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ENLIVEN
ENHANCED LEARNING AND TEACHING IN INTERNATIONAL VIRTUAL ENVIRONMENTS

COVID-19 AND THE BEST TEACHING PRACTICES

summary of interviews by Egle Hollman, Tallinn University

Universities all over the world have had to implement COVID-19 measures straight after the outbreaks intensified in their area. Instructions on how to behave in the situation came from the relevant authorities – ministries. All instructions from the authorities were passed on to the student and staff bodies, and the relevant documents were added to the universities' websites.

Teaching was transferred to distance and individual learning. In order to analyze the changes and reorganizations that have taken place in the universities of different countries due to the COVID-19 situation, we were interviewing all countries who work in the ENLIVEN project (University of Pisa, Tallinn University, University of Salzburg, NOVA University Lisbon, University of Hamburg, University of Novi Sad) and used semi-open interviews in which the partners answered the same questions either in a zoom video call or in writing.

Questions were divided into two parts:
1) questions regarding re-organisation of education during the pandemic at institutional level;
2) questions regarding learning and teaching during a pandemic.

We focused on the growth of the teacher's workload, new technical solutions and methods involving distance learning, assessment systems, the change in the role of the teacher and the support that both the university and society offer to the participants in the educational activities to get an overview of the situation in European universities and how both lecturers and students have adapted to the new situation and identify the main shortcomings in these areas.

The beginning of COVID-19 situation

In the initial stages of uncertainty and panic, all universities opted for distance study or even gave some weeks off to see how the situation would develop. After several lockdowns a new approach was implemented - universities started to encourage students to get vaccinated in order to resume back to face-to-face teaching. Although, there were recommendations saying it would be wise for lectures with one hundred or more participants to stay online. To continue with face-to-face studies, another approach saw the dividing of students into small groups and organizing further studies in these smaller groups. Teaching staff had the right to ask unmasked students to present the digital COVID-19 certificate. Most of the teaching staff went over to hybrid studies in one way or another at the same time leaving the staff the fallback option of not having to ensure online learning opportunities for unvaccinated students absent from classes due to illness or safe-isolation rules. Until reaching the target of having 90% of the university members vaccinated, everyone must wear a mask in the public rooms of study buildings (corridors, lobbies, etc.) and at crowded gatherings.

Digital working platforms, such as Zoom, meet and google classroom were mainly used. Teachers were forced to reorganize their usual practices to achieve their teaching goals.

When and how did your university react to emergency situation with official restrictions (e.g. complete or partial lockdown, switching to independent or distance learning format, mask requirements)? When and how were these measures stopped/eased?

University of Pisa reacted on March 6, 2020, switching all courses to distance learning in a couple of days, and stayed completely in distance learning mode only up to the end of the first semester 2020/2021. They allowed some courses to go back to in presence learning in the second semester 2020/2021 (around March 2021). In the first semester 2021/2022 all courses are offered in person, but even now some limitations apply: compulsory masks, limitations to the number of students in a room, access only to people vaccinated or with a recent negative COVID-19 test, etc.

In University of Salzburg the summer term starting on March 1st was switched to distance learning from March 10th 2020 until the end of semester (June, 30th).

The only classes resuming contact study in June (with prior approval by a COVID-19 task force within the Rectorate) were the ones where physical participation is necessary (sports, laboratory work, etc.). Some of the courses were postponed to the summer holidays. For the winter term 2020/21 limited in person teaching (less than 50% seat capacity in use), hybrid mode and online mode for big lectures was planned and started. However, with a new lockdown, teaching was again nearly completely switched to distance mode, with some exceptions (laboratories etc.). In the 2021 summer term these rules were maintained. Winterterm 2021/22 started on October 1st again with limited in person teaching (50% seat capacity, hybrid mode, online for big lectures), but on November 15thlearning was again switched to distance due to the fourth pandemic wave and lockdown. For January 7th 2022 a return to limited in person learning is planned.

On March 16, 2020, due to complete lockdown in University of Novi Sad switched to distance learning. University leadership developed a strategy consisting of the action plan with the following steps:

1. Communication to Faculty Deans.
2. Creation of digital identity for all teachers and students at the university.
3. Communication to all teachers at each Faculty by its dean.
4. Registration of all students and teachers at the university LMS and Communication platform MS Teams.
5. Development of online tutorials for LMS and MS Teams.
6. Development of educational resources by teachers.
7. Delivery of lectures through MS Teams and LMS.

From the academic year 2020/21, University of Novi Sad is applying distance learning with conducting exams at the university. Teachers and students are required to wear a mask. Lecturers were instructed to switch to online teaching and given instructions on how to use the moodle platform. In reality, lecturers lacked proven and tested platforms for online teaching. As the university had tested Microsoft 365 with Microsoft teams, they had the possibility to make thousands of accounts there. To help with the new platform they put up an online service where 3 people worked and helped others with technical issues. The workload during that time was immense but it paid off. And they are online, up to this day, as they are allowed to teach only small groups if they sit 2m apart.

The universities mentioned before are still partly or fully online (depending on a

certain country's COVID-19 situation). If there are more than 3-4 infectious students in contact study in one class they go to a combined learning model or fully online. Combined model means that half of students are in the classroom, the other half is joining through platforms but in reality they struggle - both students and teachers. There were several issues: not suitable equipment to record lectures and cameras and laptops not having high enough resolutions. There are also problems with microphones. If the teacher is 2 meters away from the laptop then recording the lecture, the sound is bad. Many lecturers use mobile phones and laptops together. Technically proficient solve it somehow but mostly the lecturers are lacking technical support. There are also problems with families who have more than 1 kid and not fast enough internet, many problems with devices and actual physical places where to be.

How did your university change the regulations concerning teaching (incl. workload) and attendance?

During the first two pandemic semesters in University of Salzburg, several normative easements were defined, such as extended deadlines for exams and essays or alternative modes of exam. The workload for teaching was not altered. In University of Pisa they did not change the workload; the number of hours of lectures stayed the same, both for students and professors but online attendance has been accepted also for courses with compulsory attendance. In NOVA University Lisbon, all classes are delivered through MS Teams with the same workload as in the face-to-face settings. Attendance is tracked through MS Teams.

The scholars of Tallinn University and University of Pisa claimed also that in reality lecturers say that students are just looking at the screen and are not really attending. Winter Semester 2020/21 was the second semester in which teaching at University of Hamburg was almost exclusively digital due to the coronavirus pandemic. The survey of students reveals that teaching and examinations were nonetheless mostly perceived as positive. Teaching formats, digital systems, and tools that already proved helpful in Summer Semester 2020 continued to be used in Winter Semester 2020/21. Based on existing experience and thanks to having more time to plan digital teaching, didactic tools that focused on student activation and collaboration could be developed further compared to the previous semester. More plenary discussions took place than in Summer Semester 2020, for example. The number of communicative and collaborative

work methods characteristic of seminar formats conducted as synchronous digital courses increased. However, only a portion of the respondents considered such interaction-based teaching formats helpful to their own learning. Many lectures didn't even ask students to be visible online. Some teachers have asked students to upload some photos of themselves instead of initials. The other issue is that many students have a teacher in one monitor and a video game in another and they run together. It is also difficult to understand which students are actually participating. Teachers can give more homework, but there is more cheating and coping because attendees are having parallel conversations - on teams or zoom and at the same time on other social platforms. Until solutions to this problem are not offered, automatic testing and online testing remain compromised – teachers don't know who is listening to them and giving tests, and whether the students are talking amongst themselves during the test through other channels or not unless the students forget to switch off their microphones. One of the implemented solutions has been giving students small projects instead of tests and interviewing them afterwards. Another obstacle is with big groups in contact study, as because of the restrictions teachers have to split them up into many classrooms during the tests and there are not enough people who would observe them.

How did your university handle placement / internship of students during emergency situation?

In the beginning University of Pisa stopped all internships. Starting from the end of the second semester of 2019/2020, they arranged, whenever possible, virtual internships. From the second semester of 2020/2021, the university opened again the possibility of internships on site, in case they are managed according to the current sanitary regulations. University of Salzburg took an individual approach towards (anyway considerably reduced number of) incoming exchange students. Domestic students who did services of societal relevance related to the pandemic could get ECTS granted approval of their services as internships. A project funded by the federal ministry (On track, see: https://www.plus.ac.at/wp-content/uploads/2021/02/digital_BMBWF_S48.pdf) aims to assist students in linking digital and social life, an approach particularly helpful in terms of the pandemic situation. In the University of Novi Sad there have been no internships since the beginning of the pandemic. The digital competency of the staff was reflected in the management of their workload in the new environment. Those more competent were able to move the studies to

the virtual environment with ease, whereas others struggled (as the workload increased and they had to learn and implement new techniques).
In Tallinn University and University of Hamburg many practical activities and travel arrangements were canceled or postponed due to the COVID-19 situation. In some cases they were replaced with virtual activities, like meetings in digital environments (zoom, meet). Often the situation required a reforming of assessments. The emphasis of the tests moved from knowing facts and theories to analysis and critical thinking.Various digital platforms were used for performing the tests. Technological, medical and biological activities associated with scientific research, including laboratories in the real world, moved to virtual laboratories (**CoLAB, BIOREF, ALMASCIENCE)**.

What changes were made to assessment and grading regulations (exams, grading schemes)?

From the beginning of the pandemic up to October 2021 in University of Pisa, all exams have been offered online. In November 2021 they started opening again the possibility of offering exams on site, and now they have a mixed model. In the University of Salzburg legal norms had to be adapted in order to make online exams possible. Deadlines for the submission of essays and theses were extended. In the University of Novi Sad no changes were made - all assessments, both formative and summative, were and are done in the university in face-to-face mode. Grading has not changed but teachers have been reminded officially and unofficially that if there are COVID-19 cases and students have been missing lessons for 2 weeks there are suggestions that students should have possibility to do tests in 2 parts or the lecturer should offer them extra times, still officially the grading has not been changed. Tallinn University gave students more possibilities to do tests and in reality some teachers have lowered their requirements and weakened criterias. Thus the knowledge is in decline, but at the same time the surveys show that this has been declining for the last 20 or 30 years. COVID-19 time lesson plans are less difficult than they used to be. Actually there are 2 approaches we can distinguish: 1) one approach says let all students pass, and university will reach the bar if they enter to master or doctoral studies. 2) The other says, you only have to let the minority pass, if you want to have the quality. Time will show which one is better. In the University of Novi Sad grades are sometimes used as punishments. Tallinn University and University of Novi Sad have discovered that to help students during that messy period it is important to respond to their mails and messages, because if they are online they do not meet lecturers in the building nor can they visit them in the

office. So the lecturer's priority is to respond to them. If lecturers reject them students take it personally, and sometimes when students drop out you hear that the professor hated them or they hated the professor.

What kind of extra support (e.g., tutors, technical assistance, multimedia designers) was provided by your university to academic staff during the emergency situation?

In University of Salzburg the PLUS Center for Flexible Learning offers an e-learning-helpdesk. Information provided within the institutional intranet (such as video tutorials for certain distance learning applications) was considerably upgraded. There is an e-learning-wiki in service as a pilot project e-tutors were implemented. University of Salzburg offered online supporting materials, FAQs and several webinars on the use of the new digital tools. They gave a free Bamboo slate tablet to all professors and provided on-demand technical assistance on specific issues regarding offering distance learning classes. In the University of Novi Sad only online tutorials were suggested to lecturers. Also, at the university LMS, an online community was created for all discussions and questions. There was an effort to provide internet and laptops for lecturers but that was not the policy on the country scale. The most needed resource they did not have was money (to buy proper technical devices), so many of the staff had to buy the equipment themselves for their own money just to be able to continue teaching. Big issue in the University of Novi Sad was that the internet connection varies from place to place and peoples digital competences are poor and online teaching tools are often complicated. In Tallinn University people were used to using skype, viber and whatsapp and they discovered that they can use it for teaching as well instead of teams or moodle (so they didn't have to invest their time to learn new platforms). In the University of Novi Sad there is a lack of office software, many people have second hand PCs with old software.

In Tallinn University there were organized student-to-student support lines - so that students offered free studying help to others through virtual reality or in place. The tutors and mentors systems grew stronger both for students and teachers. University also has technical assistance but due to the great number of mundane issues the tech team was busy solving problems, whereas they could have focused on creating and introducing new platforms which would have met the actual needs of the academic staff better. The Innovation Lab is also a model created by Tallinn University and was of great help for teachers who used it. In

the Innovation Lab, through the joint creation of teaching materials, testing in teaching activities and reflection of testing, colleagues moved from getting to know and teaching an innovative teaching method to its sustainable implementation within one year. The main aim there is to help the participant to acquire techniques and methods on effectively integrating robotics and playful IT tools in learning activities.

What kind of additional hardware (e.g., video cameras, scanners) and software licenses were purchased to meet the needs of emergency distance education in your university?

In University of Salzburg - Webex, the video conference system licensed for their university, has been enhanced by purchase of a higher capacity of transfer. Further on Webex was linked with Blackboard, their learning platform (plugin). Blackboard was improved by upgrading to Blackboard Ultra. A limited number of lecture rooms were equipped with cameras and microphones for enabling hybrid teaching. A huge number of individual office PCs had to be equipped with cameras in order to enable distance teaching. In NOVA University Lisbon, in addition to the already mentioned acquisition of Bamboo - they provided all professors with slate graphical tablets (1,500 units overall), there was a big investment in ICT finalized to improve the network connectivity and the wifi infrastructure, and for the acquisition of servers. For distance (or mixed distance/in presence) education over 380 new video cameras were bought (265 mobile and 117 fixed), among them two specialized for microscopes, to be used in dedicated labs reserved to biology, veterinary and agricultural sciences.

Software licenses newly acquired include: Outlook for iOS. In the University of Novi Sad some of the teaching staff purchased Zoom licenses and they had a team in their university that improved moodle and organized consultations for teachers. To Serbian universities Microsoft 365 installation was offered as a gift from Microsoft. The only thing Microsoft required was the university to have a team of administrators who helped people to create accounts and gave basic training. All universities agreed that Zoom is a great platform but you have to pay to get time over 45 minutes and in some countries teachers paid that money again from their own pockets. At the same time Teams is for free - you can use and record it as long as you need it. In the University of Novi Sad they have recorded and stored millions of megabits of lectures and stored them so students can use them for free.

In all the universities some lecturers have put their videos to YouTube as private videos, but the problem is, as soon as they give out the link, the link is shared in Facebook and in reality the whole world can see those. There have also been discussions on the utility of the online platforms and its applications in different settings worldwide. All universities agree that different departments need different approaches and all platforms have their advantages and disadvantages in certain scenarios, so it is wise to learn how to use as many platforms as we can. But at the same time lecturers complain about the lack of education on how to use different platforms.

In the University of Hamburg IT services purchased 2.000 laptops to allow most staff and faculty to work remotely. IT services were updated in only a few weeks to allow for many staff to work from home, e.g. making available software and video conferencing tools. MS Teams has become one of the main communication hubs for UHH staff. In Tallinn University the staff were allowed to take home the university laptops. For emergency needs, they were given technical support numbers whom they could call in time of need, but unfortunately that possibility did not solve all the obstacles especially during the lockdown.

How did your university organize documenting and sharing the best practices among the academic staff during and after the emergency situation? Please provide links, documents etc.

In the University of Salzburg, most prominently, the annual PLUS award for excellence in teaching was oriented towards good solutions in distance teaching. The awarded projects were presented as best practice examples, including information on tools and methodology, on the website (https://www.plus.ac.at/qualitaetsmanagement/qualitaetsentwicklung-lehre/lehrpreise/2020-sieger-projekte-distance-teaching-award/) In University of Pisa they funded projects for innovative teaching practices. The list of funded projects, including a short description, can be found here https://www.unipi.it/index.php/docenti2/itemlist/category/1795-progetti-speciali-per-la-didattica. In the University of Novi Sad the online community was created at the university LMS. They also meet with academics and talk about the obstacles, best practices and experiences. IT specialists provide informal training for free and some faculties have analyzing systems so they know how

many minutes each participant spent in a certain activity or on a certain platform. Also, all over the university, the information of how many people are using teams, moodle, etc. is formalized into graphs.

In Tallinn University organized sharing of sources or documents was not implemented, but instead the individual activity rate rose and academic staff shared newly found websites and virtual platforms with each other. Universities shared mainly the requirements which were released by the government and included information about vaccination and how the studies should be held - like how many people could attend classes/university; regulatory all distance study or continuation of face-to-face studies. University of Hamburg also offered a centralized and comprehensive system of support and help.

How did your university analyze / research the impact, pitfalls, success factors and coping strategies/policies concerning emergency distance education? Please provide relevant reports, articles, etc.

In the University of Salzburg both university and students union surveyed the situation. The department for quality management developed an adapted questionnaire and based on this issued an university wide course evaluation in summer term 2020. The evaluation results were published in the intranet for internal use. Same applies to the results of a survey that had addressed teaching staff at Austrian and German universities ("Digital teaching now!") in the framework of a research collaboration of psychologists at PLUS and Graz University. As an example for student union surveying see: https://stvkowi.oeh-salzburg.com/covid-19-umfrage-zur-lernsituation/ Umfrage Distance Learning an der PLUS - ÖH Salzburg (oeh-salzburg.at) In NOVA University Lisbon they commissioned an in-depth analysis to an external institution, the Human Foundation. At the University of Novi Sad at the end of the semester, an online survey was sent to all teachers and students to assess the success of distance learning from the perspective of technical quality, service quality, information quality, use, user satisfaction, and benefits.

Tallinn University has done several studies about COVID-19 situation, but as the situation is still novel they cannot comment on effective strategies or policies. Although the studies carried out in elementary and high schools show the learning gaps because of the COVID-19 situation. In Hamburg University instruments and procedures for obtaining student feedback on digitalized course formats in the context of mid-term and final evaluations were developed. The

offer of formative course evaluation by means of qualitative procedures was adapted to digital teaching and tested. In addition, the evaluation team conducted a student survey in response to the switch to digital teaching as a result of the pandemic, in addition to a faculty survey; the results were communicated in writing and verbally at various levels of the UHH.

Did you feel any change in *the role of the teachers/educators* during online and/ or hybrid teaching? If yes, how would you describe the differences in the role of the teacher during in-class learning and online (or even hybrid) learning? (E.g. regarding providing learning content, monitoring students, the assessment etc.) If you have any positive experience, examples of adapting yourself to the new context, please tell us briefly.

All lecturers admitted that they have to prepare themselves better for the online environment and for engaging they had to be entertainers as well. Lecturers used online tools, such as Kahoot! and Mentimeter, to increase engagement. Each week they organized online forums and emphasized discussion. In addition, all classes have been recorded and posted on LMS.

Some others said that they have become technology specialists to their colleagues offering free consultations and in that sense the role is different. They also learned to create content effectively. A competence one lecturer developed was taking notes in onenote (one of the apps that comes with windows 10, where you can use it in your personal account; in teams you have to use your work account) which is like bringing your own whiteboard with you.

Many lecturers complained that they are required to do more work with less time and they needed to improve their skills like how to type quickly and talk and draw at the same time and as it was recorded. Many experience mental tension as it is an immense pressure to be recorded all the time - you have to be careful what you say or how you move what appears on your screen and when your internet is giving you trouble or something happens with your computer in the middle of your class you have to solve those issues on the run.
One lecturer pointed out that the biggest challenge is to stay calm when people are starting to praise technology that is not good. It is especially hard to convince people to use better platforms when they have already invested their money and time into other programs and platforms.
Many teachers now give assignments to students every time they meet, then at the end of the semester even when they have copied from each other (onenote or

other platform shows who has seen assignments at the right time and according to that you can make some conclusions).

What are some of the *most suitable teaching and learning activities* in blended/hybrid learning that proved to be efficient and engaging with your students? Please give a few examples!

Despite the circumstances universities decided to stay learner-centered. They found that the learner should be actively involved, in face-to-face, distance or hybrid study. They decided to be focused on educational goals and subject integration, be adaptable to the classroom and/or hybrid and/or fully online learning environments and implement easy-to-use interfaces that are simple to use even with basic digital competences.
Universities should explicitly teach their expectations on engagement, allow asynchronous learning (to generate transcripts from your audio app:otter.ai), make materials accessible in safe places (WebAIM), record lectures and produce videos covering the necessary details. Lecturers have to build a supportive environment, where struggling students can at any moment feel safe enough to ask for help, advice or guidance.

1. Students don't like slides - avoid them.
2. Online quizzes as homework assignments and online forums for discussion are really great engagement tools.
3. As lecturers usually write and talk at the same time, you have to sanitize your computer.
4. Prepare more material. You have to talk for 45 min or 1 and a half hours. In the classroom you can walk around and ask students about what they are observing. It is more productive to shorten classes to 35 min and breakout rooms are a good way to start conversations.
5. Lecturers have to convince students to open their screens, have to give students security that the teacher would not embarrass them in front of others. That is a prominent issue now as everything is recorded officially you cannot be sure that some students don't record it from outside. Everything you say on the internet stays on the internet. You have to sanitize your talk, your appearance, your everything.
6. Teachers' role is to make students interested.
7. The biggest challenge is that you have to seem spontaneous even if you are really not.

8. You have to be effective and interesting because students expect the internet to be entertaining.

But there are also benefits of online learning and teaching: you don't need to put on makeup, you save commuting time and you can sleep longer.

How can teachers/educators take care of the wellbeing of the student and of their own wellbeing? What are some of the well-being focused initiatives that you took during blended/hybrid learning?

The wellbeing of students and lecturers was the most challenging. Spending long hours on computers for delivering online classes and participating in online meetings created technostress. Lecturers think that university leadership has to utilize technology and create a balanced schedule for students and teachers.

There is not much universities can do with their physical well-being as they are spending their days behind their computers inside - it is detrimental both psychologically and physically. Lecturers can encourage the students to work in small groups and talk to each other but teachers do see that students are not as joyful as they used to be. So one of the main aims of the teacher is to empower the students psychologically – to assure them that they are capable of learning and achieving objectives.

Some thought that maybe it would have been easier before the internet era, when there were textbooks and you knew exactly from which page to which you had to learn and everything you needed to know was in that textbook. But now students are learning from the internet and the internet is infinite from their perspective and they do not know where to start and where to end. This can seem discouraging. Teachers have to stop themselves from giving too many hyperlinks and sites. Every lecture has to have a clear lesson plan, so that students can see from what point to where they are going. Even the content of the material is not as important as the positive input to the students' confidence levels that they can achieve such things.

The wellbeing of lecturers was not in universities' focus. Lecturers talked about issues and obstacles with their close ones or other academics or professionals. Sometimes the technical support turned into psychological support.

Can you give us some interesting, new approaches and/or specific methods, tools used in blended/ online assessment?

Flipped classrooms proved to be the best strategy in the online environment (students take the teaching role). It is important to give assignments often, so the lecturer can get a realistic view of what is going on. There is no way to stop online cheating.

To what extent have you managed to give individual support to your learners - especially disadvantaged ones? Can you give any examples of it?

Disabled students love online lectures, in the building they have difficulties entering and finding the rooms and they are wishing that all the teachers may give their lectures in a hybrid way. Online consultations proved to be the best solution for individuals with disabilities. At the same time chemistry and physics teachers are struggling as they have to record every test beforehand or you have to have perfect light and camera to do direct broadcast.

How did you facilitate cooperation between learners in a blended context? Can you suggest some methods, tools that really worked for you?

For teamwork, MS Teams were used. For shared documents, students used OneDrive or university cloud tools.

How did educators in your school/university community share their practices in this new context? Can you give us examples of how LOCAL educators communities worked and what national/ international teacher platforms you joined?

In the University of Novi Sad an online community was created at the LMS as a course. The online community has the following sections: Announcements, Online discussion, Online tutorials, and Educational resources. There were possibilities to join the Serbian Moodle network. They have organized Moodle Moots and an exchange of best practices for educators. Also, EdTech Center organized an annual meeting – Online conference Digital education. At the conference, educators had a chance to present and exchange best practices.
Other universities have dedicated agencies to improve teaching. So there are different courses lecturers can take to improve and raise the quality of teaching.

And there are also informal bodies, but it is up to everyone how much one wants to attend. The courses are also given at the university level –many people use videos for learning.

How can teachers/educators and learners improve their capacity to use tools, devices and to adapt their practices to the new context in an efficient way? What is your own learning experience in this online/blended learning period? What and where have you learnt?

University of Novi Sad answered that the only way is through training. At the Educational Technology Lab they deliver training on how to use LMS with unique accents on instructional design, assignments, quizzes, and gradebook.