

# Book of Abstracts



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Gabriella Casalino and Riccardo Pecori

# Book of Abstracts

HELMeTO 2020

Second International Workshop on  
Higher Education Learning Methodologies and Technologies Online  
September 17-18, 2020, Virtual Workshop

## Sponsored by

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## Message of the General Chairs of HELMeTO 2020

Dear friends,

the 2019 edition of HELMeTO confirmed a growing interest on the online higher education topics, as well as the relevance of the interdisciplinary approach that characterize our annual event. The presentations and the talks triggered an intense discussion about the complex relationship between technologies and pedagogical approaches. These reflections highlighted some topics of particular interest such as the potential role of learning analytics, the relevance of the learning design, and the key role of tutorship in online learning. While the HELMeTO steering committee was working on the 2020 edition, to be held in Bari, the Covid-19 emergency erupted and, in few weeks, online learning topics escalated in the agendas of all the education institutions around the world: schools, universities, education ministries and policy makers. On one side the emergency led us to reconsider the organization of the conference, bringing the entire organization online, on the other side it appeared to us that the unprecedented situation needed a dedicated special session within HELMeTO 2020, a session dedicated to the impact of Covid-19 emergency on online learning. The emergency has forced universities to adopt solutions for distance learning very quickly, often without being able to provide adequate planning or build up the specific technical and didactic skills to develop e-learning courses. Even the delicate aspect of the assessment, necessarily translated online too, was addressed with emergency solutions that each university has implemented on the basis of the technological resources and skills available as well as the specific nature of the degree courses. This extraordinary situation is well represented by most of the accepted contributions explicitly dedicated to the reaction of academic institution to the Covid-19 impact on their courses. Alongside these contributions there are those less linked to contingency, which address the key themes of online learning: learning analytics, online assessment, innovative teaching methodologies, roles and practices of online tutoring. We are aware of the fact that 2020 is not going to be a year as usual and all of us had to face something unexpected and unprecedented, facing the first global pandemic of the digital era, but, in the end, we decided to maintain the HELMeTO 2020 edition as a virtual workshop and place of discussion, with a special focus on the unexpected diffusion of online learning far beyond its usual reference domain. We received 59 extended abstract submissions from more than 170 authors and 13 countries (Spain, Indonesia, Russia, Japan, Norway, Canada, United Kingdom, Hungary, Yemen, Netherlands, Greece, Oman, Italy), after the peer review 40 contributions were accepted to the workshop.

September 17, 2020  
Bari

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*Loredana Perla*

*Paolo Raviolo*

*Daniel Burgos*

*Pierpaolo Limone*

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# Open Online Courses and online teaching in Higher Education: the framework of Start@unito and the support during Covid-19 pandemic

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## 1 Introduction

Since its birth, online teaching in Higher Education has developed with three main paradigms: in person, distance, and blended teaching. Research in this topic has been active (Ghiley, 2016). The period of global pandemic for Covid-19 gave an incredible boost to fully online teaching, since schools and universities shut down across the world and students cannot be in their classroom (Toquero, 2020). For many teachers, this change of modality has been dramatic, but it is highly probable that teachers who were already used to some kind of online teaching, or with an open mind to Technology Enhanced Learning did not find it very hard to change their educational approach. Even less problems were experienced by those professors who had just prepared or were about to finish a full university module just before the pandemic. This is the case of start@unito (Marchisio et al. 2019a). Start@unito (<https://start.unito.it>) is a Digital Learning Environment (DLE) that promotes 50 Open Online Courses (OOCs). One of its aims is to facilitate the transition from secondary school to university, because most of the OOCs are related to the main first-year disciplines. The DLE is composed of a virtual learning environment integrated with different tools and designed using methodologies which help students in the autonomous learning, trying to improve the engagement (Barana et al., 2019). The DLE of start@unito uses for example an Automatic Formative Assessment (AFA) to give immediate and interactive feedback, an Advanced Computing Environment (ACE) to increase the interactivity, and other tools. The development of the online platform started in October 2017, with a first phase of 20 open online courses, who were deployed from March 2018 and officially inserted in the university offer in the academic year 2018/2019. The number of OOCs increased to 50 with new courses implemented throughout 2019 and all of them are available in the academic year 2019/20, so just in time for the Covid-19 pandemic which caused the closure of schools and universities. Teachers who developed the OOCs took advantage of the newly prepared contents, sharing this possibility with colleagues. University professors participating to start@unito were trained on topics related to online learning and teaching (Marchisio et al., 2019b). Start@unito model was evaluated also before Covid-10 in

comparison with in-person courses; the new emergency context changed the perception of its usefulness, in particular lockdown has prompted teachers and students to appreciate the flexibility of the modules and the units of start@unito. Forced distance teaching caused distress for many teachers, but those who had embarked on an online teaching experience such as start@unito found great benefits. The paper discusses the model for OOCs developed through start@unito, also in the light of the Covid-19 pandemic.

## 2 Research questions and methodology

This research wants to analyze the start@unito model and understand how much teaching was facilitated through this experience. This model is different from MOOCs, Massive Open Online Courses, because students can access and start courses anytime, from anywhere with a self-paced and adaptive approach. Thus, we can summarize the aim with the following Research Questions:

RQ1. How does the model of OOCs of start@unito help teachers improve their online teaching?

RQ2. To what extent did the start@unito OOCs facilitate teaching during Covid-19? The collection of data for this research relies on two modalities:

- Questionnaire: we asked every start@unito teacher to fill a non-anonymous online survey, to understand the point of view of each individual and to relate the various criticalities to their subject of study. Numerical variables are presented with percentages, median and IQR (Inter Quartile Range), while open comments are reported translated in English.
- Data analytics from the DLE of start@unito.

## 3 Results

The entire sample of teachers who are module leaders is composed by 69 teachers. Some of them are leaders of more than one OOCs. From the questionnaire we collected answer from 44 teachers. 50% of the teachers who answered have been module leaders for 2 years. The OOCs of start@unito are completely open to everyone, all over the world. At the University of Torino these modules have an analogous in-person module. Students enrolled at University of Torino can use the OOC as a support for the equivalent module in presence or insert the OOC in their career. In many cases, the online and the in-person module share the same teachers, who generally are also the developers of the course, after a proper training. In this way teachers can then evaluate participations, and, with knowledge of the platform potentialities, they can experiment how to use it in their online teaching, in presence and at distance. We asked teachers how they used the online course with their students. Most respondents (45,5%) declare that they advise the OOC for revision, thus as a corollary of the usual module for theory (11,4%), exercises (34,1%) and formative automatic assessment (31,8%). Few teachers transformed their course into a blended one (13,6%) or required students to attend some online activities (6,8%). Teachers were asked to evaluate the advantages of start@unito modules

from the point of view of the students over a 5-point Likert scale. Results are summarized in Table 1, from which we can see that the model works, according to teachers.

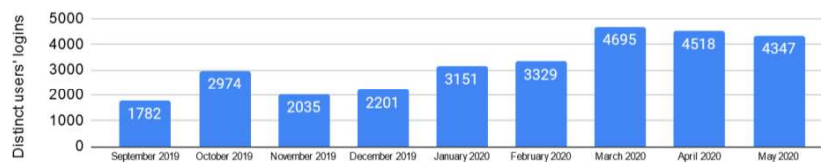
**Table 1.** Teachers evaluation on the opportunities provided by start@unito OOCs

<b>Item</b>	<b>Median</b>	<b>IQR</b>
Expansion of the educational offer	4	2
Anticipation of the students' career	4	2
Support for the preparation of the exams	4	2
Support for students not attending or with special needs	4	1,5
Reusability of materials	4	2
Continuous availability of materials	4,5	1
Orientation in choosing the university path	4	1
Creation of a bridge between university and secondary school degree	4	2
Support for teachers of secondary schools who want to offer opportunities for further study and enhancement for their students	3	2
Support for distance learning in the Covid-19 period	4,5	1,5

Other opportunities highlighted by teachers concern the chance for students to obtain ECTS with self-paced study, that can be used to reach the requirements for an application, for example to a master's degree. Focusing on teachers' advantages, they emphasized their own development of skills related to online teaching (43,2%). Another advantage that teachers appreciated is the facility in the management of the exam (22,7%): in fact, for those who choose to adopt a computerized test, there was a person devoted to the assembly, the assistance and the extraction of marks, while teacher were responsible for the questions and the verbalization.

We can state that start@unito model is working since it can be used in different ways and it brings advantages to both students and teachers.

During Covid-19, many start@unito teachers had the advantage to use already prepared online contents and they appreciate it (Median 4, IQR 1 over a 5-point Likert scale). Its usage has increased, but not so prominently (Median 3, IQR 2 over a 5-point Likert scale). The reasons for this are shown in the open comments: part of the modules belongs to the first semester, while the Covid-19 emergency occurred in the second semester. Even if professors did not see the increased usage, this was detected by the activity in the online platform. Let us start by splitting the academic year 2019/2020 into two parts, the pre-Covid period from September 1<sup>st</sup>, 2019 to February 29<sup>th</sup>, 2020 (6 months) and the Covid period from March 1<sup>st</sup>, 2020 to May 31<sup>st</sup>, 2020 (3 months). Globally, more than 25.000 new users registered on the platform, 47% of which during Covid. Moreover, there were on average 72 new users every day, compared to an average of 41 in the pre-Covid period. The increased usage is not just connected to new users: even the distinct users' login number grew, from 266 daily distinct users' login in the pre-Covid period to 504 during Covid (+90%). Figure 1 shows monthly distinct users' logins to the platform.



**Fig. 1.** Monthly distinct users' logins in start@unito, September 2019 - May 2020.

Stat@unito was of great help in enhancing the internationalization process for two reasons: firstly, some OOCs are in English and this allowed incoming Erasmus students to attend them and secondly, outgoing Erasmus students can more easily take exams of non-followed courses. Moreover, in Covid-19 pandemic the Erasmus program was blocked but University of Torino agreed upon a virtual mobility for international incoming students in the second semester.

## 4 Conclusions

University professors are aware of the opportunities that OOCs can provide them and their students (RQ1) and felt very lucky to be a part of start@unito. The model must be enforced with new modules and didactic support, and it must be extended to other teachers. It is also true that the sample we analysed is composed of teachers who accepted to develop an online course, but when start@unito began we had some rejections, too. Even if this affected teachers in different ways, the experience of teachers through the Covid-19 pandemic was facilitated by their previous experience in start@unito (RQ2). They appreciated what they learned during the training. This means that it is important to train every teacher on online didactics, especially after Covid-19. But what was done is not enough: 65,9% of teachers say that their online course needs an update. This means that the support to teachers for online teaching must be continuous. We await them with a positive attitude since they want to repeat the experience: 93,2% of them said that they will take part in online teaching initiatives in the future.

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