

Survey on the Status of Digitization at German HEI

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1. Summary

The results of a survey on the digitization of universities in Germany prove that digitization is of great importance for the three dimensions of research, teaching and learning and administration in general, but that the actual implementation status of digitization at German universities is much more restrained. Particularly in the area of administration, the actual level of digitization accomplished at German universities is still regarded as comparatively low. If the IT infrastructures and the systems implemented are analyzed, the status quo is characterized by a large amount of different systems, most of which do not yet allow continuous workflows and are hardly integrated. Many universities show completely different levels of maturity for different systems.

2. Results

2.1. Introduction

Digitization has initiated a comprehensive process of differentiation at higher education institutions (HEI), transforming established forms of scientific and administrative work. Despite a number of studies on partial aspects, comprehensive surveys on HEI digitization have not yet been available, neither in Germany nor internationally. This is the background to the survey "Digitization of Higher Education" (Gilch et al. 2019a), conducted by the HIS Institute for Higher Education Development (HIS-HE) on behalf of the German Expert Commission for Research and Innovation (EFI 2019). The objective of the study was to analyze the process of HEI digitization, considering the dimensions of research, teaching and learning, administration and infrastructure. Methodically, the study focused on a partially standardized full survey among German university leaders, conducted in spring 2018. 119 universities (response rate: 30.1%) completed the questionnaire. The quantitative data were evaluated by means of descriptive analysis methods and multivariate analysis methods (cf. Gilch et al. 2019b).

The study focuses in particular on the importance, strategies and objectives of digitization, the embedding of digitization in IT governance, the status and framework conditions of digitization, digital infrastructure, digital research, learning and governance, and recommendations for action to policy-makers. The most important survey results with a focus on status of digitization, digital strategies and system implementation in German universities are presented and discussed in this paper.

2.2. Status of Digitization

With regard to the significance and status of digitization, a central result of the quantitative survey is that the significance of digitization at universities in Germany is generally rated as high. With regard to the whole institution, 82.6% of the university leaders rate the importance of digitization on a five-point scale as high or very high. In terms of individual dimensions, university leaders attribute the

greatest importance to the digitization of teaching and learning (75.7%) and the digitization of administration (71.9%). The status of digitization of one's own university is assessed much more cautiously than its respective significance. Mostly, university leaders attest a high or very high level of digitization to the areas of research (34.3%) and teaching and learning (29.3%) at their own university.

2.3. Digitization strategies

It was then analyzed to what extent digitization is reflected in university strategies and which objectives the universities pursue with digitization. A written strategy or concept for digitizing the university as a whole is available or being developed at 54.5% of the universities. Dimension-specific (digitization) strategies are primarily available for teaching and learning (69.6%) and administration (61.8%) or are currently being developed. The objectives most frequently associated with these strategies are to improve the teaching quality (91.7%), to increase the administrative services' quality (90.0%) and the administration's efficiency (90.0%) and the teaching of digital skills (86.7%), to increase the ability of... (73.3%), profiling (66.7%), intensify research (50.0%), attracting new target groups (48.3%), internationalization (45.0%), increasing research quality (45.0%), intensification of transfer activities (45.0%), increase research performance (43.3%), increasing the diversity of the... (38.3%), and Other, namely (6.7%).

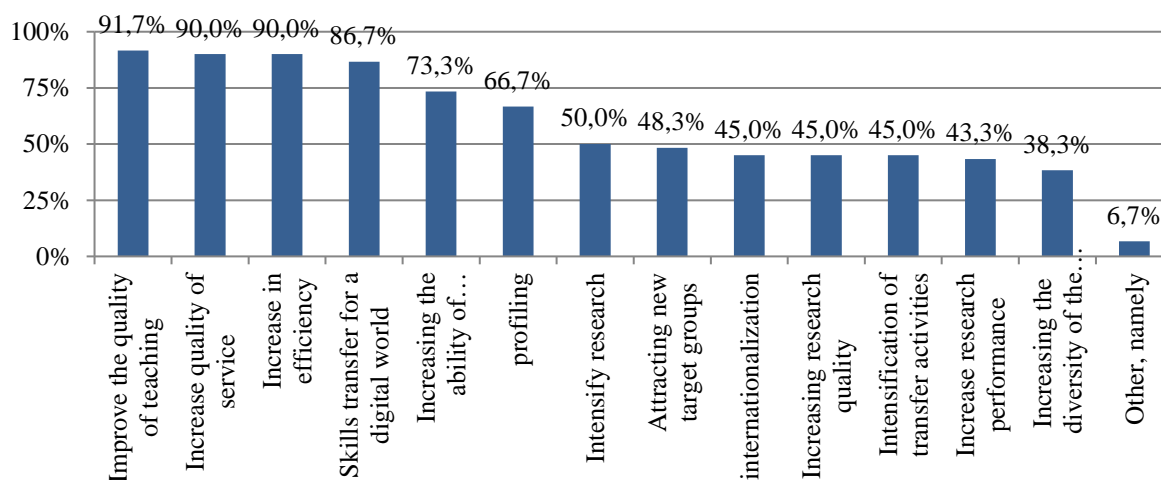


Figure 1: Objectives of digitization strategies

""What objectives should the university's digitization strategy achieve?"
(N = 60, multiple answers possible) (Gilch et al. 2019a: p. 69)

2.4. Status of IT infrastructure and selected IT systems

With regard to the implementation status of digital infrastructures and the implementation level of selected IT systems, fully digital workflows have so far only been offered to users at 9.2% of universities. In most cases (72.3%), a large number of IT systems and applications are in use, but these are only partially but not fully integrated. Considering the implementation level of selected IT systems, Learning Management and Student Information Systems are already in use almost everywhere, while other administrative systems are in an introduction phase for the most part (e. g. ERP, CAFM, BI). The use of cross-university infrastructures for research (e. g. Research Information System) is either not planned, the implementation is currently under review or has already been decided but not yet realized.

3. REFERENCES

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