

Online platforms for teachers in higher education



Comparative Case Study for HEInnovate

July 2022

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1 Introduction

This comparative case study investigates how three selected higher education institutions use digital platforms to support teachers in their professional development. Professional development can relate to enhancing teaching practices or supporting teachers in using digital tools in their classrooms. The platforms include well-known digital platforms such as Moodle or Canvas and extend to other tools and self-developed programmes.

During the Covid-19 pandemic, these digital platforms were an important support factor in the accelerated transition from in-person education toward digital (or digitally enhanced) education.¹ In particular, teachers who were not yet familiar with digitally enhanced learning could find support on these platforms (for example, through videos, good practice examples or similar) as well as the opportunity to exchange with colleagues working on the same or similar problems.

What do we mean by digital platforms?

Digital or online platforms are tools that facilitate the structuring, sharing and archiving of information and can also support communication among individuals that are not part of one group or institution.

Digital platforms in education can take very different forms that range from sharing learning or other content to providing full degree programmes online. Platforms can also stimulate networking and communication among users. While platforms are frequently mentioned to provide education for students, they are also used for the (professional) development of teachers. However, platforms can differ in their functionality. In its feasibility study for the implementation of a national platform to support teaching and learning in higher education, the German Hochschulforum Digitalisierung distinguishes platform types with regard to their degree of formalisation, i.e., the extent to which platforms are open to different forms of contributions, and with regard to the extent, it is specifically addressing the demands of potential users. These two dimensions reveal three types of platforms. The first, **platforms with micro-content**, has been produced by its users and has a high degree of openness with regard to contributions that can be shared on the platform. Also, there are no restrictions on accessing the platform and its contents. The second type of platform facilitates **open learning**: it provides mostly courses that are open to anyone. The courses, however, can lead to certificates as formal learning proofs but can also end with no certificate. Finally, platforms can provide very specific content and restrict access to users who need to qualify or apply to use the content on the platform. With regard to learning, these platforms provide, among others, full study programmes and can be established as **virtual universities** when meeting certain requirements.

What can digital platforms do for teachers?

These platform types can also support the staff development of teachers. Frequently, national initiatives to enhance teaching and learning in higher education establish platforms with micro-content that is provided foremost by the users. The Dutch platform "onderwijskennis.nl", for example, provides basic information for teachers and educational practitioners who are looking for inspiration. These teachers and practitioners can come from all education levels. On the platform, teachers and other individuals can find information about new teaching practices or other topics based on their choices. The European Union has recently started to implement the Digital Education Hub. This hub aims to support teachers in implementing digitally enhanced teaching and learning practices. Furthermore, it aims to facilitate

¹ Mishra, L., Gupta, T., & Shree, A. (2020). Online teaching-learning in higher education during lockdown period of COVID-19 pandemic. *International Journal of Educational Research Open*, 1, 100012.

cooperation and peer learning among them through establishing communities of practice that address selected topics.

At higher education institutions, platforms for the professional development of teachers are often provided as part of learning platforms or course management systems but also as websites. Here, the platforms can also perform different functions. Mostly, they provide user-generated micro-content, in which teachers share educational resources or information on new teaching practices or the use of educational technology.

What does this comparative case study offer?

This comparative case study presents how online or digital platforms have been used by three European higher education institutions to support their teachers and build communities of practice. Depending on their goals, the platforms differ with regard to their openness for content and access restrictions for users.

In detail, this study will compare the implementation of the three platforms with the help of the following questions:

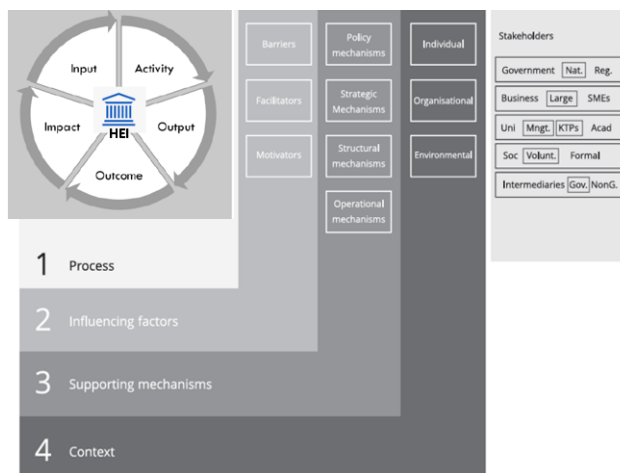
- What are the goals that the HEI wants to achieve with the platform?
- What problems does the platform address?
- What services/functionalities does the platform provide to teachers?
- What resources are needed to implement/run/maintain the platform?
- What factors contribute to the acceptance/use of the platform?
- What factors hinder a successful implementation of the platform?

The compared cases in this study are the **Fachhochschule Campus Wien**, a university of applied sciences located in Vienna, Austria. This higher education institution (HEI) has implemented the platform Campus Connect, which functions as a one-stop point for teachers for information and training for their educational activities. At the **Metropolitan University Budapest**, a private university in Hungary, the online platform for teachers mainly serves to provide learning materials and support for improving the quality of teaching. Finally, at the **Department for Teacher Education at the University of Agder** - Norway, the online platform Stalu shares and documents results from a project that is aimed at enhancing teaching practices aiming to stimulate more active student engagement. Access to the platform is not restricted to teachers at the University of Agder but is also open to teachers and others from other institutions or schools.

For this case study, we conducted interviews with the facilitators of the online platforms. It is also informed by documents that relate to the platforms, such as project plans or strategic documents.

This comparative study applies an analytical framework developed by Davey et al. in 2018 (see figure 1). Originally, the framework was developed to study university-business collaborations, but it can also provide useful categories to describe and understand other entrepreneurial change processes in higher education institutions. In the following, the implementation of digital or online platforms to support teachers in higher education institutions will be understood as a change process as their implementation will alter existing practices.

Figure 1: Analytical Framework



Source: Davey, T. et al. (2018): *The state of university-business cooperation in Europe. Final report. Luxembourg: Publications Office of the European Union, p. 26.*

The framework includes the various levels, factors, and challenges around implementing change towards a more entrepreneurial and innovative higher education institution. As such it is useful for furthering the HEInnovate agenda.

Central to the analytical framework is the *process* dimension, which relates to the change process. This process is operationalised as a simple activity chain. It distinguishes between inputs, activities, outputs, outcomes, and impact. The process can be regarded as a cycle because organisational change is usually not just a sequence of different activities, but often its actual outcome and impact will lead to further action in the institution. This dynamic process is embedded in three further dimensions (or layers) the *influencing factors* at the second level, the *supporting mechanisms* on the third level, and the *context* - on the fourth level.

The second layer of influencing factors signifies the immediate environment in which the process takes place. At this level, various barriers, facilitators, and motivators influence the activity chain and pull it in one or the other direction. The (third) level of supporting mechanisms relates to the institution's enabling environment that includes the policies that frame rather than directly influence the steps in the change process. Finally, the fourth dimension stands for the wider context in which the process is situated. It includes factors that are not under the institution's direct control, such as the individual characteristics and preferences of the actors involved or circumstances in the socio-economic environment of the HEI. In addition, the framework also looks at different categories of stakeholders that can have a role in the change process. Stakeholders are linked to very different organisations in the institution's environment.

2 The individual cases

2.1 FH Campus Wien

2.1.1 Institutional Characteristics

With about 7000 students, the FH Campus Wien is the largest University of Applied Sciences in Austria. There are more than 60 bachelor's and master's degree programs, as well as specially designed master courses offered across the departments of Applied Life Sciences, Building and Design, Health Sciences, Applied Nursing Sciences, Administration, Economics, Security, Politics, Social Work and Engineering. More than half of the programs (especially all master programs, except for two) are offered as part-time study programs (i.e., these study programs enable a combination of working and studying). The FH Campus Wien has strong ties to stakeholders

and works closely with an established network of companies, associations, schools and public facilities. Almost all study programs dedicate a considerable amount of time to internships. These firms often employ students after graduation. In terms of baseline funding, The FH Campus Wien receives 63% of its funding from the "classic" standard per-student budget model, supplemented by additional funding from the public health sector and by other sources of financing, i.e., research grants, tuition fees, students' contributions, and financing from the industry.

Around 80% of the teachers at FH Campus Wien, i.e., around 2,000 individuals, are employed as part-time teachers. These part-time teachers are mostly highly qualified practitioners from industry, public administration or other sectors where they have their main employment.

2.1.2 *The Platform "Campus" Connect*

Goal/Problem addressed

The platform 'Campus Connect' foremost targets teachers at the FH Campus Wien and aims to function as a one-stop information centre where teachers can find information and support for their teaching activities. Each teacher, i.e., part-time as well as full-time teachers, can access the platform. The main goal of the platform is to increase the quality of education through the provision of information material on didactical topics as well as practical advice for digitally enhanced learning or other challenges in education. The provided material aims to stimulate teachers to engage in enhancing their teaching practice while providing opportunities for self-study or self-directed learning. Therefore, 'Campus Connect' is also a tool for staff development.

Against this background, the platform has three main functions:

1. The platform provides teachers with information and practical guidelines for teaching strategies and didactical methodologies. Here the platform functions as a repository and provides teachers with information about pedagogical issues and learning technologies. Through video tutorials, the platform offers various teaching tips which can easily be found by the teachers.
2. The platform aims to stimulate professional communication among teachers and building a professional learning community.
3. The platform aims to build closer ties between the institution's part-time lecturers and others at the FH Campus Wien to better integrate them into the institution's mission and vision.

The platform provides content that has foremostly been developed by the institution's Teaching Support Centre as short training videos and texts. In addition, teachers report on their experiences with teaching practices in a blog format. The platform is only accessible by teachers and staff employed at the FH Campus Wien.

Activities

Once completed, the platform will include three major roles:

- First, as an information and resource hub that offers teaching material and support to teachers through videos and texts. This role has been already fully established since the beginning of 2020 just before Covid 19. During the pandemic, the platform was very helpful to support teachers to transform their classes into online formats. This element of the platform mostly facilitates information and self-directed learning.
- The second role is offering the format "Espresso", which is more targeted to facilitating exchange and peer learning among the teachers through communities of practice. The format employs a flipped classroom concept to structure exchange among part-time and full-time teachers. The work and exchange of the communities aims to result in short education videos on the topic addressed. To this end, a three-step process takes place: In

the first step the Teaching support Centre suggests a topic and arranges several meetings in which teachers can participate. In these meeting, experiences around the topic are shared and questions are answered. During the meetings, staff from the Teaching Support Centre take notes. After the meetings, the Teaching Support Centre develops the content of the meeting into a short video that all users of the platform can access. Besides a short introduction in the topic, the videos pick up the most frequent questions that came up during the meetings. The length of the videos is on average around four to six minutes – just the time needed to enjoy an espresso. The implementation of this format has started in 2022 and will be fully rolled-out in the coming months.

- The third function of the platform is offering a digital version of the FH Campus Wien teachers' handbook. Currently, the handbook is available as 'hardware'. It includes regulations around education, contact addresses and practical information concerning the administration of courses, assessments, and other topics. Yearly updates and changes of the teachers' handbook were costly and time-consuming; therefore, it will be provided on the platform from autumn 2022. All teachers will be able to access the content, and updates can be incorporated in a timely manner. Besides the handbook, also administrative forms can be downloaded from this part of the platform.

Resources invested

The platform was developed inhouse by staff from the Teaching Support Centre of FH Campus Wien. It took one year to design the first part that was launched a week before the pandemic struck. In this development process, information was collected from the teachers on what they would like to see and use from such a platform.

For the development and implementation of the platform, staff who are competent in programming platforms in a user-friendly manner turned out to be an asset. Additionally, competencies in didactics and processing didactical knowledge into videos were needed. Also, technical devices to produce videos are needed.

Further, the implementation of the platform required skills to translate and reorganise information in a user-friendly manner. In its current shape, the platform bundles and presents information and knowledge in a structure that can be understood intuitively. In this, it strongly differs from previous ways of working where information and knowledge were physically scattered and also embodied in individuals. Transforming the structure and designing a user-friendly appearance of the platform also requires specialist competencies.

Outcome/Impact so far

The two elements of the platform that are currently available are used by a high percentage of teachers. At the beginning of the pandemic, the platform turned out to be a beneficial investment as it could be used to disseminate information and assistance among teachers. Currently, the use of the platform is consolidating, and the interest in participating in the communities of practice is stable. In terms of the addressed content, the platform provides information and support to make digitally enhanced learning sustainable.

Hindrances

Firstly, a shortage of staffing and funding can stand in the way of implementing the platform. Besides institutional resources, the FH Campus Wien won a grant to the develop the community of practice element (Espresso) further.

Secondly, legal issues related to the published content need to be solved. Each piece of content needs to be checked for licences, copyright and related legal issues. The communication department of the FH Campus Wien facilitates this process.

Facilitators

Certainly, the pandemic has contributed to a wide use of the platform and acceptance among the teachers. In addition, the quality of the information, the easy-to-use structure stimulate teachers to access and contribute to the platform. Teachers appreciate that the platform bundles knowledge and further tools in a one-stop format. Further, the way content is provided appears to stimulate teachers to engage with didactical issues and consider trying out new teaching practices, in particular in the area of digitally enhanced education.

The project and implementation of the platform is strongly supported by the Vice-Rector for Teaching and Learning who actively participates in developing the platform further.

Conclusion

The platform Campus Connect represents a multi-functional tool that aims to support teachers with information. It also has strong elements to stimulate learning among teachers: Either as self-directed learning or peer-learning. While its current shape mostly facilitates self-directed learning, elements that allow exchange and peer learning will be expanded in the future.

The case shows that implementing an institution-wide platform for teachers needs a careful design and the formulation of a few, but clear goals support the process.

The platform was launched before the pandemic and its wide use by the lecturers has proved its usefulness and importance. The main goal of the platform is to enhance the quality of education by providing lecturers with a platform for communication and a resource base. However, extra funding and staff are required for the further development of the platform.

2.2 Budapest Metropolitan University

Institutional Characteristics

Budapest Metropolitan University (METU) is a private institute of higher education in Budapest, Hungary. METU is the largest privately-owned university in Hungary. It was established in the year 2000 with state accreditation. Education began a year later. METU offers four major fields of education in its two faculties: (1) business studies, communication, and tourism and (2) arts and creative industries. The list of programs includes 32 BA, 34 MA, 15 professional training programs and seven higher education vocational training programs in Hungarian or English. METU has 7000 students, including more than 1000 foreign students from 110 countries.

In its education, METU places a high value on the demands and requirements of the labour market. One of the most important elements reflecting this was the launch of the [myBRAND](#) portfolio-based education methodology in 2018. This approach was designed to boost students' individual development and employability. During their university studies, students complete real professional tasks which later can be integrated into a portfolio which can be presented at job interviews. Students are taught how to give an effective presentation, how to argue, and represent themselves or their work (e.g., their business idea) assertively in market situations. This requires appropriate teaching methods: situation games, project tasks, debates, presentations, mind mapping, real-life market case studies, and internships. It also requires a modern teaching environment and infrastructure, digital materials, e-notes, inspiring project classrooms and social spaces.

The platform: Coursera for Campus

In the beginning of 2021, METU signed an agreement with Coursera, the global online learning platform. Coursera is one of the most popular online learning platforms. The three-year partnership is designed to strengthen the University's existing curriculum in English-language programmes, embedding digital content from leading international universities and companies (e.g., Google). Through '[Coursera for Campus](#)' students get access to specialised

programmes, course certificates and Guided Projects spanning disciplines as varied as programming, biology, psychology, and language studies.

Budapest Metropolitan University has used online learning resources for many years. Coursera for Campus complements and strengthens the University's existing resources by integrating courses on the Coursera platform into its own curricula and allowing faculty and staff to privately author Guided Projects, courses, and assessment for students at the university. Coursera provides methodological and technical assistance for METU's own digital content production.

METU primarily uses Coursera in combination with other digital tools (e.g., ZOOM) and its online learning management system to guarantee the quality of its degrees. Teachers are confronted with a surplus of digital support tools and need a transparent, controllable harbour, a starting place. This is offered by the platform. For the teachers, the platform offers short tutorial videos, for instance about the basics of starting Zoom meetings, providing learning materials for students, doing PowerPoints with voice narration. All of this is meant to improve the quality of online teaching and learning.

To further improve the quality of teaching and learning, METU introduced a mentoring system where teachers visit the classes of their colleagues.

Activities

The METU platform integrates courses offered by Coursera, meaning that the Coursera courses become part the METU curriculum. For the METU teachers, the METU platform offers a series of videos/tutorials on practical issues around online learning. Lecturers can, as part of a group moderated by a mentor, learn about new approaches and didactical models in a series of meetings.

As part of its quality improvement activities, and assisted by the digital tools in place, the class visit system allows colleagues to give feedback on the teaching methods and didactical tools used by teachers. In particular and given METU's ambition to encourage student-centred learning and interactive forms of teaching, the classroom visits focus on the teacher's use of a variety of ways to encourage student engagement. The class observation exercise is meant to give positive feedback for lecturers – it is focused on improvement, not on accountability. In the (virtual) classroom visits, the observer makes use of a list of observation criteria. In total, there are about 40 criteria. However, not all of them have to be used – only the relevant ones. It is a mentoring system that allows the University (and its leadership) to keep an eye on what is going in in the classroom.

Another element in these quality assurance activities supported by the platform is the Teachers Clubs. These serve as community-building activities, encouraging teachers to share their experiences.

Resources invested

To gain access to the online courses offered by Coursera, METU signed a contract with Coursera for a three-year period. This three-year partnership provides access to more than 4,200 international courses from universities and organisations such as Yale University, University of Pennsylvania, Johns Hopkins University, University of Michigan, The Hong Kong University of Science and Technology, Imperial College London, IBM, AWS, and Google. The value of the Coursera contract is not disclosed, but the leadership of METU felt the investment would provide a return to the university, and felt that the offer improved the attractiveness of the university for its fee-paying students.

Given that METU is a private university, investments in online content and digital tools are assessed in a business-like way. The owners of the University expect to see a return on their investment and keep an eye on student numbers and student satisfaction scores. In the same

way, the leadership assesses resources spent on improving the research carried out by METU staff. If the research can help improve the students' learning, such investments will be assessed favourably.

Outcome/impact so far

The exchange taking place through METU's digital platforms has helped to motivate the teachers and encouraged them in implementing new didactical methods, using technology-enhanced teaching practices ideas. In the early days of the pandemic, METU colleagues prepared video tutorials, that were put on YouTube channels. Some of these tutorials were downloaded or watched by more than 10,000 teachers in Hungary.

During a time of huge educational transformation towards online teaching, the METU platform had an important role in terms of monitoring how teachers adapted to the changes. The class visit system and its criteria used in class observations were expanded and included topics such as digital preparation, data literacy, digital content creation, and also the incorporation by teachers of the various activities and apps that Zoom, and other platforms offer.

A large part of METU's online and on-site curriculum is in English – also given that many of METU's students are from abroad. This implies that the teachers' language skills are important. Its concern was the criticism expressed by students about the English language competences of teachers. Therefore, METU wished to identify the teachers who needed help and the kind of help that could be provided. Currently, METU feels that its English language classes have improved a lot in the last five years. Some external English teachers were involved in providing specific teaching-related language courses. Its teachers have become more proficient in English and were made aware of typical culturally sensitive or multiculturally sensitive wordings and expressions.

As part of other initiatives to improve the quality of its education, a series of workshops are offered regularly to teachers who wish to share experiences on teaching methods and the use of digital tools. The model used for this is that a group of about twelve teachers regularly meet for 2-3 months to participate in training activities and workshops. The teachers meet some four times for 40-minute sessions. METU mentors facilitate the exchange of working practices among the participants. This activity is a form of experiential learning offered in a team setting. It is to a large extent a self-directed activity. Teachers themselves suggest the professional development topics. For example, the advanced use of Zoom.

Hindrances

METU feels that to address today's big societal challenges, students will need to be prepared to solve multi-faceted problems. For this, students sometimes need to go beyond the disciplinary borders. Working across disciplines is a big challenge – for students as well as teaching (and research) staff – and it can run into a number of obstacles. In that sense, METU has a business faculty (also covering tourism and communication) and an Art faculty. One of its main educational policy challenges is to interlink the two domains by means of involving teachers and students from both sides to work together in mixed groups. To achieve this, use can be made of technology as a cross cutting issue. However, the two faculties have a different culture. While the Business Faculty is more willing to accept change, the Art faculty seems to prefer working on the basis of its proven methodologies (e.g., the master-apprentice system).

Another obstacle standing in the way of the educational transformation processes is the fact that licence fees and contracts have to be paid to companies for allowing METU to make full use of applications such as Mentimeter, Zoom, Mural, et cetera. The integration of these applications into ZOOM or TEAMS is not just a financial a challenge but also a challenge in terms of building competencies and staff capacity.

About half of METU's teachers are part time teachers, who are active in their own sector or business as practitioners or artists. Organising events to encourage these external teachers to consider implementing new teaching methods and digitally enhanced learning can prove difficult. Given their other jobs, the part-time teachers are more difficult to reach and finding a suitable time slot for events aimed at professional development and community building is a particular challenge. METU realised that sessions lasting one afternoon, or one full day are not appropriate – neither for its full-time staff and its part-time staff. Shorter sessions are advisable.

Overlooking hindrances in general, it is a given in all higher education institutions that lecturers have many other commitments and face a lack of time. However, despite that, there are always lecturers/ colleagues who will resist change anyway and do not wish to sacrifice some of their autonomy. In the case of METU, there were lecturers who were less enthusiastic about the class visit/observation system where colleagues observed their teaching methods. However, there are also lecturers who are more pioneering and who are passionate about new tools and opportunities for experimentation.

Facilitators

In METU, the Mentors who are active in the teaching clubs and the capacity building events receive some modest financial incentives for their work on improving the quality of teaching and learning.

However, to reward high quality teaching and the exploitation of the opportunities of the digital dimension there is no direct incentive in terms of salary or bonuses. METU is not considering performance management systems that have salary consequences. Intrinsic motivation is still key.

METU feels that teachers wish to belong to a community – in particular during times of a pandemic – and therefore teachers are willing to sign up for events, teachers' clubs. This also makes them join the professional learning networks.

To encourage multidisciplinary collaboration across its two faculties/domains, METU recently established an agency to provide creative services for external partners. It is a joint agency of its two faculties, and both faculties can offer products and services through the agency.

Conclusion

To innovate and improve the quality of teaching is important for METU – being a private university interested in student recruitment and ensuring its attractiveness to fee-paying students. METU realises that its students expect value for money and a teaching experience. This is all the more important because other universities in Hungary are offering zero fee places to students. The myBRAND training method is a unique selling point in that respect. Using digital tools and digital content to enable METU's students building their own portfolio of competences is an important element in METU's strategy.

In that sense, the METU leadership stresses the importance of the quality of its education and its teachers. It would like its teachers to constantly look at new opportunities and an online learning community based on digital platforms can assist in achieving this. METU feels that the exchange of practices and the communication taking place on the digital platforms has helped motivate its teachers implement new methods and ways of teaching.

Allowing online visits to a colleague's classroom can help, if organised in a smart and non-intrusive way. In this visit system, the handling of the observation criteria is important, as it should be aimed at giving constructive feedback ('polite advice') and not at building a surveillance system.

To reward high quality teaching and the exploitation of the opportunities of the digital dimension METU only implement some modest financial incentives to compensate those staff involved in the training and mentoring activities.

The platforms and the digital tools are seen as instruments for the professional development of teaching staff and are aimed at improving the quality of teaching and student learning. In all this, it is METU's intention to increase the opportunities to monitor the quality of teaching using the digital tools available. Learning analytics and student surveys are elements in the monitoring of the students' learning experience and METU is constantly on the lookout for opportunities in this area.

2.3 University of Agder

2.3.1 Institutional Characteristics

The University of Agder is a relatively young higher education institution in the West of Norway. It was originally founded as a university college in 1994, for which six colleges in the region were merged. Currently, the University of Agder enrolls around 14,200 students on its two campuses located in Grimstad and Kristiansand. The University has six faculties, of which the majority are in the social sciences and arts and humanities. All faculties provide study programmes for Bachelor, Master, and PhD-level. In addition, the University has a teacher education unit.

2.3.2 The Platform "Stalu" – Student-active learning at the University of Agder

Goal/Problem addressed

The Platform **Stalu** documents and shares outcomes and good practices that come from a development and innovation project dedicated to the enhance student-active learning in the teacher training at the University of Agder and also beyond, i.e., at the national level. The development and innovation project includes several sub-projects in which special forms of student-active learning are developed, and teachers are trained/informed to use these educational innovations. The project was stimulated by the challenge to increase student-active learning and the training of related competencies in pre-service teachers and teachers in schools in the environment of the University of Agder. However, project outcomes also target any teacher outside these groups, including teachers in Norwegian higher education institutions. The project is part of a national enhancement programme for student-active learning, funded by the Norwegian Ministry of Education.

Activities

The main activity related to the Stalu Website is to document and share the outcomes and good practices that have been developed in the sub-projects, thus, to disseminate. Therefore, the research team implemented the online platform Stalu as a website that can be accessed by anyone. The set-up of the website is simple. Besides news on the activities and outcomes of the wider projects, a blog provides more in-depth information on how student-active learning was implemented in the subproject belonging to the project. The team that is responsible for the website updates news at regular intervals. For the blog, researchers and teachers from the subprojects agreed to contribute based on their project outcomes. In addition, teachers can address other topics on student-active learning of their own choice, which they find useful to share. Both the news section as well as the blog section allow users to send comments. Visitors to the website can also contact the authors of blogs and the researchers that report on their project outcomes in the new section as contact details are provided. The 'governance' of the website, i.e., feeding the news, liaising with blog-authors continuously feeding the site, editing, layout, and quality checks of the contributions are in the hands of the researchers who are responsible for the website. The website is part of the domain of the University of Agder.

Resources invested

The project draws on matched funding that is provided by the Norwegian Ministry of Education and the University of Agder. With these funds, the time for the maintenance of the website and

regular updates are secured. In addition, besides manpower to maintain the content, there is a need for manpower to facilitate the technical side of the platform. This support is

Outcome/Impact so far

The website has been online since spring 2021 and has generated some interest among teachers and other researchers in the environment of the University of Agder and across Norway. To learn about the outreach of the platform, the project mostly checks the website traffic, i.e., the number of visitors to the website. In addition, the project team follows up contacts with interested researchers or teachers and supports them in implementing student-active learning. So far, the project team has not checked to what extent the dissemination has already prompted some teachers to make use of the practices and innovations that are developed in the overall project. The persons who are responsible for the platform also mentioned that the platform stimulated the establishment of a network among its users.

Hindrances

The implementation of the platform did not have to overcome major hindrances. When starting up the website, the project team mostly had to deal with technical and legal problems. To solve these problems, specialists from the Department of Communication at the University of Agder supported the project team. The project team points out that this kind of support is not only needed to get the website up and running but also as continuous assistance.

Facilitators

The project plan included a detailed plan for the dissemination of results. In addition, all sub-projects agreed on a schedule on when and what contributions have to be delivered to be published in the webpage. It was also reported that researchers and teachers participating in the project are motivated to write about their outcomes as they receive feedback and recognition for their work. The possibility of sharing the outcomes is seen as the most valuable feature of the platform.

Conclusion

The Stalu platform is an example of an online platform with micro-content. While the production of the content is mostly done by a defined group of contributors, the platform is also open to visitors as they can comment on the contributions, send feedback, or contact the teachers and researchers authoring these. However, the design of the platform is more oriented towards spreading the information and inspiring visitors with regard to teaching practice rather than stimulating lively exchange or facilitating (peer) learning processes. These processes might start due to the platform but mostly take place in other (real-life) settings. Platforms such as Stalu are a useful instrument when aiming to kick off or inspire teaching innovation processes. They are also useful as a repository to archive knowledge on practices and make it available to a large group of users. The impact of this platform type is difficult to capture as it is hard to follow up with users and collect information to what extent the information contributed to their learning experience or change of teaching practice.

3 Supporting mechanisms, outcomes and obstacles

3.1 Goals and problems addressed

One major goal that the institutions want to address with their platforms is to enhance the quality of teaching and learning. Stimulating learning and inspiration processes among teachers is seen as a major lever to achieve this goal. The platforms use different approaches to kick off these processes. These range from inspirational measures to self-directed learning formats and professional learning communities or mentoring systems. However, the institutional

experiences show that interactive formats such as professional learning communities are complex processes, difficult to implement and achieve outcomes.

3.2 Outcomes achieved

The design of the platform strongly determines the outcomes that can be achieved.

Platforms such as Stalu that are open to an unspecified audience and mostly oriented towards sharing and documenting information on a selected topic will foremost achieve inspiration for the teachers. Teachers will learn that different methods of student-active learning are available. They will also learn where to find information and which experts can be contacted. When it comes to the question of whether the platform and the provided content have contributed to a change in teaching practice, its impact has to be considered as low. Also, the impact of these platforms for establishing networks or learning communities among users has to be considered as low.

Platforms such as the METU platform, which incorporate content from other platforms, can diversify the learning content for students and widen the methods for teachers. However, to use external content in an efficient and goal-oriented way, accompanying measures such as information on how to use the content need to be in place. Also, support for developing competencies or adapting teaching practices should be provided. Facilitating mentoring systems and classroom visits can stimulate peer learning among teachers. Mentoring can also enhance and secure the quality of teaching and learning.

The platform Campus Connect of the FH Campus Wien provides an example where the platform focuses on information and supports different kinds of learning processes among teachers. Here, self-directed learning plays an important role, and the material and instruments provided address the needs of teachers (short information or videos addressing major questions of teachers). In addition, the platform works as a repository where teachers can find information and other materials related to their educational activities.

3.3 Resources invested

Essentially all platforms need qualified staff and funding to get up and running. However, the amount of the invested resources differs strongly. Open platforms for documenting and sharing information on teaching practices do not require complex technical support or high amounts of funding. However, there needs to be a governing body for the platform that checks the quality of the contributions and updates the platform regularly. Further, legal issues concerning the publication of materials need to be addressed, and competencies in these areas need to be developed.

Platforms that engage external content, such as the METU platform, might require more substantial financial investments. Also, the higher education institution needs to ensure that the teaching staff has competencies in selecting and using the content. Thus, resources for the training of teachers need to be available. Virtual mentoring systems, however, require that criteria for the classroom visits are carefully developed, and that consent for them is achieved among the teachers.

Platforms that are specifically geared to the needs of the teachers in one institution, as in the case of the FH Campus Wien, need substantial investments in staff and funding. Furthermore, institutions need to be aware that complex platforms require careful preparation. In particular, for platforms that bundle knowledge and aim to provide intuitive access to it, it has to be considered that real-life repositories cannot be transferred one-on-one to virtual settings. Also, when aiming to implement virtual professional learning communities, didactics for training teachers and engaging them in these communities need to be developed. Staff with competencies in training teachers can be very helpful.

Factors to increase acceptance and use of the platform

While it may be tempting to use the digital platforms to implement radical shifts in teaching and learning due to their technical possibilities, the cases show that implementing minor changes over time secures the support of teachers. Forcing teachers to drastically change their teaching practices can create frustration. Similar to enhancing teaching methods for students, special didactics that create tempting opportunities for teachers are helpful in this respect.

Low thresholds to accessing the content of the platform can attract teachers to engage with it. Also, clear structures that facilitate quickly finding topics of interest and short information are supportive factors.

Platforms that link to the voluntary engagement of teachers are more likely to be accepted as a source for professional development. Compared to obligatory training courses in higher education didactics, the platforms provide teachers with opportunities to engage in self-directed learning, i.e., to select the content they are interested in that match their needs and that they can adapt to their purposes. Also, the fact that the platforms are accessible at any time supports the use of the resources. Combining different sorts of knowledge and information in one place can also attract teachers to look at the information on new teaching practices while they are actually looking for other information.

Platforms also provide teachers with the opportunity to report on their classroom experiences when using new teaching methods in blogs or other formats. While this brings practical information to other teachers, their reactions and questions can be understood as recognition from peers.

For complex platforms, leadership supporting and giving high priority to their implementation is essential.

3.4 Hindrances to implementing platforms successfully

The cases also revealed a few major hindrances that can stand in the way of a successful implementation of the platform. A successful implementation, however, can include different outcomes depending on the goals the institution was aiming at and the type of platform that has been established. For example, for platforms that are aimed at spreading information – such as the Stalu platform – success can relate to the number and diversity of the platform's visitors and their requests to the authors contributing to the platform. Wide acceptance and frequent use of the platform can be indicators of a successful implementation of institutional platforms that aim to support teachers and encourage them to enhance their teaching methods.

Hindrances to the successful implementation of the platform can relate to the design of the platform and the availability of resources to set up and maintain the platform. Certainly, funds must be available for the development, implementation, and maintenance of the platform. The availability of qualified staff is essential for its success. Besides technical or IT experts, also educational specialists and legal expertise is needed. Frequently, higher education institutions struggle to find these experts. In addition, collaboration among these experts is essential for shaping the platforms.

Legal issues that are linked to publishing content on the platforms can also form a hindrance to the platform. The formulation of clear guidelines for the publication of original content and other resources can address these issues.

Adapting the shape of the platform to the needs of later users is also a challenge that needs to be addressed. Users' needs can be diverse in relation to their disciplinary background, skill levels in teaching and also interests in improving teaching practices. These differences need to be addressed by the platform so that the provided content and support match the demands

of a diverse teacher community. In this context, it is also important to point out that platforms with a complex structure or that are not intuitively comprehensible are less frequently used (on a regular basis) by the teachers.

Finally, against the backdrop of the goals that the platform would like to achieve, the design should be adapted to the learning of teachers. While the development of innovative teaching practices for students often starts from the idea of better considering their learning, these issues are hardly addressed with regard to teachers. However, when considering the learning needs of teachers also other aspects such as time resources, their interest in collaborative activities and in development of their teaching skills further need to be addressed.

4 Lessons learned

The above cases show that digital platforms for teachers can vary with regard to the support they provide to teachers. Their offer can range from informing and inspiring teachers about new teaching practices to stimulating their collaboration and finally, also providing space for peer learning and collegial exchange. The platforms can also vary with regard to their openness to audiences, that is, to what extent they address teachers and other individuals across several higher education institutions or only teachers at one institution. In any case, the design of the platforms should be carefully shaped with these factors in mind. The guidelines below aim to point to the most important issues that need to be considered when planning such a teacher support platform.

1. Goals and purpose of the platform need to be clearly defined.

A clear definition of goals and purpose helps to create a targeted platform. The definition also requires learning about the demands and needs of teachers and what audiences should work with the platform. The development of platforms that aim to stimulate teachers to improve their educational practices through (peer-) learning benefits from bottom-up processes in which teachers, educational and IT specialists collaborate.

2. Start small and expand the functionality of the platform in a stepwise and customer-oriented approach.

Digital platforms offer a wide range of technical possibilities to support teachers' online collaboration. This diversity sometimes leads to implementing complex platforms that overwhelm users or whose functions are not needed to the full extent. A step-by-step implementation, where the variety of functions is gradually increased, helps to strengthen the understanding and acceptance of the platform among teachers.

3. Leadership support is essential for the development and implementation of the platform.

The cases have shown that strong leadership support facilitates the development and acceptance of institutional teacher platforms. This support should go beyond a symbolic contribution and - as far as possible - represent active participation in the projects. It is important that the importance of the project is made clear.

4. Developing a (complex) teacher platform requires high levels of expertise and collaboration across disciplines and other fields of expertise.

The complexity of a teacher platform strongly determines the level of expertise and collaboration across disciplines and other fields of expertise, such as IT and legal skills.