

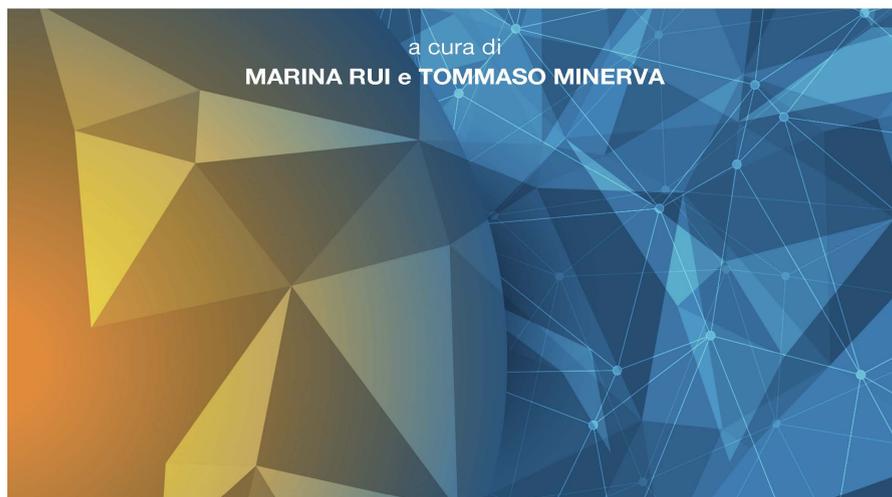
# EMEMITALIA2019

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## Learning, Competencies and Human Resources

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# From desk to desktop: the integration between classroom and online teaching from the teachers' perspective

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## Abstract

*The start@unito project of the University of Turin is a two-year-old project whose primary aim is to offer 50 open online university courses in various scientific, humanistic, economic and legal subjects. As Project Manager, research fellows with a coordinating role and LMS administrator, we assisted and supported teachers before, during and after the creation and the implementation of the online courses. We analyzed the biggest and most destabilizing changes brought forward by the transition and integration between classroom teaching and online teaching in order to understand how we can help to make transition and integration smoother. Our methodology relies on data gathered from training sessions, focus groups, a questionnaire given before and after the experience and a self-evaluation rubric. Our findings confirm the trends highlighted by the literature: on the one hand, professors are still hesitant to embrace online teaching because it is a challenging, time-consuming process that requires rethinking their role; on the other hand, professors are optimistic about the potential of online education; teaching online experiences seems to have a positive effect on classroom teaching as well, since it promotes more inclusive and interactive didactics along the classical one.*

Keywords: Online Teaching, Open Online University, Online Courses, Online Education, Teacher's Changing Role

## Introduction

The start@unito project (Bruschi et al., 2018; Marchisio et al., 2019) at the University of Turin is a two-year-old project whose primary aim is to offer 50 open online university courses in scientific, humanistic, economic and legal subjects. The target of the project is twofold: on the one hand, the first courses were designed specifically for students in their last year of high school and had therefore the purpose to orient students' choices and advance their university career; on the other hand, the most recently developed courses belong to both Bachelor's and Master's degree programmes. In addition, these courses have a strong emphasis on internationalization, since 20 are held entirely in English and 8 are courses in foreign languages and cultures. As Project Manager, research fellows with a coordinating role and LMS administrator, we assisted and supported teachers and grant-holders (graduate or post-graduate students with expertise in a specific subject and in working with LMSs) before, during and after the creation and the implementation of the online courses. The project was financed by the bank foundation Compagnia di San Paolo; given the project-based quality of the funding, the professors who decided to take part in this journey were given a strict deadline to implement their course. Grant holders and professors participated in a series of theoretical and practical training sessions about building online courses and were provided with online reference materials and lesson recordings. Throughout the phases of course design, course creation, and course implementation we conducted focus groups and listened to teachers' ideas, concerns, doubts, difficulties and suggestions, which we may summarize as follows: developing a quality online course is not an easy task, and being an expert researcher and teacher in a given subject does not make one expert in teaching the same subject online, therefore professors need to reinvent themselves; the method and the pedagogy need to be rethought too; first comes the pedagogy, then the technology: there is a widespread feeling of getting lost in the technical possibilities available; ensuring academic quality with a strict deadline and regular academic commitments requires a huge effort on the professor's, the grant holders' and the technical staff's part; many teachers are afraid that online education will replace classroom education and it won't be as effective. Our aim is to report and analyze the teachers' perspective on their experience in creating an online course, and on how classroom and online teaching can be integrated, in order to better understand how to guide and support professors through this paradigm shift.

## State of the art

Before delving into the subject, a distinction must be made between online teachers (teachers – not only university ones – of a given subject who teach online synchronously or asynchronously as part of distance education programmes or for personal choice) and academics who design online courses for their university. In the first case, one example may be an English teacher opening their own YouTube channel, which is very common nowadays. We are dealing with the second type, teachers who prepare open online courses for the sake of their university and because they believe in open and free education, usually subject-oriented. Teachers are primarily subject experts and they often receive little pedagogical and technical training, as (Ammenwerth, 2017) notices. Teaching in Italy – as in many other countries – is not the sole activity of a university professor and sometimes it is considered less important than research.

The literature shows that the transition between face-to-face to blended and online teaching is quite challenging, since teachers' roles change (Coppola et al., 2002). Both (Redmond, 2011) and (McQuiggan, 2007) notice that many experienced teachers find themselves as novices when first approach online teaching, and this may result in a resistance towards online teaching. In addition, the transition to online teaching and learning from a traditional face-to-face approach challenges the expectations and roles of both instructors and learners (Meloncon, 2007; Redmond, 2011). Later, (Berge 1995; Feiertag & Berge 2008) and (Alvarez et al., 2009) proposed a model for the instructor's role model based on four categories: pedagogical, social, managerial, and technical. Thus, teachers do not only have to learn new approaches, new methods and new technology, but they also have to take on new roles. Redefining professional identity and teaching practices takes time and training, otherwise many instructors run the risk of replicating existing course design and pedagogical practices when they move from face-to-face teaching to blended or online teaching (Bonk & Dennen, 1999). In (Ammenwerth, 2017), the author points out that these traditional approaches may not be adequate for online teaching and that if we evaluate online teaching following the Technology, Pedagogy, and Content Knowledge (TPACK) model, university teachers appear to have high expertise in content knowledge and a weaker one in technology and pedagogy knowledge (Mishra & Koehler, 2006). These results may suggest that university professors lack expertise in pedagogy. Another major challenge identified by (Yang & Cornelious, 2005) for instructors who are used to a teacher directed face-to-face environment to an online one is to redesign learning with a constructivist approach. Especially in Italian universities, where student numbers in a classroom can reach 300 participants, learner-centred inclusive and interactive approaches are very difficult to put into practice. This shift in the teacher's role has already changed the way secondary school teachers teach, but university professors are still struggling with the adoption of a new approach as “designers and facilitators of learning” (Hlynka & Jacobsen, 2009) or as coaches in their students' learning process (Ammenwerth, 2017; Alvarez et al., 2009; Guasch, & Espasa, 2009). Another very common concern among university professors is that teaching online may affect their image or prestige (Wingo et al., 2017). Nevertheless, there is evidence that academics may be ready to become reflective practitioners in the pedagogy of the subject they teach (Laurillard, 2002), and that learning to teach online may fuel further self-reflection and evaluation of current teaching practices (McQuiggan, 2007). In addition, researchers have found that teaching online changes the way teacher think and approach teaching, course design, and their relationships with students (Major C. H., 2010). Moreover, a shift to a more Socratic pedagogy, paired with a renewed precision in the presentation of materials and instructions has been reported (Coppola et al., 2002).

To conclude, in a study comparing the function of teachers in face-to-face and the online teaching more, (Díaz & Entonado, 2009) report finding no important differences, and they continue by saying that “if these differences do exist, they are likely to be due to the teacher's involvement and the institution's commitment in the programming of the learning process”. We stand by this view, opposed to the idea expressed by many scholars of a transition between traditional and online teaching, where differences are emphasized. In our view, this might be misleading because online courses are not only an alternative or a replacement of face-to-face ones, but also an addition, an integration. Therefore, we would like to think in terms of integration, too. Thinking in terms of transition is useful to explain the journey of university professors, but in the end traditional teaching and online teaching influence and change each other, there is no hierarchical structure.

## Methodology and research questions

Our research revolves around two questions, one pertaining to the phases before and during the design of the courses, and one after their implementation, as follows: what are the biggest and most destabilizing changes brought forward by the transition and integration between classroom teaching and online teaching? How can we help to make transition and integration smoother? The methodology chosen for this research relies on data gathered in four different occasions.

- 1) The training sessions on a specific topic (pedagogical, technical, managerial, etc.) that were held before the online courses design phase. During the training sessions, which was not mandatory to attend, we listened to professors' concerns and supported them every step of the way, as they learnt how to use new tools, how to redefine their role and how to redesign their contents. In turn, we were also made aware of issues related to the specific subjects, which helped us redirect and tailor our training and our support according to the professors' needs.
- 2) Focus groups, meetings and individual support, where we tackled specific issues together with professors, the grant holders who helped them design the courses, and the technical staff.
- 3) The questionnaire, which was given both before the experience and after one year of activity. The questionnaire is made up of different kinds of questions, ranging from Likert-scale evaluations, to multiple choice and open questions.
- 4) In addition to the end questionnaire, we requested the teachers to fill a self-assessment rubric. At this stage, we opted for self-assessment because the focus of our research is teachers' perspective. Further research will be carried out correlating this data with peer and instructional designers' evaluation, together with students' evaluation.

The data gathered in the first two occasions are mostly qualitative, whereas the data gathered from the questionnaire are mostly quantitative. In the following section we will report and analyze these data.

## Results and discussion

Our sample is 34 teachers who developed their online courses in the academic year 2017-2018, so they also had time to reflect on the student feedback and results.

First of all, we inquired about the level of expertise on online teaching of each professor: analyzing the questionnaire, we found out that only 37,1% of teachers already had experience of online teaching, and of that percentage 9 had experience of totally online courses, 7 only blended, and only 2 in both. The expertise or the lack thereof does not seem to depend significantly on the subject taught. Secondly, we asked our teachers how ready they felt to start designing an online course before they received the training. On a 1-4 Likert scale, where 1 is not ready and 4 is ready, 5,7% reported not feeling ready and 11,4% reported feeling ready, then 37,1% gave a 2 (somewhat ready) and 45,7 gave a 3 (ready enough). Direct correlation between feeling ready and already having had experience is manifest: 100% of those who gave a 1 on the Likert scale had no previous experience, likewise 90% of those who gave a 2 reported not having any experience, and coherently 80% of those who gave a 3 reported having previous experience. Out of the 4 teachers who gave a 4 on the Likert scale, only one reported having experience in online teaching, while the other 3 participants reported little or medium difficulty (both perceived and actual) with technology and in speaking in front of the camera. This may suggest that previous experience played a role unless the teacher was already tech-savvy and used to being recorded.

Some very interesting data emerged in the comparison between expected and actual difficulties. In the first questionnaire, we asked teachers to evaluate a set of difficulties they expected to encounter, on a 1-5 Likert scale, where 1 is positive (no difficulties) and 5 is negative (a lot of difficulties). In the second questionnaire, we asked them to evaluate the same topics, according to how many difficulties they actually encountered. We found that:

- The topics in which the expected difficulties are higher than the actual ones are speaking in front of the camera, rethinking materials, producing new materials, working with tutors and using new technology. These are all new activities, so there is less awareness of what may be expected and a certain degree of reluctance and anxiety usually accompanies the decision to start teaching online. For example, in the case of working with tutors, 91,4% of professors gave a very positive evaluation to the question "how useful was the tutors' support?" (Likert 3-4). It is likely that actual difficulties

with technology also were lower than expected difficulties thanks to the tutors' support. As far as speaking in front of the camera is concerned, many teachers were already used to being recorded, but the simplification and the shortening of materials required in order to produce easily accessible videos and presentations was often perceived as a hyper-simplification of contents that could hinder proper learning and damage professors' professional image. After the training, these concerns were mostly dissipated.

- The topics in which the expected difficulties were lower than the actual ones are workload and deadlines. They are, in fact, two very often underestimated problems. As regards the workload, there is a huge gap between the time necessary to visualize a content, such as a 3-minute video, and the time it takes to prepare that video. In (Dietrich, 2015), the author also underlines teachers' difficulty in evaluating the amount of work to be expected from students. Our university provided professors with the guideline that 1 ECTS is worth 25 hours of study, but it was very difficult for instructors to quantify those hours of study given the fact that the materials are different from the ones they are used to preparing. As regards deadlines, preparing quality online courses is extremely time consuming, and as (Kolowich, 2013) points out, that time spent in preparation takes a toll and distracts professors from their academic duties. Coherently, these were among the most commonly debated issues during our focus groups and throughout the individual support that took place both in person and via email. Although most professors expected to struggle with the new technology and preparing materials, they received a big help from tutors. However, being this the first experience of creation of a fully online course for most, they were not able to predict how much time to set aside from the regular academic commitments and therefore ended up with a greater workload than they expected. Knowing this is fundamental for us, since it allows us to plan the next training session by putting more emphasis on these issues and provide more support.
- The topics in which the expected difficulties were the same as the actual ones were copyright and working with colleagues. This does not surprise us, as professors are already used to working with colleagues and well aware of copyright issues.

The data gathered from the self-assessment rubric also underline the resistance and scepticism that surround the perceived effectiveness of online teaching. When asked if the effectiveness of their course was the same online as in the classroom, only 17% answered yes, 50% partially, and 33% no. This scepticism is underlined by many other studies, such as (Kolowich, 2013). When the professors Kolowich interviewed were asked whether they thought that the MOOC they taught was as academically rigorous as the traditional version of the course, 48% answered yes and 52% no. Nevertheless, there are also promising results concerning the use of new technologies: when asked if they used adaptive feedback, whenever possible, 25% answered yes and 52% partially, which is a very good result for us, showing that the training was useful and appreciated. In fact, adaptive feedback with the Automatic Assessment System (AAS) Maple TA has been used extensively by the Department of Mathematics in various online and blended projects, but professors teaching other subjects, especially non-scientific ones, were not familiar with it before the training. Some of them were reluctant to use not only the adaptive feedback tool, but also the AAS in general. The most sceptical teachers were the ones who teach legal subjects, which usually value language command and the ability to explain complex concepts orally among the necessary skills to successfully pass an exam. However, after the implementation of the course they were satisfied with automatic assessment and recognized the potential of adaptive feedback in providing longer explanations of why an answer is wrong and/or different and personalised guided learning paths. Automatic grading technology also had an important role in the integration between online and classroom courses. In fact, 36,1% of the teachers reported using them for the self-assessment tests and 41,7% for the exercises. This shows that preparing online courses leads teachers to rethink their classroom pedagogy too, and therefore fosters a shift towards a more interactive type of lesson, coherent with the literature. In addition, 50% reported using it for review and 47,2% for in-depth analysis. The fact that teachers appreciated the training and some of them are willing to rethink the way they teach becomes evident if we look at the question: "What are the advantages found in the classroom since the course had been implemented?": 11,4% reported having more engaged students in the classroom, and 28,6% improving personal skills in technology. These results are promising because they show that students appreciate a more interactive, technology-integrated lesson, as reported also by

(Coppola et al., 2002), and professors appreciate learning new skills, as source of personal satisfaction that is not limited to the creation of online courses.

Other advantages reported were having a more manageable number of students in the classroom – a huge issue for Italian university courses – (14,3%), the fact that exam management was facilitated (17,1%), more students passing the exam (11,5%). In addition, in an open question asking about the specific advantages of the online course over the traditional one, teachers said that it is good for those who cannot attend regular lessons or laboratories, foreign students, working students, and self-paced study. One teacher underlined the importance to see online courses as an integration and not as a replacement of face-to-face teaching. About the opportunity for users and teachers, most professors found reusability and the continuous availability of materials as the most interesting. Advancing students' careers and support for secondary school teachers who wish to use the materials as support or enhancement of their own were not really taken into consideration, as probably university professors are not fully aware of this potential.

All in all, the experience was regarded as positive. When asked to evaluate it on a 1-4 Likert scale, where 1 is negative and 4 is positive, 48,6% gave a 3 and 31,4 a 4. 71,4% of the participants declared they would consider teaching online again.

## Conclusion

Teaching from a desk and teaching from a computer desktop are two very different ways of teaching: the first is a long time tradition, one that professors are familiar with and have mastered throughout years of experience, while the second was born around thirty years ago; the first is a solitary act that typically only involves the teacher's expertise as far as the content, the delivery and the assessment are concerned, while the second is usually a team effort, which requires the collaboration of tutors, technical and managerial staff, and instructional designers. They share a similarity, though: in recent years, the pedagogical assumptions of traditional teaching have been questioned, as we move towards a more learning and learner-centred, constructivist model. This model is one of the foundations of online teaching, where the teacher becomes, more than ever, a facilitator of learning and must redefine their role. These principles are still very hard to put into practice at the university level in a classroom context, but through the design of online courses, professors are becoming aware of the necessity to "teach the way students learn" and not vice versa. However, as we have seen designing online courses is a time-consuming, challenging process demanding that professors become once again learners too. Not only do they have to redefine their role and rethink their materials, they also have to familiarize with new technology and plan how to use it according to their courses' learning objectives, adapt evaluation to the automatic assessment model, and juggle academic commitments and the preparation of videos, animations, quizzes and other online interactive activities.

Our experience showed that at the University of Turin there is little familiarity with Open Educational Resources, leading to more difficulties in creating online resources. In addition, to make the transition smoother, teachers need to be constantly supported and universities must be equipped accordingly. Universities need people who are expert in designing online courses with the teachers, who can find the most suitable solutions, who can show them models and innovative strategies, such as interactive feedback. Blended modality can help the transition, too.

Despite all difficulties, after the training most teachers express satisfaction for the work done, give encouraging feedback on the training received, and say they would repeat the experience. At the same time, preparing an online course seems to prompt reflection on traditional teaching, and once the course is completed the integrated use of the classroom course and the online one provides undeniable benefits.

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