MODE OF DELIVERY: ONLINE, TARGET AUDIENCE: PROFESSIONALS; DEVELOPING AN ONLINE PORTFOLIO FOR PROFESSIONAL LEARNERS REQUIRES NEW SKILLS IN AN ACADEMIC INSTITUTION

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ABSTRACT

The courses in an online learning portfolio for the professional market have different characteristics compared to those in residential bachelor and master programmes. This includes the mode of delivery: online versus face-to-face, as well as the audience: professionals versus degree students. Developing such a portfolio entails a different approach for defining learning needs and learning outcomes, for course design and development, scheduling, marketing, credentialing, etc. It means that the institution needs to develop new skill sets in various areas: translating the market needs to learning outcomes, expertise on online pedagogy, platforms and tools, technical support and support for online learners. On the level of the organisation, management, policy and human resources need to recognize that offering this type of education forms part of its activities and ownership needs to be in place at different levels. This paper describes how the TU Delft learned what skills and processes are needed to develop and offer the online portfolio for professional learners, what this means for the organisation, and how it was implemented. It includes the criteria to select courses to include in the portfolio, the differences in learning needs between professional learners and degree students, the issues to take into account when translating the learning needs of professional learners to an online portfolio, the specifics for course development, and the processes developed to implement these in an academic institution.

1. INTRODUCTION

The TU Delft offered its first MOOCs in 2013, started its Open and Online Education programme in 2014, offered its first online Professional Education courses by 2015, its first Professional Certificate Programme in 2016, the first Delft Micromaster in 2017, and has developed by 2020 into an organisation with a portfolio of over 100 MOOCs and over 50 paid courses, approaching 3 million enrolments overall. The objectives and organisation have evolved with these developments [1], [2]. The new activities made it necessary to acquire new expertise and develop knowledge, skills and organisation to deliver these open and online offerings successfully. With the increase of the number of courses to be developed and offered, we saw the need to create efficient work processes ranging from those for Portfolio Development and Course Development to Video Production, Marketing, and Administration. In this paper we describe what we achieved, and what we have learned in the process.

2. SPECIFIC REQUIREMENTS FOR ONLINE COURSES FOR PROFESSIONALS

2.1 Professionals have different learning needs compared to degree-students

Professionals have different learning needs compared to the Delft campus students: they look for applicable skills, have broader range of backgrounds, generally a higher age and less time available for education. The added value of a course needs to be apparent in the course description: as learners want to advance their career, they need to see what they can do more, or better, upon finishing the course. This requires a thorough understanding of your learners needs and pain points. We have implemented several ways to meet the need of the professional learner better in our courses. One is to involve the targeted learner in the course development process, in the form of full co-creation, or in the form of feedback at various moments in the process. Another is to give professionals a role in the course, as "Voices from the field", for example in the form of interviews, a practical case, or through participation in the discussion forum. Furthermore we analyse the pre- and post surveys the participants complete in a course: who are the learners, what were their main takeaways, what did they miss, to improve the course accordingly. As credentials are relevant, but these non-degree courses can mostly not be connected to credits in the ECTS, we issue other credentials: Continuing Education Units (CEUs). These are connected to the time a learner is expected to spend on the course. Implementing this in an academic environment involves a shift in mindset from the instructor, and collaboration with the business team.

2.2 Mode of delivery: online vs face-to-face

The lecturers at TU Delft are used to designing and providing education for bachelor and master students who are present on campus. The education is structured on the basis of scheduled lessons, practicals and exams. Campus students generally study full time, 40 hours per week. An academic year is divided into four quarters and each quarter ends with an examination period in which students complete the mostly mandatory courses and receive credits. Campus courses are therefore grade-oriented and form part of a curriculum.

In 2013, online education was completely new for the TU Delft lecturers and the support staff. As campus education was the frame of reference, the first online courses were derivatives of campus courses. These had comparable learning objectives and study load, and mainly consisted of video lectures and quizzes.

Our online courses reached a completely different target audience, namely lifelong learners and/or working professionals. With their different time zones, sometimes full-time jobs and busy private lives, they need education that is time- and place-independent, and flexible. Schedule and study load must be adapted to their busy agendas. The content needs to be highly relevant and immediately applicable. In table 1 the main differences between campus education for degree students and online education for professionals are summarized.

Campus Education for degree students	Online education for professionals
Structured by scheduled classes	Time and place independent
Grade-oriented	Knowledge & skills oriented
Curriculum focused	Stand alone with more diverse audience
Higher total and weekly study load	Lower total and weekly study load

Table 1. Main differences between campus and online education

3. DEVELOPMENT OF EXPERTISE AND PROCESSES

3.1 Portfolio development

The selection of courses to be included in the online portfolio is through a tender process: faculty members submit a proposal which is evaluated and granted by the Open and Online Education (O2E) program committee. The criteria for this tender have developed over the years. In the first years of the O2E program, the focus was to build up experience and expertise in online course creation and delivery, and the criteria focused on the educational quality of the course and the O2E programme committee granted and supported almost all courses proposed. As the O2E programme progressed, the number of online courses available worldwide grew to thousands, and it was more difficult to attract the envisaged number of participants. The development, production and offering of online courses requires a significant investment of time and resources, which can only be justified when a certain audience is reached. We recognised the courses were only successful if they have a certain uniqueness, provide additional value to the learning landscape, and are aligned with the TU Delft organization. We learned more about the characteristics of the courses that resonate with a professional audience, like meeting the learning needs of professionals. This way we developed a tender procedure with selection criteria that are regularly reviewed and adapted, to respond to the changing world. The resulting selection criteria are listed below.

1. The programme has unique features and learning outcomes: a successful programme adds value to the global online learning landscape; it does not duplicate what is already available; and a top-reputation helps to have learners find and select the programme.

2. The programme offers knowledge and skills, relating to proven labour market needs in a flexible, accessible and focused way: to attract a substantial audience, the programme is tailored to the learning needs of working professionals, in terms of content and mode of delivery.

3. The online programme ideally contributes to improving the quality and efficiency of campus teaching, and/or to research, branding, and forging new collaborations: the course materials, and course or programme results, will be used in campus education (in- and outside TU Delft), and/or to achieve other goals.

4. The programme and course production process is efficient and effective when the course team members have the expertise and are able to allocate time: a driven and motivated course team will ensure timely delivery; the programme should start within one year after approval.

5. The faculty is the owner of the programme, and commits to at least three runs, unless agreed otherwise: the programme is in line with and preferably strengthens the faculty strategy on lifelong learning, and builds upon the faculty's strengths; the faculty management commits to support development and running of the programme for at least three years.

6. Collaboration with industry results in courses/programmes that are better aligned with the needs of professionals as well as contributing real-life case studies: one or more corporate or public partners are identified to provide a 'voice from the field' and/or to 'co-create'.

7. The Extension School is building a portfolio that is aligned with the University's strengths and UN's Strategic Development Goals: the programme adds value to the Extension School's portfolio.

8. Programmes provide an extensive learning experience, give individual courses value and are easier to market: the proposed programme forms a coherent whole.

Developing and implementing these criteria has resulted in a better feel for which courses can be successful, and it has also led to the recognition of the necessity to align the objectives of the O2E programme with those of the faculties. It is not only applicable for new courses, we also improved and/or bundled existing courses to better meet these criteria to result in more impactful courses for learners. This process of embedding is ongoing and continuously adapted based on findings and experiences.

3.2 Course development

To ensure high quality online courses we created and implemented the Online Learning Experience (OLE) pedagogical model [3]. The OLE model consists of 8 principles which define TU Delft's online courses.These principles are: supportive, interactive, active, authentic, innovative, flexible, diverse and inclusive. The principles have been translated into different supporting documents and are applied in the different phases of the course development process.

3.2.1 Course development process

In order to support course teams well, a detailed course development process has been defined that consists of a number of phases.

Online course development process

Plan	Produce	Run	Evaluate
Define learning objectives, learning activities, resources and assessment	Create learning activities, reuse and develop educational resources (text, quizzes, video)	Run your course using community management and e-moderation techniques	Improve your course for the next re-run using surveys and learning analytics

Figure 1 Online course development process

Each phase consists of a number of steps that the course team must go through. In the Plan Phase, course teams are trained in online education (on boarding day), the course is designed and production and marketing prepared. In the plan phase, the value for the learner is made explicit with the marketing team, and we use the Carpe Diem approach of Gilly Salmon [4] to design the online course. In the Produce Phase, the course content is produced, such as assignments, texts, media and assessment. The course structure, based on the storyboard, is included in the online learning platform and a beta test is carried out. The Delivery Phase focuses on offering the course, and improvements are identified. In the Evaluation Phase the whole process is evaluated with the course team and the next run is prepared. Input for this evaluation is feedback of learners collected through questionnaires, combined with platform data and enrollment numbers. In this way we create a cycle of Quality Assurance and continuous improvement of courses.

3.2.2 Online learning Hub

Course teams are guided by a learning developer to apply the OLE principles in every step of the course development process. Over the years we have developed a variety of supporting materials and workshops to implement the OLE, which are used in the various process steps. These resources are accessible for everyone in an open hub (http://onlinelearninghub.tudelft.nl). For each phase in the process, the website describes the products to be delivered and which supporting resources can be used best. The resources consist of templates, guidelines, manuals, good

practices and workshops that course teams can take. For instance, in the production phase, where a course team might want to produce videos, the resources include a Script Writing workshop, a workshop Presenting in front of a Camera and a Video Editing workshop. In addition, there are various fact sheets with tips and tricks about video production.

3.2.3 On Boarding Day

To quickly familiarize new course teams with online education, we organize an On Boarding Day for all approved projects after each tender. On this day the new course teams get a chance to meet and become acquainted with each other. Moreover, they get to know each other's projects and learn how support for online education is arranged at the University. They also receive information about the innovation program "open and online education" of which they are now part and they start with defining the target audience of their course, their course design, and project planning.

3.2.4 Lessons learned in course design

Over the years, we have learned more and more about how best to set up an online course, so that a meaningful, engaging and feasible learning experience is created for the working professionals. Lessons learned include: optimal course length is about 4 to 6 weeks with a workload of 4 to 6 hours per week. It is crucial to create a highly engaging first week, to allow learners to evaluate whether the course is worth the time they allocate for it. This means that they should see interesting and engaging content from the first minutes on. An introduction and orientation to the platform are in a side menu. It is very important to vary in learning activities and formats to keep people engaged.

3.2.5 Cross over to campus education

When creating a MOOC or professional education course, lecturers increase their knowledge and skills in learning technologies, online learning activities, creating media, developing online assessment and interacting online with learners. Consequently, they apply these in their regular campus courses as well. The majority of the online courses developed within the extension school portfolio, have their effect on campus education. They are applied in various ways, which has resulted in increased flexibility of campus courses and and increased variety of digital materials. These enhancements are much appreciated by both lecturers and students. Furthermore, we use a similar course development process for redesigning campus courses toward blended formats as we use for online course development. Especially during the corona crisis, when all campus courses had to be delivered fully online, our expertise in online course development has proven to be very valuable.

3.3 Reaching the target audience

After fine tuning the course content and design to meet the needs of the professionals, we need to reach this professional target audience. This requires another approach compared to communicating to future campus students. As the course team members are experts, and have a network, in their field, we work with

them to define an approach on how to best reach the audience. The target audience and main take-aways are made explicit in the course announcement, in a language that is more practice-oriented and less academic. To help the instructors reach their network, we developed resources and materials of which the "Marketing Menu" in fig.2 is an example. Other examples are texts and visuals for use in social media, signatures in emails, and printed materials.
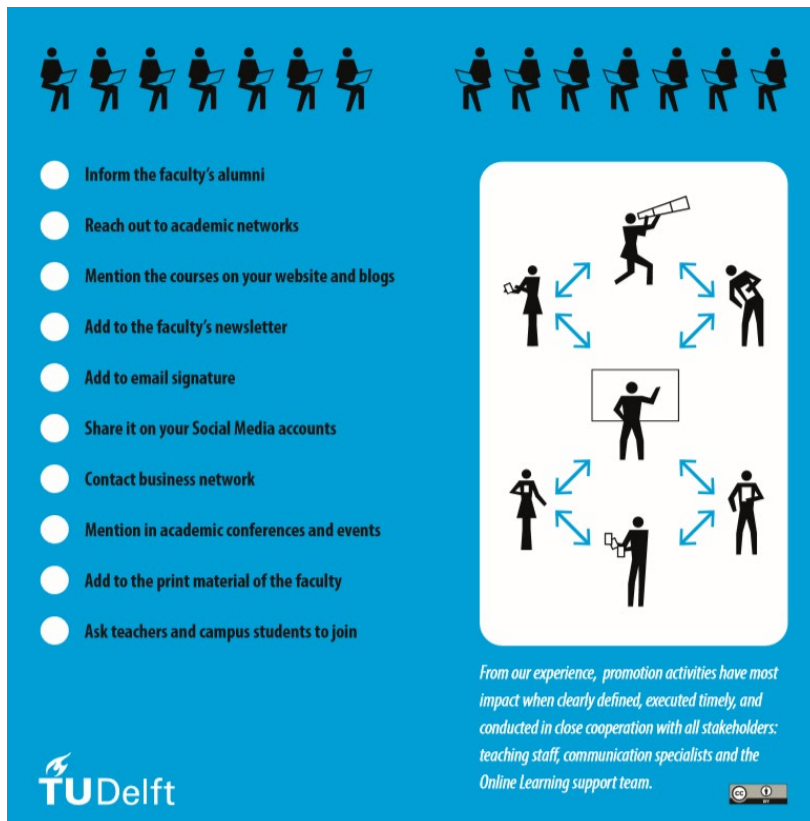

Figure 2 Marketing menu for online courses

4. CONCLUSION AND OUTLOOK

Setting up and maintaining a successful portfolio for life long learners and working professionals continues to be a major learning process at TU Delft. The differences with Bachelor and Master education forced us to develop new expertise, new work processes and a support organization for portfolio management, course development, marketing and quality assurance. These work processes need continuous adjustment to make them more efficient without losing the tailor-made approach that recognises that each course has its specific characteristics.

Our future challenges lie in finding the balance between the objectives of the different faculties for open and online education and meeting the market demand, to result in a coherent portfolio of courses that add value to the learning landscape.

REFERENCES

[1] Kiers, J. (2016), MOOCs and their Effect on the Institution: Experiences in Course Design, Delivery and Evaluation; Research; Faculty Development; Unbundling and Credits for MOOCs, *Foro de Educación* Vol. 14, No. 21: pp. 133-149.

[2] Kiers, J., Van der Werff, J.H. (2019), The Future of Work requires a Future of Professional Learning: From stand-alone, academic MOOCs to Programmes that are relevant for Professionals, Proc, of the EMOOCs Conference: Digital Education: At the MOOC Crossroads Where the Interests of Academia and Business Converge, 6th European MOOCs Stakeholders Summit, Napels, Italy, pp. 247-253

[3] Jorge, N., Dopper, S.D., Van Valkenburg, W., (2015), Defining a Pedagogical Model: The TU Delft Online Learning Experience, EDEN 2015 Annual Conference, Barcelona, Spain, pp. 88-92.

[4] Salmon, G. (2016), Carpe_Diem_workbook_version18_june2016 (pdf). https://www.gillysalmon.com/carpe-diem.html