Digital teaching at universities

Promotion of digital teaching offerings in consideration of teaching commitments

Michael Leyer Universität Marburg

Wieland Müller Universität Rostock

Layout & Design: Christopher Rothhardt

Also Available in English

Digital teaching - more than just online teaching

The digitization of teaching at universities has been an important concern of various funding programs for years, but the possibilities of digital media are still far from being used by all teaching personnel. Digital teaching is much more than just pure online learning in the form of synchronous communication via video conferencing tools. Thus, in addition to traditional face-to-face teaching, digital media can be enriched, blended learning scenarios can be carried out, digital feedback can be given automatically, or asynchronous communication can take place via online forums and cooperative

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work via cloud applications. Digital tools open up new opportunities in teaching: courses can be tailored individually, a greater variety of teaching methods and formats can be offered, teaching can thus be made more varied and student motivation can be increased. Even against the background of different personal conditions, abilities and teaching habits of students, digital teaching can lead to making knowledge transfer more attractive and improving it. The heterogeneity of students affects very different areas. In addition to individual factors and social factors, it is above all cognitive and motivational factors that should be taken into account. Different learning types require the use of different media and methods.

In addition, different input channels through which knowledge can be absorbed should be considered in combination. Only with traditional teaching is it difficult to meet all these requirements for modern teaching. However, the combination of face-to-face teaching with digital learning elements, online phases and digital learning methods makes it possible to take as many of these factors into account as possible. It is not a question of replacing traditional teaching, but rather of enriching it with digital components and thus imparting knowledge effectively while at the same time creating flexibility in terms of location and time. A didactically valuable offering of digital teaching therefore also includes much more than the uploading and downloading of learning materials. However, since German universities are free to teach, the choice of teaching method cannot be prescribed; only incentives can be provided. From the point of view of the universities, it is therefore important to create incentives that motivate lecturers to decide in favor of the use of digital tools and thus to make teaching more modern.

Additional effort of digital teaching

Similar to analog teaching, there are also different types of effort for digital teaching. There is the classic teaching effort, which is represented by the implementation of the actual course. Unless instructional videos replace the course, this is the same for digital and traditional teaching. The development effort represents the initial creation of a teaching concept and the teaching materials. The use of digital tools usually requires a training period, and the creation of digital teaching materials often requires more time than that of traditional teaching materials. Also, the implementation effort increases the more digital components are used. This relates to the preparation and follow-up effort for the individual courses and the (possibly also digital) venue. The fourth type of effort is the support effort. It describes the support, coordination, and supervision of students beyond the course. This can mean anything from answering personal questions, compiling lists, or supervising discussion forums.

A survey of instructors at a medium-sized university in northern Germany found that an average of 4.5 hours is needed to learn how to use a single digital tool on a one-off basis. The use of the tools to create teaching materials varies between a few hours (1-2) to 20 hours of development effort - per upcoming course - depending on the teaching personnel surveyed. In addition, almost another two hours are required weekly, in which digital tools are used in addition to the creation of the teaching materials and which are incurred as additional implementation effort. According to the interviewees, the supervision effort also rises sharply. The participating teaching personnel see problems above all in the fact that the additional work is not rewarded accordingly, since it is not taken into account in the various regulations. Thus, despite various support programs and the provision of digital tools by the university, it is ultimately up to the teaching personnels' own motivation to invest additional and often private free time in digitizing and modernizing their teaching.

Outdated teaching regulations without incentive system

The teaching regulations of German federal states specify how many hours of teaching must be carried out by teaching personnel and by what factor the different types of courses can be credited. What is not considered, however, is how much effort is actually behind such a course. As a result, there is often a lack of incentive to constantly improve courses through innovative, digital solutions. After all, additional work is required on a voluntary basis, for which there is no remuneration. In addition, the increasing effort for teaching tasks leads to a reduction of research and administrative activities and can thus even lead to a personal career disadvantage. It is therefore necessary to be able to credit the additional effort for innovative and digital teaching, at least in part, in order to create new incentives.

The teaching regulations of some federal states take into account, at least in part, additional credit for implementation, supervision or one-time creation effort. In most cases, however, this can only be guessed at from the wording; there are no concrete paragraphs or recommendations. The decision-making option is often shifted to the level of the universities, where it is rarely actually taken up.
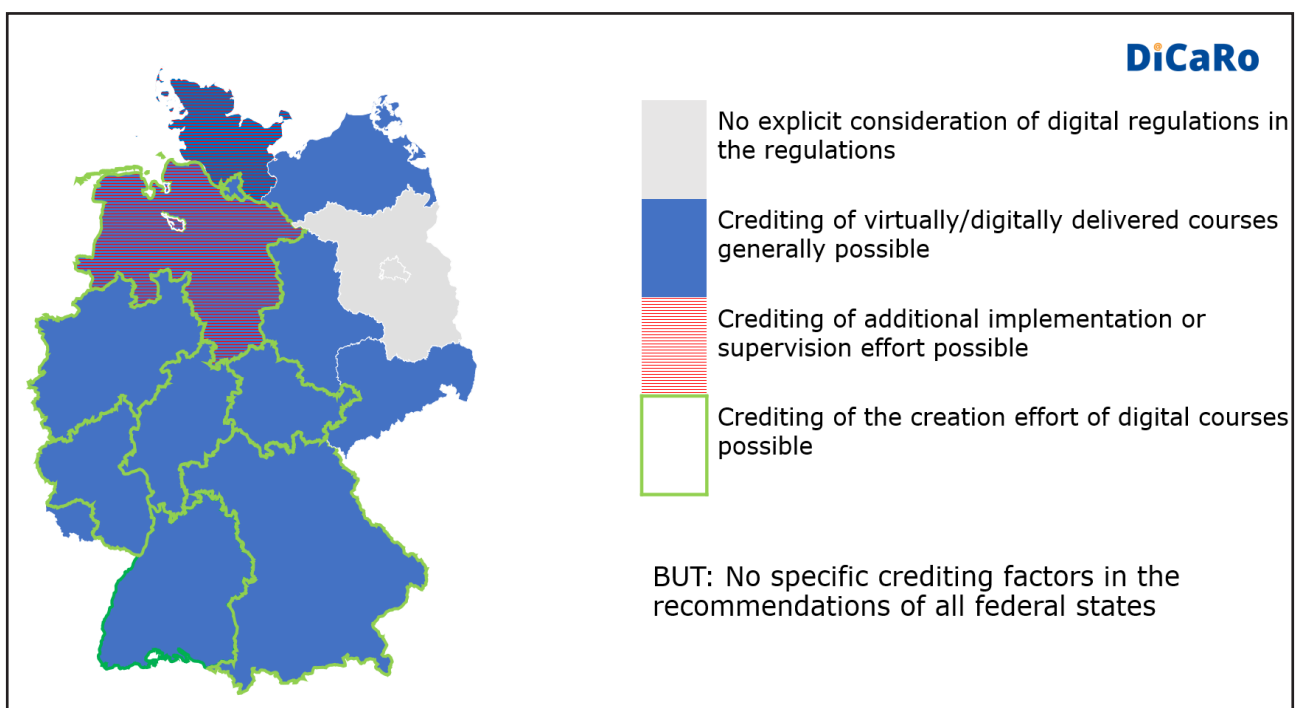
Model idea: Request for increased credit for innovative and digital teaching

It is therefore advisable to address the issue of digital teaching more specifically in the respective state ordinances and to include it as an additional paragraph. Besides the new incentives, this would also provide more clarity. Based on interviews, surveys, literature, and previous incentive systems, we recommend that innovative, digital courses be credited with a factor of 1.25, provided that the implementation and supervision effort is significantly increased by the digital components. Since the initial creation of innovative, digital courses is particularly time-consuming, we recommend a factor of 1.5. Although this does not fully compensate for the additional effort, the factor must also be considered from the perspective of the overall course offering, which should not be changed by the increased crediting factor.

On top of the significant additional effort, other criteria should be examined to allow for increased credit. Above all, the digital enrichment of the course should bring didactic benefits and should not be a mere addition of digital tools. The digital tools used should cover different areas of learning: Knowledge transfer, knowledge testing, and mutual exchange or collaboration. It is also important that the overall learning experience is not compromised. Possible solutions here include learning videos or self-learning material in combination with face-to-face events. In order to protect the overall teaching offer, we also recommend that the increased crediting may amount to a maximum of 2LVS or 25% of the respective teaching load or that the regulations can also be suspended depending on the workload of the study program. Alternatively, compensation can also be made with financial budget.

However, for crediting, there must be a review body that makes an independent assessment with the most necessary information. This can be done at the department level (e.g., commission with dean of studies) or at the university level (e.g., study commission of the senate or a commission with a focus on digitization). The

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No explicit consideration of digital regulations in the regulations

Crediting of virtually/digitally delivered courses generally possible

Crediting of additional implementation or supervision effort possible

Crediting of the creation effort of digital courses possible

BUT: No specific crediting factors in the recommendations of all federal states

ideal situation is a commission with experts from different departments that can make a quick and independent assessment. Decisions can then be made at the department level as to what is feasible with regard to capacity utilization.

Depending on the country, other legal aspects must also be considered. These include possible links to existing capacity ordinances or whether the detailed ordinance adjustments can be implemented across the board at the state level or only at the university level. Lead times and reporting requirements must also be examined in detail, depending on the country.

Conclusion

Digital teaching offers many possibilities, but is difficult to implement, since its use is based on the voluntary efforts of the lecturers. Here, only incentives for support and crediting can be given. It is important to maintain a balance between existing and required capacities as well as sensible concepts with little application effort. Our proposal should serve as a basis for further discussion and the creation of the appropriate framework conditions.

CONTACT DATA

Prof. Dr. Michael Leyer
Chair ABWL:
Digitalisation und Process Management

Department Business and Economics

Adjunct Professor, School of Management,
Queensland University of Technology,
Brisbane, Australien

Email   michael.leyer@wiwi.uni-marburg.de

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