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eGovernment and Universities: Lessons learnt from European Study Visits

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Abstract

The studies conducted by HIS-HE in Germany in recent years on the digitalization of higher education institutions have shown that not only technical, financial and organizational framework conditions are important. Rather, the "digital culture" and the eGovernment of the states are decisive for the most comprehensive digitalization possible, especially in higher education administration. And it is precisely in this respect that Germany is not in the top group in a European comparison. Rather, the Northern European countries are considered pioneers in the area of eGovernment - see, among others, the EU report "eGovernment Benchmark 2021" or the UN's E-Government Development Index (EDGI).

In order to analyze the current status, interactions and possible interdependencies between the level of digitalization of public administration in general and higher education administrations in particular, HIS-HE conducted study visits to higher education institutions in Estonia, Finland, Sweden and the Netherlands in 2022. The study visits are intended to gain insights into the extent to which advanced eGovernment in public administration interacts with higher education administrations and what possibilities for action can be derived from this for the higher education system in Germany and Europe. In addition, we can look to the future - what practical insights can be gained? In which direction will the organisation and processes in higher education institutions develop with advanced digitalization? What recommendations for the development of German and European higher education institutions can be derived from this?

1 Introduction

In recent years, the HIS-Institute for Higher Education Development (HIS-HE) has conducted various studies in Germany on the status of digitalization at universities, the impact of legal frameworks on the digitalization of universities, the digitalization push by the COVID-19 pandemic, and digital

recognition processes in the context of European student mobility. These studies have shown that, in addition to the technical, financial and organizational framework conditions, so-called "soft" factors are also crucial for promoting the digital transformation at universities. These are, in particular, the "digital culture" at the universities themselves, but also, for example, the state of eGovernment in public administration and, in general, the "digital readiness" of the population. Especially in this field, the Northern European countries are in the top group - see, among others, the EU report "eGovernment Benchmark 2021" or the UN's "eGovernment Survey 2022" - while Germany is not at the top, but ranks only in the middle.

To analyze the impact of these differences and the correlation between public eGovernment and specific developments at universities, HIS-HE conducted a study visit in summer 2022, visiting universities and other higher education organizations in Estonia, Finland, Sweden and the Netherlands (see Figure 1). The goal was to explore, from the German perspective, the extent to which more advanced eGovernment within public administration interacts with university administrations and how this affects the state of digitalization at universities. The intention was also to provide a look at the future of digitalization and the related opportunities for German universities to act. The comparison was made on the basis of the specific situation in Germany, so that differences and special characteristics could be identified. Independently of this, however, fundamental development trends can also be identified at a European level, which could also be used for further, more specific cross-country comparisons.

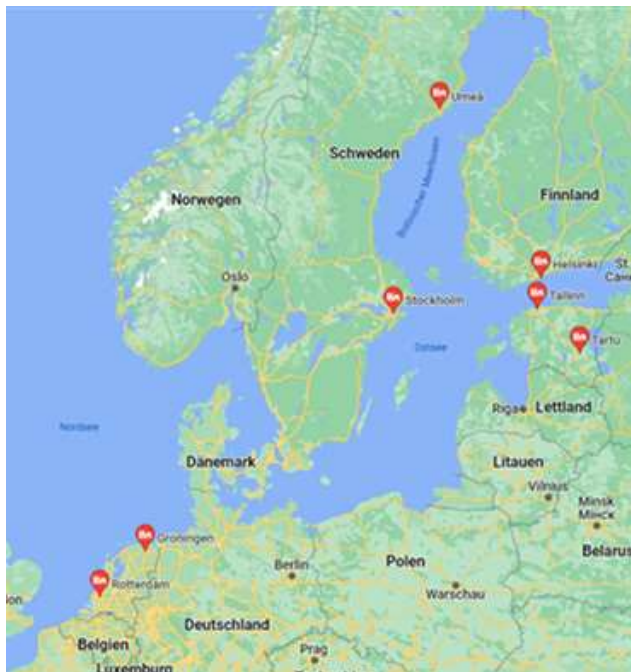


Figure 1: Locations of the Study Visit

A comparison shows that in all the countries visited, there is a time advantage over Germany with regard to digitalization in society and in the public sector, and eGovernment was already an issue for public administrations and thus for higher education institutions much earlier. Higher education institutions benefit from these framework conditions because, for example, digital workflows, digital signatures and digital authentication have been available in some cases for years and are also widely

accepted in the societies. Digitalization also seems to be more widely accepted by society in the countries visited than in Germany, because, for example, the healthcare and education sectors have already been digitalized to a greater extent than in Germany. Here, digitized processes or the digital transformation of society do not appear to be a far-off option, but rather a reality that has in parts already been successfully implemented. However, it must also be considered that the countries visited are relatively small in terms of their population, with a centralized higher education and education system. This must be remembered when comparing their eGovernment with a large federal state such as Germany, where higher education is in the responsibility of the federal states and which has 16 different state-specific higher education and eGovernment legislations.

2 Key findings

As a result of the study visit, ten central aspects emerge from the comparison of the higher education institutions and science institutions visited with Germany, which encompass both differences and similarities. However, the findings listed are the results of individual interviews at selected HEIs and not an overall comparison of the higher education systems and all HEIs in the countries visited. The selection of HEIs visited was geared towards large and preferably excellent HEIs, so this may influence the findings obtained. An overall comparison must be made at a later date if necessary and for selected topics:

1. The universities in the countries visited can be seen there less as pioneers in digitalization in public administration than is the case in Germany. Due to their high level of heterogeneity and complex processes, they tend to be regarded more as "latecomers", since, for example, the healthcare sector or the financial and tax administration have already been digitized much more comprehensively than the universities. This is significant because, on the one hand, areas of digitalization that have already been successfully implemented generally lead to greater acceptance of digitization among the population. For another, there is already a large pool of digitalization experts in the public sector that universities can draw on (e.g., project managers or IT experts).
2. The digitalization of administrative processes is changing the tasks and job profiles of the university employees concerned. The job profiles tend to become broader, since a wider range of different tasks can be performed with good digital support. The salary levels also change, because digital workflows require greater expertise and thus higher remuneration than routine manual tasks. The extent to which digitalization in administration can also save personnel resources depends largely on the extent to which digitalization is embedded in general change management and not just processes are digitized, but digitally transformed (e.g. in the context of centralization and focusing on the provision of services rather than on people).
3. The IT services within the universities visited are centralized to a greater extent than at many universities in Germany. At the same time, however, the heterogeneity of the faculties and the resulting diversity of IT requirements remain major challenges, and the centralization of IT is therefore reaching its limits in universities everywhere. Nevertheless, it is important to avoid double structures and thus save money, since IT security in particular requires new additional resources due to the increasing dependence on systems and the related growing threats. In order to limit an additional increase of staff, necessary for this, for example, an attempt is being made to reduce the variety of systems supported and to focus on standards. However, at the same time, universities should continue to ensure that as much as possible of what the many heterogeneous users need (or think they need) for their research and teaching can be used, so

that the development of and compliance with general IT security guidelines is of central importance.

4. Even though the universities in the countries visited have returned to face-to-face teaching after the Covid 19 lockdown, just as in Germany, they see hybrid forms of teaching and learning much more as the core elements of future-oriented university teaching. All the universities visited have already set up or are experimenting with hybrid teaching and learning spaces to a far greater extent than in Germany. Not the technology itself is more advanced, but more lecture halls and seminar rooms are already equipped with it. An important aspect for all universities was that the multimedia technology should be as simple and uniform as possible to use, allowing teachers to use the complex technology easily and without lengthy instruction.
5. Digitalization enables new working and spatial models - not only for teaching, but also for lecturers and researchers as well as for administrative staff. New Work and Mobile Working helps to provide fewer individual offices and to enable more work in "office gardens" (see Figures 2 and 3). A comprehensive range of meeting rooms and individual workstations for special uses complements the shared workspaces and ensures that team meetings, telephone calls and video conferences are possible without disturbing colleagues. In addition to the impact on staff and lecturers, this also has consequences for the space available for students, whereby existing lecture rooms are not simply removed due to the increasing number of online courses. The multiple use of teaching and learning spaces as well as an adapted calculation basis for space requirements are therefore central issues, especially when new buildings are planned and constructed.
6. Even in digitized processes and procedures, there must still be opportunities to carry out the process non-digitally. In universities, the variety of possible variations and users is so large that even with very far-reaching digital solutions it will hardly be possible to achieve truly complete and one hundred percent digitalization (invoices from foreign suppliers or the authentication of foreign students without a credit card or digital ID were mentioned as examples).
7. The openness to the use of data (open data) is greater in the countries visited than in Germany. This does not mean that data protection is not considered. In comparison, however, it appears that aspects of data protection and benefits from the evaluation of existing data are contrasted in such a way that data protection cannot become a knock-out criterion as easily as in some cases in Germany. A higher level of acceptance for digitalization in society is helpful here. Regardless of this, it has been shown once again that - even if data protection is a European issue - the interpretation is country-specific, which is a key aspect for the future development of (European) university networks.
8. The academic areas of higher education institutions in particular are very individual and have high demands on their academic freedoms. This makes the introduction of standardized processes in the area of programme administration more difficult, so that although application/admission/registration with digital certificates and eID is carried out digitally, the mutual recognition of academic achievements and individual modules is not yet fully digitized. This is rather a challenge that higher education institutions throughout Europe are facing and for which it is now necessary to bring together and further develop the different initiatives, projects and standards.
9. From the point of view of the interviewees, higher education institutions will continue to develop in such a way that students will seek out their achievements as verified credentials from various offers of different higher education institutions, e.g. at national (for example DIGIVISIO 2030 in Finland) or international (for example within the framework of the

European University Initiative) level, and combine them into a degree. This applies both to traditional studies and - even more so - to the area of lifelong learning (for example, within the framework of micro-credentials). Corresponding digital standards and processes with which students can combine their achievements are currently being developed in many countries (cf. Nordlund, 2022, among others). Cooperation at the European level is necessary (cf. also point 8).

10. In addition to the financing of digitalization, the securing of data protection and IT security are described as central challenges. Cross-border cooperation, e.g. within the framework of the Scandinavian NORDUNET, helps to contractually enforce high data protection standards against the global players in digitalization by creating greater market power. In the Netherlands, a compass of values was developed for the field of education to ensure core values such as equal opportunities, mutual respect and protection of privacy in the digital world (cf. SURF 2021).

3 Lessons learnt

In all of the universities visited, the individual - in addition to the various technical or structural aspects - was one of the central, overriding factors for the success of digitalization (cf. Randall & Berlina, 2019, among others). For digitalization processes, employees and colleagues must be taken along and involved. In other words, this means: Constant communication, continuing education and lifelong learning, change management and personnel development are central aspects without which digitalization can only be implemented to a limited extent, even at higher education institutions in countries with a high eGovernment index. Connected to this is also the focus on the users of the respective offerings - regardless of whether these are students, staff or teachers. User centricity and service orientation are central aspects that were in focus at all of the institutions visited.

Furthermore, the universities cannot solve the various challenges and tasks that arise and have to be mastered in the course of digitalization on their own. For successful digitalization, it makes sense for (especially the smaller) universities to cooperate and network. Aspects such as learning from each other, exchange formats and university cooperation - especially at the European level - are becoming increasingly important. This applies even more, because higher education institutions should keep an eye on national and international developments, whereby the current activities around Erasmus without Papers and the networks of the European University Initiative are only a beginning.

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