

Hybrid education @UM

The way forward

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1. Introduction

The COVID-19 pandemic forced education at Maastricht University (UM) to find creative solutions for providing education at a distance. More specifically, limitations in learning space usage and impossibilities to come to campus, for example due to quarantine or travel restrictions, have led to the application of hybrid learning. Hybrid learning is the situation in which a part of a group of students is following education live inside a classroom, and another part of the group participates remotely via an online connection. However, hybrid learning requires well-developed teacher skills, high quality teaching and learning spaces with high-end technology setups, well-provided educational and technological support, and the educational design (e.g. how to improve interactivity).

From different departments within the organization, the question has arisen what we are going to do with hybrid learning in the longer term. Because while there are challenges, there are also potential benefits that better prepare UM for the future of education and dealing with the growing student numbers, as well as ensure that UM keeps up with the rapidly transforming world we live in.

To examine this, the TEE-program carried out a practice-oriented research in 2021 that looked into the current state of affairs for hybrid learning. It consisted of three main questions: 1) what does the literature say about hybrid learning and its do's, don'ts and don't knows 2) how are our current learning spaces designed to facilitate hybrid learning, and 3) what are the experiences and needs of teaching staff in regard to hybrid learning. The results are presented in this report, with the conclusion that it is recommended to start a pilot program with a more high-end technical solution for hybrid learning, testing educational scenarios that fit in PBL.

2. Defining hybrid learning

Hybrid learning is not the same as blended learning. Blended learning refers to enriched student-centred learning activities, made possible by the harmonious integration of various strategies, achieved by combining face-to-face interaction with ICT. This means that blended learning is an approach to educational design, whereas hybrid learning only refers to a classroom setting. In other words, in blended learning there is interdependence in learning activities. A student does an online activity first, and then a face-to-face one. But in hybrid learning, part of the students follow fully online education, and another part fully face-to-face. Figure 1 visualises this difference.

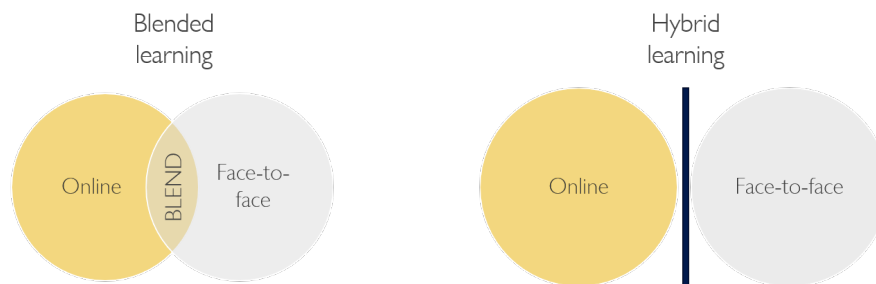


Figure 1: The difference between blended and hybrid learning.

Because blended and hybrid learning are often confused with one another, and to emphasize the teacher task of providing education to two target groups at the same time, other sources propose alternative terms for hybrid learning: multi-location learning and bimodal learning. Hybrid learning can take place in several different types of classroom combinations (see Figure 2):

- **Physical classroom:** the students are all present in a physical space;
- **Virtual classroom:** several students, that are all on a different location, call in via an audio-visual live connection, and this forms a virtual classroom;
- **Remote classroom:** several students, that are all in the same location, call in via an audio-visual live connection, and are being taught by a teacher the is in another location;
- **Hybrid virtual classroom:** physical and a virtual classroom combined synchronously.
- **Hybrid remote classroom:** the same as above, but the students that call in from another location are all in the same physical space.



Physical classroom



Virtual classroom



Remote classroom



Hybrid virtual classroom



Hybrid remote classroom

Figure 2: The difference between blended and hybrid learning.

2.1 Do's, Don'ts and Don't Knows

It is important to include the latest insights from literature during discussions and in making policy choices about hybrid learning. The concept has not yet been extensively tested worldwide, but the emergency remote teaching and learning during COVID-19 gave this a huge boost. Initial findings show potential benefits (like providing education for students that cannot be physically present and bringing in experts from all over the world), but also underline the need for a thorough redesign of education, the requirements of technology (e.g. implementing high-end hard- and software), and creating a solid support structure. Below is a list of do's, don'ts and don't knows that can provide input for a constructive discussion.

2.1.1 Do's:

- Let course coordinators redesign their courses and tutorials sessions. Preliminary results show that it is very hard to retain attention in this setup, even when using top notch hard- and software. Preparation is key, as it requires a new approach to teaching.
- Make sure to use correct definitions of concepts. Hybrid learning is not the same as blended learning.
- Motivate and prepare all teaching staff from higher-up. It needs to be based on the UM vision on education and fit in the PBL approach.
- Realise the vast amount of time and money that needs to be invested in order for the concept to succeed on a large scale. Learning spaces need to be prepared for this approach.
- Make sure that students are very well prepared when coming to class. This goes for content as well as format. This is very important for the sessions to succeed.
- Make sure there is uniformity in setups and provide training on using the hard- and software.
- Work together with vendors, as they develop and supply the hard- and software.
- Set up a broad support service, consisting of both educational and technical specialists.
 - For example: KU Leuven has created an entire university-wide expertise centre, that provides support for this new pedagogy.
- Let teachers experiment a lot. They need to feel comfortable with the hard- and software.
- Provide fast, stable, and cabled internet connection. This also goes for students at home.
- Shorten length of sessions, as it requires more focus.
- Share best practices and best failures as much as possible. Try not to re-invent the wheel.

- Use the community of inquiry model to design engaging education in the hybrid virtual classroom. This model addresses student engagement in several domains.

2.1.2 Don'ts:

- Do not integrate computer vision techniques (like eye tracking) without consulting the legal department (regarding ethics).
- Don't assume that students that take part remotely have the same experience as the students that are physically present do. They don't. Research shows that they feel more distant.
- Don't let teachers use this method without extensive pedagogical and technical training. Letting students for example just dial in via a laptop screen will have negative effects and is a recipe for inequality.
- Do not assume all students have access to proper internet.
- Don't scale up too fast. This requires a radical change in pedagogics and redesign of education and its learning spaces.

2.1.3 Don't knows:

- There is no research that provides evidence for this approach to teaching and learning to have any positive effects on learning.
- Even though there are many potential benefits, all of these benefits are still exactly that: possible benefits. Research has yet to provide evidence for these benefits.
- Mobile sets could provide a solution, but it is unsure if they provide the same experience as a fixed setup in all spaces.
- It is difficult to know in advance what the effect will be on equality, and in extension of that the accountability for course quality. This needs to be monitored closely.

3. Inventory of the hybrid virtual classroom @UM

3.1 Introduction

In the past two years, most faculties @UM implemented hybrid learning as a solution for the limited use of learning spaces due to COVID-19 restrictions. Educators teach remote and in-person students at the same time using tools and hardware for video conferencing. During the emergency remote teaching and learning, the most used setup was the hybrid virtual classroom (HVC). The HVC is the setup in which a group of students follow a synchronous tutorial session physically on campus, while another group of students call in from home. This setup was often used in combination with blended and/or online learning. To support this educational setting, specific hardware and software is needed to allow for optimal audio-visual interaction. Faculties have therefore started transforming their teaching and learning spaces.

Each faculty has their own approach in organizing the HVC setup. To create an overview of where we stand collectively, learn from experiences and share best practices, an inventory has been done of all teaching and learning spaces at the faculties. This input offers insight in order to negotiate a possible purchasing advantage in the long term and to arrive at a universal variant for the entire university. The results of the inventory are written down in this chapter.

3.2 Results per faculty

In the table below, the results of the inventory are shown.

Faculty	Contact	Specifics	Information
FdR	Jean-Paul Beusen	<ul style="list-style-type: none">- 40 rooms- ProWise screens- External microphones	<p>Several classrooms are also equipped with additional microphones, often in combination with acoustic measures, in order to optimise the sound.</p> <p>The Statenzaal (large lecture hall) is equipped with 2 intelligent cameras to support interaction with the room and external participants.</p>
FHML	René Nijssen	<ul style="list-style-type: none">- 82 rooms- cTouch screens- External microphones	
FSE	Ton Derix	<ul style="list-style-type: none">- PHS1:<ul style="list-style-type: none">o 28 rooms with screen and internal mico 10 rooms with screen and external mico 28 rooms with only screen- UCM ZW4:<ul style="list-style-type: none">o 27 rooms with screen and internal mic- UCV Venlo:<ul style="list-style-type: none">o 3 rooms with screen and internal mic- Chemelot:<ul style="list-style-type: none">o 27 rooms with screen and internal mic	<p>More info: https://fse.maastrichtuniversity.nl/lo-fse/site/multimedia-rooms/</p>
FPN	Rosanne Jansen	<ul style="list-style-type: none">- UNS40: 13 rooms- Oxfordlaan 55: 10 rooms- MSM: 4 rooms- In every room Smartboards with beamer setup- External microphone for conferencing	<p>Microphone: Konftel Ego – Personal Conference Speakerphone</p>
FaSoS	Sven Assink	<ul style="list-style-type: none">- 33 rooms- Prowise screens	<p>The Turnzaal (lecturehall) has an older setup with beamer, LifeSize recorder and external microphones. This setup allows for Mediasite recordings of lectures.</p>
SBE	Paul Hick (TS53) Walter Vluggen (Tapijn)	<ul style="list-style-type: none">- 114 rooms (per 1/9)- ProWise sceens- Some rooms have external microphones (e.g. larger halls)	

4. Needs assessment for hybrid learning @UM

4.1 Introduction

Given the potential opportunities of hybrid learning in terms of futureproof education and in order to enable any rapid transitions to online or hybrid learning, it is necessary to map out exactly what these possible educational scenarios for hybrid learning look like and how we can support them. This support concerns both technology inside learning spaces, as well as educational support in the design and delivery of education. Several departments within UM have been asked to look into what place hybrid learning can and should have within UM. Therefore, a needs analysis was conducted.

4.2 Method

4.2.1 Data Collection

Data for the needs assessment was collected from September until December 2021. Participants were asked to fill in a questionnaire in Qualtrics to gather opinions and experience level on hybrid learning. We received a total of forty-six responses. Respondents include managers and teaching staff at the University Library, the Language Centre, the Global Health Program, and the Faculty of Arts and Social Sciences (FASoS). Participants who indicated their interest were invited to take part to focus group discussions as a follow-up to the survey. Three separate sessions were organized, for a total of 16 participants, 6 from the Language Centre, 6 from the University Library, and 4 from FASoS. The sessions were held on zoom; each had a moderator and a notetaker from the TEE-programme team. With participants' consent, sessions were recorded for analysis purposes. In addition, a written response to the focus group questionnaire was submitted by an educator from the Global Health Program.

4.2.2 Data Analysis

We compiled survey results inductively. We used the results to draft a questionnaire for the focus groups. The data from the questionnaire was gathered by the notetakers during the interviews. Focus group results were categorized inductively.

4.3 Results

Below we list the main takeaways from the questionnaire and focus groups.

Seventeen participants have had experience with hybrid learning so far. Among the critics raised about the hybrid learning model, recurrent points were related to educational quality and teachers' workload, as listed below.

4.3.1 Concerns, issues, and advantages

Concerns on educational quality

- Interaction between face-to-face and online students is challenged by the hybrid learning setup, hindering group activities and discussion.
- Disparity between online and face-to-face students:
 - Students at home and face-to-face have a different, unbalanced experience, with students online often receiving a lower quality education.
 - Online students get to ask fewer questions and are often (unintentionally) ignored.
 - Professors tend to focus less on online students.
- The social aspect goes missing.

- A fixed hybrid learning setup, as many vendors are offering right now, might not fit PBL as well as an in-person set-up.
- Students may take advantage and attend online even if they do not need to.

Concerns on teachers' workload:

- Hybrid learning requires more preparation and training on the teacher's end.
- Holding a hybrid learning session requires more effort as there are two simultaneous class spaces (physical and virtual) that the teacher is responsible for.
- The teacher is responsible for taking care of the hardware set-up, adding extra work.

Technological (hardware) issues

- Poor video and audio quality decrease the quality of online students' learning. Examples:
 - Fixed mics that don't allow the professor to move.
 - Audio system that can't filter out background noise.
 - Audio system that does not allow online student to hear the lesson.
 - Fixed cameras that have a narrow angle.
- Having too few screens does not allow to display online participants and class slides simultaneously, which hinders the lesson's fluidity.
- Lack of support in setting up and using hardware and/or software.
- Teachers' inexperience and lack of training with the new technology causes more work on their end.
- Lack of technological support, both in-class and out-of-class, (e.g., maintenance of the equipment, a technician taking care of the setup, an assistant providing in-class technological support) increases educators' workload and decreases education time and quality.
- Logistical issues, e.g., scheduling.
- Not knowing how many students will be following online and face-to-face each time adds a factor of uncertainty and makes class preparation more challenging.
- Large groups are difficult to manage.

While several of the above-listed issues could be solved or improved with better and more advanced technology, a number of participants questioned whether hybrid learning can ever reach the same educational standards as a face-to-face setup, and whether it is a model well suited for PBL. Despite some criticism, numerous participants showed interest in the adoption of hybrid learning at UM. Next to the concerns and issues of hybrid learning discussed, there were also possible educational advantages:

Educational advantages

- Accessibility and inclusivity: having the option to attend online opens educational opportunities to students who could not attend otherwise (due to e.g., health reasons, financial limitations).
- Hybrid learning could be better suited to certain educational activities and provide a way to integrate the advantages of online and face-to-face learning.
- Hybrid learning can enrich the educational offer by allowing for international collaborations with other universities and the work field (e.g., international courses, exchange programs, guest lectures).
- With hybrid learning, UM is better prepared to deal with the growing student population.
- UM's educational offer would adapt to modern exigencies and be more "future-proof".
- UM would be more resilient in times of emergency when face-to-face education is not always or entirely possible (e.g., pandemic), and keep up its high-quality standard for education.

4.3.2 Piloting hybrid learning

Twenty-nine participants expressed interest in participating in a pilot program. The participants mentioned specific needs for several domains:

Equipment (hardware)

- Camera requirements:
 - Everyone needs to be able to always see the participants they have interaction with.
 - Camera angle should allow for participants to move and still be in the image.
- Screens:
 - Online students can be seen by each other, the teacher/tutor, and their face-to-face peers.
 - Enough screens on-site to simultaneously show online participants and presentation slides.
- Audio system:
 - A microphone set up that allows the participants in-class to move while still being hearable.
 - Microphones or amplifier/speakers that allow online students to hear face-to-face students and vice-versa (e.g., conference mics, Jabra amplifier).
- Room features:
 - Enough sockets to have electricity access everywhere in the room.
 - Fast and stable internet connection.

Tooling (software)

- The tools used should be easy to operate and user-friendly.
- There should be tools available that improve interactivity between face-to-face students and remote students.

Support

- Pedagogical:
 - During sessions: moderator for the session, assistant (e.g., to check on online students).
 - Support desk: an experienced and expert tutor who can provide practical support and be a reference to go to for issues and questions on how to set up and teach in a hybrid education context (e.g., how to organically moderate having students in person and online).
 - Educational design: being able to go to an educational designer that can help (re)design lectures and other learning activities for the hybrid learning environment.
- Technological:
 - Professionalisation: training on working with tools and hardware.
 - Management: designated staff takes care of maintaining and testing the equipment, making sure it is working and ready to be used when classes start.
 - During sessions: a technician on-site (or maybe behind a telephone number) who can provide support when issues arise.
- Logistics
 - Aim for small classes (4-8 students).
 - Information should be available in advance about how many students will be present face-to-face and how many online.
 - Reimbursement of hours is provided, based on a realistic estimate of the time commitment.
 - Transparency and fairness: participants are informed that it is a pilot (experimental) program.

- A diverse team is needed to make sure as many voices and perspectives are represented.
- Creating a space for educators and students to exchange opinions and lessons-learned from previous hybrid learning experiences.
- Interviews underlined the need of having a clear goal defined for the pilot program, as well as clarity on how the pilot would be structured.

5. Conclusion

Firstly, we looked into the current state of affairs in regard to facilitating hybrid learning at UM. Based on the results from the internal inventory of learning spaces, it can be concluded that for a large part UM's learning spaces are in fact equipped to facilitate hybrid learning. However, current setups are only suitable to provide an emergency solution when education unexpectedly has to switch back to a stripped-down or online variant (e.g., in case of new COVID-19 restrictions). Furthermore, they only allow for basic educational needs in providing more flexible solutions (e.g., bringing in external expertise or allowing students with travel restrictions to take part remotely). Faculties have been experimenting with hybrid learning to gain more experience and to investigate whether the hybrid virtual classroom could become a structural feature of our educational model. However, there is no overall (central) governance and collaboration in place. It remains fragmented and exchange is minimal.

Secondly, we looked into teaching staff experiences and opinions in regard to issues, concerns, potential advantages and support for hybrid learning. Results from both the questionnaire and the focus groups highlight how participants' experience with hybrid learning (at UM and other places) has had many challenges so far. Several of these are related to low-quality technology and lack of support. Some of the mentioned issues could be solved by investing in better technology, creating a proper room set-up, providing technical and pedagogical support, and changing aspects of the organisational/logistical set-up (e.g., class size). Overall, there remains scepticism on whether hybrid learning can ever reach the same standards as face-to-face education.

Despite the scepticism, both the questionnaire and the focus group results highlighted the possible advantages and potential that participants see in hybrid learning, including – but not limited to – increased educational access and opportunities, as well as interest in keeping up-to-date with modern exigencies. However, there remains a need to identify more clearly what is UM's goal with and view on hybrid learning, to what extent UM is interested in implementing it further, and if its advantages are worth the investment it requires.

In light of this, a pilot program could provide a suitable experimental ground to test on a small scale what hybrid formats could work and in what context, creating a space for a constructive dialogue involving educators, managers, and students. Given that a substantial number of participants expressed interest and enthusiasm in participating to such pilot program, we propose it as a next step to assess whether hybrid learning can be adopted by UM in an efficient and feasible way, allowing the university to enrich its educational offer, resilience, and modernization.

In such a pilot program, possible educational scenarios should first be explored, after which several learning spaces will be equipped with high-end technical solutions, such as the following examples:

- [Logitech Learn Anywhere](#)
- [Hybrid Virtual Classroom @ KU Leuven](#)
- [Virtual Classroom @ Universiteit Utrecht](#)

The experiences teachers and students will gain within the proposed pilot-program will provide input to better inform our decision on how to proceed with hybrid learning on a more future-proof sustainable level.

6. Appendix 1: Survey questions

Page 1: General questions

1. Indicate your role:

- a. Teaching staff
- b. Manager
- c. Other, please specify

If manager (or other) -> skip the teaching-staff questions

2. Where do you work?

- a. Library
- b. Language Center
- c. Global Health program
- d. Other, please specify ...

3. Please leave us your email if you are interested in receiving the result report for this needs analysis into hybrid education at UM, and the possible pilot that might come out of it. (Open).

4. How long have you been teaching for?

- a. 0-5 years
- b. 6-10 years
- c. 11-15 years
- d. 15+ years

5. How many hours per week do you teach?

- a. 0-4 hours
- b. 5-9 hours
- c. 10+ hours

6. What courses are you teaching? Are they for example one-shot workshops or lectures, or entire courses? Are they online or face-to-face? Or both? (open)

Introduction

This survey is about your needs and experiences with hybrid learning. **Hybrid learning** is an educational model where some students attend class in-person, while others join the class virtually from another location, connected via an audio-visual live connection. There are several classroom setups for hybrid learning, with the **hybrid virtual classroom** being the most used. This model was adopted by Maastricht University as a response to the restrictions imposed on our university by the coronavirus crisis.

The setup that was used, consisted mainly of an interactive screen (whiteboard or plasma-screen), a camera and a microphone. This worked well for the emergency situation, but is not well-suited for a more sustainable, futureproof application. We therefore acknowledge that this questionnaire can only address your experiences with the current emergency hybrid learning solution. However, to provide insight into what a more high-end installation for the hybrid virtual classroom can look like, here are some examples:

- [Hybrid Virtual Classroom – Campus Kulak Kortrijk \(kuleuven.be\)](https://www.kuleuven.be/hybridvirtualclassroom)
- [Hybrid Active Learning Classroom | Universiteit Utrecht \(uu.nl\)](https://www.uu.nl/hybridactivelearningclassroom)
- [Logitech Learn Anywhere \(learn-anywhere.nl\)](https://www.learn-anywhere.nl)

As you can see in these examples, teachers facilitate face-to-face learning activities in a space equipped with a set of screens at the back or front of the room that view individual remote students life-sized. Next to that, directional microphones and cameras, allow the remote students to interact with individual students and the teacher as lifelike as possible. Such setups enhance interaction and participation of students that are not physically present.

NOTE: Unless stated otherwise, the following questions refer to hybrid learning as intended in an ideal setup (see examples above).

7. Have you ever taught in a hybrid learning setting before (at UM or another institution)?
 - a. Yes
 - b. No
8. Have you taught in a hybrid virtual classroom setting during the emergency remote teaching at Maastricht University?
 - a. Yes
 - b. No
9. When you taught in a hybrid learning context, what was the set-up provided?
 - a. Basic setup (e.g. interactive screen, camera and microphone)
 - b. High-tech solution (see introduction for examples)
 - c. Both.

10. What were some positive and negative aspects of the basis set up? (open)
11. What were some positive and negative aspects of the high-tech solution set up? (open)
12. What do you think of the current setups used at UM? (open)
13. What are in your view the most important advantages of hybrid learning:
 - Provides education for students that cannot be physically present
 - Increases flexibility for students
 - Increases chances for course customization and *ad hoc* education
 - Increases the number of learning/teaching tools available
 - Increases the University's ability to provide high-quality education in the event of crisis that prevent physical presence on campus
 - Other (open)
14. What are in your view the most challenging elements of hybrid learning:
 - Harder for students to retain attention
 - Extensive preparation required for teaching staff
 - Training and support required for teaching staff
 - Fast and stable internet required (also on students' end)
 - Students attending physically and virtually have a different learning experience
 - Span of control for the teacher
 - ICT-things (other than fast and stable internet), e.g.
 - Other (open)
15. Is hybrid learning a way of education that fits your educational program and vision on education?
 - a. Yes, because ...
 - b. No, because ...

Introduction

To investigate whether hybrid learning deserves a sustainable and structural place in education at Maastricht University, the EDvance-program is investigating possibilities and interest for setting up a pilot with an high-end solution for a hybrid virtual classroom. The following questions therefore address possible scenario's and required support.

16. Would you be interested in participating in a pilot program experimenting with hybrid learning at Maastricht University?

- Yes
- No

If No -> skip next 2 questions and go to end of survey

17. What kind of scenario's would you like to experiment with? How often, with whom, how many students, etc.? Keep it short. We will discuss more in the follow-up focusgroups (open)

18. What kind of support would you need from the organization? Please elaborate.

- Pedagogical support
- Technical support
- Work-force support (e.g. Student Assistant)
- Project lead
- Other (open)

7. Appendix 2: Focus-group instrument

Focus Group guide – Pilot Program: Redesign Hybrid Education at Maastricht University

Section 1: Introduction

- 1) Moderator and observant introduce themselves
- 2) Moderator gives introduction to the session
- 3) Goal of session is to get your input on:
 - a. Your experience and thoughts on hybrid education.
 - b. Your views on the future of hybrid education at UM.
- 4) Rules of engagement:
 - a. Cone of silence: what is said between these walls stays between these walls. All data collected is anonymous.
 - b. Everybody should get their turn, so the moderator will try to probe everyone and try to find the underlying cause of your motivations. Feel free to react to each other. This could be confirming or contradicting.
 - c. The meeting will be recorded for analysis purposes.

Section 2: Get to know participants

- 1) Short round:
 - a. Name?
 - b. What's your role? (Teaching staff / manager / coordinator. Department?)

Section 3: Experience and thoughts on hybrid education

- 1) Question 1 (10 minutes): Have you taught in a hybrid education setting before? Was it at Maastricht University? How was your experience overall? Anything that you particularly liked or disliked? (General, warm up-question)
 - a. Who wants to start? (Moderator searches for leads)
 - b. Probe other participants: was this the same for you?
- 2) Question 2 (10 minutes): Do you see any opportunities and potential in hybrid education? What about barriers / drawbacks? *[This could be also phrased as a comparison between hybrid vs purely in person (or purely online) education.]*
 - a. It could be about:
 - i. Accessible education (e.g., students who can't be here) and inclusive education (do all students receive the same quality?)
 - ii. Quality of education (student engagement, activities that can be done, flow and fluidity of the lesson...)

- iii. Amount of work required (incl. trainings, preparation for class)
- iv. Resources used and resources available (e.g., tools, guest lectures)
- v. Institution's resilience in time of crisis
- vi. Keeping up with the times and new societal exigencies

3) Question 3 (5 minutes): Thinking of the issues we discussed, and based on your previous experience, what are some changes that could be done to improve the delivery of hybrid education at Maastricht University? Which among them do you think are the most urgent and/or impactful?

- a. Could be related to
 - i. Technological improvements (e.g., more screens, different microphone set-up)
 - ii. Logistical changes (e.g., class time, room-set up)
 - iii. Technological support (e.g., someone else does the set-up, trainings...)
 - iv. More / different assistance to the teaching staff
 - v. Pedagogical changes (e.g., lesson structure, use of quizzes...)
 - vi. Other

Section 4: Setting up a pilot

Statement:

The hybrid education we have experienced at Maastricht University so far is a model developed as an emergency response. The model was well fit as a temporary solution. However, as discussed in this group, it presents some flaws that make it inadequate within a long-term vision of education at UM. We now want to get input on the questions whether or not we should pilot a more high-end solution for hybrid education, also improving and testing how PBL education could fit and if it achieves the same goals as regular, face-to-face education.

- 1) Question 4: Would you like to pilot hybrid education? Why?
- 2) Question 5: Are there things you would change or adjust to make the set-up more suitable for your teaching purposes? (e.g., small classes, only do it once a month...)
- 3) Question 6: Are there specific courses among those you teach that you think would work well for this type of setup? What about specific teaching spaces at UM? Why?

Examples from questionnaire: Spanish for beginners, PhD presentation skills.

Library hybrid learning spaces, ICL makerspace, FASoS set-up.

- 4) Question 6: What kind of assistance would you need to hold a class in one of the described settings? Please be as specific as you can. (How can we help you).

- a. Could be related to both content
 - i. Technical / technological support
 - ii. Pedagogical support
- b. And format:
 - i. Training courses
 - ii. Written resources
 - iii. Practice
 - iv. Workforce assistance (e.g., room operator)

5) Question 6: Wrap-up

- a. Final questions:
 - i. Was there something you expected me to ask you, but did not come by?
 - ii. Did I miss something that you would like to share?
- b. Talk about what will we do with the data → follow-up and next steps.
 - i. We will see if a pilot is something to set up, and get back to those that applied.