



FABLE project – IO2 – Di2.2 Survey on blended learning methods in university education

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As a reminder, the objectives of IO2 are defined as follows:

The overall goal of IO2 is to design a generic methodology for transforming in-person courses into blended learning courses that takes into account both the topic taught and the level of the students. The IO2 defines the pedagogical engineering methodology to be taken into account by determining the most relevant pedagogical tools and modalities of blended learning, and based on these actions defines a recommendation for the coaching and tutoring process to be set up to help students succeed while decreasing the number of students dropping out of school.

Document purpose

A compilation of results collected from project-delivered online survey focusing on the project-relevant topics of blended learning, long distance education tools, user experiences collected from the students, and a compilation of observations made by the pedagogical staff and other personnel relevant in the themes of the project via interviews.



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Introduction

The survey on which this report is based on investigates the challenges that students, faculty, and administrators face during Blended learning. The techniques used by each university to address these issues are outlined and compared. Secondly, the favoured online learning tools and platforms from the perspectives of students, faculty and staff are explored. The purpose of the study is to identify students' social and technological challenges based on a systematic literature review as well as collected data from a survey and interview findings from the focused universities in a case study, as a part of the European Commission-funded Erasmus + Training Faculty on Blended Learning (FABLE) project.

The purpose of FABLE is to help higher education faculty and administrators to create and implement blended learning programs that fully exploit the benefits of this method. In this report, we present the survey and interview results for the IO2 deliverable Di2.2.

As such, the survey results were collected from five project partner countries (France, Germany, Finland, Hungary and Spain) between April and August of 2022. In addition, several teaching staff members were interviewed from the participating universities to collect perspectives from the pedagogical staff. For this report we decided to apply interview approach, since the pedagogical staff and university administration was already once surveyed in IO1.

In this document, the survey results are presented in the part 1, where the general results and most important observations based on the preferred learning methods, pedagogical approaches and best practices from the viewpoint of student are presented. In the second part of the document, a summary of the teaching staff interviews are presented, along with a library of best practices collected from the university pedagogical staff.

References to online attachments refer to the materials, which have been made available via the project website *www.fable-project.com*.

Part 1: Online survey to students

The online survey conducted by the FABLE-project collected opinions from the students in the participating institutions and countries on the following topics :

- Online education in general
- Long-distance learning tools
- Blended learning
- User experiences with different online learning solutions

The data collection work was organized by LUT University for the entire consortium, with the other project partners responsible for translating and collecting the data in their countries, in the case where the original English version of the questionnaire (available as attachment 1) was considered unsatisfactory or too difficult for the target audiences to apply. At LUT University, the survey data was collected with an online tool Webropol due to EU data protection requirements and for the ease of management, collecting 95 submissions via the tool with the English questionnaire, mostly from Germany, Finland and Hungary, supplemented with 61 submissions collected with the Spanish questionnaire. With the English version of the survey tool, a response rate of 38.5 % was achieved with the 247 students opening the survey and 95 submitting their answers, a rate that can be considered very high for an online survey.

In total, the survey collected 156 submissions from university students across several EU-countries and other regions; the respondents were not restricted to any certain country or region, and in the results country-specific observations are based on the informed country of studies, not identified or verified country of studies.

BASIC PROFILING DATA

The collected student responses included 94 women, 59 male and 3 who did not wish to disclose their gender. With age division, the distribution was following:

Table 1: Age profile of survey respondents

	n	Percent
Under 20	6	3.8%
20-30	89	57.1%
31-40	21	13.5%
41-50	21	13.5%
older than 50	10	6.4%

Majority of the submissions to the last two age categories came from the Spanish questionnaire, whereas majority of the submissions to the first two categories came from the English survey. As for the countries the submissions were collected, in the English-speaking

version of the survey the largest groups were Germany (39 submissions), Finland (25 submissions) and Hungary (24 submissions). With the Spanish survey, the largest singular country of origin was Colombia, with 41 submitted answers, Spain being second-largest with 7 submissions.

TYPES OF STUDIES

With the general population of students there are several different types of study programs, which obviously set different limitations and expectations to the student's ability to participate to at-campus events, or participate to the teaching events at all during weekday business hours. On our survey, the distribution between the different types of studies was as follows:

Table 2: Degree types the students were currently pursuing

	n	Percent
Bachelor's degree program for a first degree	31	20.4%
Master's degree program for a first degree	49	32.2%
Bachelor's or Master's degree as a second or other degree	25	16.4%
Open university studies, open minor, or microcertification studies	5	3.3%
Other degree type	42	27.6%

On this survey, a slight majority, 52.6 percentages of answers came from the first-time students, while non-traditional university degree students made up almost one third (30.9%) of the submitted answers. Additionally, 86.3 percent (82) of the students answering to the English-speaking survey also indicated that they are Full-time students, as opposed to part-time studies while working, or similar arrangements. From the submitted answers in Spanish, 41 out of the 61 were microcertification, open university, or other degree type students.

For the purposes of general audiences, it was decided to not use online learning, blended learning or hybrid learning as separate options, but to discuss just about "online studies" as there was evidence based on prior data that the students might struggle with the definitions and distinguishing the differences between these educational approaches. On the amount of online studies in their current degree program, regardless of the format, the students answered as follows:

Table 3: Amount of online studies in the current programs

	n	Percent
0-20%	42	26.9%
21-40%	12	7.7%

41-60%	12	7.7%
61-80%	16	10.3%
81-99%	16	10.3%
100% (only online studies)	58	37.2%

Interestingly, the most common profiles for the students were either no to little online studies to supplement face-to-face learning at campuses (26.9 %), or fully online programs (37.2 %). It is also worthwhile to observe, that majority of the students (48 out of the 61) in the Spanish survey were 100% long distance students.

Due to the differences in the student profiles, it was decided that in the following section we focus on the English survey results as they represent the “traditional” university bachelor’s level students working towards their first degree as full time students, and the Spanish survey results (mostly adult students with long-distance participation) will be used as a comparison point where appropriate. This way also the differences between the groups could also be assessed further to understand the differences in more detail.

PREFERRED STYLES OF STUDIES

The first survey theme covered the different preferred styles of studies, the application preferences of different tools, and preference of the attended teaching events in the cases where both online and face-to-face events are available. The results from the English-speaking survey is available in Figure 1.

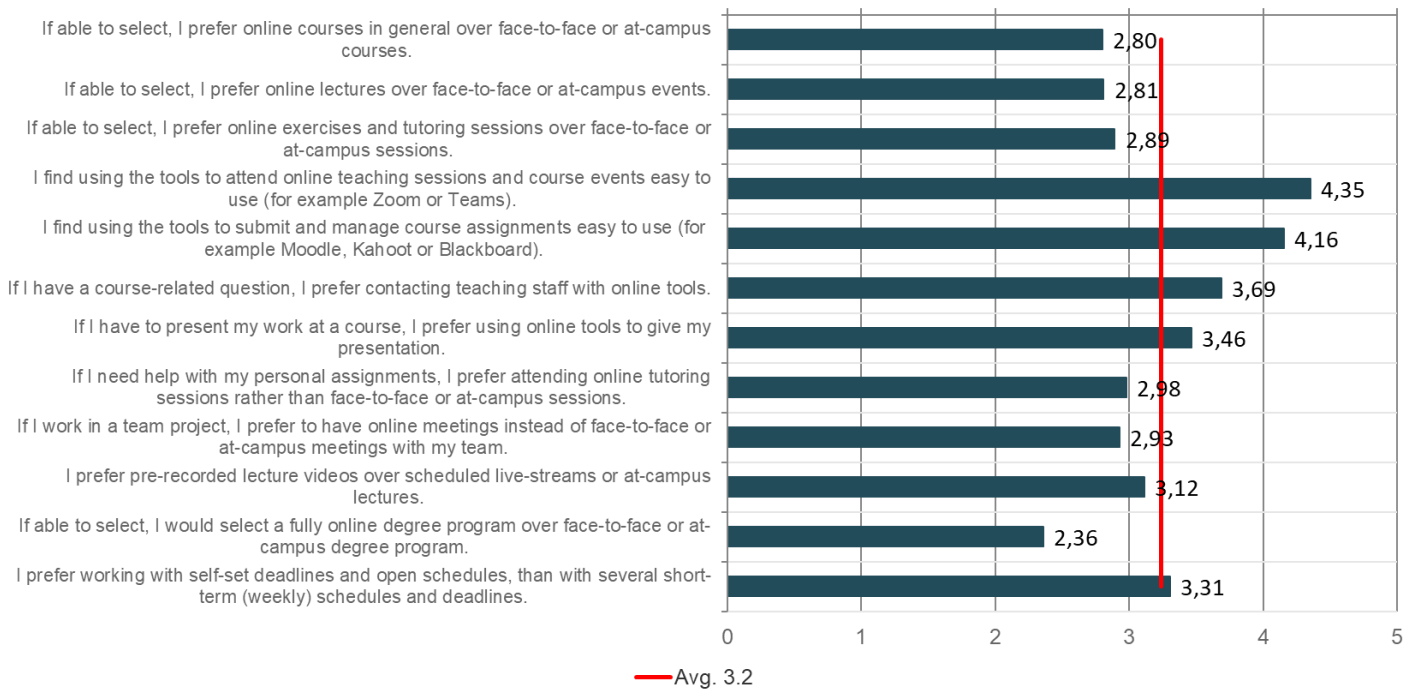


Figure 1: On preferred styles of participation to university education. Contains only English survey data, scale (1 = fully disagree, 5 = fully agree)

In general, most of the survey questions failed to reach strong bias or differ from the generally neutral position of 3.0 average. Overall, the students reported that they have no issues with the online education tools. Tools which are used to attend online teaching events got the most uniform support for their ease of use (4,35 average), with the tools to submit project work (4,16) following closely. Additionally, students also seemed to prefer using online tools to present their work, instead of do presentations at the face-to-face events, although the difference from average was rather small (3.46, median 4). Similarly, slight majority of students seemed to prefer working with open, self-set deadlines (3,31, median 3) over the tightly structured weekly courses. On all the other measured methods of course participation (in general courses, exercise events, tutoring sessions, lectures, asking questions from teaching staff, the program type in general) the student groups actually favored at-campus activities, which was a bit surprising considering the observed behavior based on interviews with the teaching staff (see part 2). Based on the results of this item, it can be argued that the online participation tools or their usability is not the issue; students can use the tools and even have usages for them, in which they prefer the online tools over face-to-face events.

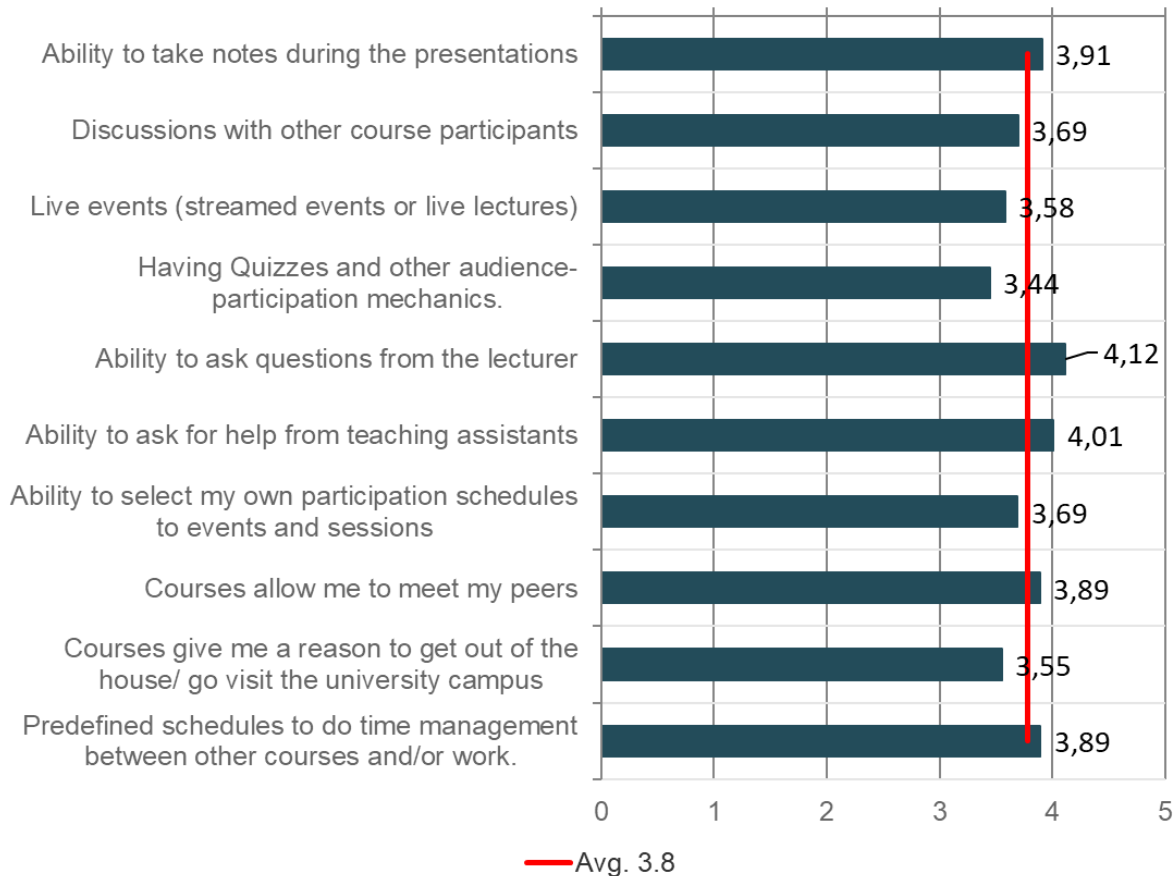


Figure 2: How important different course-related activities are to you? Contains only English survey data, 0 = not at all important, 5 = very important.

In the next survey chapter, the importance of different course components and arrangements was discussed. As observable from the results presented in the Figure 2, the most important feature of the activities are to be able to reach the course personnel, either lecturer (4.12) or someone else like teaching assistant (4.01). Additionally important features were taking notes, and being able to socialize with peers (3.89). Interestingly, the course components of live teaching events (3.58) and audience participation mechanics (3.44) did worse than other measured areas of course components and other arrangements.

APPLIED TOOLS FOR ONLINE STUDIES

The final item in the survey was the preference of different tools and services, that are utilized in the online courses that the respondents had already taken. Unsurprisingly, the most common tools were video lecturing and meeting tools such as Zoom or Teams (4.64), online documentation tools such as Google Docs or Overleaf (4.34), and learning platforms such as Moodle (3.95). Tools which are more domain-specific such as programming environments (1.88) or software environments (2.11) were obviously less utilized.

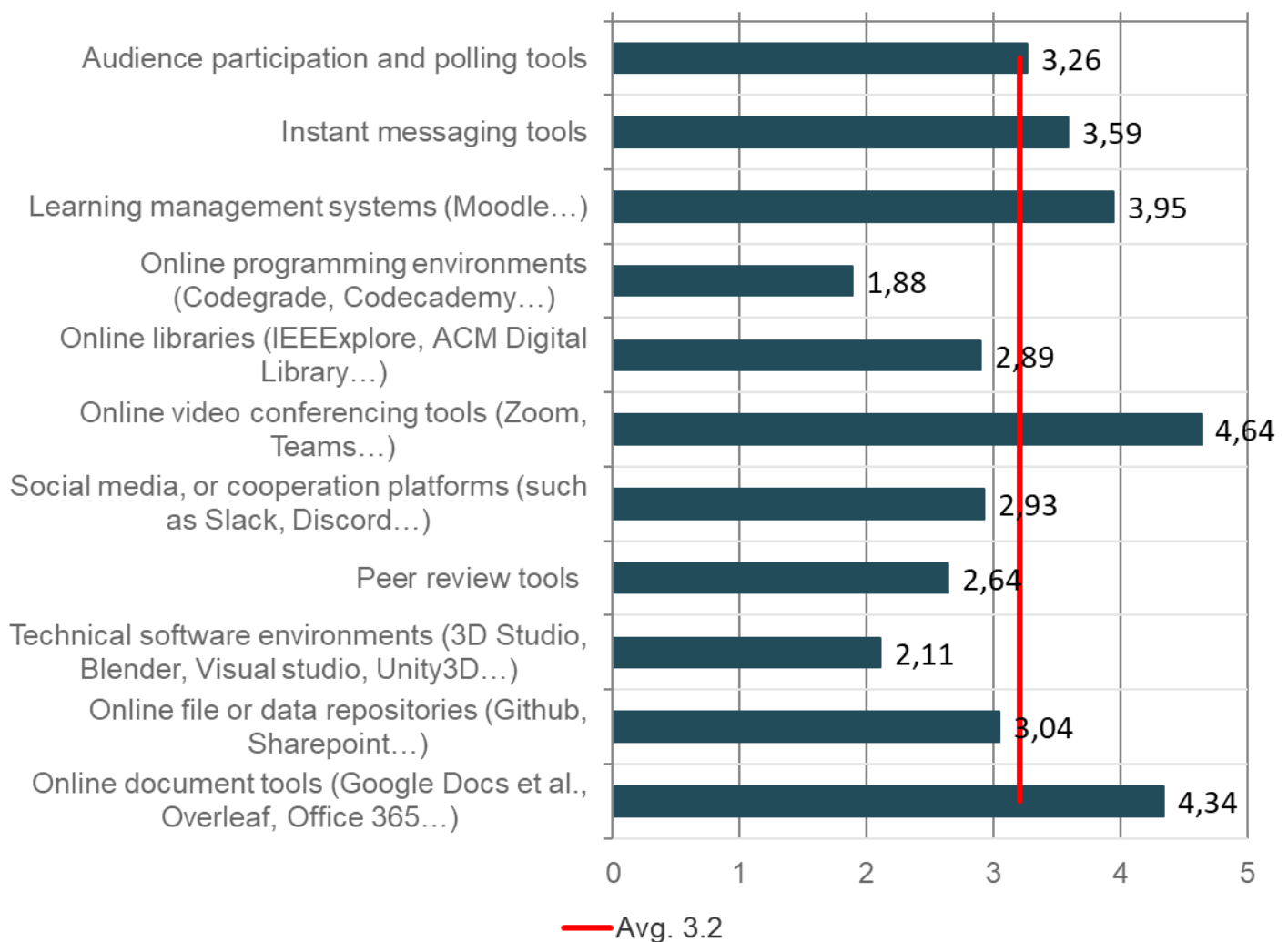


Figure 3: How well-utilized the following digital learning tools are to you. Contains only the English survey data, 1 = not at all utilized, 5 = utilized constantly

In addition of these applied tools, also a preferred online course arrangements were asked from the students; these results are available in the Appendix 2. Observing the open items, the theme repeats again that the students are able to work with the online

tools, and find the software required for participation usable enough, but they do raise issues on ability to cooperate with other students, ask questions, or feel like that they are participating in actual university education.

OBSERVATIONS FROM THE SURVEY RESULTS

Overall, the survey results provided several insights into the functionality of online course modules. In addition of numerical data, we also had open items such as “please name up to 3 most important positive aspects of online courses” and similarly “...negative aspects of online courses”. The full written comments are included in the report attachments, and word clouds



Figure 4: Word cloud from the “up to 3 most important positive aspects of online courses”

What the word cloud for positive aspects emphasizes, are flexibility, easiness and schedules, which is not very surprising. Looking at the earlier results, the most important aspect of course arrangements is to have access to the teaching staff. The matter of whether the learning event is live, streamed or recorded does not matter if the communication channels exist otherwise, and the online participation tools are considered easy enough to use. Having courses online allows students to for example work while studying and participate from long distance; this was also mentioned in the Spanish survey.

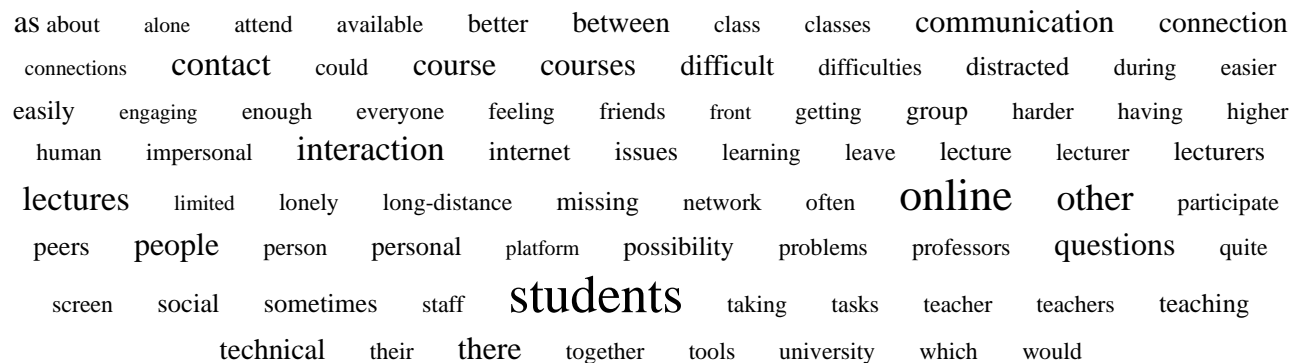


Figure 5: Word cloud from the “3 most important negative aspects of online courses”

When considering the negative aspects, the aspects such as lack of contact, interaction and communication issues were mentioned with several keywords. This reflects to the other survey results observing that the ability and access to communicate with the teaching staff is one of the major aspects required for successful course modules.

Part 2: Interviews with the pedagogical staff

Academic personnel are seen as the pivot on which all educational growth is based, and schools are required to hire and train competent and highly motivated lecturers in order to achieve educational goals. In addition of survey data, we interviewed and analysed teaching staff from FABLE participants to understand their opinions towards the online education and long-distance course arrangements.

One universal observation was that the demand for qualified academic personnel has grown because of the challenges provided by a fast-paced, highly dynamic, and more global economy. Globally, some universities were able to overcome the challenges of the Covid-19 epidemic through technology, not all universities were similarly ready. In the following chapters we take a closer look to the Finnish, German and Hungarian interviews to gain some insight into the current state of the long-distance learning in few case organizations.

From the pedagogical staff, university lecturers and interviewed professors we also collected a library of best practices, cautionary tales, and worthwhile observations that they that that has a major impact on how the online education should be organized, on what works and what definitely does not work. These cases are available via online attachments at the project pages (www.fable-project.com).

RECURRING THEMES FROM THE FINNISH INTERVIEWS

The results from Finland were mainly focused on the Lappeenranta University of Technology (LUT). The study interview results indicate that interviewees believed the Covid-19 pandemic was a significant success in terms of shifting the instruction online and campuses should be appreciated. In the following, the most common challenges, observations and problems collected from the Finnish teachers, administrators and open feedback from the students are introduced:

Low Motivation and Interaction

The learning community is one of the major challenges. How can students interact and learn from each other? It would be difficult for students when there is not any socialization. Interactions between lecturers and students should be improved which is difficult to achieve during online learning. Students need to be motivated to take part in online forums and conversations. The most critical aspect of BL is interaction. Some lecturers attempt to save time by developing online lectures; nevertheless, there should be some interactive components in which students collaborate, meet the course personnel, and engage in more social activities. This was reflected in students' feedback.

Lack of discipline and low accountability

It can be difficult and discouraging for students to use online materials. Exercises and quizzes can help to increase interaction during lectures. Lack of accountability is inevitable in online learning if the learners are not engaged during the lecture. It can be managed by imposing strict biweekly deadlines and exercises. Requiring learners to engage with course content in small chunks all the time.

Inadequate socialization and interaction

During online learning, communication and socializing suffer. Interaction with students throughout the course is critical to improving the quality; in online courses, feedback is often received at the end of the course; to have more efficient interaction in BL, more collaboration and online community are required. Adfasfads

RECURRING THEMES FROM THE GERMAN INTERVIEWS

The results in Germany mainly were gathered from FH Münster university. Blended learning has already been trendy in Germany for long and originated before the covid-19 epidemic when video lectures went mainstream. Yet there are many challenges students and faculty deal with. The top three challenges and observations differed from the Finnish data, and are as follows:

Lack of motivation

Some professors believe if students are motivated, BL can provide great benefits. Students must be engaged in the material and eager to study it to be motivated. How can professors inspire their students? There are 2 methods. One strategy is to try to gather students in groups even throughout the week. In other words, assigning them projects that they will subsequently work on in small groups, provide them with social contact opportunity. The major challenge with BL is that it is really difficult to demonstrate this social presence online. The second is to attempt to provide structure by not just showing the videos and saying that you may email me your questions or post them on Metamost, but also by holding weekly meetings with specified assignments for follow-up work so that there are always short-term goals. Students and teachers don't like doing something alone. Motivating them to learn needs a few contacts. Once motivation is shared, they start learning without any problems. To improve student engagement during online lectures, professors might hold interactive sessions in which students are encouraged to actively participate. Communication in only one direction will not succeed. However, asking students to work in groups in breakout rooms to prepare something after a few minutes is a better method to truly engage them. Teachers cannot otherwise ensure that students focus on other tasks while teaching.

The other solution to engage students is deciding to do some ground rules for instance if they do not turn on their camera, they need to do it during group works in breakout rooms to make sure they actively participate.

Lack of enough socialization

The main disadvantage of BL is that social interactions are fading. The most challenging aspect of BL is establishing social bonds. One solution is to invite students to organize some type of happy hour online or online lunches, where students may have lunch together in a relaxed setting, so they can communicate.

Lack of precise instructions

Third major observation was the lack of precise instruction to do assignments, internship, and thesis (specifically for Bachelor's degree) with online approaches. The other concern for students was that throughout BL, precise information on how to perform tasks such as projects, internships, and thesis, is lost, particularly for bachelor's degree students. BL works better for master's and upper-level students, but for bachelor's degree students,

particularly freshmen, it might be difficult since they cannot follow quick online instructions correctly. This is one of the reasons why students value face-to-face learning. There were also feelings that the current approach had low accountability and online presence, with the system being too permissive.

The fundamental advantage of BL is its flexibility. Parallel downside is that some students become easily disoriented and withdraw. Thus, students, whether they work or have other obligations, may sometimes incorporate it differently. Another guideline that helped organize and engage students during BL was that if they missed a deadline, they would not be able to retrieve the link to the assignment or task afterward, which aided in more disciplined and organized teaching.

RECURRING THEMES FROM THE HUNGARIAN INTERVIEWS

The results in Hungary were gathered mainly from Széchenyi István University. Again, they differ somewhat from the previous countries, bringing up novel problems, but also repeating some of the already-introduced issues on their list of three most important issues:

Procrastination and Lack of motivation, Time management

The problem is the lack of motivation and interest on the part of the students. A more consistent organizational order and uniform requirements would make the expected performance clear. Teachers have to be creative to take the attention of students in the online space! University can improve students' motivation by organizing competitions related to the course, creating a new motivating environment for students, and organizing activities that give extra credits. The first issue is the appropriate ICT infrastructure. If students have a good ICT background, then innovative learning and teaching methodologies can help. It is very important, that lecturers should not forget about the opportunities inherent in editing common documents, creating, and visualizing 3D objects, and running simulations, as further opportunities for knowledge gain, which also help the cooperation, and the implementation of the common project.

Using objective metrics in the performance system, the student receives clear information that he or she can track. It is necessary to help the use of online tests and interactive knowledge transfer interfaces that can also be used by educators. The contribution challenge can be solved in the online space with the possibility of effective communication and video consultations. Practice-based learning, the predetermined timeline and requirements, the personalized learning opportunity, and the constructive pedagogical methods are the principal opportunities to engage students. Young adults can hardly manage their time. A tight schedule and continuous reporting can help them to complete subject requirements.

Lack of enough socialization

Social challenges are more significant in online learning. Several online meetings, a wide variety of platforms, and software can be adopted to help with online social presence. Students are especially motivated to integrate the latest ICT technologies into the learning experience. While ICT technology is already embedded into the everyday lives of the X, Y, and Z generations, it is even more important for students in terms of their future work and social lives that they have access to these technologies in the classroom. We need to observe how workflows can be communicated and share digital content with the 2D online and 3D VR technological tools. VR/AR and immersive technology have great potential to transform learning and create engaging experiences for students. Students are eager to see the new technology because it is part of their digital life and their culture. From the

educational perspective, an important benefit of such technologies is that they lead to a teaching environment that is first and foremost learner-centered. There are many virtual and augmented events and educational software and some of them give the possibility of active user actions. Since the user is moving in space, talking to partners and the speaker, chatting, reading an article, studying a presentation during a presentation, etc. Active participation and new technology can help to solve the lack of socialization problem. Group work can also help to improve the social presence of students. Common social network groups dedicated to a subject or project can also help cooperation and their social presence. To solve low motivation and the poor social feeling caused by digital learning, organizing group works as much as possible helps to motivate and engage students in the online space. With small groups, everything is easier! In some cases, dividing classes into three or four groups and asking for shorter presentations, and more conversations makes students happy and comfortable with online learning. Less personal contact leads to an impersonal education. Sometimes students must meet each other and their teachers.

System is too permissive

The system of requirements should be tightened, making it clear that students cannot complete school without independent study. The system is too permissive. During online learning, the best situation is when the professors hold the classes via video call, which means that the students and the professor need to be online together at one time. Students can turn their cameras on if the teacher requires them during the class. Of course, teachers cannot force students to do so, but they can bind getting good credit to do it. It is important to consider that students are inclined to procrastinate in online classes. Fewer log in to the lectures, as they think it does not have any consequences. Or even if they log in, some do not concentrate because the teacher cannot assess their concentration specifically while the camera and speaker turned off. Thus they might do some other things during the classes instead of paying attention.

Conclusions

In general, the interviews, open items from the survey and the numerical data collected from the conducted surveys all provide evidence towards similar conclusions; the online modules are not inherently unviable in any of the observed educational domains, and there are few general guidelines or observations, which can be derived from this data.

The main observations and recommendations towards online education best practices based on this survey data can be summarized as follows:

- **Access to teaching staff is the primary concern:** This was the major issue raised by the students. If the access to teaching staff is arranged otherwise, the lectures being live events (at campus or streamed) were no longer a concern.
- **Motivation and social aspects or online participation:** The difficulty of having social contacts and ability interact with peers was considered major issues by the students. Similarly, teaching staff in all analysed interviews raised the issue of motivation to participate as one of the biggest problems in online versions of the courses normally arranged as at-campus course modules.
- **Open schedules may lead to lack of discipline:** The ability to decide on the own working schedules with the online courses was considered on several student feedbacks as the most important factor that online education enables. However, the interview data raises a concern over procrastination with the students being late, or sometimes simply failing to arrange their own work to get a passing grade. Therefore structured and scheduled courses with some ability to select studying hours

Appendix 1 : Survey instrument

The English version of the FABLE-project data collection instrument is below.



FABLE - A Survey on the long-distance tools and user experiences



Mandatory questions are marked with a star (*)

DISCLAIMER, PLEASE READ

What data will be collected

This data collection will include the following activities:

- A set of questions on your opinions regarding online education in general, long-distance learning tools, blended learning, and user experiences regarding these tools.

How is this data used

- This data will be collected by the LUT-university (Lappeenranta-Lahden Teknillinen Yliopisto LUT) FABLE-project research team to collect information on factors affecting effectiveness, experiences and opinions regarding online learning and blended learning.

- The custodian of the collected data will be Associate Professor Jussi Kasurinen (jussi.kasurinen@lut.fi). The data will be handled by the LUT employees appointed to the FABLE research team, who all have non-disclosure agreement regarding confidential research project information such as this data.

- This data will be fully anonymous. The fully anonymized data will be combined with the dataset of other FABLE partner universities in EU region to enable comparisons between the EU regions. Fully anonymized data or parts of it can be published in a scientific or an academic context, such as research papers.

- No information, from which an individual respondent can be identified will be published or disclosed. All of the collected data will be deleted 3 years after the FABLE project has ended (current end date Q1/2023).

Important observations

-Participation to this study is absolutely voluntary. If for any reason you decide to decline further participation, just close the browser window and if on public computer, clear the browser cache. No partial data will be submitted to LUT before you press the "Submit" button.

-The data analysis will not provide you automatically any results on your answers. You will not be given any feedback or be contacted by the research group, and there will be no follow-ups on any made observations.

1. Do you wish to proceed into the survey? *

*This question is mandatory.

☐

I am over 18 years old, understand the disclaimer, and consent to giving this information voluntarily.

Part 1 Profile: The first questions are for data-analysis purposes only

2. Gender

☐

Female

☐

Male

☐

Other

☐

Do not wish to disclose

3. Age

☐

Under 20

☐

20-30

☐

31-40

☐

41-50

☐

older than 50

4. Are you right now studying in:

☐

Bachelor's degree program for a first degree

☐

Master's degree program for a first degree

☐

Bachelor's or Master's degree as a second or other degree

☐

Open university studies, open minor, or microcertification studies

☐

Other degree type

5. How large percent of your current degree programs studies are done online or long-distance studies, something done away from the campus and face-to-face events?

- ☐ 0-20%
- ☐ 21-40%
- ☐ 41-60%
- ☐ 61-80%
- ☐ 81-99%
- ☐ 100% (only online studies)

6. What is your main area of study:

- ☐ Business and accounting
- ☐ Engineering
- ☐ Arts and humanities
- ☐ Social sciences
- ☐ Natural sciences
- ☐ Computer science
- ☐ Health sciences
- ☐ Others

7. Are you a part-time or full-time student while studying your current degree?

- ☐ Part-time
- ☐ Full-time

8. In which country are you studying?

If you are doing fully online studies, please select the country where the host university is located.

- ☐ Afghanistan
- ☐ Albania
- ☐ Algeria
- ☐ Andorra
- ☐ Angola

- ☐ Antigua and Barbuda
- ☐ Argentina
- ☐ Armenia
- ☐ Aruba
- ☐ Australia
- ☐ Austria
- ☐ Azerbaijan
- ☐ Bahamas, The
- ☐ Bahrain
- ☐ Bangladesh
- ☐ Barbados
- ☐ Belarus
- ☐ Belgium
- ☐ Belize
- ☐ Benin
- ☐ Bhutan
- ☐ Bolivia
- ☐ Bosnia and Herzegovina
- ☐ Botswana
- ☐ Brazil
- ☐ Brunei
- ☐ Bulgaria
- ☐ Burkina Faso
- ☐ Burma
- ☐ Burundi
- ☐ Cambodia
- ☐ Cameroon
- ☐ Canada
- ☐ Cabo Verde
- ☐ Central African Republic

- ☐ Chad
- ☐ Chile
- ☐ China
- ☐ Colombia
- ☐ Comoros
- ☐ Congo, Democratic Republic of the
- ☐ Congo, Republic of the
- ☐ Costa Rica
- ☐ Cote d'Ivoire
- ☐ Croatia
- ☐ Cuba
- ☐ Curacao
- ☐ Cyprus
- ☐ Czechia
- ☐ Denmark
- ☐ Djibouti
- ☐ Dominica
- ☐ Dominican Republic
- ☐ East Timor (Timor-Leste)
- ☐ Ecuador
- ☐ Egypt
- ☐ El Salvador
- ☐ Equatorial Guinea
- ☐ Eritrea
- ☐ Estonia
- ☐ Ethiopia
- ☐ Fiji
- ☐ Finland
- ☐ France
- ☐ Gabon

- ☐ Gambia, The
- ☐ Georgia
- ☐ Germany
- ☐ Ghana
- ☐ Greece
- ☐ Grenada
- ☐ Guatemala
- ☐ Guinea
- ☐ Guinea-Bissau
- ☐ Guyana
- ☐ Haiti
- ☐ Holy See
- ☐ Honduras
- ☐ Hong Kong
- ☐ Hungary
- ☐ Iceland
- ☐ India
- ☐ Indonesia
- ☐ Iran
- ☐ Iraq
- ☐ Ireland
- ☐ Israel
- ☐ Italy
- ☐ Jamaica
- ☐ Japan
- ☐ Jordan
- ☐ Kazakhstan
- ☐ Kenya
- ☐ Kiribati
- ☐ Korea, North

- ☐ Korea, South
- ☐ Kosovo
- ☐ Kuwait
- ☐ Kyrgyzstan
- ☐ Laos
- ☐ Latvia
- ☐ Lebanon
- ☐ Lesotho
- ☐ Liberia
- ☐ Libya
- ☐ Liechtenstein
- ☐ Lithuania
- ☐ Luxembourg
- ☐ Macau
- ☐ Macedonia
- ☐ Madagascar
- ☐ Malawi
- ☐ Malaysia
- ☐ Maldives
- ☐ Mali
- ☐ Malta
- ☐ Marshall Islands
- ☐ Mauritania
- ☐ Mauritius
- ☐ Mexico
- ☐ Micronesia
- ☐ Moldova
- ☐ Monaco
- ☐ Mongolia
- ☐ Montenegro

- ☐ Morocco
- ☐ Mozambique
- ☐ Namibia
- ☐ Nauru
- ☐ Nepal
- ☐ Netherlands
- ☐ New Zealand
- ☐ Nicaragua
- ☐ Niger
- ☐ Nigeria
- ☐ North Korea
- ☐ Norway
- ☐ Oman
- ☐ Pakistan
- ☐ Palau
- ☐ Palestinian Territories
- ☐ Panama
- ☐ Papua New Guinea
- ☐ Paraguay
- ☐ Peru
- ☐ Philippines
- ☐ Poland
- ☐ Portugal
- ☐ Qatar
- ☐ Romania
- ☐ Russia
- ☐ Rwanda
- ☐ Saint Kitts and Nevis
- ☐ Saint Lucia
- ☐ Saint Vincent and the Grenadines

- ☐ Samoa
- ☐ San Marino
- ☐ Sao Tome and Principe
- ☐ Saudi Arabia
- ☐ Senegal
- ☐ Serbia
- ☐ Seychelles
- ☐ Sierra Leone
- ☐ Singapore
- ☐ Sint Maarten
- ☐ Slovakia
- ☐ Slovenia
- ☐ Solomon Islands
- ☐ Somalia
- ☐ South Africa
- ☐ South Korea
- ☐ South Sudan
- ☐ Spain
- ☐ Sri Lanka
- ☐ Sudan
- ☐ Suriname
- ☐ Swaziland
- ☐ Sweden
- ☐ Switzerland
- ☐ Syria
- ☐ Taiwan
- ☐ Tajikistan
- ☐ Tanzania
- ☐ Thailand
- ☐ Timor-Leste

- ☐ Togo
- ☐ Tonga
- ☐ Trinidad and Tobago
- ☐ Tunisia
- ☐ Turkey
- ☐ Turkmenistan
- ☐ Tuvalu
- ☐ Uganda
- ☐ Ukraine
- ☐ United Arab Emirates
- ☐ United Kingdom
- ☐ Uruguay
- ☐ Uzbekistan
- ☐ Vanuatu
- ☐ Venezuela
- ☐ Vietnam
- ☐ Yemen
- ☐ Zambia
- ☐ Zimbabwe

Part 2 Blended and online learning, user experiences

9. Please rate the following statements

(All on scale Strongly disagree-Disagree-Neither agree nor disagree-Agree-Strongly agree)

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree
If I have a course-related question, I prefer contacting teaching staff with online tools.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If I have to present my work at a course, I prefer using online tools to give my presentation.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree
If able to select, I would select a fully online degree program over face-to-face or at-campus degree program.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I prefer working with self-set deadlines and open schedules, than with several short-term (weekly) schedules and deadlines.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If able to select, I prefer online lectures over face-to-face or at-campus events.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If I need help with my personal assignments, I prefer attending online tutoring sessions rather than face-to-face or at-campus sessions.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If able to select, I prefer online exercises and tutoring sessions over face-to-face or at-campus sessions.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If I work in a team project, I prefer to have online meetings instead of face-to-face or at-campus meetings with my team.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I find using the tools to submit and manage course assignments easy to use (for example Moodle, Kahoot or Blackboard).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I find using the tools to attend online teaching sessions and course events easy to use (for example Zoom or Teams).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I prefer pre-recorded lecture videos over scheduled live-streams or at-campus lectures.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If able to select, I prefer online courses in general over face-to-face or at-campus courses.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Part 2 Blended and online learning, user experiences

10. Please rate the following study or course-related activities on how important they are to you

Scale 1-5: 1 = not important, 3 = neutral, no opinion, 5 = most important

	1	2	3	4	5
Ability to ask questions from the lecturer	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ability to ask for help from teaching assistants	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Courses give me a reason to get out of the house/ go visit the university campus	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Predefined schedules to do time management between other courses and/or work.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ability to take notes during the presentations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ability to select my own participation schedules to events and sessions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Live events (streamed events or live lectures)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Courses allow me to meet my peers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Having Quizzes and other audience-participation mechanics.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Discussions with other course participants	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Part 2 Blended and online learning, user experiences

11. Please name three most important aspects or advantages that make online courses work, or are generally positive aspects of blended and online courses.

12. Please name three most important aspects or disadvantages that need improvement in long-distance learning, or are generally negative aspects of blended and online courses.

Part 3 Blended and online learning, tools applied

13. Please rate the following types of digital learning tools on how utilized they are on your current studies

Scale 1-5: 1 = Unfamiliar, never used. 5 = Very familiar, used on all courses.

	1	2	3	4	5
Online programming environments (Codegrade, Codecademy...)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Online document tools (Google Docs et al., Overleaf, Office 365...)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Learning management systems (Moodle...)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Instant messaging tools	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Online file or data repositories (Github, Sharepoint...)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Peer review tools	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Audience participation and polling tools	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Online libraries (IEEEExplore, ACM Digital Library...)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Social media, or cooperation platforms (such as Slack, Discord...)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Online video conferencing tools (Zoom, Teams...)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Technical software environments (3D Studio, Blender, Visual studio, Unity3D...)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

14. In a few sentences, please describe your preferred online course. In your opinion, how well do your experiences from existing courses match this expectation? *

For example, how do you typically participate to online or blended courses? What tools do you use if you are allowed to select them yourself? What tools or engagement methods do you like, what do you dislike?

*This question is mandatory, but there is no minimum length to the answer.

15. Open feedback. Do you wish to add something to your other answers, did we miss a category, or do you wish to leave feedback for our research team? If so, please write it here.

Appendix 2: Survey questionnaire open questions data from the English survey

ITEM 11: 3 MOST IMPORTANT ADVANTAGES

Please name three most important aspects or advantages that make online courses work, or are generally positive aspects of blended and online courses.

Number of respondents: 80

Responses
Structured learning outcomes and deliverables. All material is available when course starts
Frees up a lot of time by taking commute out of the equation. Helps me focus on the studies and not my social anxiety. I vastly prefer online exercises and online peer review to doing either offline.
I suffer from presentation anxiety, and having the ability to have presentations online have helped me a lot. When I have been able to present from a safe environment (my own home) and without camera, I have performed better than usually. I have also gain courage and confidence in presenting.
When lectures are recorded, I don't have as tight schedule as I would normally have. I can easier work part-time while studying and concentrate on studies only on specific days of the week.
One thing I absolutely love about lecture recordings is the ability to speed them up. I get bored with the regular speed, and I can concentrate better when watching them in 1.5x or 2. speed.
Ability to mix many courses with full-time work, ability to listen again the course and facts from the recording, no need to travel hundred of kilometers to school.
1. I am studying while working. It would be very difficult or practically impossible for me to travel to the campus during office hours.
2. Online courses allow me to use my time efficiently and flexibly
3. All the information and material is conveniently available online
Not having to commute to the university daily
The flexibility of making your own schedule
The time saved from cutting away redundant aspects of courses
1- The ability to re-watch the lecture later if you need to remember something 2- Schedule flexibility is nice 3- It's easier to access the contents that go along with the lessons
Independent of location Digital tools (Miro, Kahoot) Easy access to materials Asking questions feels less stressing
It saves my travelling time since I live in other city than the city my university locates. I can rewatch the recored lecture to understand the lecture better before intending to ask the tutor or lecturer. I can have better sleep time and sufficient breakfast before the lecture starts.

Lecture recordings available, possibility visit friends in other cities during course, no need to wake as early to morning lectures
No need to travel; ability to set own schedule; easier to look back at materials
Being able to choose when I study. Easier to take notes and understand things when I can pause the video or go back in video. Makes scheduling work, school and freetime easier.
<ul style="list-style-type: none"> - makes distance no more barrier - effectively minimize or avoid cost of living - flexibility to take your course at your own convenient time
<ul style="list-style-type: none"> - Possibility to study whenever I want to --> easier to make own schedule - Possibility to study wherever I want to!
flexibility, own time management, convenient
Clear and easy to follow structure, short videos (2-10 minutes) that explain the main concepts, simple tasks, no complicated group discussions online.
Pre-recorded lectures, flexible schedule and independent studying
Online courses work for me, as they allow time to absorb the knowledge and I can do them at my own pace. Blended courses work well for me as well as I enjoy face-to-face meeting sometimes as it keeps the personal element alive.
well-made lectures with text and videos, enough (much) help given,
no travel, low participation threshold, can accommodate a large group
<p>1. Well-prepared study materials, such as the slides shown during the lectures. Well-prepared does not mean "overloaded with text" though. A roadmap of topics that will be covered by the course presented at the beginning of the course and then referred to during the course. Sometimes the structure of the course becomes less clear as the course goes on.</p> <p>2. Weekly or bi-weekly assignments (these help stay on track with the course, otherwise it is possible to end up having to do most course assignments in the final weeks). If a course only has one final project, good to break it down into parts/modules that can be completed over the course of the semester.</p> <p>3. The quality of the English language in English-language courses. If a degree programme is offered in English, there needs to be some quality bar for the language used by the professors. Perhaps a language proficiency test is necessary.</p>
<p>1. Work-life balance (study, sport, self-time)</p> <p>2. own learn rhythm</p> <p>3. more time to take notes</p>
<p>Saving time (when not driving to uni)</p> <p>Able to take deliveries at home</p> <p>When I don't feel so well I can still take part from home if I want to</p>
<p>Lectures are more efficient if online (able to repeat the sessions in own pace) but tutorials and working sessions should take place face-2-face</p> <p>Save time</p> <p>For more shy students chat function</p>
<ul style="list-style-type: none"> - possibility to study everywhere - no masks (you still have to wear them at the university) - you don't have to move out and search for apartments, if the university is far away
<p>Flexibility from where to attend</p> <p>Less disturbances</p> <p>Lower inhibition threshold</p>

<p>1. When the course is online, it doesn't matter where you are located physically, you can take the course. It opens up opportunities instead of limiting them only to what is available to you locally or forcing you to move.</p> <p>2. The best online courses have been designed with online limitations in mind instead of just moving a previously offline course online as-is.</p> <p>3. Online courses also allow for time flexibility</p>
<p>You can turn off your camera</p> <p>you don't have to travel if your university is far away</p> <p>it is more relaxed, no pressure</p>
<ul style="list-style-type: none"> - time saving (no traveling to university) - less preparation (comfortable clothing, no make-up) - nice environment (own home)
<ul style="list-style-type: none"> - more sleep - do sth else - record sth
<p>Camera (especiallly for the teachers), short breaks, second monitor</p>
<p>You are more flexible with your time management etc.</p> <p>You save costs and time because you don't have to drive to uni</p> <p>It makes it easier to work while studying</p>
<p>Video on.</p> <p>Good and previously communicated time management.</p> <p>Breaks every hour</p>
<ol style="list-style-type: none"> 1. Flexibility 2. Practicality 3. Self-organization
<p>Allows traveling to other destinations, no need to travel to sites</p>
<ol style="list-style-type: none"> a. Online courses are more flexible, no "travel" time to the campus b. Use of digital tools (quizzes, movies, blackboards etc.)
<p>It is great to be able to Pause or speed-up a learning Video to learn in my own pace. This allows me to take efficient notes for further learning, and write down questions to ask my teacher in Person.</p> <p>It is great to be Held accountable with weekly homework with due-dates. This helps me stay productive and actually learn.</p> <p>It is important for me to Talk to teachers and other students in person. To Build support networks and social contact, which is just healthy in general.</p>
<p>You can access the lecture from everywhere</p> <p>You can attend the lecture when you are sick or can't leave the house for some reason</p> <p>You can use the internet or books/ other resources for research without having to pack them in a backpack or similar</p>
<p>Time-efficient</p> <p>Flexible in time and place</p> <p>Own pace of learning</p>
<p>possibility to take part even if you are not able to go the in-person-lectures, i.e. because of sickness or not being in town; easier to leave if not relevant to you; more flexible with choosing if you want to/can attend, for example because of time conflicts</p>
<p>flexibility of location</p> <p>chance to attend classes if you're sick/ not able to come to the campus</p> <p>time-saving if you don't have to go to the campus</p>

sometimes recorded, one can watch it again more time due to no way to university do other things while listening
saving time getting to the point digital broadcasting
More flexibility from where to attend, easier to use different kinds of tools, saves time.
If you didn't understand something you can rewatch it online, it largely works around your schedule, you learn to manage your time (assuming there's access to recordings)
You have more flexibility. When the material is recorded, you can have a look at it again later for revision or when you didn't understand something. You can learn the material at your own pace.
Ability to study from anywhere, recorded lectures and ability to do better degree management (when to study and what to study; easier while working)
Everyone can hear and see the same thing, is always on the right page. Ability to easier take notes and screenshots of the presentation. Flexibility to participate where ever you are.
Time management Personal organisation I have my own space
1. You have more time due to not have to commute to university. 2. With the lessons being filmed it is easier to study for finals. 3. If you are working in groups, you can show your own screen and it is more productive for update team meetings.
facility to join flexibility commodity
Flexibility Organize
You can attend other universities without physically being there, or you can have a full time job while also pursuing a degree
Easier time management Less stress due to traffic Can do other useful activities during a boring lessons
Have time to work Easier to attend
Flexible timetable Personal attendance is not requirement
Flexibility, More comfortable,
They save time for other activities, personal or work related. They save energy of the everyday transportation to and from the study location They are beneficial for remaining in contact and having a sense of community learning while still at home.
cost-saving, flexible, comfortable
Flexible, comfortable, cost saving
Respect - Management - positive energy
1. The travelling doesn't take time 2. Opportunity of multi-tasking during course 3. No need for personal attendance at the university, so dormitory or flat rentig isn't necessary
I like to participate on classes at home too, but online it's really easy to cheat on exams

Save of time, efficiency, easiness
You have more time, you dont have travel Comfortable
Online courses are comfortable, easy to follow and effective
Flexible timing More details about the subject Comfort
Easier to schedule Questions at chat (does not disturb the lecturer) Possibility to record lessons
1. Good internet 2. Managing the lecture by the lecturer in an organized manner 3. Good knowledge of dealing with applications that help facilitate the delivery of information
time available. Place flexibility. Easy to communicate with remote distance
It saves time and energy since you do not have to go to the university It is more flexible, you can organise your schedule freely and you are not restricted to being obliged to be at the university at certain time you can work more, or study more when having online classes
flexibility , records , being able to study in any place
being able to participate at home when your sick for example online platforms for managing documents etc. flexibility
Time could be scheduled personally. Providing the opportunity to re-watch or re-read the lectures. Independent from the individuals' locations.
Convenience No pressure
flexibility saving time comfort
Able to stay in pyjama Not having to spend time on the road to get to school Not having to worry about battery
Flexible less time consuming Can be attended from anywhere
Technical knowledge from teacher by also using other tools Good internet connection Flexibility
more flexible, I can participate in the lecture from different locations and even if I am a bit sick, interactive tools are nice, and the opportunitiy to access materials online

ITEM 12: THREE MOST IMPORTANT DISADVANTAGES

Please name three most important aspects or disadvantages that need improvement in long-distance learning, or are generally negative aspects of blended and online courses.

Number of respondents: 75

Responses

Collaboration with other students
Not as many opportunities to talk with other students.
If I would have started my studies fully online, I would not have been getting to know my classmates and making friends. I loved the fact that during the first and even second year, I went to the same courses with my year class and there were familiar faces. I was able to get to know people and have a social life. We went to lunch together, to coffee together and hanged around our guild room together between the lectures. We were able to study together and learn together. I was able to easily ask from my peers about things, study related. With online studies I would have missed all this, and that I think is the greatest disadvantage of online studies.
More discussions with other students and getting to know them online etc. Not that easy to select a work group if you don't know them.
1. No possibility to meet other students in person
2. Weaker sense of belonging to the community
3. Watching pre-recorded lectures is not always very engaging
Some courses are directly copied and pasted from previous "in person"-courses. This leads to the course not being optimised for long-distance learning
The time between returning an assignment and receiving feedback can be quite long
The responsibility of finishing everything on time weighs heavy
1- University is a place for professional network building and socializing. The digital aspect of this was AWFUL/non-existent during the pandemic and even afterwards.
2- Less chance for casual conversations and projects that lead to innovation and scientific spirit.
3- The communication experience with professors is actually heterogeneous, each professor might use different channels and react/communicate differently on each channel, it feels like engaging a patchwork of organizations rather than a single organization.
Students' engagement
Time perception (its perceived very discrete and limited when online)
Online etiquette?
Maybe the lack of interaction with lecturers and with students peers, if we see each other we have time to ask, discuss face-to-face, get to know friends better.
Poor possibilities to meet other students, lecture recordings are easy to pause when I get distracted which enables distractions more, and no reason to go campus/leave home
Limited interaction between participants; not always effective; boring
The communication between course staff and students.
Lack of social interaction.
Procrastination on tasks.
- course video recording may not be available
- group work may be difficult as you may not know each other
- motivation of taking the course difficult to monitor and take corrective action early
interaction, relationships, common platform
Sometimes difficult to get instructions or help, sometimes the workload is huge compared to credits and sometimes there is quite a little work to do.
- Difficult to establish a communication channel with teacher/ ask doubts when I have them
- Extra effort needs to be made to reach out to peers

video lectures where just notes are read from screen word to word, no easy forum/chat for anonymous questions/discussion with all the course participants, no peer meetings, no possibility to receive advice, tools keep changing so no online course is available after 10-years (technological obsolescence).
<p>1. Some courses recorded lectures in poor quality years ago, and simply replay those to students every year. If the course provides recorded lectures, those could be re-recorded regularly (maybe even annually) to ensure the sound quality is perfect, the materials are still relevant, and the English language is understandable.</p> <p>2. The course schedule needs to be announced well in advance. Sometimes mostly long-distance self-paced courses announce live sessions with mandatory participation at the last minute. Sometimes Moodle pages contain irrelevant schedule information from past years. Each long-distance course needs to have a TA responsible for keeping Moodle contents up-to-date and communicating the schedule to students.</p> <p>3. The relationship between the courses in a degree programme needs to be somehow communicated better. In my degree I felt that many courses were just bundled together without a particular purpose. The course overlap between multiple degree programmes at one department is also quite vast, I didn't feel there was enough specialization and differentiation. Towards the end of my degree I felt the purpose of the degree became quite vague.</p>
<p>1. less contact with fellow students</p> <p>2. less concentration</p> <p>3. less variety</p>
<p>Too many zoom calls are exhausting</p> <p>No need to leave the room (no variety)</p> <p>Loosing social contact</p>
<p>Missing interaction</p> <p>Missing live presentation skills</p> <p>Technical issues</p>
<p>- difficult to find friends</p> <p>- technical problems</p> <p>- problems to read facial expressions and gestures through camera</p>
<p>Teaching tools</p> <p>No personal interaction</p>
<p>1. Peer-to-peer interaction is more difficult</p> <p>2. Technical issues might make participating in a lecture more difficult</p> <p>3. The learning platforms (eg. Moodle etc.) might not be best suited for fully online courses and might need some new features for better usability for both students and lecturers</p>
<p>the platform is not easy to understand</p> <p>the profs don't answer to your questions</p> <p>you don't see your peers or get to know people</p>
<p>- if mandatory to turn on cameras (reduces advantages)</p> <p>- poor internet connection</p> <p>- professors' acceptance of switching to online</p>
<p>- no peer contact</p> <p>- Bad atmosphere</p> <p>- no room change</p>
<p>it's easier to loose the focus, more interruptions, dependency on good wifi</p>
<p>Some professors aren't as good with technology</p> <p>Not everyone has the best preconditions to do successful long-distance learning (regarding their environment or access to technical devices)</p> <p>It can get lonely, so there should be the possibility to connect with the other students</p>

<p>Lecturer tend to do frontal lectures and forget about their audience easily.</p> <p>No inter-personal relationship.</p> <p>Ability to do other things during the online course</p>
<ol style="list-style-type: none"> 1. Videos as preparation for the live class (too much) 2. Less human/social interaction 3. Less networking
<p>Harder to attend courses over a longer period of time (plus 1h), you get easily distracted.</p> <p>Feeling isolated and lonely, having no peers for quick discussion. Hard to tell if people are mentally present</p>
<ol style="list-style-type: none"> a. Motivation of the lecturer and students. Students are easily distracted or do not participate actively, which means every group work is unsuccessful. b. Technical issues. Technical infrastructure for all students is key and technical knowledge for lecturers. c. Quality of lectures. Also lecturers should adapt, so online lecture and on-site lectures should not be the same, as circumstances are different. <p>In general, I would say, a mix of online and on-site lectures is the best. Especially the quality and success of online lectures strongly depends on different factors, as motivation of the students or if the lecturer can make the lecture also online interesting. Nevertheless there are some fields or topics, where an on-site lecture is just better, e.g. for explaining things or practical group trainings.</p>
<p>Only long-distance learning without any check-ins by teaching Staff for me often ends up in week-long procrastination and anxiety. So check-ins, e.g. in Form of homework, are very important.</p> <p>Often Times it is missed to give students Practice in what they learn. I Think weekly homework or similar Tasks make students realize their difficulties and questions and make a better and Deeper learning experience.</p>
<p>Many lecturers took their in person teaching concept and transferred it to their online classes, need to overthink this</p> <p>Online lectures tempt people to do housework while in the lecture</p> <p>Interaction between the lecturer and the attendees can be difficult</p>
<p>Impersonal, you stay alone</p> <p>Difficult to ask questions and participate</p> <p>Difficult to remember content</p>
<p>unable to attend if you have an unstable internet connection; little or no interaction with students; often very fast-paced</p>
<p>no contact to other students</p> <p>no contact to tutors/ professors</p> <p>higher fear of asking questions/ giving your opinion</p> <p>sitting in front of your computer the whole day, bad for body condition</p>
<p>interactivity</p> <p>the human</p> <p>the captivity of attention</p>
<p>Lack of contact with teaching staff as well as other students, higher barriers to contact teachers if needed, possibility of technical issues.</p>
<p>Sometimes, the material is not accessible, when you are offline and you cannot download it.</p> <p>You spend the most part of your day in front of the screen, which is exhausting for the eyes and I personally don't leave my house as often.</p>
<p>Better lectures, better tools and better way to see what is been learned</p>
<p>Social connections and feeling as a group of students is missing.</p> <p>Engagement of the students during the lecture quite low. Level of stress is higher due to no breaks that would be existing if you are walking to another room or having lunch together.</p>

Less human contact Not socializing so much Too much time looking to a screen
1. It's easier to get distracted if you are at home taking classes because you feel you can multitask. 2. It's harder to make a connection within your teammates and profesores, because the small talk time disappears in the online lectures. 3. When presenting it's hard for people to participate, and people are not that excited about discussing or talking.
open cameras more didactic impersonal
Schedule
problems with internet connections, personal devices and university resources, not enough knowledge of modern telecommunication from teachers
Some teachers are unable to teach online Less communication with classmates Teachers are unable to keep practical lessons
Not everyone is familiar with it Easier to get distracted
There is no face to face contact.
Bad wifi, people that can Not Work with technique
Faulty internet connection could get in the way of it . There's no face to face communication The atmosphere of the in university classroom isn't the same as the online one.
Miss of class mates, miss of personal communication, difficulties of time management,
A short lectures - communication between teacher and students - recording the meeting
Need improvements: 1. Availability of the professors all day 2. Small group tasks 3. Interactive courses
Most of the classes are good in online, but there are some exceptions of course. Mostly on exams it's easy to cheat, so that could be a weak point
Style of teaching, prepared presentations, delivery of content
No personal contact with people You have to keep your house warm, you used your toilet (water) ect. This is expensive, if you don't have any support for the university Feeling alone/depressed
Disadvantages of online learnings are mainly related to students who are easily interrupted by another tasks
Distraction Less communication Taking the class serious
Preparedness of lecturers in most cases No physical contact with classmates Easier to cheat on exams
Technical problems, poor lecture management, missing body language
Easy to distraction. Efficient. lack of emotional communication

Respecting time and sticking to the agreed upon lesson time since sometimes the lesson can be longer if it is online and students usually have other lessons to attend Strong Wifi connection Having enough time for students to ask questions if they have any
not able to meet people in full online courses sometimes problems with the connection
Streaming issues. Impersonal to ask questions, could be interrupted by the network or others more easily. Teacher's can't use the tools properly sometimes.
Bad network Interruptions
difficulties to get help loneliness complex systems
Really cold/impersonal Harder to stay concentrated and involved Can not talk and meet with friends
Possibility for questions All time. Available
Online courses are not possible for everyone due to an instable internet connection and/or missing calm environment in order to concentrate on the online course
No personal contact with fellow students High possibility of distracting yourself/getting distracted Teacher can't read face impressions from students that are to shy to tell that they didn't understood something
discussions and interaction are missing, it can be lonely

ITEM 14: PREFERRED ONLINE COURSE

- Recorded lectures for watching later, lecture notes, and a book for learning materials. Weekly exercises with TA feedback on at least a part of the work, the rest reviewed by other students. Two or three self-assessments over the course. Project or a week-long exam at the end of the course. For the grade, maybe 40/30/20/10 weighting between exam/project, exercises, self-assessment and peer-reviews. I would guess that about half of the courses I took over my undergrad fit this description in part. A few of them were exactly this, and I enjoyed them a lot.
 - I kinda like Zoom, even though it is not perfect, but I think it se the best option available at the moment.
 - Moodle is good, but not all teachers know how to utilize it, so I think that offering (mandatory) training for them could help.
 - I would have hoped that we would have been taught how to work in a code repository as a team. What is the good flow etc. But anyhow, when working with a code project with a group I prefer GitHub over other tools.
 - When I have a group project in a course, I usually have created a Discord server for our team, where we can have a chat, share files and links and have the group meetings online. That is something I have found to be really functional and convinient.
 - I have used both Google Docs and Microsoft Word. I don't have a strong preference, but it is important that every person in a group uses the same tools. Word has probably slightly better tools.
 - I use school's librarys databases (Scopus) to find scientific articles and I like it.
- Teams is best to partisipate and good to do practise in common platform
- Due to the pandemic, all the courses that I have taken have been 100% online. I am hoping that we could meet with other students and teachers at least for a couple of times during the next

semester.

- At the start of the week you are given the study materials and exercises. During the week you can attend online groups to get help on the exercises and they must be returned by the end of the week. The projects and tests can be done and returned online

I had an online course that worked like this and I feel like it was the smoothest experience I've ever had with long-distance learning. Usually however online courses tend to lean either too far towards "in person"-courses or complete responsibility on the student

- Software models and modelling by Antti, Knutas was probably the best structured course on moodle.

If it was up to me all courses should use discord or ms teams. Zoom is a mess, useless, ugly, badly integrated with other systems (ie: docs) and not automated at all.

I like it when professors use live polling tools but only one professor used them and only for 1 lesson during the whole academic year.

- I usually participate to online lectures from home. The tools used for this are usually either Zoom or Teams, whatever the course uses. If the lecture videos are stored and available for viewing afterwards, I usually watch them at my own time, not necessarily when they are streamed live. I usually just complete the possible exercises/assignments required to pass the course, using the tools required and/or provided.
- Teamwork is arranged and performed in Miro, documenting is done collaboratively (preferably in Google Docs), Kahoot is used (good for gamifying, competitiveness, and engagement), also group work contributes to common, e.g., different teams work on their part of the common paper or some project.
- I like almos participate to online via Zoom and Teems.
- I actually like blended courses, I can attend the main lectures in campuses to interact with lecturers and friends, or attend online if I have some other businesses to do in the same days if the time schedule is conflicted with each other. I still find I understand better if I attend lecture live stream or in campus rather ran only watching pre-recorded lectures, but still I think there is still definitively the need for pre-recorded or recored lectures whenever I want to rewatch the lecture especially with some difficult courses. I think my university is doing really good right now in provide students blended courses. I hope they still continue like that even after the Covid pandemic.
- Clear structure on the course where is easy to get in subject, no weekly set deadlines as those cause unnecessary stress. Existing courses match poorly those expectation.
- Most of my courses have contact teaching, but still enables students to participate online. The most useful tools are Zoom and Moodle. Some students just skip the contact part, and take it online fully. This will decrease the level of interaction a lot.
- I like that there is an option to participate in online life lecture or watch the recorded version of the lecture. I like Zoom or Echo360 as streeming platform. Zoom is good for discussion and interaction during lectures. For pre-recorded lectures YouTube has been the most pleasant to use.

Meeting sessions with corse assistants have been on Discord or Zoom. In some courses, even though the lectures where online there was an option to meet course assistants at campus, which was nice.

In many courses there were weekly assingments, which had to be return by end of that week. In some courses all the tasks were revealed in the begining of the course, but had different deadlines. There is usually also a course project which has longer deadline. I think that having different deadlines for each assingment was good, because then you had more motivation to do them.

I think that best way to execute an online course is, by giving students to the freedome to choose when watch lectures. Then having optional events where you can meet course assistants either

live or online. The assignments should have a deadline, but it is nicer when everything is published all at once and you know what is coming and can schedule accordingly.

- I have used many tech tools such as Zoom, Teams, Discord and the likes in my blended study as it becomes the new normal in these days and I am so comfortable to take course with it.
- Blended with flexibility
- There is a "suggested" weekly schedule, so for example a lesson and exercises for each week BUT a possibility to do everything when I want to. So I could do the whole course in a week if I want to.
- In the online courses, but also in face to face lectures, I like the interactive tools like quizzes and Mentimeter. I prefer also Zoom over Teams and we use ILIAS in our university as a platform for the courses and the materials, which is good, as a common platform is important. Icebreakers are nice and if people turn on their camera. But I do not like classic lectures in the online format, so synchronously, it does not really make a lot of sense to me.
- Typically: Teams or Zoom, teacher chooses the tool. I don't like working in breakout rooms. If groupwork is necessary, better to discuss in Teams / Zoom.
- I like the pre-recorded lectures hosted in YouTube.
- My first preference would be blended courses as they allow for the balance between attending courses in person and offline which lets you choose according to your convenience. Some tools I use when allowed to choose the medium of learning are OneNote as it allows me to make notes as well as diagrams/flowcharts when needed. Some engagement tools are the online Microsoft apps which allow for real-time collaboration.
- I had one great online course during my first year of studies, it used online lectures which were really well made and easy to follow. What I hate about other courses is that there is a "lecture" which is just prerecorded, even from another year, and there is just plain text on white background and it gets read with no proper explanation. Making online courses is really not that hard if professors would just try a little harder, it doesn't need much to make students actually interested in the lecture.
- Something that would bring joy when participating
- The course is well-structured, every week has sufficient content and builds on previous weeks. The schedule and overall contents of the course are explained in the first lecture, and followed strictly. Lecturer has an engaging style, and asks students questions to ensure engagement during the lecture. There is room for questions at the end of the lecture. If a course has exercises or lab sessions, the content of those lab sessions completely matches what is taught in the lectures. The lecturer must participate in creating the content for the labs, and ideally should also conduct the labs personally. In the labs preferably the lecturer carries out the lab assignment and the students follow along. This is better than just letting students work independently during the lab - there are course assignments for independent work, and the labs can be more like walk-through tutorials. If there is independent work, students present it at the end of the session and get feedback on their work. Many blended courses only conduct proper labs for on-campus students, and online students are left with a bare minimum "ask if you have any questions" approach.

I am attending a degree programme that was directly advertised to working people. For me, having every lecture and lab session video-recorded is a must, because often I am at work during the day and cannot attend live. However, I do prefer to attend live when I can - that is far more engaging. I would say that the best online courses conduct live lectures and labs every year using Teams or Zoom, video record those, and publish the recordings to the students that could not attend. This ensures that students that want live participation can get it, and students that cannot attend e.g. due to work can get the same content later. This also ensures that lecture materials are re-recorded every year, and remain relevant and hopefully improve every time.

- Teams Chat, annotate, react
- Dislike menti
- Microsoft Teams is the most used online platform we use at my university. I use it to work on projects with other students. Usually everything works fine. The online lectures are most likely

to be visited by everyone.

- Everyone should have their camera on, discussion like atmosphere with questions to audience, collaboration exercises
- The online courses in my program are typically held via Zoom as normal frontal teaching. Since I generally prefer to learn in the form of self-studying, I prefer to just use pen and paper to take notes during these, without any further interactive online tools.
- I prefer online courses if they are still engaging and lead to open discussions. For instance, one lecturer used the presentation mode in zoom, which means that we couldn't see the other participants nor ask spontaneous questions. That was very demotivating.

- I would prefer a course that has a clearly outlined schedule for learning events, learning materials are clearly marked and available and courses aims are well presented. If the course requires extensive teamwork, I would prefer that the teams are self-organizing and are allowed to decide for themselves how to communicate.
- I prefer Zoom and Moodle.
The first one is good for the contact with students, because I didnt have problems with these software. It does work mostly and it's easy to handle.
Moodle is in my opinions good to take the documents and you can see, what you done and which document is missing.
- Our online courses take place via Webex
- Teams
- I prefer Zoom and Teams for group work
- ...
- -teacher uses camera, some participants as well
-short breaks
-not just a lecture, but supported by media such as power point
-I prefer Zoom or Microsoft Teams.
- I think it's best when the actual lecture is uploaded as a video so that you can (re)watch it anytime and then there's a live-session with the professor (on Zoom for example) where you can ask questions or do some practice tests, so that there's a deadline to do the work if you want to participate in that. Some of our professors did it like that in the last semester.
- Starts with a repetition, has enough time for us to take notes and ask necessary unanswered questions
- All videos on. Interactive part every half an hour. Breaks min every 90 min. Different tools eg concept boards, games
- I organize my week according to the class time, so I can be more productive in between. I let the tools and materials I will need already prepared a day before, or a few hours before starting. I have an online calendar where I add all my personal and educational appointments to make sure I don't miss anything.
- Lots of Switching between modes of learning. Solely listening to someone talk is tiring
- Unfortunately, I have had some pretty bad online lectures. In my eyes, this means that the lecturer simply gives his lecture, in the worst case even just reads out the slides. If there is no interaction online, the concentration is gone in no time. For me, concise, meaningful, but brief slides are important. For this, the lecturer should explain in more detail. There should be interaction with all students every 30 minutes at the latest (it doesn't have to be long or particularly in-depth, but it keeps you active). In addition, a sufficiently long working phase should be planned in which the knowledge is applied or expanded. This can happen alone or in groups.
And regarding the tools, honestly it just doesn't matter if we use Google docs or MS Teams. But in general, I like sth. to organise group work (e.g. Trello or Teams), sth. to do group work (e.g. google docs) and something to keep students active during class (kahoot etc.)
- The best blended course i attended, that really worked for me used multiple methods. There were

multiple tools used every week: First we had to watch a few Videos of a Recorded lecture. In between the Videos we had to do exercises with the just learned Information. We were encouraged to take notes and write down questions. Then we would have to participate in a mandatory class as well. This would be either using Zoom or in an actual classroom. Our Professor would actually check attendance. She always Made sure that she had only small classes of 20-30 students so she could Account for everyone. In the class she would Hand out a paper of exercises which would be quite difficult and we would work on them sometimes alone, in pairs or in groups and talk about our results. This is the best way to make sure everybody understood everything in my opinion. In the end we would be encouraged to ask any questions. We could also send emails to our Professor and she would offer tutoring if necessary. That's the best class I had in years.

- In my opinion it is important to capture the audience's attention which is more difficult in online learning environments than in on-campus learning environments. I believe the groups should be smaller (maybe up to 10 people max) and there should be small exercises in between that could be worked on in groups.
 - I like Zoom meetings more than MS Teams meetings
 - Small group with synchronous lectures, break out sessions, pre-scheduled deadlines for homework, exercises to practice on my own.
- Preferred tool: Zoom, ILIAS

In real: often large groups, no active participation, only lectures, no tasks to practice

- I prefer doing online courses via zoom
- Work with the Students together, Break out Rooms are important
- I usually participate using my laptop and take notes on paper
- high participation rate, obligatory to turn on your camera, polls/ questionnaires, time to ask questions, no break-out sessions, Zoom
- for online courses I like Teams or Zoom, sometimes it's helpful to use quiz tools
- One of my best online courses was an international management course during my Erasmus because it was very interactive and the teacher kept varying the working methods, the materials, so as not to lose our attention.
- An online course should be easy to access with all tools made available. There should be enough opportunities to contact professors and other students through different tools and especially for group work, collaborative software such as Microsoft Teams is essential. Any needed information should be made available to students, also to access it offline if possible. More emphasis has to be put on tracking the progress of learning so using online learning platforms such as Moodle are great to test one's own knowledge level.

Until now, many courses are prepared for online methods but there is still a lot of potential to improve the experience especially in terms of collaboration and self-monitored learning.

- I like to have the material beforehand and take notes on my iPad, I can write down points I didn't quite understand and write down approximate time stamps to look up later
- Usually, you "put up your hand" to show the lecturer that you want to say something and he/she calls on you. This is how it works online and face-to-face. I think, I prefer face-to-face here because you interact much better with the lecturer and not just with a screen and a voice.
- Has prerecorded lectures and lecture notes that are somehow editable. Has continuous participatory learning measurement, such as vocal exams and group work
- I took advantage of the classes from my own room.
- Zoom lectures in combination with a central online storage where all documents etc. are gathered. Within the Zoom session breakout rooms are established once in a while to get the students activated and engaged. Everyone got their camera turned on. Not more than 15 people in a lecture. Frequent discussions between lecturer and students. Several meetings in person to get to know each other better.

- I prefer the blended courses instead of a complete online course. Using Slack or Teams to connect with teammates is nice since it is a place where everything can be organized. Also the document tools are good when working in a group. I consider the lectures are better when they are offline but being filmed, so you can check them later but have the opportunity to be there, and to connect more.
- Zoom and Slack
- we used a lot teams and zoom
- Zoom or teams
- Pre-recorded lectures, with clear requirements, and weekly online or face-to-face Q&A sessions with teachers
- I prefer online Courses at Coursera and Udemy. Because on these sites I can find well organised online courses.
- I believe a very good solution is hybrid courses. When there is a possibility to take some lessons/presentations/tasks online, when it is not needed to be present, that's a good balance. But to be effective, and have the relationships with my mates, it is important for me to come to the uni campus, and meet and talk with students and teachers
- I would have more online lessons, or have the possibility to attend online on some lessons
- At blended courses I prefer participate lectures online and seminars in real life.
- The typical online platform is the teams, but I used many of others, as well. I used to sit in my working room and following the lessons. I like to use camera, instead of black screen. I like to see the face of the audience, the class mates, the teacher.
- Usually I used zoom or Google classroom to participate to online courses, and I rather don't like to use camera, because sometimes I have other things to do, but meanwhile I like to record the courses, in case if I did not understand something, I would have the opportunity to learn it later.
- To be honest I like online classes, the knowledge is able to be transferred through this way, I like it. Of course there can be more technical issues, but still a good option.
- We use Google meet in our university, Google tools for Example sharing links (excel sheets ect) Its okay to me to use Google meets, its easy to use and many people have gmail account. I don't like online courses, because at home I can't focus for the teacher so long. I think the lessons are too long to sit before the screen, and do nothing, just listening. If you are in a room, its boring too, but you can see your classmates, you don't focus anything else, just for the class I think. I prefer personal courses, maybe the online education is for future, but I'm glad, that I have opportunity to take personal courses. It is really good for your mental hygiene.
- I would prefer online courses to be short in pieces and effective
- I wish online course to be part of the course. If the course is wholly online I think it will be difficult to maintain high level of study. However, being in the class for several hours isn't good use of time, from my point of view. I want the most important part of the topic to be discussed face to face, and other time consuming part of the class to be carried out online.
- It is very important to have a specific interface for teaching (for example MS teams). It is very hard to catch up if every teacher uses different software.
- I prefer dealing with Moodle and Zoom because they allow you to upload files and make recorded and live lectures
- My preferred online course was a risk management Course we had to study fully online so we had to use discord as a way to get information on the class group channel and used Google docs for any prolonged sheets of info , Google sheets for uploading student informations, and google forms for polls or surveys .
- I prefer more project based courses, I think it can be solved online as well.
- I use google meeting to attend online courses. Sometime the internet connection is weak. It is more based on self study.
- I wish online courses to be interactive
- Last semester, I had a course that was blended. I enjoyed the online lessons more than in person. I was able to make a set up for myself with my computer and notes. I was able to listen to the

lesson and make notes and at the end I asked questions via the google meet chat option and they were answered by the presenter. I am fine with using any tool (teams, zoom or google meet).

- i used microsoft teams in most of my online classes .

its a very good tool

- The online courses must be comfortable for students with a short presentation and brief explanation
- Hybrid course so i can participate in class or be flexible and Watch in whenever i want
- xxx
- Teams for documents, but Zoom for meetings,kahoot and mentimeter are also great tools
- Make the content and recordings available after the lectures.
- Connect to the course , get the course material and study before the online lecture
- I don't really like them. Because mostly it's the teacher talking by themselves.
- via zoom with the possibility for questions and feedback
- I normally use zoom meetings to participate. I don't choose them myself, I would rather meet the people in person.
- Preferable recorded courses instead of live stream. Possibility to include quizzes in order to check the learning objectives
- Well the best form was when everything was like before, you had a live course where the professor hold it's lecture and you also could interact with him.
- Teams is very helpful with structuring taks, documents, and having everythin at one place, however the video calls do not work so well there, so here I prefer Zoom