Expansion and Reconfiguration of the Action of the University Teacher in Relation to ICT: a Qualitative Analysis

Maria Carmela Catone* and Paolo Diana**

Author information

*   Department of Political, Social and Communication Sciences, University of Salerno, Italy. Email: mcatone@unisa.it

**   Department of Political and Social Studies, University of Salerno, Italy. Email: diana@unisa.it

PADOVA **UP**

Expansion and Reconfiguration of the Action of the University Teacher in Relation to ICT: a Qualitative Analysis

Maria Carmela Catone* and Paolo Diana**

Abstract: This article aims to reflect on the experiences of university teachers who in recent years have begun to use new technology in their teaching activities. In particular, through empirical research based on qualitative interviews, the article focuses on the use of ICT for e-learning by a group of teachers of the first level degree course in Sociology at the University of Salerno. The adoption of e-learning gave the teachers the opportunity to address issues related to the new digital scenario, to reflect on their teaching practices and, more generally, consider the changes taking place in the profession of the university teacher, a role that oscillates between experimentation and accountability.

Keywords: university teacher, ICT, qualitative analysis, teaching training

*　　Department of Political, Social and Communication Sciences, University of Salerno, Italy. Email: mcatone@unisa.it

**　　Department of Political and Social Studies, University of Salerno, Italy. Email: diana@unisa.it

Introduction

In the last twenty years, innovations in academic teaching and the growing demand for specialisations, together with the deep crisis in the intellectual labour market, have led to a wide gap being opened between the ongoing transformative forces of technology and the original foundations which were the inspiration for the tasks and aims of university education in the past. Within the current scenario, that is characterised both by a complex and variegated set of changes connected to disciplinary, pedagogical and educational issues and to variations in the socio-cultural environment, the diffusion of Information and Communications Technology (ICT) is playing an important role in the reshaping of the educational professions in higher education (Anderson, 2005; Alvarez et al., 2009; Ammenwerth, 2017).

One of the key changes that has emerged from this development is that of the expansion and redefinition of the role of the university teacher (Calvani & Rotta, 2010; Ammenwerth, 2017) which has contributed to the rise in the number of new models of interaction between teaching, learning and innovation: for example, teaching activities that are increasingly free from physical and temporal limits, those in which greater attention can be paid to the specific characteristics and needs of the students, as well as to changes in the social and cultural contexts of reference. Starting from these interrelated aspects, the article aims to provide a reflection on the social and cultural implications that ICT has on the teaching practices of those who work in universities.

The first section examines the overall impact that the implementation of ICT has on the work of university teachers. Among the various ICT tools and approaches, we focus in particular on the use of e-learning as a system that can provide new teaching methods, influencing the redefinition of the work of the teachers[1].

The second section presents a qualitative research based on unstructured interviews carried out in 2018 at the University of Salerno (Italy). The interviews were administered to 12 professors of the first level degree course in Sociology (University of Salerno) who have been using ICT tools through e-learning platforms over the last 10 years; the aim of the research was to explore their teaching experiences, in terms of their reasons for adopting an e-learning approach, the specific teaching methods they used, changes

---

[1] ICT and e-learning refer to different but interconnected concepts as e-learning concerns the process of learning supported by the use of information and communications technology (Pavel et al., 2015) and it "is the growth in students' understanding and knowledge when they use ICT in instructional settings [...] It embraces learning by, with and through ICT" (Anderson, 2005, p.5). For this reason, in this paper the use of ICT is related to the specific context of e-learning.

in their teaching practice and the impact of e-learning on their identity as a teacher.

The third section outlines the main results of this investigation, allowing us to identify various ways to approach and use e-learning in teaching and, more generally, how to analyze how teaching practice is being renewed to include these new developments, and how the identity of teachers is changing as a consequence of the adoption of ICT.

Technologies and new forms of university education

In recent years, the use of ICT in education has increased significantly (Harasim, 2012; Messina & De Rossi, 2015) due to the fact that it allows for the development of more open and flexible forms of teaching and learning than those found in the traditional teacher-student dynamic. Universities - despite lacking any significant regulatory measures or adequate financial support (Capogna, 2014) - are the most important institutions involved in this complex process (Kirkwood & Price, 2014). The use of ICT, however, involves both challenges and opportunities for the university and its teachers: the delicate relationship between tradition and innovation, i.e. between a system characterized by procedural automatisms, and one that is less structured (Colombo, 2008); the transition from a teaching model based on curricular knowledge, to a more inclusive model aimed at building knowledge through the integration and negotiation of "real" and digital spaces, conceived as environments of collective and connective knowledge (Buffardi & De Kerckhove, 2011); the involvement of the students in the processes of knowledge building through ICT (Galliani, 2011); the ability to adopt more flexible learning and teaching processes that lead to a redefinition not only of temporal and spatial dimensions in which the teaching takes place, but also of all the activities involved in the work of university teachers.

Among the various methods of using ICT in higher education, e-learning, in its different approaches and modalities (full distance, blended learning, MOOC, etc.), is one of the most widely adopted systems (Garrison & Kanuka, 2004; Ranieri, 2005; Bonaiuti, 2006). In recent years, this configuration has given rise to an open debate interconnecting the pedagogical, technological, disciplinary and social aspects (Ghislandi, Raffaghelli & Cumer, 2012) of this new way of teaching.

E-learning is considered as "an approach to teaching and learning, representing all or part of the educational model applied, that is based on the use of electronic media and devices as tools for improving access to training, communication and interaction and that facilitates the adoption of new ways of understanding and developing learning" (Sangrà et al., 2012, p.152). It allows for a wide range of "presence and distance" teaching combinations,

modifying the educational approach by extending the learning context beyond that of the classroom and at the same time changing the sequential nature of contents that characterized traditional teaching methods in the past (Colombo, 2008, p.149). The latest generation of e-learning environments are in fact moving towards constructivist pedagogical models (Jonassen, 1994) that place the student at the centre of the learning path through the enhancement of collaborative learning between peers (Grion, 2016) and active didactic strategies. From this perspective, e-learning systems are contributing to the changes being seen in the processes and methods of both teaching and learning, thus impacting on the nature of knowledge itself and how people use and transform it (Sandrini & Colombo, 2008).

The possibility of designing and running a university course using an e-learning approach requires an overall reconstruction of the whole educational path in terms of its theoretical basis, the content to be delivered, technological choices and human resources to be employed (Trentin, 2003), in addition to an analysis of the student profile and the socio-cultural context in which the learner interacts (Diana & Catone, 2018). E-learning courses, far from being mere undifferentiated repositories of information, necessitate a careful remodelling of the design, implementation, management and evaluation phases, through a combination of pedagogical, social and technological components (Trentin, 2003). Within this scenario, university teachers find themselves inserted into a complex educational setting, characterized by changes related, for example, to the processes of negotiation and construction of knowledge, or the adoption of a new language. In this context, the teacher is required to know how to produce their own materials and how to regulate their work on the basis of an integrated bricolage of activities, devices and the varied network of people with whom they need to interact (Laurillard, 2012, p.144). When the dimension of the classroom expands on the Internet through the integration of virtual environments, space, time, and communication codes are reconfigured, affecting all the tasks and activities of the teacher (Messina & De Rossi, 2015). In other words, they are involved in a transformative process that affects the definition of their professional identity (Crotti, 2017; Arvanitis, 2018).

The process that is transforming professional identity is closely linked both to wider changes in the educational system - the increase in new forms of public management (Pompili & Viterritti, 2018) and the rise of the "entrepreneurial universities" - and to the growing demand for a more complex and interconnected set of new skills that the university teacher is required to possess. These include not only cultural, didactic and educational skills but also specific capabilities regarding course organisation, course design and assessment, as well as social, communication, technical and technological skills (Tammaro et al., 2017).

With regard to the latter, as mentioned above, the ongoing changes and the growing attention to the role of technologies in higher education has led to an open debate on this topic and some specific measures have been introduced at institutional level to address the issue.

Considering more specifically the field of e-learning, many public and private organizations and institutions are dealing with the subject of quality development and assurance: the European Foundation for Quality in eLearning (EFQUEL) and the European Association of Distance Teaching Universities (EADTU), are clear examples of this trend. It should also be noted here that an important role is played in this area by the standards (Learning Object Metadata, the Learning Technology Standards Committee), the recommendations of the OECD (Hénard & Roseveare, 2012), and the work of the High Level Group on the Modernisation of Higher Education. However, despite the efforts of the European Commission to promote these different types of procedures in order to "harmonise the European debate on quality in e-learning as part of a pertinent initiative" (Ehlers, 2004, p.3), a common institutional strategy appears still to be lacking. Indeed, the results of the "E-learning in European Higher Education Institutions" survey, indicate that "despite some newly emerging initiatives, national policies and strategies for e-learning in higher education are not yet widespread, and seem to enjoy only limited visibility among higher education institutions"[2] (Gaebel et al., 2014, p.19). In particular, according to this research, one third of respondents stated that there is no specific e-learning policy. However, 89% of respondent institutions affirmed that they have a faculty-level strategy for e-learning. Looking at the Italian university context in particular, the survey indicates that currently there is no overall national e-learning strategy, but that there are simply some support measures at national level[3].

This situation becomes even more worrying when focusing on the professional development of university teachers, given that the Italian academic system seems to lack systemic measures and strategies aimed at supporting the development of professional skills that would provide university teachers with a more critical and informed knowledge of ICT. The result is that many teachers often approach this area voluntarily, on their own initiative or, at other times, they become directly involved in new forms of teaching following an automatic assumption that they are already qualified to use specific technological tools. This lack of professional development is also

---

[2] The survey was carried out by the European University Association between October and December 2013; a total of 249 institutions and higher education systems from 38 countries completed the survey: 20 Italian universities took part in the survey.

[3] In 2012, the Italian government promoted various initiatives (such as the Digital University initiative) aimed at supporting universities in the adoption of administrative procedures related to digitalization.

connected to a combination of extrinsic and intrinsic factors: problems related to infrastructural and technological equipment, the organizational constraints of the university, problems relating to professional identity due to the loss of social status of the profession, age, perceptions and the attitude of teachers towards technology (Ranieri, Raffaghelli & Pezzati, 2018).

In other words, although the use of ICT and more specifically of e-learning models in higher education is developing, the training of faculty staff, regulations, as well as the organisational structure and the logistical-infrastructural conditions pose significant obstacles to a wider and more solid establishment of university teaching practices (Renzi, Klobas & Trentin, 2008). Starting from this theoretical framework, in the following sections we report the results of a qualitative empirical research aimed at investigating the use of e-learning by a group of university teachers, taking account of some of the issues outlined above.

Methodology

Having briefly looked at the role that e-learning plays in higher education, below we present an empirical research that was carried out in order to investigate the experiences of university professors (including former and retired professors), teaching the first level degree course in Sociology of Department of Political, Social and Communication Sciences (DSPSC) of the University of Salerno who had adopted e-learning systems over the last 10 years. The research aims to explore the impact of e-learning on the professional development of the university teachers taking into account possible changes in their work, their relationships both with technology and learners and the potential redefinition of their professional identity.

It is important to note that the DSPSC and in particular those working on the degree course in Sociology have been involved in the design, implementation and delivery of e-learning courses since 2001. They chose to use this approach for many reasons: to enrich the educational program; to respond to the needs of a large group of students-workers and working students; to make study paths more flexible; to try to tackle the high dropout rate and to give students a more informed knowledge of ICT (Arcangeli & Diana, 2008). Various methods of distance learning were adopted during this extensive period of time, forming a development path that can be divided into three main phases.

Firstly, an experimental period from 2001-2005 in which 14 courses were delivered entirely in full distance e-learning mode, and 11 courses were offered using a blended e-learning approach - a format that integrates classroom learning time with online learning as it requires frontal lectures to be

supplemented with forms of online support and activities provided by an e-learning platform (Garrison & Kanuka, 2004).

After this initial testing phase, from 2006 all the courses in Sociology were offered both in full distance mode (for students who could not attend the frontal lectures) and in a blended format.

During both these phases, the DSPSC was supported by specialists in the fields of e-learning: an online tutor, a contents designer, a multimedia developer and a course director. Online training sessions on e-learning course design and specific training meetings were organized to allow teaching and support staff to gain more experience in the use of e-learning and to train them to become more informed in the use of the tools. All these training activities were led by a visiting professor from the California Virtual Campus. With regard to the technological aspects, an e-learning platform called Web Course Tools (WebCT), developed by the University of British Columbia, was purchased and adopted (Yip, 2004). This platform offered the teachers a variety of tools allowing them to build their own online courses: e.g. tools for the contents (Syllabus, Dictionary, Course Content, Exercises, Simulations, Additional Readings); communication and secretarial tools (Discussion Forum, Calendar); self-assessment tasks (Self-tests) (Amendola, Errichiello & Vitale, 2005). A particularly important moment during these two phases was the winning of the "Percorsi di formazione a distanza e-learning - Campania 2000-2006" P.O.R. project in 2006, that was aimed at promoting the culture of distance learning and improving the quality of the didactic offer of the University of Salerno. As part of this project, funded by the Campania Region, several software programmes were purchased, such as Camtasia (used for demonstrations or tutorials and to record PowerPoint presentations); Soft Chalk (to create interactive web pages); and Macromedia studio (a suite of authoring tools).

Finally, in 2008, there was a final phase characterized by the transition from the WebCT to the Moodle platform. Since then, the delivery of the course in an e-learning format has become optional and is dependent on the choice of the teacher: 10 courses[4] were led by 10 teachers and followed by an average of 70 students for each course. The decision to change the platform was taken mainly in order to reduce costs, since Moodle, differently from WebCT, is a free open source platform (Nedeva, 2005). Cost considerations were followed up by an analysis of the characteristics of the platform: Moodle is recognized in the international educational context for creating user-friendly learning environments based on the sharing and co-creation of knowledge, in line with a constructivist pedagogical approach. As men-

---

[4] The e-learning courses were: statistics, social research methods, laboratory of statistics, political economy, organizational sociology, the history of political thinking, contemporary history, the methodology of social sciences, math remedial classes, and sociology.

tioned above, the design and implementation of the platform used by the DSPSC was entrusted to a group of e-learning experts – an online tutor, a contents designer, and a multimedia developer - who shared their skills and knowledge with the course teachers. The e-learning course was therefore set up following a participative approach, taking account of pedagogical, social and technological aspects. The outcome of this process was the creation of the Des-k platform, built in the Moodle environment and characterized by various macro-areas: contents, activities, synchronous and asynchronous communication tools (Diana & Catone, 2016)[5].

This long three phase development path was enriched by the highly active participation and the effort and dedication of many of the DSPSC teachers who during this period reflected on both the potential and the limits of e-learning by identifying more appropriate forms and contents for the educational needs of the students. Additional aspects of the project consisted of the organization of thematic seminars with colleagues from other universities, involvement in national and international conferences and participation in scientific associations in the e-learning sector, the winning of European projects and investment in new human resources (designers, online tutors, etc.)[6]. In addition to this, the teachers and researchers of the DSPSC carried out many empirical analyses in order to explore the e-learning experience of those involved over these years (Amendola, Errichiello & Vitale, 2005; Arcangeli & Diana, 2008, 2009; Catone & Diana, 2016; Diana & Catone, 2016; Diana & Catone, 2018; Giordano & Vitale, 2006). While on the one hand these studies were mainly "student centered" - i.e. focused on the analysis of the learning processes, the satisfaction level of students and the evaluation of the performance they reached - on the other hand the point of view of the

---

[5] Each e-learning course was characterized by HTML5 video lessons, exercises with high level of interactivity, texts enriched with images, audio, video, graphics and diagrams, simulations, self-assessment tests, chat, discussion forum.

[6] The activities carried out by the DSPSC within the sphere of e-learning were: conferences such as the "Multiconferenza italiana su e-learning, media education e Moodle moot" (7-9 September 2016, University of Modena and 9-11 September 2015, University of Genova), "Apertura e flessibilità nell'istruzione superiore: oltre l'e-learning" SIREM - SIEL National Conference (13-14-15 November 2014, University of Perugia), The International Conference of New Horizons in Education (25-27 June 2014, Paris); VIII edition of Expo e-learning, (19 and 20 March 2009, Barcelona), II SIe-L conference "E-learning: Persone, Sistemi, Organizzazioni" (9-11 November 2005, Florence); projects: "E-learning per supportare l'insegnamento dei metodi di ricerca empirica nelle scienze sociali" FIRB project (2016 - 2018); "European training partnership for an inclusive society" (FES operational programme human resources development 2007-2013); "Dedalus Esplorando" project (2013 – 2014); "Grundtvig Learning partnership 2009: EEPP E-Learning Education for Prisoners and Prisoners Professionals"; seminars: "Noi, matricole allo specchio. Immagini e percorsi degli studenti del corso di laurea in Sociologia" (2 December 2015, University of Salerno); "Didattica e nuove tecnologie: i corsi online della facoltà di Lettere e Filosofia" (22 May 2012, University of Salerno). The DSPSC was also a member of the Italian society of e-learning (Sie-L).

teachers in terms of their experiences and beliefs was somewhat underestimated and to a certain extent neglected.

Our qualitative empirical research was designed in order to fill this gap and to investigate the teaching experiences of the teachers of the degree course in Sociology who had adopted e-learning systems. The research was carried out through the use of unstructured interviews (Silverman,2016), a technique based on the centrality of the interviewees, who thus have the opportunity to narrate and reconstruct, with the guide of the interviewer, their universe of meaning, as well as their own personal experience. From a methodological point of view, this technique - which adopts the dynamics of interpersonal communication - allows us to explore in-depth the subjective view of the interviewee and to understand their unique thoughts, beliefs and values, at the same time encouraging a self-reflection process (Montesperelli, 1998). The interviews were carried out and recorded during the months of February and March 2018 with 12 university teachers: 8 of whom were male and 4 females, of various ages: 3 younger teachers (with an average age of 40 years old); 5 middle-aged (55 years old on average) and 4 elderly retired teachers, (70 years old, on average). Four of them teach more applicative subjects such as statistics, social research methods, social statistic, political economy; the others teach more generalist disciplines: sociology, sociology of organization, history of political thinking, contemporary history, history - remedial course and the methodology of social sciences. Due to the unstructured nature of the interview, we adopted a general line that could be adapted according to the flow of the conversation. In particular, through the open, generative questions of interview, we tried to address the complexity of the aim of this research, bringing to the light the e-learning experience from the point of view of the teacher.

The cognitive aim of the research was operationalized in the following items that allowed us to explore and understand the e-learning experience and in particular the possible changes in the work of the university teacher as a consequence of the increase in the use of ICT:

1. The approach of the university teachers to new technologies, in terms of their reasons for using the e-learning platform, as well as their knowledge and attitudes towards of e-learning;
2. The methods and strategies adopted in the use of e-learning: the interviewees described how they used the platform, the tools, the main resources and the process of integration between the e-learning platform and frontal lectures;
3. Changes in the transmission and knowledge building processes: teachers expressed their opinion on the impact of e-learning on the students' learning process;

4. Aspects related to the definition of the professional identity of the teacher as a consequence of the use of e-learning, touching on the significant issue of the skills that the university teacher needs to acquire and develop and on the possible change in their status;

5. An overall evaluation of the experience.

After collecting the interviews, they were transcribed, analyzed and interpreted following a qualitative method (Diana & Montesperelli, 2005). In particular, the transcription was made by reporting the verbal and para-linguistic characteristics (the intonation and volume of the voice, the accents, the rhythm and speed of discourse, the pauses and their duration, etc.), through the use of conventional signals. These aspects contributed to the interpretation of the statements of the interview, that was considered as an highly polysemic communicative event. Next, we developed a "reading grid": the transcripts of the interviews were grouped into classes and types, i.e. textual elements that interconnect and that assign meaning reciprocally through semantic, lexical and grammatical relationships of proximity and contrast (Addeo & Montesperelli, 2007, p. 13).

Results

The analysis of the interviews revealed a complex scenario in which technological, pedagogical, social, cultural and biographical aspects are deeply intertwined. The results we describe below should be interpreted in the light of a series of issues. First of all, we investigated the e-learning experience of teachers of different ages and therefore with a different level of familiarisation with the technologies; moreover, the professors teach diverse subjects and, as can be seen from the results, this was a significant discriminatory factor. Finally, we considered the extensive experience of some teachers in the e-learning sector, such as the degree course in Sociology, who have been involved in the implementation of e-learning courses for over 10 years; this means that the results are interpreted also taking into account the technological innovations - such as the change of the e-learning platform (from Web CT to Moodle) - that occurred during these years.

The approach of the university teachers to e-learning

The first item deals with the attitude of the teachers towards e-learning, the results were varied: on the one hand, a group of interviewees (8 younger and middle aged teachers) expressed enthusiasm, curiosity and the desire to experiment with alternative forms of teaching, exploiting the potential of ICT; on the other hand, some teachers (4 older teachers) felt an initial sense of distrust towards the use of new technologies in their teaching practice.

With regard to the latter, the main reason behind the initial resistance to e-learning was due to the absence of face to face contact between teacher and student, as well as between students themselves. According to this group of respondents, e-learning could have hindered the social and emotional interaction on which the educational relationship has always been based, leading to significant consequences in terms of the students' level of motivation.

> I was perplexed, I didn't know what to think. In my opinion one thing that is important is that in the frontal lesson you can see their faces, you look into their eyes and understand whether they have understood or not, and you understand if they are bored. This moment of the relationship is irreplaceable, and you cannot find it in the virtual context. For this reason, I was very skeptical. (Teacher of Contemporary History - Remedial Course).

The initial approach to ICT, according to all the interviewees, followed a decision of the Department of Political, Social and Communication Sciences to adopt e-learning in order to overcome some problems related to the irregular attendance of students, high dropout rates, cultural gaps and difficulties related to socialization in the university context (Arcangeli & Diana, 2009). In this sense, e-learning represented an intervention strategy to support the educational path of students, keeping alive the contact with the learner and reducing these types of problems.

Among more specific reasons that led the teachers to adopt an e-learning approach, even when it was not mandatory, was the need to give more space to the practical activities that otherwise tended to be neglected for two main reasons: first, during the frontal lecture teachers usually spend more time on explanations of theoretical aspects, precluding the opportunity to provide specific time for practical activities; second, due to the difficulty that teachers encounter in trying to follow and supervise the activities of a large number of students (Diana & Catone, 2018). This aspect emerged especially among the teachers of applied subjects (statistics, social statistics, social research methods, economic politics) who chose e-learning in order to have more time outside of the classroom and delegate an operative function to teaching materials and platform activities (Trentin, 2006).

A second reason for adopting e-learning was the opportunity to experiment with channels and languages that were different from the traditional ones, in order to establish a closer contact with the students:

> At first, I was very skeptical, but the only way to understand how e-learning worked was to actually try it out. Whilst using it, I realized that there was a very uneven, staggered level of preparation within the group of students, so there was a risk that if I did a high level lesson, I would lose the low level ones, and if I did a low level lesson,

those who were better prepared would get bored. In front of a large audience of students you can't go into the specifics of the problems. I wanted to understand how to find a more inclusive way of getting them to follow me. When you are in front of so many students, how can you do it? You have to find different interactive formulas. (Teacher of Contemporary History).

There is a problem of the dialogue between the teacher and the student, also for linguistic reasons given that they do not understand many of the words that we usually use. Sometimes it is not possible to establish communication with the students in order to get feedback, but the need for discussion and exchange is necessary in order to identify the specific needs of the student. (Teacher of Social Sciences Methodology).

Another aspect, shared by the majority (8) of the interviewees, was the possibility to meet the needs of a significant group of students-workers and workers-students in order to give them the opportunity to choose their own times and places of study (Arcangeli & Diana, 2009).

Using the e-learning platform, also the students who were working were integrated into a class, and were part of a learning community that lasted throughout the whole degree course. (Teacher of Social Statistics).

The design of the e-learning course and in particular the implementation of the platform represented a delicate and challenging moment for teachers who, especially during the first years of experimentation, had been searching for new learning paths and ways to make some innovations in their teaching practices.

The e-learning course design required a strong commitment, in the sense that ... I had to write the contents of the majority of the units myself; for a few units I was able to use existing material, but for almost all of the others I had to create everything from scratch. (Teacher of Political Economy).

These results show that technological innovation is an important factor of change that affects the content of courses and the skills of teachers, also since there is a more complex relationship between the level of knowledge required of new technologies and the actual knowledge of the subjects involved.

In general, during the design and implementation of the courses, the teachers were followed and supported by a group of e-learning specialists and ICT experts (an online tutor, a contents designer, and a multimedia developer) who had the task of understanding the requests of the teachers - in

terms of contents, objectives and activities of the courses - and implementing them in the courses.

New technologies encourage a sharing of knowledge among different professions. In this case, the specialist nature of professional knowledge becomes less important and relational skills, based on the ability to integrate different languages and skills, translating them into practical applications for problem solving and the achievement of specific objectives, become central (Butera, 2005).

In this sense, the teaching activity is enriched with new skills and actors that enter into a relationship of communication and cooperation with the traditional teaching figures.

The negotiation between the teachers and the different professional figures involved was - as many interviewees declare – not always simple; more specifically, it was not based on the mere transposition of contents into the virtual environment, but it required a complete rethinking of the pedagogical dimension and the characteristics of the subject being taught, taking into account also the specific needs of the students.

> The approach to new technologies involves a reprogramming of the traditional lecture, in the sense that it is necessary to design the study material, to establish the typology of the activities and to adapt them to the needs of the student and their skills. (Teacher of Social Statistics).

E-learning practices in a certain sense allowed the teachers themselves to define the teaching methods adopted, to specifically define the difficulties met by students and to identify appropriate strategies to try to overcome them.

In other words, technologies are not merely tools that the teacher develops and shapes for their own purposes, but they consist of a set of knowledge and practices, modifying the routines of structured knowledge. Within this process, the teacher activates a reflective practice linked to the ability to modify the action, and to generate, in this way, a change (Giddens, 1991). In other words, technologies contribute to a "rethinking and altering one's own professional practice based on the mixing of different and complementary modes of knowing" (Arvanitis, 2018, p. 117).

> I had some ideas, but I didn't know how to implement them. For example, one problem was due to the lack of the "sense of the time" encountered by students. Everything that is not contemporary for them took place sometime in the past … three or three hundred years is the same thing to them. For this reason, I asked the group of designers of the platform: "How can I do this? Help me find a way to build a timeline". Starting from this need, during the design phase we developed a time machine based on the use of images. Because students these days grow

> up in the visual dimension. Showing them images and reconstructing
> a timeline is easier for them. (Teacher of History - Remedial Course).

This aspect also reflected a different level of familiarization of the teachers with the technologies according to their age, i.e. between the younger and middle aged teachers who already have greater knowledge and expertise with the ICT, and older teachers who frequently lacked confidence and experience with these tools.

The methods and strategies adopted in the use of the e-learning

The second item of the interview aims to explore the methods and strategies adopted, different uses of the e-learning platform, also depending on the learning approach chosen.

In the case of full distance courses, the interviewees (in some cases supported by a tutor) stated that they had been actively involved in following and supervising the activities carried out by the students. The teacher was engaged in establishing and maintaining a constant dialogue with the learner in order to overcome the lack of communication of the frontal lecture: this led, for example, to the participation of the teacher in discussion forums, the use of synchronous teaching tools such as the virtual classroom and the virtual conference.

Instead, in the blended courses - in which the e-learning platform is used as support of the frontal lecture - various different experiences were reported.

Three teachers of statistics, social statistics and social research methods disciplines mainly employed the platform during the frontal lecture to give information, describe situations, and use materials that would be more difficult to employ when following a more traditional teaching approach. According to them e-learning was useful in order to bringing students closer to the new frontiers of social research and digital sociology (Rogers & Lewthwaite, 2019).

> During the lecture, the e-learning platform allowed me to explain the
> secondary data analysis, by showing students the Istat databases, the
> system of indicators, but also the info graphics and systems to design
> web surveys. (Professor of Social Research Methods).

For four professors, the platform was designed to be used by students mainly at home: in the classroom students were introduced to models, principles and theories that they then put into practice in virtual labs, or spaces dedicated to individual and collective exercises (Bruschi & Ercole, 2005, p.27). In this case, the teacher also played the role of facilitator and mediator between the communication flows of the classroom and of the digital environment.

At the same time, two respondents acknowledged that they had moved towards a more passive e-learning approach, due to the significant workload

required by the implementation of the e-learning course, using the platform mainly as a simple repository of contents.

> I recognize that maybe I did not fully exploit the potential of the ICT [...] I used these e-learning tools less and less. I accept some of the responsibility for this process, in the sense that for me the overall educational commitment on all courses was already heavy, so, I preferred not to add other difficulties. (Teacher of Political Economy).

In general, the analysis of the interviews illustrates three different, interconnected ways of use of the e-learning platform. Firstly, as an opportunity to take advantage of the various languages provided by the digital environments that promote the students' learning process.

> Students could listen to music, watch film clips- things that in the classroom are more difficult to do especially now [...] there was an opportunity to mix visuals, images, art, and literature. To explain the pre-war situation, I used the anthology of Spoon River, and to explain Spoon River I used a song of Fabrizio De Andrè [...] When the students realized that history is also Guernica and that Gramsci and Guernica are different aspects of the same political attitude, they have the possibility to open their minds and they have fun! In the classroom you can't easily move from the newspaper, to music, to the painting etc. Using Internet, if you organize specific resources and materials, it is possible. (Teacher of Contemporary History).

Secondly, e-learning was adopted to foster communication: respondents described the main tools used, such as synchronous (i.e. chats) and asynchronous (i.e. discussion forums and email) tools that promote a dialogue between peers, with the teacher and the tutor, if present.

Lastly, as mentioned above, e-learning was employed to support the practical activities, through a situated design of multimedia resources, tools and specific tasks.

> The structure on which the e-learning course was built reproduces the phases that characterize the process of empirical research from the design of the research to the presentation of the results. The student, from a simulative point of view, carries out all the phases of the research involved in the study of a contemporary social phenomenon... immigration, deviance, etc. And so they use Sociological Abstract and Google scholar for the literature review, Demo Istat platform for the collection of data [...] in practice, the student is involved in the empirical investigation, becoming aware of the activities to be carried out in order to evaluate the situations that arise over time. (Teacher of Social research methods).

According to the majority of teachers (10 in total), the e-learning course, considered as an integrated system of activities, tools, languages and vir-

tual and real environments, modifies the modalities of transmission and construction of knowledge: the student's learning process changes and they are placed at the centre of the knowledge production process through peer collaboration activities and the performance of authentic and contextualised tasks (Jonassen, 1994).

> Chats, forums, group work, role-playing games, activities that cannot be repeated in the classroom especially if there are many students. E-learning allows students to join together, to create a class, to form a mutual support network. (Teacher of Contemporary History).

At the same time, according to two middle aged interviewees, contact with the teacher through the use of an e-learning platform was very limited due to the lack of the physical presence; in other words, the teacher, is still an irreplaceable point of reference.

> In the classroom you can see the faces and the expressions of the students, you can understand if they haven't understood something. If the classes are not too big, you can look at these expressions and repeat something if they haven't understood. That isn't possible in a digital environment. (Teacher of Political Economy).

Technologies, if adequately integrated, can be resources capable of bringing out new forms of critical reflexivity since they allow us to go back to the underlying rules, to internal criteria, to see problems from a plurality of perspectives and unknown angles (Calvani, 2000). The student is motivated to search for and process information of a different nature, collected from different life contexts, thus developing meta-cognitive skills, organizational skills, and social skills. (Capogna, 2014, p.50).

> Do you realize that along this path they are motivated to say "And then...?" and "Why?" Students need to find bridges, to find roads, and sometimes out of prudence or laziness, we do not provide them with the directions, and the frontal lesson risks being the most convenient teaching method. (Teacher of Contemporary History).

> Students understand everything they do first-hand. Because it belongs to them in a different way. What you do allows you to ask questions, it motivates your "why". When you just listen, the world of questions is distant. (Teacher of Social Sciences Methodology).

In this process, technological innovation is an important factor of change that affects the activities of the teachers: they moved within a more or less structured sphere of action: for some respondents, the platform determined different working hours (for e.g. participation in discussion forums at any time of the day); for others, the e-learning platform gave greater structure

and organization to their work as a teacher, as it allowed them to prepare a set of activities, resources and materials in advance.

> Doing e-learning, using ICT tools, means broadening the range of action beyond the classroom, so it means, for example, participating in discussion forums at any time of the day; it means understanding which tools allow us to attract the interest of students and also which ones are useful in facilitating my work. It means reflecting and understanding. In the frontal lesson there is more improvisation. (Teacher of Social Research Methods).

> During the design of the course - that was the most challenging moment for me - I had to ask myself whether my subject was suitable for the digital environment and how it could be explained through forms, contents, languages that I had never used before. In my opinion, not all subjects are suitable for e-learning […] (Retired Teacher of Organizational Sociology).

The experiences described by the interviewees show how ICT tools led the teacher to undertake a reflective process, i.e. to examine their own experiences, to question their own strategies and methodologies in a context that is free from traditional physical and temporal limits and characterized by continuous changes in the social and cultural contexts of reference (Milani, Raffaghelli & Ghislandi, 2017). In other words, the adoption of ICT in teaching influences the cognitive-design structures of teachers, engaging them in the combination of disciplinary, methodological, technological and sociocultural knowledge, as also highlighted by the research on the Technological Pedagogical Content Knowledge (TPCK) model (Mishra & Koehler, 2006; Messina & Tabone, 2014; Messina & De Rossi, 2015).

> If there is not a thinking mind behind it, there is a risk of an indiscriminate accumulation of materials. The teacher's role is central, since they organize a cultural path, a problematic path, that is not merely a multiplication of the materials. If you simply multiply them - because the Internet allows you to do this - without a specific path, it can be risky. Information does not replace the path of knowledge. We help students think, not just learn. (Teacher of History of Political Thinking).

As the following results illustrate, e-learning has not only changed the activities of the teachers, but it has also contributed to the redefinition of their role.

The definition of the professional identity of the teacher as a consequence of the use of e-learning

The results described above are deeply connected to certain aspects of the identity of the teacher with regard to the use of e-learning. More specifically,

teachers described the sensation they had of being involved in a process of the change in their status. For example, the traditional asymmetry of roles, symbolized by the *ex cathedra*, seems to have diminished. The older teachers in fact underlined the idiosyncrasy of technologies since they put the teacher-student dyad at risk, leading to the loss of authority in terms of "losing control of learning processes, losing the means to monitor and control participation and interaction, or losing the role as content expert in an online learning setting" (Ammenwerth, 2017, p.3127). This means that technological devices could have an effect on the symbolic power of knowledge, modifying the teacher's agency to act (Holt & Segrave, 2003).

> The university teacher needs the frontal lesson because it reassures them about the power of their role. When you disappear behind a computer, you have the feeling of having lost something. (Professor of Contemporary History).

From this perspective, the introduction of ICT in teaching could lead to a "disintegration of the educational relationships which are changing the power connection between teacher and student, within a class that appears increasingly "liquid" since it loses the usual space and time boundaries" (Capogna, 2017, p.127). Moreover, in this context, where teaching practices are characterized by different stakeholders with different views on education and attitudes towards the use of digital devices (Salavati, 2017), new technologies could contribute to changing the institutional space (Capogna, 2016, p.64). From this perspective, in the technological world different actors "are in conflict to affirm their power and obtain legitimization: (…) national and international technology producers who try to conquer the educational technology market; governments who try to define an education policy capable of addressing the technological challenge; the supranational agencies of evaluation who emphasise the logic of benchmarking and so on. All of this reduces the margin of discretion of teachers" (Capogna, 2016, p.65). These considerations are closely connected to the status of teachers in the ICT education setting - a subject that has generated an ongoing debate (Rienties et al., 2013; Alvarez, Guasch, & Espasa, 2009). In fact, although the use of technologies in education does not put limits on the previous roles of teachers, it does result in either a redefinition of their activities or in the addition of new roles for them (Zhu, 2011): as a course and materials designer, a knowledge constructor, a facilitator, or a coach (Ammenwerth, 2017). This model comes with expectations with regards to the social role and the work of the teacher, which seems to be experiencing a "transition from 'subject expert' to 'performance coach' in a learning situation" (Alvarez et al., 2009, p. 327).

On this point, the respondents expressed a common concern about the role of the teacher, who is still considered as the depositary of specialist

knowledge. Whilst on the one hand the activities of teachers are becoming embedded in new technologies that are changing the methods and contents of their work, on the other hand there seems to be an unwillingness to accept a radical change in their professional routines and their traditional status through the acquisition of new and different skills. According to both middle aged and older respondents, only the acquisition of basic skills was needed in order to acquire a general knowledge of the technological innovation (Felisatti, & Serbati, 2014). Only the "basic" skills are necessary since teachers need to be supported by experts and specialists. In other words, the analysis of the interviews leads to the conclusion that the figure of the teacher, that is already subject to constant pressure due to the academic workload required of them by the managerial university, cannot be radically transformed.

> We need to develop some skills - not in the sense of technical training, but to promote awareness in order to push the teacher to consider the real effectiveness of ICT tools (Teacher of Political Economy).

> I believe that without experienced staff, the teacher can't voluntarily ensure all the work required by e-learning is done, especially if we are talking about of 120 hours of frontal teaching activities and therefore they can't guarantee both the participation of the students in a frontal lecture and online activities. Support staff become really fundamental, because otherwise our work would become very hard. (Teacher of Social Statistics).

In addition to this aspect, the new challenges for academic innovation, need to be supported through training, financial resources and acknowledgement. Indeed, the teachers believe that the use of new technologies requires a significant commitment that, at the same time, is not recognized within their careers.

> The fact that there isn't a university policy to really support to these activities is a significant limitation. It is clear that if I had a member of staff specifically dedicated to e-learning, in addition to the IT experts, everything would work much better. (Teacher of the History of Political Thinking).

> In terms of costs, in terms of support, in terms of staff, because…using e-learning is an expensive activity for the structures, and it requires qualified technical staff to maintain the platforms, it requires specialized people, and the teacher cannot do all these activities. (Teacher of Organizational Sociology).

In this regard, the teachers interviewed stressed that the misalignment between institutional policies and formal recognition has a significant impact on the motivation of the teacher, who is therefore less inclined to ex-

periment with new tools and new didactic approaches (Catelani et al., 2018, p.769). The lack of institutional recognition also corresponds to the lack of economic benefits, since the activities carried out by the respondents were voluntary and not rewarded. These aspects can be interpreted taking into account the secondary role of teaching in the Italian university system, as the teachers are evaluated mostly based on the results of their research papers (Bruschi & Ranieri, 2018).

The combination of these criticalities has a negative effect on the effort and commitment of the teachers and on and effectiveness of the transformative process.

The issues relating to the acquisition of skills and the role of the teacher are also affected by the generational gap, since the older respondents reported encountering more difficulties in the use of new technologies, whilst the younger ones were more open and confident.

> The elderly teacher has difficulty in realigning with a system that is new to them, the young teacher is already brought up with a propensity to use new technologies and, finally we have the middle aged teacher, who was born in an old-style generation, but is faced with a new generation of students[...] especially since now we are confronted with students who are still educated through the old system, but we will encounter students who at school have been educated using highly technological tools. (Teacher of Social Statistics).

Related to this last point, among the teachers there is an awareness of the need to stay up-to-date with technological innovation and to be prepared for an informed use of new tools, given that as the years go by, an increasing number of young people who enroll at university will have been trained in schools that already use digital technology, and hence universities cannot do otherwise. From this perspective, according to the majority of respondents, it is necessary to take into account the characteristics of university students (Tapscott, 2011; Gardner & Davis, 2014), who are inserted into a digital environment where they build their knowledge and identity. According to the majority of the teachers, "it is necessary to intercept the semantics of their language, channeling it into a scientific framework and readjusting and transmitting in in the form of new content and knowledge, without losing the rigor and the scientific and heuristic value of knowledge" (Diana & Catone, 2018, p.158).

The evaluation of the experience

The final part of the interview deals with the overall evaluation of the e-learning experience in which the main strengths and weaknesses are summarized. In general, the teachers recognized many positive aspects in the use of e-learning: an increase in reflection that derives from the possibility

of interfacing with constantly changing online tools; an improvement in the learning process of the student who tends to have a more active approach; the possibility for the teacher to have greater contact with the student using participatory and collaborative methods.

However, the interviewees also identified a series of criticalities:

> There are no specific disadvantages, but there are big problems. The main problem is that, in my opinion, the university must be convinced about investing in this method of teaching. Instead, in my experience, there has always been a strong resistance to providing a real support (Teacher of Statistics).

> This experience is like a Ferrari without petrol, a greatly underused resource because it is clear that a teacher, without the support of the institution, cannot achieve significant results (Teacher of the History of Political Thinking).

The problems encountered by respondents were therefore mainly due to the lack of institutional recognition, the difficulty - especially among older teachers - of using digital languages with ease and the increased workload that should not fall only on the shoulders of the teacher but who, instead, needs to be supported by specialized professionals. Once again, teachers stress the need to promote changes and improvements within an institutional framework that encourages their professional development through support, incentives and recognition.

Conclusions

The research we carried out allowed us to reflect on the impact of ICT and more specifically of e-learning on academic teaching. In contrast to many studies that focus mainly on the learning paths of the students, this paper aims to consider this issue from the teacher's point of view. In fact, the teacher in many cases is seen solely as a transmitter of knowledge and content, almost impervious to new teaching methods and technologies. The interviews showed, on the contrary, that teachers who are involved in a path of digital innovation such as e-learning, have a great capacity and willingness to experiment with new forms of teaching; in many cases this leads to a reshaping of the role of the teacher, who views both the contents and the relationship with learners in a different way. In other words, technological innovation represents a factor of change which influences both the action of the teachers and their skills, thus affecting their identity as a teacher.

The results of the research reveal different points: that the implementation of new technologies leads to a redefinition of the specialized nature of the teacher's knowledge, through the contamination with the areas of

knowledge of other professions, as well as the integration of new languages and skills; At the same time, however, according to the teachers interviewed these changes cannot be allowed to undermine the traditional role of the teacher as the 'expert on the subject'.

The research also brought to light factors that sometimes hamper innovation, such as the fact that teachers acted predominantly on a voluntary basis, or that there is a lack of specific training on new forms of academic education, underlining the idea that it "is taken for granted" that university teaching remains "in the hands of the individual teachers" (Pompili & Viteritti, 2018, p.34). There is a risk that exciting new opportunities for innovation will be stifled by a lack of support and recognition at institutional level, thus undervaluing the social role of teachers.

Despite the growing attention to the theme of the quality of teaching in university education, as highlighted, for example, by the recommendations of the OECD and the work of the High Level Group on the Modernization of Higher Education (Catelani et al., 2018), in the Italian university system, teaching takes on a secondary role compared to the results of research. As Bruschi and Ranieri (2018) state, while on the one hand the evaluation of the quality of teaching through the definition of specific procedures is a central theme in Italian education policy, on the other hand, in the phase of national scientific qualifications (ASN), neither the commitment of teachers nor the quality of the teaching activities appear among the indicators used in the evaluation of the teaching; in other words, teaching becomes a critical element for the teacher, who is evaluated only on their performance in research activities (Bruschi & Ranieri, 2018).

We believe that in contemporary society, where digital technology poses increasingly complex and profound challenges for university education, there is a need to support professional development with integrated and innovative approaches, through policy initiatives implemented by academic institutions.

To proceed in this direction, it is also necessary to take into account the point of view of the subject involved in this process of transformation– in this case the teacher- as was our aim in conducting this empirical research. This is because "a new education policy cannot be based on the assumption of technological determinism. It is not sufficient to introduce technological equipment […] but the human and cultural factors that characterize the evolution of each techno-social environment must be carefully considered, alongside its educational implications in order to help people to use them in correct and responsible manner in educational context" (Capogna, 2016, p.65).

From this perspective, it could be useful to begin a systematic collection of the reflections and assessments of teachers on their experiences and prac-

tices using ICT in the public university system. One interesting example of this is the EduOpen portal (www.eduopen.org), which hosts e-learning courses held by Italian teachers from many subject areas and representing excellences in scientific research. The sharing of these platforms would certainly give the academic teaching staff greater support by providing a community with which to compare methods and experiences.

References

Addeo, F., & Montesperelli, P. (2007). Esperienze di analisi di interviste non direttive. Roma: Aracne.

Alvarez, I., Guasch, T., & Espasa, A. (2009). University teacher roles and competencies in online learning environments: a theoretical analysis of teaching and learning practices. *European Journal of Teacher Education*, *32*(3), 321-336.

Amendola, S.,Errichiello, N., & Vitale, M.P. (2005). E-Learning: l'esperienza della Facoltà di Lettere dell'Università di Salerno. In atti di Expo 2005, E-learning: protagonista dello sviluppo della società della conoscenza (pp.1-8). San Bartolomeo in Bosco (FE): Tecomproject Editore Multimediale – Omniacom.

Ammenwerth, E. (2017). Envisioning changing role of university teacher in online instructional environments. *AISHE-J: The All Ireland Journal of Teaching and Learning in Higher Education*, *9*(3), 3121-3129.

Anderson, J. (2005). IT, e-learning and teacher development. *International Education Journal*, *5*(5), 1-14.

Arcangeli, B., & Diana, P. (2008). Cultural capital, learning and ICT in a southern Italian university. In M. C. Matteucci, A. Omicini, E. Nardini & P. Gaffuri (Eds.), Proceedings: Knowledge Construction in E-learning Context: CSCL, ODL, ICT and SNA in education 2008 (pp.176-180).

Arcangeli, B., & Diana, P. (2009). Insegnare metodologia delle scienze sociali in modalità e-learning. In A. Baldissera (Ed.), Insegnare metodologia delle Scienze Sociali (pp. 55-71). Acireale-Roma: Bonanno.

Arvanitis, E. (2018). Preservice teacher education: Towards a transformative and reflexive learning. *Global Studies of Childhood*, *8*(2), 114-130.

Bonaiuti, G. (Ed.) (2006). E-learning 2.0: il futuro dell'apprendimento in rete fra formale e informale. Trento: Edizioni Erickson.

Bruschi, B., & Ranieri, M. (2018). University education: quality, effectiveness, teacher training. *Form@ re-Open Journal per la formazione in rete*, *18*(1), 1-6.

Bruschi, B., & Ercole, M. L. (2005). Strategie per l'e-learning. Progettare e valutare la formazione on-line. Roma: Carocci.

Buffardi, A., & De Kerckhove, D. (2011). Il sapere digitale: pensiero ipertestuale e conoscenza connettiva. Napoli: Liguori.

Calvani, A. (2010). Innovazione tecnologica e cambiamento dell'università. Firenze: University Press.

Calvani, A., & Rotta, M. (2000). Fare formazione in Internet: manuale di didattica online (Vol. 2). Trento: Edizioni Erickson.

Capogna, S. (2016). Schools 2.0: Experiences and Expertise. Digital Teachers Wanted. *Italian Journal of Sociology of Education*, *8*(2), 54-67. doi: 10.14658/pupj-ijse-2016-2-4

Capogna, S., & Sangrà, A. (2016). E-learning quality standards. The case study of an online university. *Scuola democratica*, *7*(3), 731-752. doi: 10.12828/85527

Capogna, S. (2017). Communication for education. From teacher to facilitator in learning and discover processes. *JANUS.NET e-journal of International Relations*, 8(2), 123-128.

Capogna, S. (2014). Scuola, Università, E-learning: un'analisi sociologica. Roma: Armando.

Catelani M., Formiconi A.R., Ranieri M., Pezzati F., Raffaghelli J.E., & Bruni I. (2018). Promuovere l'innovazione didattica e lo sviluppo professionale della docenza universitaria: primi risultati dello sportello e-learning dell'Università di Firenze. In Volungeviciene A., Szűcs A. (Eds.), Exploring the Micro, Meso and Macro Proceedings of the European Distance and E-Learning Network 2018, Annual Conference Genova, (pp. 761-770).

Catone, M. C., & Diana, P. (2016). L'esperienza del corso blended di metodologia delle scienze sociali: la voce degli student. In M. Rui, L. Messina & T. Minerva (Eds.), Teach different! Proceedings della Multiconferenza EMEMITALIA 2015, (pp. 379-382) Genova: Genova University Press.

Colombo, M. (2008). Conflitti generati dall'e-learning: umanesimo e approccio comprendente. In M. Colombo (Ed.), E-learning e cambiamenti sociali. Dal competere al comprendere (pp. 147-171). Napoli: Liguori.

Crotti, M. (2017). La riflessività nella formazione alla professione docente. *Edetania. Estudios y propuestas socioeducativas*, *52*, 85-106.

Diana, P., & Montesperelli, P. (2005). Analizzare le interviste ermeneutiche. Roma: Carocci.

Diana, P., & Catone, M. C. (2016). E-learning in an Undergraduate Course in Research Methods for the Social Sciences: Reflections on Teaching. *Italian Journal of Sociology of Education,* 8(2), 110-142. doi: 10.14658/pupj-ijse-2016-2-6.

Diana, P., & Catone, M. C. (2018). Innovations in Teaching Social Research Methods At The University in The Digital Era: An Italian Case Study. *Italian Journal of Sociology of Education*, 10(1), 128-165. doi: 10.14658/pupj-ijse-2018-1-7

Ehlers, U. (2004). Quality in E-Learning. The Learners Perspective. *European Journal of Open, Distance and E-Learning* (EURODL), 2004(I), 1-7.

Felisatti, E., & Serbati, A. (2014). Professionalità docente e innovazione didattica. Una proposta dell'Università di Padova per lo sviluppo professionale dei docenti universitari. *Formazione & Insegnamento. Rivista internazionale di Scienze dell'educazione e della formazione*, *12*(1), 137-153.

Gaebel, M., Kupriyanova, V., Morais, R., & Colucci, E. (2014). E-Learning in European Higher Education Institutions: Results of a Mapping Survey Conducted in October-December 2013. Brussels: European University Association.

Galliani L. (2011). Progettare e gestire nuove forme di didattica in un'Università cambiata. In L. Galliani (Ed.), Il Docente Universitario. Una professione tra ricerca, didattica e governance degli Atenei (pp. 145-158). Lecce: Pensa MultiMedia.

Gardner, H, & Davi,s K. (2014). Generazione app. La testa dei giovani e il nuovo mondo digitale. Feltrinelli: Milano.

Garrison, D. R., & Kanuka, H. (2004). Blended learning: Uncovering its transformative potential in higher education. *The internet and higher education*, *7*(2), 95-105.

Giddens, A. (1991). Modernity and self-identity: Self and society in the late modern age. Stanford: Stanford University Press.

Ghislandi, P.M., Raffaghelli, J, & Cumer, F., (2012). La qualità dell'eLearning. Un approccio qualitativo per l'analisi dei feedback degli studenti e dei docenti. *Ricerche di Pedagogia e Didattica*, *7*(2), 25-47.

Giordano, G., & Vitale, M. (2006). Multidimensional Data Analysis to assess interactions in an e-learning community. *Journal of e-learning and knowledge society*, *2*(2), 191-204.

Grion, V. (2016). Conclusion: higher education, participation and change. In M. Fedeli, V. Grion, D. Frison (Eds.), Coinvolgere per apprendere Metodi e tecniche partecipative per la formazione (pp. 359-370). Lecce: PensaMultimedia.

Harasim, L. (2012). Learning Theory and Online Technologies. New York: Routledge Press.

Hénard, F., & Roseveare, D. (2012). Fostering quality teaching in higher education: Policies and Practices. An IMHE Guide for Higher Education Institutions, Parigi: Oecd.

Holt, D., & Segrave, S. (2003). Creating and sustaining quality e-learning environments of enduring value for teachers and learners. In In G.Crisp, D.Thiele, I.Scholten, S.Barker and J.Baron (Eds.), Interact, Integrate, Impact: Proceedings of the 20th Annual Conference of the Australasian Society for Computers in Learning in Tertiary Education. Adelaide, 7-10 December 2003 (pp. 226-235). Tugun: Ascilite.

Jonassen, D. H. (1994). Thinking Technology: Toward a constructivist design model. *Educational Technology*, *34*(3), 34-37.

Kirkwood, A., & Price, L. (2014). Technology-enhanced learning and teaching in higher education: what is 'enhanced'and how do we know? A critical literature review. *Learning, media and technology*, *39*(1), 6-36.

Laurillard, D. (2012). Teaching as a design science. building pedagogical patterns for learning and technology. Florence, KY: Routledge, Taylor & Francis Group

Messina, L., & De Rossi, M. (Eds.) (2015). Tecnologie, formazione e didattica. Roma: Carocci.

Messina, L., & Tabone, S. (2014). Technology in university teaching: An exploratory research into TPACK, proficiency, and beliefs of Education faculty. Cadmo. XXII(1), 89-110.

Milani, M., Raffaghelli, J. E., & Ghislandi, P. M. M. (2017). Fuori orario. Il tempo docente nella didattica online. *Italian Journal of Educational Technology*, *25*(3), 35-54.

Mishra, P., & Koehler, M. J. (2006). Technological pedagogical content knowledge: A framework for teacher knowledge. *Teachers college record*, *108*(6), 1017.

Montesperelli, P. (1998). L'intervista ermeneutica. Milano: FrancoAngeli.

Nedeva, V. (2005). The possibilities of e-learning, based on Moodle software platform. *Trakia Journal of Sciences*, *3*(7), 12-19.

Pavel, A. P., Fruth, A., & Neacsu, M. N. (2015). ICT and E-learning–catalysts for innovation and quality in higher education. *Procedia economics and finance*, *23*, 704-711.

Pompili, G., Viterritti, A. (2018). Between Experimentation and Accountability: Challenges for Academic Teaching Innovation. Abstract of 7th Ethnography and qualitative research conference (p.34).

Ranieri, M. (2005). E-learning: modelli e strategie didattiche. Trento: Edizioni Erickson.

Ranieri, M., Raffaghelli, J. E., & Pezzati, F. (2018). Digital resources for faculty development in e-learning: a self-paced approach for professional learning. *Italian Journal of Educational Technology*, *26*(1), 104-118.

Rienties, B., Brouwer, N., & Lygo-Baker, S. (2013). The effects of online professional development on higher education teachers' beliefs and intentions towards learning facilitation and technology. *Teaching and teacher education*, *29*, 122-131.

Renzi, S., Klobas, J., & Trentin, G. (2008). Come favorire l'avvicinamento dei docenti universitari all'uso didattico delle ICT. In Didamatica. Annual Conference of AICA (Associazione Italiana di Calcolo Automatico). Roma-Bari: Laterza.

Rogers, R., & Lewthwaite, S. (2019). Teaching Digital Methods: Interview with Richard Rogers. Interviewer: S. Lewthwaite. *Diseña*, 14, 12-37.

Salavati, S. (2017). Dilemmas in Teachers' Use of Digital Technologies in Everyday School Practice. In Dilemmas 2015. Papers from the 18th Annual International Conference Dilemmas for Human Services: Organizing, Designing and Managing (pp.1-11). Småland: Linnaeus University.

Sandrini, M., & Colombo, M. (2008). E-learning:la prospettiva sociologica. In M. Colombo (Ed.), E-learning e cambiamenti sociali. Dal competere al comprendere (pp. 1-17). Napoli: Liguori.

Sangrà, A., Vlachopoulos, D., & Cabrera, N. (2012). Building an inclusive definition of e-learning: An approach to the conceptual framework. *The International Review of Research in Open and Distributed Learning, 13*(2), 145-159.

Silverman, D. (Ed.). (2016). *Qualitative research.* London: Sage.

Tammaro, R., Petolicchio, & A. D'Alessio, A. (2017). Formazione dei docenti e sistemi di reclutamento: un leitmotiv, *Giornale italiano della ricerca educativa, 19*, 54-67.

Tonegato, P. (2006). Lavorare a distanza. In E. Felisatti (Ed.), Cooperare in team e in classe (pp.87-102). Lecce: Pensa Multimedia.

Trentin, G. (2003). Gestire la complessità dei sistemi di e-learning. Atti del convegno annuale Didamatica, Genova, 1-8.

Trentin, G. (2006). Tecnology Enhanced Learning e didattica universitaria: i diversi approcci e i motivi della loro scelta. *TD-Tecnologie Didattiche, 37*, 3-9.

Yip, M. C. (2004). Using WebCT to teach courses online. *British Journal of Educational Technology, 35*(4), 497-501.

Zhu, C. (2011). Teacher roles and adoption of educational technology in the Chinese context. *Journal for Educational Research Online/Journal für Bildungsforschung Online, 2*(2), 72-86.