UM.ONLINE

FINDINGS OF UM'S SHIFT TO ONLINE EDUCATION DURING THE GLOBAL HEALTH CRISIS

THE TEACHING STAFF PERSPECTIVE

Maastricht University

EDLAB

PREFACE

In October 2020, we published the *UM.online - Student Perspective* report. Parallel to the data-collection for the *Student Perspective*, we also gathered experiences from UM's teaching staff with emergency remote learning (hereafter referred to as 'online education') in period 5 (2019/20). Over the course of June 2020, we organized five focus groups in which UM course coordinators and tutors shared their thoughts on both managing and running online education, allowing them to comment on instructional desgin and assessment but also on educational organization, support communication, technology and well-being. When mirroring our findings to the *UM.online Student Perspective* we can confirm an extensive overlap between the experiences of UM students and teaching staff in period 5. For example, the (emergency) remote setting makes it harder to interact, develop productive group dynamics and focus in online tutorials. Both students and staff remarked a rise in a-synchronous and formative assessment through a range of creative formats, testing deeper-learning levels, requiring student to apply and analyze knowledge. Next to that, both staff and students felt that workload increased while well-being decreased, making it hard to maintain a healthy work-life balance.

The clearest returning theme during the focus group meetings is the importance of support for providing higher education in an emergency remote learning situation. We distinguish various kinds of support, based on experiences of teachers of either what has been helpful or what they wished they had access too while making the switch to online education in a crisis:

1) Collegial support: a connection to their *communities of practice* for inspiration, reflection, coordination and mental support;
2) Expert support: access to just-in-time didactic expertise connecting them to the body of knowledge in educational research to advise teachers on "what works" for online/blended instructional design;
3) Knowledge support: access to learning resources on educational design, online group dynamics;
4) Technical and practical support: setting up hardware and software, fixing problems.

Besides substantial overlap between the two reports, there can also be differences in experience with regard to a number of topics, e.g. the perspective on attendance rules. It therefore remains important to mind the different perspectives in relation to the stakeholder, interest, agenda or policy initiative.

Maastricht, December 2020

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INTRODUCTION

Following Maastricht University's switch to online education in March 2020, the Executive Board asked EDLAB, with the support from Academic Affairs, to research student and staff experiences with online education. Titled *UM.online*, the project sought to collect experiences with online education in period 5 of the academic year 2019/2020 and launched a UM-wide online student survey and organized a number of focus groups with students, tutors and course coordinators in May/June 2020 to gain the requested insights. The project teams extends its gratitude to Felicitas Biwer (FHML) for her assistance. Throughout the report, online education, as conducted in the final months of the 2019/2020 academic year, is defined as 'emergency remote learning', reflecting a crisis situation during which a variety of different online formats were implemented to quickly replace on-site education activities.

This report presents insights about the initial switch to 'emergency remote education' as a result of the COVID-19 crisis from the perspective of UM teaching staff. It is an addition to the already published *UM.online Student Perspective* report. Based on the input from the focus groups, the report aims to provide insights and lessons from the crisis about providing (online) education and supporting teachers in this task, offering evidence-based recommendations for policy making. The report is structured in three parts: The first part contains the *general work environment*, including workload, well-being, and support. The next chapter is concerned with *course management*, focusing e.g. on course design, assessment, communities of practice, online learning applications. Finally, *running education* is concerned with the tutorial set-up, the tutor role and insights on attendance, participation and hybrid education. Each sub-section provides recommendations based on the data. For a full overview of the recommendations please visit the recommendation section after each chapter.

METHOD

The research design of *UM.online* collected quantitative and qualitative data. This part of the presentation of the results from *UM.online* presents the data from the qualitative research with UM teaching staff. For this qualitative data collection concerned with the teaching staff perspective, we organized three focus groups with course coordinators (CCs) and two focus groups with tutors. While the focus groups with tutors were mixed from all six faculties, the focus groups with CCs always included two faculties: SBE and LAW, FPN and FHML, and FSE and FASoS. All focus group participants were recruited with the help of the Education Platform (i.e. Vice Deans of Education) at request of the project team.

The semi-structured focus groups centered around the question: From your experiences with online education in period 5, what worked well, what didn't work well, and why? What can we learn from this for the future? The topics of discussion included educational activities in a CCCS context, assessment, communication with staff and students, engagement and support. The moderation guides for the course coordinators further included questions about added tasks such as course design and tutor coordination. The preliminary results from the quantitative and qualitative research from the student perspective have informed the design of the moderation guides and the asking of further questions to go in depth or triangulate the data from the student perspective.

Each focus group took place online via Zoom and lasted 90 minutes consisting of six to eight participants, one moderator and one observer being present. The focus groups have been recorded and the videos were stored in the Zoom cloud for 24 hours. The focus group discussions have been transcribed verbatim, and the audio transcripts were saved for 10 days after they were automatically removed. The focus group transcripts were analyzed thematically informed by the coding scheme from the student survey. Two researchers coded the tutors and the course coordinators. Beginning with open coding, the coding scheme quickly developed around the themes from the student perspective. Throughout the coding process, the coding scheme was discussed between the two researchers, and revised and adapted by the team.

Finally, the UM faculties have collected the experiences of course coordinators and tutors in period 5 by distributing faculty-specific surveys. *UM.online* has used the reviews of the faculty-surveys to give shape to the moderation guides in the focus groups with teaching staff.

Limitations

This research has been conducted in the extraordinary context of the COVID19 crisis, directly after UM's rapid switch to online education in period 5. Due to the high number of changed circumstances for staff and students, it is difficult to isolate data in a conclusive manner. Moreover, the small sample size of the qualitative data collection in this context requires that the analysis and results are to be treated with care. Especially as there is no quantitative data available for the staff perspective, it is not possible to simply generalize to the larger population. Moreover, the purposive sampling through the Vice Deans of Education may have provided a particular group of participants and may represent a bias toward a specific type of teacher. However, together with the report on the student perspective, the addition of the teaching staff perspective provides a deeper understanding of the UM population's reality in period 5, presenting also the ambiguities and contradictory experiences between students and staff. Thus, neither report stands on its own, and it is crucial that both are read and carefully evaluated in the particular context of a faculty, program, or course.

WORK ENVIRONMENT

Workload and well-being

One of the central take-aways from the data collection with teaching staff is related to an increase in workload, a disrupted work-life balance and other effects on well-being. The perceived necessity to carry out professional tasks beyond office hours has steeply increased before and during period 5. Course coordinators in general had to deal with additional tasks related to course redesign, assessment and special procedures. The availability of peer support, didactic support and practical/technical support is mentioned as a protective factor with regard to well-being. Teachers who felt alone in figuring out technical issues by themselves reported higher stress levels, while those who received said support tended to manage quite well.

At the end of the course period, some course coordinators in the focus groups felt that the provided forms of recognition fell short in comparison to the additional work they had to do. For instance, they missed regular check-ins from their line managers, had to carry out elaborate assessment plans with a

limited number of tutors and did not receive additional hours for their work. Concerning the lack of contact with their line manager, one course coordinator said:

”I hardly heard anything from my boss: ‘How are you doing with the situation?’. I was basically completely by myself and I needed to run it. And to be honest, I found that very overwhelming and it made me at points really angry.”

At home, a large number of staff members struggled combining child-care and the additional professional responsibilities. Many perceived a merge of ‘professional’ and ‘private’ time. This course coordinator tried to establish ‘hard’ break between professional and private spheres:

“I'm going to restrict my working hours […].I worked very, very hard during the day. But at six, I want to take care of my kids [and] in the morning I was homeschooling my kids as well. So from nine to twelve, I was doing homework with my kids. And then from twelve o’clock, one o'clock, when they were done, I tried to cram everything (the work) in for five hours.”

Others tried organizing their work around the child-care, leaving them to work very early in the morning and/or late in the evening when their children were asleep. So, overall, course coordinators perceived a steep increase of their workload in comparison to previous years. Additional workload comes from both technical and practical hassles due to the online setting and course re-design efforts to keep the quality of educational as high as possible. Especially new assessment practices (e.g. online proctoring, a-synchronous tasks, formative assessment) cost a lot of time to design, implement and monitor. On top of that, when course coordinators managed to transfer their course to an online variant they usually had no time to double check the changes they made, making them feel uneasy or uncertain about the course book. Course coordinators found it also difficult to accommodate students living in different time-zones and ran into bureaucratic hurdles to schedule lectures outside the regular timetable, further increasing their experienced workload. Conveying additional workload to tutors was also considered to be a burden: “What kept me awake was the responsibility for those tutors”.

Finally, the additional workload also took its toll physically: “I must say that with this online teaching I sat behind my computer at 8:30 and at the end of the day, I may have set 12 steps. And that is really bad.”

Course coordinators accept additional work with regards to the content or design of their courses. However, multiple course coordinators mention the need for technological and administrative assistance and compensation rather than e.g. well-being support. As this course coordinator states: “I don't need a chatline to talk about my psychology, how I deal with the Corona crisis. I need practical support: How are we solving this practical stuff?”

The tutors report two main causes of increased workload: the increased intensity of the online tutorial in comparison to the offline tutorial, and the additional importance of digital communication. Because online tutorials are more intensive and tiring, it is more difficult to tutor two to three tutorials in one day. Moreover, correcting assignments means additional screen time, which adds to an already demanding workday. Moreover, especially in the early stages of the crisis, tutors indicated that they felt they had to be available online the whole day to answer the many emails from confused or anxious student.

Recommendations

- ✓ Support communities of practice within and across faculties and encourage staff to reach out to one another, for example by:
    - Establishing course coordination teams
    - Organizing regular tutor meetings
    - Checking in with staff
- ✓ Provide compensation for additional work
- ✓ Hire student assistants to help out with technological or administrative tasks
- ✓ Recognize the effort and work put into transitioning to online learning
- ✓ Investigate possibilities for UM to support staff with children, especially in situations of closed child-care (also across the border)

Support

Institutional support

Even though faculties did as much as they could, course coordinators overall experienced low levels of educational and technological support in the preparation of period 5. They also noticed a lack of expertise within the faculty to deal with mattes such as virtual examination and online instructional design, resorting therefore to their own professional network for support. Slow decision-making processes about course re-design within faculties were regarded to be an additional stress-factor:

"The main problem was that the faculty wanted to discuss all these things at all levels, Board of Examiners, Dean of Education. And it took us two weeks before our proposal was approved. So, in the end, we had only three days for implementing all these choices."

Throughout the running of the course, coordinators also noticed that certain faculties were understaffed in order to deal with students' technological and procedural issues. They then felt the need to solve non-course related issues by themselves in the evening and during weekends. One course coordinator said: "I know they're quite understaffed, but yeah it's still a bit annoying if in your weekend you have to sort out why students cannot access the readings […]".

Communities of practice

Teaching staff on different levels report a sense of isolation, missing the regular contact with their colleagues in period 5. Most notably, course coordinators feel on their own in the online instructional (re-)design process, missing someone to check their revisions with. Already established communities of practice were the most often-used resource for quick and immediate support; a large number of participants reached out to colleagues and professional acquaintances for reflection and support. Those that ran their courses with experienced tutors and with support of education-technology experts felt more assured in transferring their course to an online format. The discussion in the focus group suggests that such sense of community does not only improve instructional design, it also gives a sense of shared responsibility and collegiality which are, as part of staff well-being, important points of attention in periods of remote work.

This experienced course coordinator remarked:

"I couldn't sort of just get my ideas validated by someone. Just to stick your head through someone's door and say: 'This is our [plan], what do you think? […] I had a lot of insecurity. You think all these things make sense in my head […] but once they get out there God knows."

Allowing informed colleagues with a fresh perspective to look at a re-adjusted online course and provide feedback, contributes to collegial learning and trust. The emergency-remote setting in that sense amplifies the recommendation already promoted in EDview to establish course coordination teams. This way, course coordinators do not feel alone in the process and can share responsibilities.

Who to turn to?

Overall, teaching staff report that talking to colleagues was the most helpful source of information and inspiration. Tutors mention they could relate and connect well to peers, which was beneficial to their work and professional attitude. Fixed course-meetings also helped to foster communities of practice, especially when the tutors do not know each other well or are inexperienced with the course content. One tutor recalls a supportive colleague that already had extensive experience with Blackboard Collaborate while teaching in period 4 and passed around fairly comprehensive instructions for others about these features.

The course coordinators noted that especially within the university, they tended to ask the same colleagues, who in turn were unable to provide support in so many instances. This indicates the need for further institutional support and training.

Support for learning platforms

Course coordinators had a good experience with *Test Vision.* Unfortunately, it took some time (and uncertainty) before it was ready to process all new digital assessment practices. Complaints about *Blackboard* are less relevant since UM changed its learning management system to *Canvas*. *Blackboard's* storing facility for documents or recordings was insufficient and up/download speed was too slow. *Mediasite* is mentioned as a good alternative, although there was little guidance in using it and insufficient technical support to edit recorded lectures once they were uploaded.

One course coordinator had a positive experience working with a tech-savvy student assistant. The student supported the coordinator not just in familiarizing him with the programs used but also helped to navigate and provided help in case of problems. This flexible support directly relieved the course coordinator from having to seek help elsewhere. The same thing happened for support during the transition to Canvas, which was appreciated by staff members.

The availability of (online) learning materials was as much a problem for teachers as it had been for students. The need for technical support to (re)arrange accessible course materials on the available learning management system or other platforms clearly increased in period 5.

Recommendations

- ✓ Offer substantial support on four different levels:
    - *Collegial support* (e.g. communities of practice, course coordinator teams, staff meetings, forums for discussion, Teach-meets)
    - *Expert support* (i.e. checking in and advising from educational experts, e.g. with the implementation of theoretical concepts, constructive alignment, or CCCS)
    - *Technological and practical support* (e.g. concerned with the functioning of online tools and procedural and administrative tasks, providing chat lines and quick-responses helpdesks, consider making use of student assistants for such tasks)
    - *Knowledge and training* (e.g. availability and dissemination of knowledge regarding blended education, establish training opportunities conducting and designing online education)
- ✓ Organize speedy approval of redesigned courses and new assessment plans

Communication

During period 5, teaching staff noticed an increase and higher reliance on communication in general and e-mail in specific. More time and effort were needed to stay in touch with students and it was important to communicate clearly at the beginning of the period and work with short messages conveying overviews of tasks and deadlines. When, in turn, teaching staff received too many student e-mails, some course coordinators posted announcements or started to collect the questions and integrated Q&As in Blackboard course pages.

Due to the increased distance between teacher and student, communication became more anonymous and, as a result, could not regard underlying personal issues as much as in an on-campus situation. Teaching staff experienced communication by students to be more direct, while professional conduct seemed waning. As one tutors puts it:

"Now due to corona, I also experienced on this course that I'm teaching that you receive a substantial amount of more emails. Not only rude ones, also concerned ones, also confused ones, and it's a lot of work to answer all of them. And eventually I came to the point… that I will not do this."

When it comes to receiving information from the faculty or university, course coordinators appreciated receiving short summaries with a number of useful links from their respective program coordinators/vice-dean of education. Those compact updates can easily be shared with the students and point students to the most important novelties.

Recommendations

- ✓ Limit the use of communication channels and frequency of updates
- ✓ Use summaries and communicate expectations, tasks, and deadlines as early as possible
- ✓ Address a code of conduct around online communication and interaction in the tutorial groups

COURSE MANAGEMENT

Course design

With the switch of their courses from offline to online in period 5, many course coordinators decided to make a larger revision to include changes they considered overdue. As a starting point, course coordinators largely reported that they based the re-design on the intended learning outcomes of their course, as suggested within the framework of constructive alignment. Some intended learning outcomes allowed for easy transition into e.g. a recorded lecture while other learning outcomes such as specific skills or statistical analysis, proved to be harder to switch to an online format. Maintaining coherence between the different learning outcomes, learning activities and a (new) online-proof assessment formats became a challenge. Also, the position of the online course in the curriculum became difficult to monitor, i.e. potentially disrupting overall curricular alignment. Often course coordinators asked their colleagues for support (see: Communities of practice).

As with finding (new) coherence between intended learning outcomes, so did course coordinators make an effort to (re-)balance the level of collaborative, contextual, constructive and self-directed education (CCCS). In line with the student experiences, course coordinators have seen an increase in self-directedness of students and it has become a challenge to align the increased self-directedness with the course learning outcomes and PBL-tasks.

Ideally, online-proof courses should function in an online setting as well as on-site. Smart design choices that activate students, promote collaboration, and allow for fair and proportional assessment are in principle not dependent on the availability and necessity of online learning applications. The forced switch to online education could be an opportunity to reassess previous educational formats.

Some course coordinators successfully experimented with the idea of *flipped classroom*. This way students study pre-determined learning goals and assigned literature as well as lecture recording and their peers in their own time. This allows (shortened) tutorials to be used as a moment for reflection, for student presentations, Q&As, and discussion.

During and at the end of P5, aware of the educational changes and novelties, teaching staff actively sought to receive feedback from the students, next to the general course evaluations. One tutor reported:

“We had a lot of evaluations with the group. And I think normally, you do it halfway and you do it at the end. But I think because it was online, we were forced to do it more often. And I think that was really nice because you get way more information out of the students and also from the coordinator.”

Students were for example asked to give constructive feedback or share three things they would like to see changed. In relation to new tasks or assessment formats, it was also valuable to check how these changes resonated with the students, either during the course or afterwards. Some course coordinators offered students to provide anonymous feedback through Google docs or survey tools.

Recommendations

- ✓ Reach out to colleagues or students to get input on engaging online course
- ✓ Use available UM resources such as CPD webinars, the tool wheel, or library resources
- ✓ Experiment with *flipped classroom*, alternative assessment approaches but uphold UM's general educational principles, like CCCS education and constructive alignment

Assessment

Overall, teaching staff report that the rethinking of assessment practices into the online context was stressful but the result has shown that some courses ended up with a more elaborate and varied assessment plan. Creative practices with formative and a-synchronous assessment have enriched the overall assessment experience and avoid dependence on large summative assessment moments at the end of the course. The additional workload that comes with more elaborate assessment plans is an issue that needs to be solved if such plans should be implemented structurally.

Formative assessment: Weekly assignments, blogs, group papers and in-class quizzes

Formative assessment emphasizes the importance of feedback and assesses no singular but multiple moments of the student learning process. It helps to identify strengths, weaknesses, and learning opportunities and minimize the dependence on final grades and reduce the pressure of deadlines. During period 5, several course coordinators mention to have distributed their 'on-site' assessment plans into weekly assignments. Weekly assignments tend to build upon each other and are used as moments for tutor- or peer-feedback and can therefore well function as a formative assessment method.

Weekly assignments seem to motivate students to learn, albeit extrinsically. Furthermore, they improve lecture attendance since students are actively seeking for information to complete the assignments. Teaching staff noted that weekly assignments also improve interaction during the tutorial and keep it relevant, since the discussions help them to do the assignment. These learning-advantages aside, one should not underestimate the time and energy needed to design and monitor such assessment practices in the online setting. In-class discussions or peer-feedback about the assignments can help to relief the additional assessment burden on the tutor/course coordinator. Finally, some data suggests that the installment of weekly assignments may reduce cheating and plagiarism since the stakes are lower.

Other examples of formative assessments are:

- Blogs: require regular posts and keep tutorials relevant. They assess multiple skills, such as working in teams, presentation skills and writing skills, as well as content comprehension and, often, application. Students receive feedback from staff and peers through comments. Blogs are easy to organize and communicate to students and can provide insights into the individual contribution to a group project.
- Group papers: collaborative essay assignments, allowing students to work together outside the regular contact hours, teaching them to plan their work, reflect on both process and output and stimulating students to integrate lecture content.

- (Zoom) polls or quizzes: a good practice to check the knowledge-level in the group, and to spark discussion and ask follow-up questions. They provide a change of routine and stimulate participation. Course coordinators can support their tutors with pre-programmed poll/quiz questions which tutors can import, while simultaneously ensuring a common experience between different groups within a course.
- Other positive examples that replaced final exams were *debates*. Teaching staff report a positive formative experiences in which the students were graded for preparatory documents and their conduct during the debate rather than the outcome of the debate itself.

Summative Assessment: Take-home exams, open book exams and other high-stake assessment alternatives

Most commonly, open-book exams were used as an alternative to on-site exams to avoid an online-proctored solution. In most cases, the original assessment timeframe was maintained. The most common approach was to take an exam similar to the existing one but focusing on deeper learning levels such as asking for knowledge application and analyses through essay-type answers. In another example of an open-book exam, the course coordinator made 20 versions of each question, and randomized the order of the questions to make it more difficult for students to cheat. Another reported successful alternative assessment form was the *concept map*. Students were provided with the central course concepts and had to define them, establish relationships between the terms, and apply the concepts by providing examples. With regards to student scores, course coordinators report that the overall range of the grades from open-book exams has been comparable to previous years.

Fairly classical take-home exams have become another general way to assess students during P5. This assessment format allows for a slightly longer timeframe than open-book exams (usually between two days up to a week) and require the student to answer essay-type questions. They differ from papers in that they are more directed towards the course-content and provide less freedom in the choice of topic. Integrating course content into take-home exam questions calls for higher levels of learning, such as analysis, application and evaluation of the course content.

Papers writing assignments played a smaller role in the focus groups with teaching staff. When mentioned, they were usually already part of the course, functioning well in offline as well in online settings.

Online proctoring

Online proctoring was considered to be an undesirable method because of surveillance and privacy concerns. Most course coordinators managed to find assessment alternatives to avoid turning to online-proctored exams. For courses that include mathematics, this was reportedly more difficult to do. With a switch from central exams to open-book or take-home alternatives, students have to show how they make calculations on the spot and should not be able to check formulates and make calculations online:

"You can imagine for courses like linear algebra […] you need to compute an integral or derivates of functions. This is not for take-home [exams] because you can find everything online […]."

Course coordinators considered online proctoring as an organizational challenge because of the many invigilators that need to be scheduled and instructed. Still, if no good alternative can be found, online proctoring can be regarded as a last resort for assessment to avoid study delay.

Grading and feedback

With regards to deadlines, teaching staff report to be more lenient due to the extraordinary circumstances and during the grading process tutors cared more about giving effective feedback. For example, instead of written feedback, one tutor recorded himself giving short feedback on the student's work. It saves time, and allows for intonation in the spoken feedback, making the feedback more digestible or fitting, depending on the learning goal and type of student. Another helpful example to facilitate feedback was through the use of rubrics. These cover different criteria (report, presentation, collaboration/project management) and helped allocating grades effectively. Rubrics were already broadly used before but showed to be particularly useful in the online setting to improve consistency with other assessors. With regards to tools, teaching staff positively experienced working with *FeedbackFruits* in order to organize (anonymous) peer-feedback.

Student workload and assessment

The online context makes it much harder to estimate student workload, especially because the distinction between (self-)study and private time has become more difficult to separate. Course coordinators considered it to be valuable to have discussions with colleagues about fitting assessment plans and formats in the context of online learning. Looking back at their experiences in period 5, course coordinators warn about excessive assessment plans that aim to cover every possible aspect of the intended learning outcomes. This is unfeasible for students and counterproductive.

Some coordinators have asked students to keep study logs and monitored those in order to see how students were coping with the overall workload. Others showed flexibility towards students by installing softer deadlines. To alleviate some stress during the course, tutors report letting students practice with exam questions before tutorials and discussing possible answers during the tutorial.

Recommendations

- ✓ Provide training on online assessment, e.g. about useful formats, suitable exam questions and rubrics
- ✓ Experiment with more formative approaches and multiple assessment moments (e.g. through weekly assignments), independent of the educational setting
- ✓ Only make use of online proctored exams as a last resort
- ✓ Coordinate assessment and deadlines with courses running in parallel to avoid excessive workload
- ✓ Use peer-feedback and peer-assessment to avoid grading overload
- ✓ Use in-class zoom polls and offer sample exam questions
- ✓ Be lenient with deadlines and mind students' personal circumstances
- ✓ Align intended learning outcomes and teaching/learning activities with assessment (constructive alignment)

Coordinating tutors

Course coordinators did not face any problems in establishing contact with their tutors and most tutors were supportive and made the best out of the extraordinary teaching circumstances. In general, weekly tutor meetings were organized on Zoom and tutors with further questions or concerns contacted their course coordinators via e-mail. The nature of the conversations was geared more towards workload and didactic difficulties rather than content. From the tutor perspective, those meetings were useful, effective and pretty much the only opportunity to replace informal contact in the office or faculty building. They included evaluations about how the classes went as well as preparing for next week's class. When such meetings did not take place, tutors felt unsupported and missed moments of feedback and peer-learning, leaving tutors demotivated.

Course coordinators remark that too much was demanded from tutors in this period. Most meetings took place during the first three weeks of a course to convey expectations and didactic tips for online education. One course coordinator made new tutor guidelines: "We drafted a little teaching guide before the course to explain […] how to do things …". Course coordinators felt the specific need to organize additional meetings about the course's assessment plans, which in the online context included new (formative) assessment practices.

One particular example that worked well to alleviate the tutor's workload were prerecorded instructional videos for students, allowing tutors to focus on daily tutorials and give feedback in class. The use of WhatsApp groups among the tutors was considered useful due to the ease of communication. However, it was also an issue of discussion, since WhatsApp makes it even harder for some staff members to stop working and can negatively affect workload after office hours.

Recommendations

- ✓ Update tutor guidelines in time
- ✓ Maintain regular, weekly tutor meetings
- ✓ Allow for informal conversation between tutors

Online learning applications

In addition to Zoom, course coordinators relied on project-tool Slack and Google Docs to ensure fluent interaction and collaboration between students. Google Docs was one of the tools appreciated as a 'whiteboard' during the discussions and for collaborative exercises of all sorts. Slack was regarded as a good way to engage students in a-synchronous group work and to facilitate quick communication between the group members. Discussion boards on Slack, discord or Blackboard (now Canvas) have been actively used to keep students engaged and post additional material. However, teaching staff experienced little student engagement when these forums where not moderated by staff or not integrated to students' learning activities.

During tutorials, course coordinators instructed tutors to make use of quizzes and polls to gain attention and see what aspects are worth discussing more. Break-out rooms helped to organize small group work during tutorials including an additional task to present to class your results as a sub-group. Next to

seeing each other's faces it helps to see when people are working or typing in a specific platform/application.

Good practices to stimulate interaction:

- Use discussion boards during practicals, allowing students to ask questions/receive answers and or see if the question is already asked.
- Google Docs, makes it easier to take notes because you can type faster in a basic text document than on the whiteboard.
- Use of a digital whiteboard to build mind-maps during the discussion, starting with the general concepts.
- Interaction when using a whiteboard is optimal if tutor and students have a second screen for the whiteboard (tablet) next to the one for their Zoom session
- Use Zoom polls as part of formative assessment, to see what students understand already and what needs to be discussed more in depth
- Allow screen sharing by tutors and students, for instance to share an image with the group
- Use of breakout rooms to have discussions in a smaller setting. This also is more personal, so also good for strengthening the social ties in a group.
- Giving feedback via sound files instead of writing saves teachers a lot of time, and tone of voice can be more pleasant for students. It is regarded to be more personal and less confrontational than written feedback.

Recommendations

- ✓ Limit the amount of OLAs used
- ✓ Use quizzes, polls or other interactive functionalities to activate students

RUNNING EDUCATION

Educational Activities

PBL & CCCS in the online setting

The switch to online education invited staff to experiment with different approaches to PBL during period 5, to cope with the circumstances at the time while maintaining active, student-centered education. Tutors tended to struggle with PBL-online, mainly because of the sudden switch and the lack knowledge and experience about online learning.

The following examples from the focus groups show the diversity of approaches to run PBL education in the online setting:

- Shortening the 7-steps: provide students with learning goals after a short brainstorm
- Shortening the 7-steps: instead of a brainstorm, provide instructions for the task (what's the point of the task, what to focus on while reading). Also, give some space to ask questions based upon their instructions.
- Shortening tutorial meetings to 1/1.5 hours instead of 2 hours
- Handing out the learning goals beforehand, giving a 30-minute lecture (no pre- or post-discussion)
- More elaborate notetaking during post-discussions to help others who couldn't participate because of circumstances.
- Sticking with pre- and post-discussions but thinking about the learning goals in subgroups before the tutorials. Keep the regular tutorial to one hour/one hour fifteen, because much longer is hard to keep focus. Emphasis on sharing notes.
- Asking student to prepare a few slides to present and discuss their findings.
- Dividing the learning goals between subgroups and having the group present the results.
- Organizing students into small project groups. They meet their tutor on a weekly or biweekly basis. Students have to come up with the agenda, chair the meeting and discuss their progress.

Tutorials

As already reported in the *UM.online Student Perspective,* the tutor focus groups affirm that the social dimension of education is crucial for collaborative learning, but more difficult to achieve an online setting. An important difference between period 4 and 5 is that students in period 4 had a chance to meet their fellow tutorial group members in real-life, before the lockdown. This social dimension is often tacit and take place in small talk, joint library visits, study sessions, or social activities in one's free time. It allows the tutorial group to develop positive group dynamics and creates a safe space to express one's thoughts. Also, it helps to establish a personal connection between the tutor and individual students. This is important, because it helps students to overcome shyness and determine vital behavioral aspects of the PBL process: when do I speak up? When do I engage in a discussion?

For online tutorials, tutors recommend increasing the activities that allow students to get to know each other and to break the ice – especially, at the start of a course period, but also as a start of every tutorial session. For instance, do a little game at the start of a new course: find an image online that expresses how you feel today. Or initiate talks about how the COVID19-measurements affect the lives of the group members, including the staff member. Take the first few minutes of every tutorial for normal

conversation (“How was your weekend?”) or try to stimulate a conversation during the break for those students remaining. In general, the data suggests that breaks should be taken away from the screen though. It is also appreciated when the tutorial is opened half an hour before or after the session to facilitate informal chat. Lastly, course coordinators suggest to discuss an online class etiquette with tutors and students. An etiquette not about formal rules but about professional conduct, such as turning your camera on, unless for some technological or connection reason this is not possible and allowing each other to finish talking.

Tutor role

With the change to remote tutorials, teaching staff had to take a different role in class than they were used to. Most notably, they had to become online moderators able to guide students within the online tutorial format. This includes among other this the development of house rules with the students, helping them to overcome their shyness, or facilitating equal participation. Also, the remote setting increased the need to proactively build personal connections within the group, for instance by talking to students about their home situation and how they cope with the crisis (see *tutorial set-up)*.

Some tutors recalled how they took over the role of the discussion leader or created slides in advance of the discussion. Tutors appreciated it when the course coordinator provided them with additional material for online learning such as zoom polls or pre-recorded videos. This allowed them to focus on the tutorial dynamics and give students feedback.

Lectures

Course coordinators tend to agree that it is easier and less time-consuming to provide ‘live’ lectures than pre-recording them. While producing them, it is difficult and time-consuming to correct mistakes. After the recordings have become available, course coordinators disliked being unable to change them or to adapt them to students’ feedback or needs. Even though the transition to online lecturing was regarded to be fairly well-supported, it changed their lecture practice from a flexible into a rather inflexible one.

Organizing live interaction with an international student population that, to a large extent is situated remotely from UM (including different time zones), remains a big challenge. As a result, lectures have been shortened and included Q&A sessions or were cut up into different knowledge clips. One example refers to lectures being posted online within a certain time slot, with a parallel discussion board in which students can interact with the lecturer. These practices are well-regarded but require more preparation.

Those course coordinators that continued doing live lectures (and recorded those) appreciated the room for interaction with students. The possibility to see faces and chat with students allows for much more tailor-made lecturing, reacting to aspects that students did not understand or need to discuss more. Recordings of these lectures would then afterwards be uploaded allowing students to (re-)watch the lecture. For more homogenous student groups this approach seems to be a fitting option.

One risk concerning re-watchable online lectures, as mentioned by tutors, is that some students might choose to rely on them during open-book exams, instead of studying the course literature:

"I had really good feedback about having the lectures online from students, but then I found in the exam, the one problem is over-reliance on the lecture, instead of the readings. […] With marking, […] the question was almost solely answered based on the lecture because they had access to that, and they were looking at it while they were writing the exam."

The possibility to watch recordings and see how other lecturers performed online was regarded to be uplifting in terms of seeing creative and inspiring practices yet also pointed to shortcomings of lecturers' own performance.

Practicals

In the *UM.online Student Perspective,* we reported the general disappointment with practicals that were cancelled and the lack of viable alternatives. Course coordinators add that some activities just cannot be organized in the online setting: "[With regards to labwork] some things cannot be done online so we also should not do them online". One course coordinator suggested to enable small groups to go to the lab and analyze the data at home. This complicates the coordination of the practicals yet avoids cancellation altogether.

Practicals that require less unique equipment can still take place. One course coordinator shared best practices from a statistics workshop and provided instruction as preparation for students' self-study. During the entire time staff was available to answer questions or support students on Slack with calls or messages.

Recommendations

- ✓ The PBL format in online education can be flexible as long as CCCS are safeguarded
- ✓ Develop an institutional online classroom etiquette
- ✓ Discuss online conduct with students at the beginning of the course
- ✓ Get to know your students and let them get to know you
- ✓ Organize breaks in educational activities
- ✓ Upload lectures on time
- ✓ Update lectures regularly
- ✓ When offering online lectures, make them shorter or produce knowledge clips
- ✓ When keeping the lecture live, use interactive elements
- ✓ Make sure students understand the role of lectures in the course in relation to other information sources (e.g. readings)
- ✓ Avoid cancellations of practicals

Attendance

During period 4 and 5 the mandatory attendance rules were lifted in order to alleviate students during lockdown and avoid administrative chaos. Whereas students raised both advantages and disadvantages with the absence of attendance rules, tutors mainly experienced adverse impacts on the classroom. Course coordinators and tutors report a general drop in attendance in both tutorials and lectures. As one course coordinator puts it: "Because they abandoned attendance requirements, attendance was

quite low in the tutorial groups, but also during lectures, I noticed there were only 13 of my 42 students present." According to the focus group participants, voluntary attendance negates the structure many students need to stay motivated, and the quality of discussions is reduced when many students are not present.

Soft measurements such as friendly reminders or announcements did not help to overcome the lack of attendance, also because there were not sanction mechanisms in place. One course coordinator sees the problem in the nature of the online set-up: "We've had students not come to tutorials in the fifth period. Online education seems to be very loose and not stringent." Another course coordinator calls for mandatory attendance rules to make sure students stay on track and to assure a collaborative classroom spirit:

"If [education] stays online, I do want some sort of attendance requirements, just for the sake of the students that they don't shoot themselves in the foot."

Recommendations

- ✓ Consider using weekly assignments to encourage attendance and preparation
- ✓ Introduce minimal attendance requirements or indirect measures such as participation grades

Participation

Teaching staff had very mixed experiences with participation. On a positive note, with the absence of participation grades and mandatory attendance the students who attended and participated tend to do so out of intrinsic motivation. On the other hand, teaching staff report students being more selective which tutorials to attend making it harder to develop group dynamics and facilitate good conversations. Teaching staff made more explicit use of PBL-class roles (e.g. chair, note taker) to boost participation for example by making discussion leadership a part of the assessment.

As the report on the student perspective suggests, tutors also experience that the setting of an online tutorials tends to make it harder for students to participate. Students experience higher thresholds in speaking up or find it harder to engage in a natural discussion so that often just a few students are active in a tutorial group. Vibrant discussions come about more easily when students already know each other, and tutors generally find that active participation is hard to direct:

"Sometimes I had a group with twelve students and they were all super motivated and it was very nice. But I had also another group with eight students: No one talking and no one participating, so very annoying, and I had a very small tutor group of five students. It was very nice. But there was a lot of interaction… And yet why some groups are more fun, I don't know. I think it depends on the atmosphere… if they know each other before that might help also to create a good atmosphere."

Based on the experiences in period 5, teaching staff see room for participation grades. It could be helpful to work with overall individual or sub-group participation grades and allow 'chairs' to be graded for their efforts. Even though this measurement is an extrinsic motivator it may improve online group cohesion, creativity and online collaboration.

Recommendations

- ✓ Discuss expectations about how to behave and interact in an online learning setting
- ✓ Participant's webcams should be turned on
- ✓ Having preparatory assignments in sub-groups helps to improve participation
- ✓ Organize breakout rooms to have smaller group discussions
- ✓ Allow for team building and socializing
- ✓ Organize debates between students
- ✓ Use online tools to stimulate interaction (see also: online tools)
- ✓ Assign clear responsibilities to engage students
- ✓ More directive tutor involvement may help to improve discussions
- ✓ Consider participation grades

Hybrid education

A large number of students and staff would like to go back to on-campus education, yet the implementation of hybrid education is debated. At the time of our data collection, some participants attended pilots yet most had no experience with hybrid education. Course coordinators fear additional workload. Among other things, they sense discomfort in the way that the course they re-designed in period 5 needs to be adjusted again in the academic year 2020/21 to fit the faculty educational format, be it offline, online or hybrid. With the experiences of emergency remote learning, which were stressful and time consuming, course coordinators expect a similar amount of work to adjust to a hybrid setting. Besides communities of practice, course coordinators basically require extra hands in the form of tutors, educational services and technological support.

While a return to on-site education is much awaited, tutors, too, are skeptical about hybrid education. Some tutors even prefer a fully online tutorial over hybrid tutorial. There are concerns about dividing attention between off- and online students, about online students being ignored, and the technical setup and quality of the conversation. As one tutor states: "I was immediately wondering: how am I going to switch the attention to make sure that everybody gets a chance to speak?" Moreover, tutors note that the skepticism should be treated with care: "We're not really used to it. In general, and if you do it a lot, […] it could be different."

The benefits of hybrid education that are mentioned is that at least some students have the opportunity to be on campus. Since some programs are already working with hybrid education, it is recommended to investigate these as the insights from this research are inconclusive.

Recommendations

- ✓ Make sure teachers are well-trained for hybrid tutorials
- ✓ Learn from existing hybrid implementations at other faculties
- ✓ Consider hybrid education as a possibility while students are unable to return to Maastricht

CONCLUSION

For Maastricht University, like most other education institutions, the COVID19 crisis required a rapid change and adaptation of its educational activities. With this report, we aim to present valuable data that allows for an informed reflection on UM's educational practices in general and on blended PBL in specific. We would like to leave the readers with two final thoughts.

The first thought concerns the longevity of the recommendations. As we have made clear in both the *UM.online Student perspective* report and in this *Teaching Staff perspective* report, our data has been collected in a situation of emergency remote education. Hence, we based our results and recommendations on experiences in a hectic time, forcing our staff and students to move education online. Still, many of our recommendations also remain relevant in a setting of more standardized online education. Think for instance the importance of personal contact, the need for empathy in education, and the importance of student and staff well-being and work-life balance. Next to that, both the *Student* and the *Teaching Staff perspectives* re-affirm many of the findings of EDview (as published in 2018), such as the need for small tutorial group sizes, course coordination teams, more formative assessment plans, and considerations around high staff workload. For this reason, in 2021, EDLAB re-activates EDview to connect its initial findings to developments in blended PBL.

The second thought is more remote, addressing the future of education at UM. Even though the online transformation of PBL in period 5 was a reaction to a crisis, we see how it gave an impulse to experiment with a variety of formats, e.g. *flipped classroom* and assessment practices like formative approaches, which make our education even more "PBL". This shows that, while there is an unmistakable role for online learning platforms and digital tools in the future of education, the drivers of change remain rooted in creative and diversified instructional design rather than in technology.