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E-learning in Belgium: a case study of Mons University

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ABSTRACT
The implementation of e-learning in higher education in some European countries is a real challenge. Academics still face resistance from university authorities to launching e-learning centres because of the costs, but they also do not see the point of investing in an inferior type of didactics (they believe that it is impossible to teach effectively online, only possibly in crisis situations such as a pandemic). It turns out that e-learning in the form of bottom-up initiatives was already being organised many years ago in Belgium, for example, and the results have led university authorities to take an interest in investing in e-learning. The aim of the article is to present the innovations implemented at the Belgian university, with particular regard to open e-learning courses. The research is based on participant observation, interviews with employees from the team introducing e-learning at the Belgian university, as well as on source materials from the visited higher education institution. The publication demonstrates that it is possible to implement professional e-learning from scratch, even without substantial support from the university authorities. The research shows that it is possible to implement effective online courses, targeting lecturers, students and external audiences, thanks to innovators who want to implement modern educational methods, while improving their own skills all the time.

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INTRODUCTION

In this article I want to present a case study of the successful implementation of e-learning in a university, as part of a bottom-up initiative. I will show that the introduction of e-learning does not have to mean top-down decisions on the part of the university authorities, but changes can be introduced by the forces of innovators. The research problem that became the basis of the study concerns the popularization of e-learning on an increasing scale through participation in international projects and the introduction of attractive courses for both students and all those interested in deepening their knowledge in MOOC courses. Can e-learning be the best promotion of universities?

There is still little research in this area (despite the immense popularity of e-learning during the pandemic period). Research on e-learning in higher education, especially from the perspective of university promotion and obtaining international grants, is rare. However, the recent literature is supplemented by publications that address the attractiveness of online courses and the necessity of introducing open MOOC courses at universities.

To date, however, no one has described the practical aspects of the work of research didacticians working at a model center for popularizing e-learning, such as the University of Mons. Thanks to visits to this university, I have had the opportunity to learn about the work of didacticians from the inside, observe classes, conduct in-depth interviews with representatives of the research team specializing in e-learning, and describe

innovations implemented by lecturers. Thus, the research questions are whether it is possible to introduce and popularize e-learning from the bottom up, without involving (at least in the initial stages) the university authorities, and whether courses taught at the university and outside it can be a kind of business card of the university and best promote it? The purpose of the article is to present the innovations implemented at the University of Mons, with a particular focus on courses that promote the university (open courses). In addition, through interviews with the research team, I want to present the process of e-learning development in the pre- and post-pandemic period in a thriving academic center promoting e-learning. The aim of the article is to present the innovations implemented at the Belgian university, with particular regard to open e-learning courses. The publication demonstrates that it is possible to implement professional e-learning from scratch, even without substantial support from the university authorities.

To attract the attention of online course participants, various forms of narration are used, elements of fun are used, game-based learning is introduced. It is important to understand the preferences of learners during the online course, studying the pace of completion of each course module, ways of using data, channels of communication between the teacher and students and the students themselves. It is possible to track the involvement of participants in online education in relation to the results and grades obtained, which gives the opportunity to adjust further portions of knowledge in terms of quantity and difficulty. For open courses in particular, the basis is the acquisition of specific professional qualifications, so a lot of practice should be included in this type of training (Breslow et.al., 2013 ; Chaw et.al., 2019). It is important to establish cooperation with partners outside of academia and a project-problem approach to online learning. E-learning is supposed to ensure student autonomy and make courses practical to encourage systematic learning and greater independence in obtaining knowledge. Online courses are to be as attractive as possible, including in terms of graphics, the applications and videos used are to encourage continuous improvement of knowledge and skills. Knowledge acquired during studies very often becomes outdated already at the end of the education cycle. Therefore, mini-training, open courses offer the chance to supplement and update knowledge at any time and place and, most importantly, usually for a fairly nominal fee. It should be emphasised that higher education is supposed to provide knowledge and skills, but also to develop meta-skills, e.g. problem-solving skills (Deng et.al., 2020; Douglas et.al. 2020).

It is also important to develop appropriate attitudes related to entrepreneurship or lifelong learning. It seems that e-learning and open courses are a very good complement to traditional studies. Such courses, if only because they are mostly not taught synchronously and do not involve group work, rarely contribute to the development of social competences (although this is not impossible in more interactive courses). In open courses in the social sciences, it is important to achieve learning outcomes, the knowledge and skills acquired during such training should be recognised by universities, and students, together with their tutors, will be able to arrange their learning path in an individual way, tailored to the interests of individual learners. It combines an intellectually formative experience, responsibility and autonomy in the choice of subjects, as well as individual interests and social competences (Eynon et.al., 2021; Lee et. al., 2016; Lowenthal et. al., 2015).

Undoubtedly, e-learning courses are very attractive for students, but also for people who want to improve their skills outside the patterns of traditional teaching. Such training courses are often conducted using modern teaching applications and can be part of the marketing of the university, showing those university courses that are conducted in the most innovative way. Such training should be addressed not only to students and adults interested in this type of qualification improvement, but also to foreigners and representatives of external companies - corporations. These courses, which are taught with a lecturer, can also be part of, for example, MBA programmes, giving learners greater flexibility in accessing knowledge. Of course, this type of course requires a lot of effort on the part of the lecturers (to develop the first version of the course), an appreciation of the innovators on the part of the university and technical assistance from the

university. It is necessary to invest quite a lot of resources for the production of MOOCs, a corresponding amount of work and time on the part of the instructors, but also of the technical - support staff (Hew et. al., 2018 ; Wang et. al. 2005 ; Wang et. al., 2015).

In addition, such training contributes to building and strengthening the university's brand, as well as improving the economic situation thanks to the decreasing costs of running successive editions of the courses and charging appropriate final fees. There is also an improvement in the quality of teaching, both for students who are just completing their knowledge while studying, and for outsiders who want to efficiently increase their qualifications, confirming them with a diploma that is recognised by employers. Thanks to e-learning open courses, teaching innovations are put into practice and research is being carried out into the effectiveness of learning and teaching through open online courses . MOOC courses are increasingly popular, although their creation involves increased effort on the part of lecturers, the need to update content, and one cannot be sure that students will conscientiously familiarize themselves with the course content (Brzostek-Pawlowska, 2020). In addition, issues related to the remuneration of lecturers are problematic (innovators at universities often start working on MOOC courses for free, treating them as a new professional experience), as well as intellectual property (Milligan et. al., 2013 ; Zhang et. al., 2020).

METHODS

In general, the research is based on participant observation, interviews with employees from the team introducing e-learning at the Belgian university, as well as on source materials from the visited higher education institution. The research sample was four NAWA project participants from the Belgian side, along with a professor - a leader in implementing changes in e-learning in Mons. The four participants were interviewed in-depth, while the information obtained was supplemented by the professor, who has been the initiator of e-learning changes in Mons since the beginning, i.e. since the implementation of international projects and e-learning for students in Africa as well. I conducted the interviews while the four respondents were in Lublin (Poland) in June 2022 and in Mons (interview with the professor) in September 2022. The in-depth interview was conducted according to a specific scheme, which was modified according to the information obtained from the female respondents. The statements were conducted in English and recorded by the author. Identical was the follow-up interview with a professor in Mons. The research sample was selected in accordance with the ongoing project. It included active participants of a bilateral project, having a comparative scale with e-learning in Poland.

RESULTS AND DISCUSSION

The beginnings of e-learning at the University of Mons

Since 2000, all universities and higher education institutions in Belgium have had their own e-learning platforms, implemented applications and used ICT in practical teaching. Another motivation for development was the fact that, due to a great number of higher education institutions in Belgium, they became combined into a kind of consortia. It provided a stimulus to further actions for the modernization of teaching formulas and promotion of e-learning on a larger scale. Moreover, educational projects supported by the European Union, in which Belgium was one of the most active parties, also contributed to the dissemination of distance learning.

In 2022 (two visits to Mons University – in June and September) research was carried out on the implementation of e-learning, as exemplified by the pedagogy major at Mons University. There is a special centre, established at the Faculty of Pedagogy and Psychology at Mons, which is responsible for design of e-learning courses and for implementation of innovations among students and lecturers. Furthermore, the

centre deals with international cooperation, training courses and seminars conducted e.g. for participants of CONECTE project (implemented in cooperation with the Lebanese universities). The extensive experience of the university, which participated in the grant, in the implementation of e-learning in social sciences prompted me to get more acquainted with the functioning of the centre, the innovations introduced and verification of effectiveness of remote teaching organized at the highest level currently attainable. The e-learning system is implemented at Mons on a regular basis and with suitable technological facilities. The first e-learning platform at the university was created as early as in 1999, solely by its own IT experts. Esprit platform had the basic functionalities known from Moodle, but it was not based on any licences. However, attempts at the introduction of remote application elements at the university had been made even earlier, and a wider platform was developed on that basis. The attempts were connected with the implementation of international projects. The courses uploaded to Esprit platform were divided into modules and contained basic literature necessary for studying particular issues, as well as assignments with place for lecturers' comments. It was also possible to contact a lecturer via the platform, to delete an assignment already sent and replace it with a correct version. Esprit platform was one of the earliest e-learning applications developed by a university on its own (Pokrzycka, 2023).

What is important, the platform could be used intuitively, all functionalities were clear and technical problems were rare enough to keep Esprit still available at the university. It is used e.g. for downloading archive materials or simply for showing pedagogy students how e-learning platforms used to look like.

International projects and grants, as well as online Master's studies addressed at students from Africa, provided a stimulus for the development of the platform. The initial cooperation with other universities in Europe turned into independently conducted e-learning classes and research on the effectiveness of remote education.

MOOC Courses

Currently, at Mons University there is a classic Moodle-based platform available, which contains also MOOC course modules. The courses comprise not only presentations, literature and assignments, but also interviews with experts both from the university and outside. Teachers record their lectures in YouTube and link them to the modules on the platform.

Open courses need to have a relevant and attractive graphic design, as well as content that would encourage participation. Open modules published on the university platform are very attractive not only visually, but also in terms of content. Each module of open courses contains several instructional videos for educators and interviews with experts. Subsequent modules end with quizzes. In order to solve them, a participant needs to be familiar with all the materials contained in the course (including interviews with experts). The formula of interviews with well-known people working in the education sector and with distinguished experts in a given field makes courses more attractive and motivating for work.

Two MOOC-type courses have been created as part of educational activity and for the purpose of developing expertise in the area of distance learning. The first course deals with educational innovations online and has already its sixth edition. The other course, run in cooperation with Mohammed Premier University of Oujda in Morocco, concerns the evaluation of digital environments for learning. In addition, as part of the special Pact for Excellence in Teaching, research is conducted with a view to exploring possible uses of the digital transformation in the compulsory education. Moreover, in cooperation with the Wallonia-Brussels Federation, a pilot experiment related to remote reading and writing courses for primary schools is carried out. Furthermore, some courses are open for all and available in YouTube www.youtube.com/channel/UCm_GVh-c8psiriJ4_IX_O7w Having completed them, full-time students are given ECTS credits, and people from outside are awarded course completion certificates.

Classroom observations

Based on my observation during classes for PhD students and lecturers taking part in CONECTE international project in e-learning it is very important to motivate participants on a regular basis and to mobilize them especially with the quality of education. If it is at a high level and varied, there will also be steady motivation for learning throughout the course. At Mons the focus is on various teaching strategies, adjusted to the character of each course and education level. A well-tried formula in the higher education is a seminar lecture which combines classical teaching with discussion and involvement of students in the educational process. They are not passive, they turn their webcams on during remote classes and use applications for discussion in the real time. Other important elements of remote courses are: relevant and attractive graphic design, giving students considerable autonomy in learning, interactivity of courses and sticking to the action plan (syllabus) specified before the course but allowing for flexibility (corrections in the action plan, suggested by students themselves). Syllabuses must be interactive so that all students should be able to introduce their proposals for change during the course. Students ought to be accompanied by a tutor who is authorized to modify syllabuses. Courses must include sources of information and possible extension of knowledge, contact details of the lecturer, examples of task solving and case studies. The focus is on appropriate pedagogical and technological approach, as well as on interactions between members of the group and the lecturer, and between students themselves. An application www.kotobee.com is used very often at Mons. It gives an opportunity to publish e-books in which students from MOOC courses share their opinions on the effectiveness of classes or development prospects in the near future, based on knowledge acquired during meetings at the university or online. Open educational resources and motivational badges for students are frequently used during classes (badges are usually designed by lecturers themselves in relevant applications, and their character and message are tailored to specific situations and students). All activities undertaken during courses are suited to students' abilities. However, learners' responsibility for their own actions and selection of an appropriate pace of learning are emphasized (e.g. students can return to the materials already taught and revise their knowledge anytime). In addition, in open courses, but also in other important courses, fundamental to a given major of study, numbered certificates are awarded for completion of a series of modules. Badges, which are granted along with these certificates, are stored in free or professional (symbolically paid) applications, such as Open Badge Passport or Open Badge Factory. Badges can be shared and regarded as a kind of a CV for prospective employers, thus contributing to successful job seeking after studies.

Interviews with a research group from Mons

During my visits to Mons and visits of Belgian scientists to Poland, I conducted in-depth interviews with a group of researchers from the Faculty of Pedagogy (research team from Mons University: Sarah Descamps, Pauline Marchal, Anne-Cécile Housiau and Sabrin Housni). The first question concerned the popularity of e-learning at Mons University before the coronavirus pandemic. All the interviewees admitted that even though the effectiveness of online courses had been examined for over 25 years at this Belgian university and e-learning had been used for a long time in their scientific unit, the popularity of remote teaching was rather low on the university scale. The faculty represented by the interviewees promotes online education, but it is often opposed especially by senior lecturers. It is believed that remote teaching requires more work and constant learning, while lecturers do not have time for these, according to popular opinions. They also prefer to meet students personally and consider this form of contact to be the best. However, the situation changed significantly during the pandemic and a number of lecturers do not want to return to intramural classes in the post-pandemic period, having realized that remote work is more effective, enables more individual contact with a student, and it is enough to start working in this form to become virtually addicted. The university has organized numerous training courses for lecturers on modern teaching methods,

and at least one form of additional training per semester is mandatory. However, it was the pandemic that slightly changed the approach of scientists also from other fields than pedagogy how to use remote teaching effectively in their work. It turned out that it was possible to teach online well and not to devote considerably more time to students than in the intramural form.

Another question was how students were working in the e-learning system, whether they handed in their assignments regularly and on time, and whether they participated in online classes with their webcams on. The research team answered univocally that before the pandemic students worked mostly in the blended learning system and rather systematically. However, these classes were conducted only at the final years of study. On the other hand, younger groups of students were first given assignments entailing their participation in MOOC courses, but they presented their conclusions from these training courses at intramural classes. During the pandemic, students at all years of study worked online on a regular basis, although deadlines had to be introduced at the beginning to make students accustomed to working online. It was mandatory to turn webcams on, except for lectures with a lot of participants, but classes have usually been conducted in smaller groups. In the post-pandemic period the situation is slowly returning to the pre-pandemic state; however, more and more lecturers, also from other fields than pedagogy, want to work in the distance learning or blended learning systems. It has turned out that remote teaching does not mean round-the-clock availability of lecturers, and e-learning or blended learning (currently preferred by the university) facilitates the teaching work.

Next, I asked about the platforms used by Mons University lecturers and, in general, by people studying in the e-learning system in Belgium. The answer was unequivocal: all platforms used in Mons and in other Belgian cities are based on Moodle, which enables cooperation on designing courses or migration of materials (when a lecturer works also at other universities or schools).

Another question concerned the directions of development of e-learning in Mons and in Belgium. The team of researchers unanimously claimed that there was no turning back from online studying. Blended learning is the most effective form of study and, as such, it will even be obligatory in the majority of higher education institutions in that country in the near future. Currently, about 60% of all classes are conducted already in the blended learning system. Higher education in Mons and is Belgium is virtually impossible without e-learning, development associated with it, and further research conducted with a view to increasing the effectiveness of teaching and examining the current results of online education.

I also inquired whether any trends to teach courses entirely online were noticeable and whether it was possible to conduct practical classes remotely (apart from the pandemic period). According to the research team, this trend is visible. In the post-pandemic period, around 20% of classes are conducted entirely online (especially lectures, but also practical classes which involve teamwork and assignments with necessary external or online queries). During the pandemic, lecturers realized that there were apps which enabled teamwork and implementation of educational projects. Even practical classes, dealing with issues related to critical thinking or design thinking techniques, are taught online. Lecturers from other faculties only ask for help e.g. with recording professional instruction videos or, in general, audiovisual materials uploaded to the platform. The research team offer their assistance in developing any courses at Mons University, especially with respect to recording professional videos or interviews with educational content. The Faculty of Pedagogy has equipment for recording videos, but materials for MOOC courses are often published in YouTube. Owing to the fact that they are widely available, the quality of teaching at the university is promoted (Pokrzycka, 2023).

Discussion of the research

To date, there has not been more interest in the problems of implementing e-learning in universities. Earlier studies were based on the concrete effects of e-learning implementation at universities, the process of arriving at e-learning implementation and the interest of university authorities in didactic innovations or e-

learning centers were not directly considered. The author is a researcher and lecturer in Poland and at her home university she has been facing the problems of implementing e-learning, establishing an e-learning center, hence the idea of implementing a project with a very experienced Belgian side came up.

In Western Europe, investment in e-learning has been the norm for years, especially when it coincides with external funding. The effects of the grants are so beneficial that the solutions developed stay at universities permanently. In Central and Eastern Europe, on the other hand, e-learning was an innovation by 2020. E-learning support centres for lecturers and students as well as researchers were rare. After the pandemic, when sychronic classes were no longer a necessity, there was a move away from online classes, sometimes even considering them an inferior way of learning. I have conducted research in several centres in Poland, where I come from, and I have to say that there is still resistance to online teaching, although there are also a few centres that have started to invest in e-learning, thanks to the initiatives of university authorities (Pokrzycka, 2023). Slowly, the benefits of MOOC courses are being seen, as well as lectures, or workshops, conducted remotely, which (thanks to a number of training courses aimed at academic teachers, also self-financed by lecturers) are being conducted at an increasingly higher level. However, there is still a lack of a structured system for the implementation of e-learning especially in Central and Eastern European countries, and examples from Western Europe can provide a positive impetus for change (Tømte et. al.,2017).

Based on an interview with Bruno De Lièvre, head of the Department of Pedagogy and Digital Education Engineering at Mons University, it appears that the e-learning centre at Mons University was not established by an official order of the rector. It resulted from hard work of a group of people who wished to introduce changes at the university. Several researchers wanted to implement innovations in distance learning and, in addition, were invited to participate in international grants which entailed creation of first e-learning platforms. It turned out then that e-learning became profitable for the university, because owing to remote education more and more foreigners studied at Mons (especially from Africa, as part of implemented projects). Master's studies conducted entirely online, without a need to come to Belgium, provided one of the most important motivations for the development of remote teaching at the university. Another stimulus was the implementation of innovations among university teachers, first step by step e.g. by publishing manuals how to use educational apps, and at the same time improvement in quality of education, along with promotion of the university. Remote teaching should be strongly promoted, but it is not an easy task. Higher education institutions still consider online courses to be just an addition and remote teaching is not duly appreciated. University authorities usually regard e-learning as a passing fashion that will go out e.g. with the implementation of subsequent projects. At the beginning, access to the university platform was blocked for people from outside, so initially own MOOCs could be published e.g. in YouTube to promote the remote teaching idea and to show that such courses are popular worldwide. The research team from Mons introduced e-learning, which was not project-based, gradually at their university, pointed to advantages, suggested how to make classes more attractive, and ran a number of training courses for university authorities and employees. As a result, the centre was established and it supports the university in remote education. The task is not easy because the majority of the team are young people who, having finished their PhD dissertations, leave for the professions where e-learning is implemented in practice, e.g. in corporations. Nevertheless, there are several permanent members of the centre within the framework of the Department of Pedagogy and Digital Education Engineering. They carry out research on the effectiveness of e-learning in practice and take an active part in numerous international projects. According to Belgian researchers, the pandemic has contributed to a significant increase in knowledge of innovative online learning methods. Researchers acknowledge that they have become more interested in the problem of effective distance learning, developed their skills in the use of online tools and within e-learning platforms. The pandemic helped to strengthen technical skills, Teams, Moodle platforms started to be used. The obligatory use of

online tools led e-learning researchers themselves to enrol in MOOC courses, participate in many webinars, online research meetings. It has also turned out that open online courses are very profitable for the university itself and that projects with companies, business are the future of the university.

CONCLUSION

Summing up the Belgian higher education institutions realize how important remote education is these days. Owing to a number of popularizing initiatives and, most importantly, grants-related activities on the international forum, development of e-learning is possible in cooperation with business and institutions dealing with e.g. promotion of education in Africa. Mons University is the leader of cooperation with African states and, as early as in 1999, it joined a consortium, owing to which in Africa it has many graduates of Master's studies who have never been in Europe. The willingness to study and improve their qualifications is very noticeable among lecturers, students and participants of projects financed e.g. from EU funds. The pandemic only boosted further interest in synchronous teaching among lecturers and students, also from other majors than pedagogy. However, in the post-pandemic period, many classes are still held in Teams or on the university e-learning platform due to the fact that lecturers and students consider this manner of learning to be very effective and offering a chance for further development. It should be emphasized that courses open for all (MOOC) at Mons University were initially available only on YouTube but, in the course of time, when university authorities became convinced that it was a successful method of promotion, some courses were significantly developed and they turned into a supplement to education also for students of the home university. Research conducted in Mons shows that it is possible to introduce and popularize e-learning from the bottom up, without involving the university authorities (at least in the initial stages), and also online courses conducted within and outside the university can be a kind of showcase for the university and best promote it. In the process of learning through the network, we are dealing with a certain culture of study, a specific one that gives more independence to learners. However, when planning such courses, it is necessary to keep in mind the development of a suitable open e-learning platform, the content of the course (encouraging outstanding, distinguished lecturers), the development of a system for providing students with feedback and substantive and organizational support, as well as the granting of rewards in the form of, for example, badges and certificates (Pokrzycka, 2023).

Online learning and MOOC courses are most developed in the United States. In the case of European Union countries, very often e-learning centers and MOOC courses are subsidized by grants and the European Commission. The effects of the implementation of innovations, online teaching are usually very good, because they are also associated with increasing the qualifications of lecturers, remote teaching is then very effective, in addition, it is associated with lower educational costs (Moreira, 2016; Jansen et. al., 2015 ; Simpson, 2023). However, it seems that the countries of Central and Eastern Europe do not mostly implement e-learning on a larger scale (except during the pandemic period), because some lecturers do not have the desire to increase their qualifications, they believe that they do not have time for further training, which do not bring academic results. In addition, university authorities do not want to finance e-learning centers themselves, not considering it necessary. The author has even encountered cases in Poland where e-learning centers have been closed down due to the lack of interest of university authorities in developing this type of education (remote learning is also in some cases, in the social sciences, even unwelcome). These trends are even surprising, since e-learning means lowering the cost of education for students and lecturers, it also relieves the burden on universities, and encourages foreign students or those from other regions of the country to study as well (Silva, et.al., 2013). Thus, it is necessary to make university authorities aware that the development of e-learning is a necessity, as well as to support researchers who are engaged in remote learning as a field of research, introduce bottom-up methods of work, design MOOC courses themselves. This should be appreciated and the university's development process should be managed accordingly (Balter,

2017). The changes and challenges facing lecturers and university managers are constant, all the time it is necessary to modify the way universities and teaching processes are managed (including in the era of artificial intelligence). The article was written as part of a completed grant to compare remote teaching at a university in Mons and at Maria Curie Sklodowska University in Lublin (Poland). The results of the grant show that the Belgians, thanks to grassroots initiatives and proper promotion of their online activities adequately reached the university authorities many years ago and e-learning can develop unhindered. In the case of universities in Poland, we can see a lack of interest in e-learning investments (beyond the standard Moodle platform), and there are no MOOC courses available, although within the framework of the grants the author decided to create open courses and promote them properly, taking the example of the Belgian experience.

Research conducted in Belgium can be used by universities that are struggling to implement e-learning on a wider scale. This is especially true in Central and Eastern Europe, where e-learning developed in the early 1990s, under the influence of EU funds earmarked for this purpose, and after the projects - online learning initiatives were also terminated, e-learning centres were closed down, universities did not see the point in funding such a form of education, which did not seem effective. Based on the conducted, obviously fragmentary research, it can be concluded that e-learning is profitable, it requires a lot of effort on the part of the lecturers, applying for grants, implementing MOOC courses on their own, but by properly disseminating the results of the implemented activities, it is possible to convince the university authorities and implement professional e-learning centres, as well as systematic retraining courses for lecturers, who are sometimes in opposition to innovation, change, modern technologies.

The limitations of the study were, of course, the research sample, only one center related to the dissemination and implementation of e-learning in Belgium was examined. However, the interviews conducted, observations of classes (including online) showed that it is possible to implement e-learning from scratch thanks to the initiative of a few people involved in an initially informal project. This is an example for all those who would like to develop remote learning and online teaching innovations, despite the initial lack of support from university authorities. Innovations and open courses can be implemented thanks to people interested in the subject, wanting changes in education and writing international projects on implementing e-learning and innovations on a wider scale (including globally). The limitations of the study were, of course, the research sample, only one center related to the dissemination and implementation of e-learning in Belgium was examined. However, the interviews conducted, observations of classes (including online) showed that it is possible to implement e-learning from scratch thanks to the initiative of a few people involved in an initially informal project. This is an example for all those who would like to develop remote learning and online teaching innovations, despite the initial lack of support from university authorities. Innovations and open courses can be implemented thanks to people interested in the subject, wanting changes in education and writing international projects on implementing e-learning and innovations on a wider scale (including globally). Further research should include many universities in different parts of the world, not just Belgium and Europe. Research projects focused on disseminating good practices in the implementation of e-learning, ICT and open courses are needed. Smaller research centers, their situation before and after the pandemic should be studied, and good practices in implementing innovative teaching methods should be described.

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