

Emergency Distance Learning in the Italian University

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Abstract

The suspension of face-to-face teaching activities, due to the pandemic emergency, led universities to rearrange their teaching strategies using online learning environments and video-conference tools as a temporarily replacement of classrooms, without an accurate attention to training strategies. In this scenario, there is a need to reconsider current practices in order to determine the appropriate development strategies of academic policies to address the future of innovation of higher education. The purpose is to develop a training system that could adequately integrate users' needs, capitalise good practices and provide a boost in innovation caused by the distance learning experience. A right step in this direction is to develop a higher education context marked by high level of learning environments' hybridisation that could flexibly answer users' needs and meet increasing demand for professionalism in the work marketplace. In this paper, a documentary research of university Emergency Distance Learning practices is presented. The aim is to draw the profile of current situation in order to reflect on future development trajectories of higher education.

Keywords: *Open and Distance Learning, Higher Education, Learning Environment, Education Policy, Quality of Education*

Introduction

The activation of distance learning, regardless of what each university has experienced, cannot be considered just a parenthesis that will have no consequences in the institutional practices of Italian universities. Change is unavoidable. However, in order to make this change an occasion of innovation that could improve the higher education system in Italy, it is necessary to adequately address the institutional policies through an appropriate analysis of current practices.

First of all, it is important to clarify some basic concepts and eliminate any terminology ambiguity when referring to this teaching modality, since there is a vague semantic and conceptual overlap.

When we talk about distance learning, we refer to an emergency teaching modality replacing face-to-face training due to the Italian Prime Minister Decree of 04/03/2020. In the higher education context, this different modality was set up to ensure teaching continuity and not to interrupt the regular course of academic activities. The Conference of Italian University Rectors (2020) underlines that Italian universities reacted promptly to the lockdown period by immediately starting to provide lectures, exams and degree sessions in telematic mode. This immediate response required universities to reorganise their entire teaching system with the aim not to slow down students' careers. Emergency Distance Learning often resulted in a way to replace only temporarily and exceptionally face-to-face training. As a consequence, physical presence was replaced by digital devices, without being driven by the awareness of a methodological shift. The tools used to provide training actually influence adopted teaching mediation methods and processes of teaching. Hence, frontal teaching experiences have been often enabled by video-conferencing tools. Basically, there has been an instrumental shift useful to maintain almost unaltered already consolidated practices typical of face-to-face training.

Therefore, it is evident how far this modality is from the e-learning paradigm, in which, instead, the focus is on the technical and methodological possibilities to ensure significant learning outcomes in online contexts. Yet, e-learning refers to the complex system of teaching design, of the technological learning environment organisation and the methodological changes necessary to promote qualitatively valid learning outcomes (Horton, 2012).

Furthermore, on the occasion of the beginning of the new academic year, many universities were ready to partially resume face-to-face activities in compliance with ministerial indications on the prevention of public health, providing, therefore, a teaching modality called 'dual' (CRUI, 2020): where possible, teaching activities would have been provided both in presence and online, outlining a mixed teaching method that could be simultaneously experienced by students in the university classrooms and at home (*ivi*).

Therefore, mixed or dual teaching is a way of providing training that, once again, draws attention to the instrumental setup and the consequent access modalities: a teaching method that makes use of both analogue and digital tools and can be attended both face-to-face and online.

In literature, the main reference to this method should be blended learning, which, however, has qualitatively different characteristics from mixed teaching method mentioned here. In fact, blended learning places particular emphasis on the methodological aspects that make it possible to effectively combine face-to-face and online activities in a continuum aimed at ensuring participatory teaching and learning processes (Bonk & Graham, 2005).

Thus, in the current higher education scenario, there is a context where particular attention is paid to the ways in which training is provided and attended. However, there is no methodological approach aimed at defining the best way to guarantee a quality service concerning not only the tool used, but also the effectiveness and significance of learning outcomes conveyed by this type of training.

1. Theoretical framework

Far from being an emerging topic, when we talk about distance learning, we draw on the wide scientific scenario developed in the field of e-learning that has extensively deepened those potentialities of online learning (Laurillard, 2005; Hamid, 2002) and its critical issues (Jayaprakash et al., 2014; Dawson et al., 2010; Wong, 2007), developing an extended foundation of best practices and guidelines (Daniel, 2015; Siemens et al., 2014). Online learning environments need to be designed based on the principles of social presence, negotiation of meanings and construction of symbolic artefacts (Dunn et al., 2003) that can foster participatory processes and promote meaningful learning outcomes.

If distance learning was the principal teaching strategy in the pandemic context, in the post-pandemic scenario, the keyword has become 'hybridisation'. The hybrid learning (or blended learning) is a teaching strategy that combines face-to-face and online learning activities (Gleason & Greenhow, 2017; Means et al., 2010). This teaching modality focuses on those methodological aspects that make it possible to effectively coordinate online and offline activities in a continuum designed to ensure flexibility and personalisation (Jonker, Marz & Voogt, 2020; Boelens, Voet & De Wever, 2018) and to improve students' engagement (Bruggeman et al., 2021; Mestan, 2019).

The literature on e-learning and blended learning suggests careful reflection on online teaching methods with regard to the ways of designing learning environments and conducting activities. In fact, meanings conveyed by digital media, rather than being acquired, have to be negotiated. They draw a scenario in which the learner is engaged in a work of acquisition and translation of knowledge in a dynamic and transformative continuity between formal, informal and non-formal contexts (Rivoltella, 2019). The aim is to maintain high quality standards and to promote learning outcomes that could be meaningful and situated in a changing social and economic scenario in which the integration of future professionals is planned. In this direction, the instrumental setup is a necessary basis for the success of a training project that makes use of the potentials offered by the web. Nevertheless, this is not the only determining factor. Rather, teaching design becomes a crucial element for the construction of hybrid learning environments that can maximise the potentials offered by technologies. Indeed, hybrid teaching practices involves a mixture of face-to-face and online activities in which the face-to-face activities constitute the basis on which the online ones are built and the place where feedback is constructed (Trentin, 2010). This organisation results in a transformation of teaching-learning processes and a reorganisation of teaching activities (Johnson et al., 2014; Graham, Woodfield & Harrison, 2013).

In order to let higher education institutions accept the innovation instances discussed here, it is necessary for academic policies to place at the centre of the university's development strategy the need to support teachers' professionalism, developing a system of professional updating that aims at improving their pedagogical knowledge. Teaching strategies have a strong impact on the performance of any university and represent a strategic lever for the university's contribution to social progress (Felisatti & Serbati, 2015). Supporting the professionalism of university teachers in terms of teaching practices, therefore, has to be part of a broader strategy aimed at rethinking university courses to improve the academic curriculum (Galliani, 2006).

2. Analysis of Distance Learning Practices in University

Based on these reflections, a research has been conducted to investigate the teaching practices implemented in Italian universities during the Emergency Distance Learning period. The aim is to identify a path for the development of a training system that appropriately integrates the digital dimension with university teaching, so that a tangible innovation can take place.

Therefore, the research aims at investigating current practices in the academic Emergency Distance Learning context. Based on this purpose, a documentary research has been conducted that has analysed the Italian universities' official websites through a checklist built to collect quantitative data about the ways in which universities have organised their training programmes and the technological environments used.

2.1 Population description

For data collection, it has been decided not to proceed with sampling, but to extend the research to the entire population which is composed of 86 public and private non-telematic universities, distributed throughout the country.

To guarantee the homogeneity of data collection, telematic universities have been excluded from the population, since they are context in which, by statute, training is always provided online. For these universities, therefore, distance learning, was not a temporary substitute for face-to-face teaching. The perspective and the organisation of these universities could differ too much from the others, creating a possible distorting effect in data analysis.

Of the 86 universities belonging to the population, 66 are public and 20 are private (source: cineca.it). Overall, public universities represent 76.74% of the population. The research field is summarised in Table 1 which shows the distribution of universities among the Italian geographical areas.

Table 1. Distribution of Italian universities among the geographical areas.

Area	No. of regions	No. of universities	% on overall universities	No. of public universities	No. of private universities
North	8	33	38.37%	24	9
Centre	4	26	30.23%	19	7
South	8	27	31.39%	23	4

Data presented in Table 1 show that the 38.37% of Italian universities are in north regions, 31.39% in south regions and 30.23% in centre ones.

Another aspect emerging from the data is that public/private ratio in the north and centre of Italy is similar to the national trend in which 76.74% of the universities are public. In the south of Italy, instead, the public universities constitute 85.18% of the total number located in this geographical area.

More generally, 45% of Italian non-telematic private universities are in northern regions, followed by 35% located in central regions and 25% in southern regions.

For a better understanding of these data, it could be useful to consider the number of universities with the potential student population in the three geographical areas by calculating the average potential student population for each university.

To calculate the potential student population, demographic data of 18–40 year old people resident in each region (source: demo.istat.it; data updated to January 2020) were considered. The age range was established by consulting the Ministry of Education's data, specifically considering the percentages of bachelor freshmen and postgraduate students attending Italian universities in the 2018-2019 academic year. These data show that the number of freshmen students who are more than 40 years old accounts for only 1.58% of all the enrolled students in Italy (source: anagrafe.miur.it). Therefore, the 18–40 years age range explains the phenomenon examined for over 95% of students.

In Italy, there is an average of 172,922.51 potential students for each university (Table 2).

Table 2. Average of potential student population compared to the number of local universities.

Area	Potential student population (18–40 years old)	Average: potential population/number of universities
North	6,602,426	200,073.52
Centre	2,851,023	109,654.73
South	5,417,887	200,662.48
Italy	14,871,336	179,922.51

Data presented in Table 2 show that in the northern and southern regions, the average of potential student population for each university placed in these regions slightly overtakes the national average. In the central regions, instead, the average is lower than the national one. Therefore, in the local contexts, there is a substantial overlapping between data from north and south of Italy with regards to the density of universities compared to the territorial extension; instead, in the central regions, this ratio shows a wider university's density.

2.2 Description of data collection tool

For data collection, a checklist has been built, aimed to examine the organisation of emergency distance learning in Italian non-telematic universities.

In particular, the checklist was built with the aim to understand the following aspects:

- if the universities were able to capitalise the e-learning infrastructures already implemented;
- the level of awareness about teaching methods in distance learning contexts;
- the teaching model in distance learning contexts emerging from the technological solutions adopted;

- attention to the type of service provided to teachers and students and their specific needs and
- capability to catch the opportunity to innovate the academic teaching system.

All the specific aspects investigated are summarised in Table 3.

Table 3. Checklist items.

Items	Options
University type	Private Public
Geographical area location	North Centre South
Presence of a specific page inside the website, which provides information about Emergency Distance Learning	Yes No
Presence of digital environments used for training provision	Yes No
Number of digital environments used for training provision	--
Type of digital environments used for training provision	Microsoft Google Blackboard Other video-conference tools Moodle No digital environments detected
Digital environments adoption modality	Mandatory Recommended No digital environments detected
Presence of digital tools to take written exams	Yes No
Type of digital tools to take written exams	Microsoft/Google Moodle External tool No tool provided
Digital tools for written exams adoption modality	Mandatory Recommended No digital tools detected
Presence of guidelines for teachers	Yes No
Presence of guidelines for students	Yes No
Guidelines format	Web page PDF
Presence of pictures in guidelines	Yes No
Presence of video tutorials in guidelines	Yes No
Presence of steps for the usage procedures in guidelines	Yes No
Language in which guidelines are written	Only Italian Only English Both Italian and English
Presence of Open Educational Resources	Yes No

2.3 Data analysis

Data presented in this section represent what was available on the official websites of the universities in December 2020. The analysis used both descriptive and inferential statistics.

The first aspect analysed is the presence, inside the websites, of a specific page to provide information about Emergency Distance Learning and the indication of digital environments and tools used for training provision.

It has been found that out of 86 universities, 20 did not have a webpage dedicated to Emergency Distance Learning, as shown in the following diagram (Fig.1).

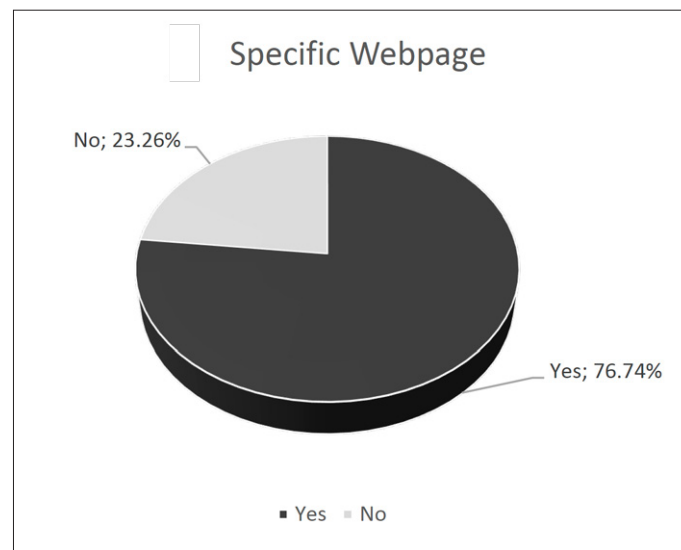


Fig. 1. Presence, inside the website, of a specific webpage to provide information about Emergency Distance Learning

The following analyses were mostly performed using the information retrieved on the webpage dedicated to Emergency Distance Learning. For those universities that did not have a specific webpage, any reference available to the possible presence of Learning Management Systems (LMSs) or video-conference tools was searched inside the website. In this way, it has been possible to determine that all the universities used a digital environment to provide training, except one (a public university placed in northern Italy). Based on this evidence, data about this university were removed from the analysis to avoid outliers in the results.

With respect to the type of digital environment, 6% of the universities adopted more than one digital environment. Microsoft Teams as a video-conference system was the tool adopted by most of them. Fig. 2 shows the complete data.

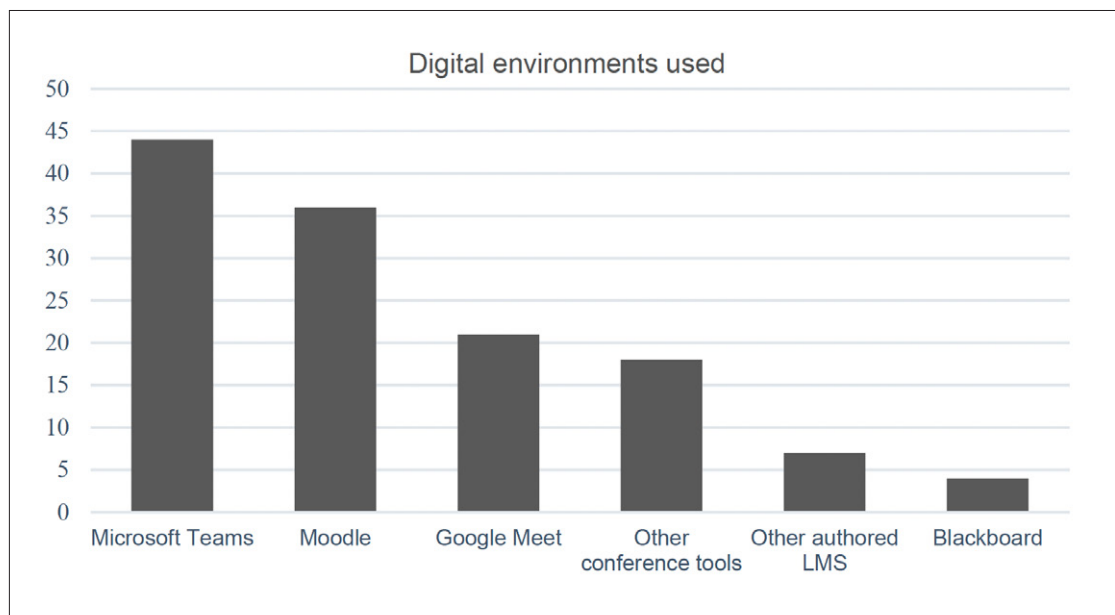


Fig. 2. Digital environments used to provide emergency distance learning

Data presented in Fig. 3 show that 51.8% of universities adopted Microsoft Teams, 2.4% adopted Moodle, 4.7% adopted Google Meet and 21.2% adopted other video-conference tools such as Cisco WebEx, Zoom, etc. Examining these data, it emerges that almost all the universities adopted a video-conference tool and some universities also used a specific LMS such as Moodle. In these universities, the LMS was mostly adopted together with a video-conference tool. In fact, out of 36 universities using Moodle, 32 used also other video-conference tools. Moreover, in 61% of the universities, the system adopted was mandatory.

With regard to the tools used to take written exams, 48.2% of universities adopted a specific tool. Data are presented in Fig. 3.

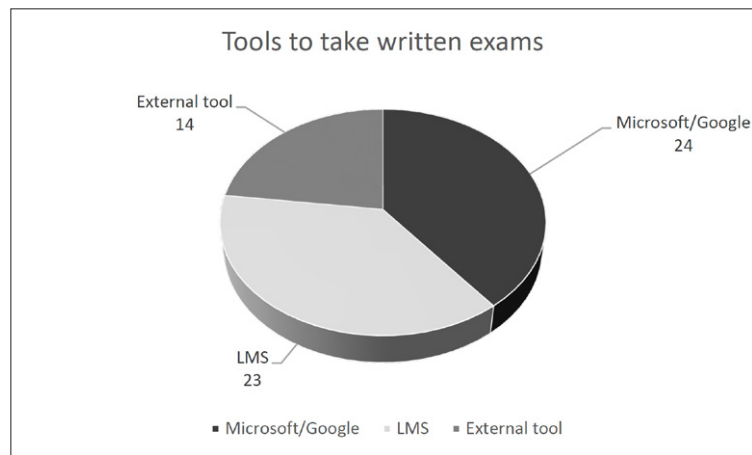


Fig. 3. Tools to take written exams

Almost all universities indicated the internal tools of the video-conference environments or the LMS already adopted to provide training as useful tools to take written exams. Only 34% of those one who indicated a specific tool, used an external one. In general, also for the written exam tools, most of the universities adopted more than one tool. Also, in this case, the adoption was only recommended for almost 54% of the universities.

In terms of guidelines availability, 56.5% of the universities published guidelines for teachers and 63.5% for students. These guidelines were in PDF file format (66.7%), mostly rich in images and steps for the usage procedures. Also, 83% of the guidelines were written exclusively in Italian.

The last aspect detected was the presence of Open Educational Resources and it emerged that 72.9% of the universities did not have one.

Some correlations between data have been identified through deeper analysis. The 'type of university' variable has been taken into account to perform further analyses.

The chi-squared test was aimed to find some correlations and differences between data. Significant correlation was found between this variable and the presence of a specific webpage for Emergency Distance Learning information, the presence of specific tools to take written exams and the presence of guidelines for teachers and students.

Table 4 gives the results of the chi-squared test performed to spot the presence of the webpage.

Table 4. Contingency table: type of university and presence of the Emergency Distance Learning webpage.

Chi-squared = 5.981; df = 1; p-value = 0.014; Cramer's v = 0.264 Significant with a strong correlation				
University type	Page absent		Page present	
	No.	%	No.	%
Private	9	42.86%	12	57.14%
Public	11	16.92%	54	83.08%
Total	20		66	

Data presented in Table 6 show that there was a significant correlation between the presence of a webpage for Emergency Distance Learning information and the type of university. Also, 42.86% of the private universities did not have a dedicated webpage and only 16.92% of the public universities did not have one.

Regarding the indication of a specific tool to take written exams, data obtained are presented Table 5.

Table 5. Contingency table: type of university and presence of tools to take written exams.

Chi-squared = 6.343; df = 1; p-value = 0.012; Cramer's v = 0.271 Significant with a strong correlation				
University type	No specific tools		Specific tools present	
	No.	%	No.	%
Private	16	76.19%	5	23.81%
Public	29	44.62%	36	55.38%
Total	45		41	

There was a significant correlation between the indication of specific tools to take written exams and the type of university. Also, 76.19% of the private universities did not indicate a specific tool to take written exams and 55.38% of the public universities adopted at least one tool.

Correlation data about the presence of guidelines for teachers are presented in Table 6.

Table 6. Contingency table: type of university and presence of guidelines for teachers.

University type	Chi-squared = 5.694; df = 1; <i>p</i> -value = 0.017; Cramer's <i>v</i> = 0.257 Significant with a strong correlation			
	No guidelines		Guidelines present	
	No.	%	No.	%
Private	14	66.67%	7	33.33%
Public	24	36.92%	41	63.08%
Total	38		48	

Data presented in Table 8 show a strong correlation between the two variables: 66.67% of the private universities did not publish guidelines for teachers and 63.08% of the public universities had published them.

Conclusions

Data presented in this paper show that almost 98% of the Italian non-telematic universities adopted at least one video-conference environment to provide training. A little more than half adopted a specific LMS also. This aspect leads to think that at least half of the Italian universities relied only on video-conference tools to provide training. Real usage of the adopted LMS, even if cited as possible resources or used to provide training, has not been followed. In fact, almost all universities in Italy already activated an LMS for different purposes and it was not possible to investigate the way in which they used them. These considerations lead to think that most universities tried to reproduce the same teaching method in online environments as was used in the face-to-face ones. The risk is a quality and effectiveness impairment of the provided training.

Almost all the universities provided tutorials to guide students and teachers on the use of technological tools adopted, even if data presented show that many private universities did not publish any guideline. This evidence leads to think that much attention has been paid to sustain the community of teachers and students in the transition to distance learning modality. It is also likely that those universities that did not publish any tutorial could have provided information in other ways such as via e-mail.

At last, data collection and analysis highlighted a temporary adjustment situation due to the emergency, and only in a few universities, decision makers had seized the opportunity to build a better future and pursue an innovation-oriented vision.

For the academic system, the Emergency Distance Learning provides new opportunities that differ from those of face-to-face teaching. It is, therefore, necessary to overcome the ideological polarisation between face-to-face and online training, in the direction of a hybridisation of practices that can represent a real element of innovation for Italian universities. This aim leads to the need for scientific research to lay the foundations for new solutions to long-standing problems.

The quality of a higher education system is based on its ability to provide high-level training that could respond to emerging demands in the territory and is sustained based on scientific evidence. This determines a condition of continuous change in teaching practices and in their contents. In the current historical moment, the social context is undergoing deep changes to which scientific research is turning its gaze. Unavoidably, the structure of the educational system must be rethought. The direction of this change can be guided by the empirical evidence already found in literature and by the new instances of society that research is currently decoding. However, it is necessary to design a system that could support teachers' professionalism in the transformation process led by hybrid education. This effort can truly lead the technological infrastructures' renewal to university teaching system innovation. Indeed, the hybridisation processes vehicle deeply different teaching practices. The reports of the Conference of Italian University Rectors in 2020 stress the importance of taking measures to defend the academic community's health, adapting the infrastructures and organisation of university life (CRUI, 2020). However, there is no reference in the reports to the need to plan measures aimed at supporting teaching professionalism in the transition to a different training system. Changing the learning environments determines the need to rethink teaching practices at many levels. Firstly, the formats of teaching materials through which knowledge is shared have to change, resulting in different processes of teaching mediation, which have to be deeply analysed and appropriately managed. Furthermore, the way of conducting the training process also changes, where the frontal approach, in online contexts, does not prove to be as effective as it can be in face-to-face learning contexts. Designing hybrid learning environments requires specific training practices as well as an adequate instrumental equipment to support the whole system. Such changes should be fostered through university policies aimed at wisely balancing this hybridisation and adequately designing training intervention.

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