures in the following fields of action during the current "Decade of Educational Opportunities". The signatories expressly welcome feedback as well as different perspectives and approaches to solutions.

## **1. DIGITAL EDUCATIONAL INNOVATION REQUIRES COMMON GOALS AND STRATEGIC EMBEDDING**

A common understanding of education and goals between the federal government, the federal states, universities, non-profit organisations, EdTechs and open-source communities is necessary in order to implement measures in the following fields of action as quickly as possible. This can only be achieved if all stakeholders join forces to understand the diverse needs and perspectives and define common visions and goals as well as steps and measures to achieve them.

### **Discussing and understanding multiple perspectives and needs in order to define common goals**

We need

- » higher-education institutions and political decision-makers to be aware that innovative solutions for shaping the future can also be successfully developed with external partners such as EdTechs and open-source communities. This goes hand in hand with the necessary adaptation of the policy framework in order to ensure the comprehensive use of





third-party offers in terms of educational equity and free access to education.

- » the representation and recognition of the different stakeholders' perspectives on digital educational innovations, i.e. the visualisation of needs as well as the further development of framework conditions. To this end, the synergy of didactics and technology should always be considered.
- » open, participatory innovation processes to bring together stakeholders in the education system for the purpose of setting goals and developing new solutions.
- » the willingness to change and take risks on the part of the stakeholders involved, combined with an iterative, user-oriented approach to identify and meet the needs of learners and teachers.
- » a social discourse on good higher education together with the federal government, the federal states, higher-education institutions, and students as well as stakeholders in the labour market. The central question is: How can a sustainable development of competences succeed in which students and graduates, regardless of their background, are enabled to be successful and capable of action in the future and to shape a democratic society (keyword: future skills)? How does the integration of educational media also promote the employability<sup>4</sup> of students and graduates? This also involves a critical reflection of and research on the socio-cultural effects of said educational media and their use.

### Strategically embedding digital educational innovation in higher-education institutions

Universities, EdTechs and open-source communities can jointly develop innovations for learning and teaching at higher-education institutions, which requires a certain strategic framework.

We need

- » a clear strategic embedding of digital educational innovation in the universities and in the target agreements between higher-education institutions and ministries. In this context, the interrelation of didactic developments, socio-cultural effects, and technological possibilities must be considered and further developed.
- » faster procurement and decision-making processes at the universities in order to be able to better estimate the duration of trying out external solutions together with partners. The development of agile, digital administrative structures is particularly critical and urgent.
- » explicitly designated human and financial resources for the testing and technological development of solutions as well as their introduction

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<sup>4</sup> Employability includes all measures that make it more likely for employees to maintain or, in this context, for students and graduates to gain employment. These measures include further education and training of- fers as well as the readiness to act to benefit one's own qualification.





and sustainable implementation in the organisation. Innovations in teaching and their personnel and technological requirements should be integrated into the institutional decision-making and budgeting processes of higher-education institutions.

- » structures and processes in teaching, research, and administration that enable experimentation and agile work.
- » even more courageous innovation leaders with teaching experience (so-called 'change champions') in higher-education institutions who initiate and test relevant and effective pilot projects for a potential broad implementation in the institution. In addition, they should share their experiences beyond university boundaries. As key players, these 'change champions' must be well-networked internally and externally, and their expertise must be recognised ("the go-to EdTech person"). There are already many important movers and shakers at universities, but it is important and necessary to empower these people methodically and financially across the board.

## 2. DIGITAL EDUCATIONAL INNOVATION REQUIRES CONDUCTIVE FRAMEWORK CONDITIONS, LATITUDE, AND IMPACT ORIENTATION

The current framework conditions for publicly funded higher-education institutions make it difficult for them to cooperate with external, market-oriented stakeholders such as EdTechs.

### Giving higher-education institutions latitude

We need

- » provisions for experimentation for higher-education institutions in the higher-education acts of all federal states. These should enable digital educational innovation and new forms of collaboration within universities, but also across universities in national or international consortium projects and with external partners. The provision for experimentation of the Federal Ministry of Economic Affairs and Climate Action (BMWK) can be a first impulse to further develop the possibilities for higher-education institutions and external partners.
- » latitude and (scientific) recognition for experiments with regard to using existing digital educational innovations and developing solutions with external partners.
- » an official, legally certain basis and innovation-promoting, open quality standards that can serve as a guideline for the collaboration of higher-education institutions with external partners. These standards would ensure that educational technologies and learning content are freely accessible and that questions of data protection and quality requirements are clarified. At the same time, it would be ensured that these questions do not have to be answered anew for each project and that processes of legitimisation do not have to be gone through repeatedly.





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- » a drafting of initiatives and funding programmes that promote the exchange between public and private universities and that make the experiences of private innovation labs visible and usable for the science system.
- » scalable digital educational innovation that identifies and draws on the needs of learners and teachers in individual institutions, and that allows for an application of solutions at a regional, national and international level.

### Strengthening impactful and purposeful governance

Up to now, success criteria for higher education have not been broadly oriented towards overarching goals. Successful higher education is often measured either by input factors (e.g. resources or staff-student ratios) or student satisfaction. Correspondingly, the framework conditions often specify the "how" rather than the "what is to come of it". This makes it difficult to open up experimental spaces.

We need

- » an approach that combines impact- and result-focused action for goals in higher education and latitude in shaping the path towards them. This includes, in particular, the discussion, definition and evaluation of goals together with the students, whose needs and competences the universities need to address or develop by means of their innovative educational offers.
- » a reorientation in the evaluation and accreditation of study programmes with an increased focus on and recognition of technology-supported learning processes and skills development. The possibility of accrediting joint offers by higher-education institutions and external partners should be explored in this context.
- » a new, modern exam culture with correspondingly adapted regulations to reflect the competences acquired by students through novel approaches.

### Promoting attempts at interdisciplinary collaboration with external partners

Didactics and an open digital ecosystem with corresponding infrastructure should also be considered in order to break down institutional barriers and to embed innovation in digital education comprehensively, permanently and sustainably.

We need

- » a separate federal funding, e.g. as part of the Federal Digital University Programme, for the collaboration between higher-education institutions and external partners, such as EdTechs. The aim of this fund should be to integrate innovative solutions into curricula and to attempt interdisciplinary cooperation with external partners in research, teaching, and administration with scientific support.





- » the establishment of an open EdTech ecosystem in Germany in conjunction with the National Education Platform, potentially following international examples such as EdTech France and SURF in the Netherlands in terms of quality and quantity, setting new standards and lifting German EdTechs out of their niche existence. Initiatives such as the [European Digital Education Hub](#) or the [European EdTech Alliance](#) can serve as models.

### 3. DIGITAL EDUCATIONAL INNOVATION REQUIRES NETWORKS AND PARTNERSHIPS FOR INCREASED VISIBILITY

#### Identifying and harnessing synergies in networks

Scouting technologies for teaching and for quality assurance of new solutions and products requires time, resources and established expertise. Higher-education institutions would be well-advised to form national or international alliances with like-minded and similar educational institutions. Acting as a consortium or association, such as initiatives like UAS7<sup>5</sup>, conserves resources and ensures scaling and a broad impact as well as the interoperability of solutions.

We need

- » a “fast lane” for the purposeful advancement of scalable innovations in higher-education institutions and the establishment and expansion of (inter)national networks for long-term implementation.
- » an intensive exchange of experience across international networks with higher-education institutions, EdTechs and policymakers for the integration and scaling of technological solutions and products in teaching and administration in order to make digital educational innovations accessible and usable across the board.

#### Increasing communication and visibility of digital educational innovation

Communication and visibility, already present in EdTech and open-source solutions and in use at higher-education institutions, are the prerequisite for establishing and spreading digital educational innovation.

We need

- » designated persons for open-source communities and EdTechs at the higher-education institutions in order to refer enquiries to the right people within the university.
- » communication between internal stakeholders to provide information across departments, and between internal and external stakeholders to

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<sup>5</sup> UAS7 has existed since 2005 as an alliance of seven universities of applied sciences in Germany: Berlin School of Economics and Law, City University of Applied Sciences Bremen, and the universities of applied sciences of Hamburg, Cologne, Munich, Münster and Osnabrück.



- create interest in the other side's perspective and thus in turn the necessary cultural understanding.
- » the willingness of higher-education institutions to vouch for EdTechs and open-source solutions in order to lower entry barriers at other higher-education institutions and to make their offers accessible across the board.
  - » high-profile events (e.g. a showcase conference) organised by all stakeholders in the education system in order to present and honour technological solutions that have been successfully implemented in higher-education institutions, and to make them visible to universities, policymakers, and other stakeholder groups. In this context, the EdTech Next Summit of the state of North Rhine-Westphalia is to be welcomed but should be expanded to include the perspective of higher-education institutions.
  - » an organised network or interest group that makes EdTechs visible to all relevant stakeholders at the national level, especially to policymakers (cf. German Startups Association).

#### 4. DIGITAL EDUCATIONAL INNOVATION REQUIRES RESOURCES AND NEW COMPETENCES

Financial and time resources of individuals as well as new digital and methodological competences are the foundation for the development of new impulses for digital educational innovation. The German Transfer and Innovation Agency (DATI), among others, may well provide a suitable framework.

##### Stakeholders contribute resources and build up competences

It is important that all relevant stakeholders – federal government, federal states, universities, non-profit organisations, EdTechs and open-source communities – commit to contributing the necessary resources. The formation of consortia or partner projects can also help to achieve a critical mass for the validation of digital products and solutions, to harness stronger synergy effects, and to avoid costly in-house developments.

At the same time, the development and expansion of digital and methodological competences (cf. Web Literacy and Future Skills) among the stakeholders involved (especially at higher-education institutions) also serves to build up and sustainably secure human resources.

We need

- » a central scouting authority of quality-assured EdTech and open-source solutions and products, whose assessments can be accessed by all higher-education institutions. To this end, a working group of educational experts can be established, for example, who submit their assessments for peer review.





- » a dedicated budget<sup>6</sup> at and for higher-education institutions to finance experiments or projects with innovative open-source solutions or Open Educational Resources (OERs) and EdTechs. Funding already earmarked for the promotion of start-ups and start-up programmes could be used for this purpose.
- » qualification programmes for digital and methodological competences for university staff in order to lower barriers and reduce reservations, and to ensure quality requirements for EdTech and open-source solutions as well as their critical reflection. This includes a needs-oriented approach and user-orientation in the selection of suitable solutions in order to account for the needs of students, but also of teachers and administrative staff. Furthermore, this includes competences for the confident, appropriate and thoughtful use of tools as well as communication skills and teamwork. The European Commission's Digital Competence Framework provides helpful guidance.
- » a framework for regular exchange on competences across federal states and universities, for example in the form of so-called communities of practice such as the German Forum for Higher Education in the Digital Age funded by the Federal Ministry of Education and Research (BMBF).

## 5. DIGITAL EDUCATIONAL INNOVATION REQUIRES AN INFRASTRUCTURE WITH A SOLID FOUNDATION

The use of innovative technologies in our education system is based on functioning infrastructures such as learning-management systems. These are often based on open-source solutions, which in turn require standardised interfaces, (further) development, adaptation to current needs, and the allocation of resources.

### Renewing and standardising technological infrastructures

We need

- » the establishment or renewal of comprehensive technological infrastructures and technological expertise at higher-education institutions, allowing for the linking with external solutions and the scaling of innovations across the board, as well as the associated budget for the further development of existing, proven solutions.
- » international standards and, where necessary, framework agreements for these infrastructures in order to standardise conditions and ensure the linking with external solutions. Data protection and data security as well as compliance and sustainability aspects must also be taken into account.

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<sup>6</sup> To this end, one might consider a national seed-money fund with lean administration.







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- » long-ranging human resources for strategic and operational staff to accompany digitisation and digital educational innovation at higher-education institutions in order to ensure plannability with regard to responsibilities and organisational development.

### SIGNATORIES

The signatories of the Charter for Digital Educational Innovation will take measures to disseminate and implement the guidelines. They call on other stakeholders to do the same within their sphere of influence.

#### Institutions and Initiatives (in alphabetical order)

- » CBS International Business School
- » EDUvation GmbH
- » ESMT Berlin
- » Fachhochschule Erfurt
- » Hochschule Bonn-Rhein-Sieg
- » Hochschule für Technik und Wirtschaft Dresden
- » Hochschule Harz
- » Hochschule München
- » ICN Berlin Business School gGmbH
- » IU Internationale Hochschule
- » LearnTech Hub powered by Campus Founders Ventures GmbH
- » mmb Institut GmbH
- » Ostbayerische Technische Hochschule Amberg-Weiden
- » RWTH Aachen University
- » Stiftung Tierärztliche Hochschule Hannover
- » Stifterverband für die Deutsche Wissenschaft e.V.
- » Technologiestiftung Berlin
- » Universität zu Köln

#### EdTech companies (in alphabetical order)

- » bettermarks GmbH
- » Buntspecht & Rabe Softwaremanufaktur GmbH
- » chabaDoo GmbH
- » FeedbackFruits
- » Fobizz | 101skills GmbH
- » Kiron Digital Learning Solutions GmbH
- » mcEmpirics & Statistics GmbH
- » Mobile Learnings Labs GmbH
- » Onilo
- » StackFuel GmbH





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- » SupraTix GmbH
- » teech Education GmbH
- » UniNow GmbH





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