The communicative process in a university lesson

A consideration of the effectiveness and the efficiency of teaching methods

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Abstract

Il lavoro prende in esame il contesto della magistrale in Scienze dell'Educazione degli Adulti, Formazione Continua e Scienze Pedagogiche dell'università di Firenze, andando ad analizzarne l'organizzazione didattica e gli attori. Focalizzandosi sulle peculiarità della didattica on line, il testo mira a definire pro e contro di una metodologia *blended.* In una società come quella odierna, dove prevale un precariato svalorizzante e dove al soggetto è richiesta una continua formazione per stare al passo con la domanda del mercato, si impone un ripensamento metodologico dell'azione didattica volto a conciliare i due aspetti citati. L'ultimo capitolo prende in esame il laboratorio di gestione dei processi formativi nel quale è stata sperimentata una didattica partecipativa grazie all'ausilio di video registrazioni, forum e video tutorial; attraverso questionari a risposta multipla e/o aperta gli studenti assumono un ruolo centrale nel restituire un feedback dell'esperienza vissuta. Lo scopo dell'elaborato è quello di portare all'attenzione l'idea di una didattica flessibile, in linea con le richieste degli *users:* la tecnologia può aiutare a dirigere l'intervento formativo verso il singolo rendendo personalizzabile e adattabile il contesto di apprendimento.

Abstract

This paper analyses the master's degree in Adult education taken at University of Florence, focalizing on didactic organization and its main actors. Looking at the on line didactic, a pro and cons list of blended approach is made in relation to the needs of the students. Our society is characterized by a devaluating job insecurity which goes hand in hand with a constant request for lifelong learning to keep up with the labour market demand. For this reason, a methodological reflection on didactic action has to be made in order to balance the condition of the subject on one hand and the call of the society on the other. The last chapter looks at lab in training processes management: a collaborative didactic was implemented, by using forum, video recorded lessons and tutorials. Students are involved by filling in a questionnaire: they have a central role in the feedback mechanism. The aim of this paper is to focus attention on a flexible didactic which matches with users' requests: technologies may help in this process, by making a personalised and adaptive learning.

Introduction

> <<**knowledge society** *<nòlig sësàiëti>* locuz. sost. ingl., usata in it. al femm. – Società nella quale il ruolo della conoscenza assume, dal punto di vista economico, sociale e politico, una centralità fondamentale nei processi di vita, e che fonda quindi la propria crescita e competitività sul sapere, la ricerca e l'innovazione[1]>>.

This work has its reason in my personal life experience. I started the master course in Adult Education, Continuous Training and Pedagogical Sciences[2] in September 2014. On the 8th of December I received a work proposal from the Cooperativa Sociale Selva ONLUS. That is why I consider myself a working student even if I took my last seven exams after having resigned. My course of study was not at all easy. I was doing three different jobs at the same time, trying to keep up with all the courses I had to do. The hardest difficulty I met was to keep in touch with the world of university. I was doing a different journey that required different speeds: work forces you to keep to time tables (imagine having three of them!), and your mind is not free to concentrate on what you have to study. At the same time, universities impose on you an exam calendar and a time table of lessons that usually is not compatible with your job, even more so if you live far from Florence and have to get there by train or bus. That's why I find myself completely lost and alone. The distance created between me and university was not only physical but moreover increased by remoteness from a reality so different from the life we live every day. As mentioned previously, in April 2017 I resigned in order to accelerate my degree: I had the possibility of attending some courses and I started to breath again: I was finally back, I had human contacts, I could speak to other students, compare and grow with them. I was a small part of the university mechanism, I was included again, just for the reason I was there I had the possibility to know things, to have a voice. I am not so naïve to think that it was just for my presence there that I felt like that: a big role was played by my empty mind, finally free to concentrate all my efforts on university. However, I noticed, with regret, that my feelings about working students were not just suppositions: people who do not attend are penalized by a heavier programme, and a more

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[1] <<Society in which the role of knowledge assumes, from the economic, social and political point of view, a fundamental centrality in the life processes, and which therefore bases its growth and competitiveness on knowledge, research and innovation>> Cfr. Enciclopedia Treccani, http://www.treccani.it/enciclopedia/knowledge-society_(Lessico-del-XXI-Secolo)/ (consulted on 19/09/2017)
[2] Master course means a second level degree, differently from Italy where master means a post graduate qualification: the Italian education system provides a first level master (which can be accessed after a first level degree) and a second level master (available after a second level degree)

thorough oral test during the exams. The preconception about workers is real: if you are not present in class, your experience is poorer than that of a student who can participate to a peer education, have a part in working class practises, make face-to-face experiences with the teacher. That's why, for this line of thought, you can partially fill this gap by reading more books. To me that sounds a little hypocritical. We are putting on the same level two different experiences: on one side we have a book, full of notions which help you to improve your knowledge, think about concepts and supply you with a better comprehension of the topic: but nothing more. It is self-referential learning that helps to develop a meta-reflection on your person and it doesn't allow you to go further. On the other side we have an experience characterized by human relationship, exchange, interaction, growth as a person before a student. It's the magic of two or more human beings talking about something, creating a third concept made by negotiation, listening to each other, reflection, in a continuous mechanism that doesn't have an end. We are talking about some soft skills that are denied if we don't interact with someone else. That's the added value of university: we are adults, carrying different life experiences that can enrich each other. That's why a book will not be a good replacement for human interaction: and I love books, I really do!

So I asked myself if it could be possible to offer something more than an extra book to people who cannot be part of the beauty of classroom experiences. That's more important if we think that working people bring with them a package of experiences that are very valuable to other students: it's a plus we can't ignore. They facilitate the connection between the world of university and the outside, they give a different point of view because of their condition.

During two of the seven exams taken in the past year, I met a new reality, unknown to myself since then: the MOOC courses, made by the most important universities in the world (we are talking about Harvard, Cambridge, Oxford, MIT, myths and legends to a small person like me). Started in 2008 with a course on Connectivism and Connective Knowledge made by George Siemens e Stephen Downes, the world of MOOC increases exponentially: these massive open online courses allow access to a wide range of topics to all the people in the world who have an internet connection and a video support. So, ten years ago there was the idea to reach the most isolated areas in the world and infect them with knowledge. That sounds pretty obvious if we think that we are going towards the knowledge society, where knowledge is pervading every aspect of our existence. But more than that, it was and it is a good. In my opinion, if we can think about a solution that makes this good (in all its forms, not just the notions we can find in a book) accessible to a bigger part of the market, we can have a small part in this inevitable path.

That's why I started this project. Thinking about the market of knowledge, the University of Florence has to reflect on its position, trying to make itself more competitive, in a reality like the Italian society made up of precarious workers and people who continuously have to adjust to different and colliding universes. More than others, a master course on Adult Education, Continuing Training and Pedagogical Science has the duty to reflect on this change and stop hiding behind ancient preconceptions.

What I want to create is a new philosophy: we can't start with the idea of a palliative solution for working students, considering them as an incomplete amount of experience instead of resources. It's necessary to think about a new method of teaching, which includes a different type of client: it's a duty of the university to reflect on its position in order to make itself not an auto referential organization but a part of a network that includes society. We can say that a complex training requires a complex training action: if society is changing, university has to keep up.

Chapter I: Overview of the master course in Adult education, University of Florence and its users

<<Non è possibile rispettare gli educandi, la loro dignità, il loro essere-in-formazione, la loro identità *in fieri*, se non si prendono in considerazione le condizioni in cui stanno vivendo, se non si riconosce l'importanza delle <<conoscenze che nascono dall'esperienza>> con cui arrivano a scuola.>>[3]

We should start this work by making a short route inside this master course. It's very important to know the context we are working on: every analysis made without a deep and conscious contextualization can't be taken seriously. This is an essential process to understand cause-effect mechanisms and, more importantly, the essences of this kind of dynamic. Before that, let's have a look at the users of our master: a student is first of all a person, and also a citizen. That means his or her life is influenced in many dimensions: we can individuate a first sphere consisting of political, economic, and social assets of the country where he/her lives (we might consider not just Italian laws, but also Europe instructions). A second scope of individual level can be identified: the relation networks the person has built in his/her life, but also economic, social and cultural state. We can't ignore all these aspects because they have a direct or indirect influence on the student's path.

Another essential element must be considered: the university's ethic role. The teaching process has various aspects. Paulo Freire believes that education is a way to intervene on the world: that means it has an ethic role and it can't be neutral[4]. Being aware of it implies a deep analysis' process about the part a university must play, and more over that of the subjects involved. But since we are talking of a teaching process and its actors, we can't avoid the possibility of building a connection between curricular knowledge and students social experience. Teaching is not just a simple transfer: it's a possibility of creating knowledge instead. To do so, students must consider themselves as subjects of making process and not just the addressees of something canned. And there it's clear how urgent the necessity of a rethinking of a mutual role is in order to make concrete interventions and not just pretending to do them.

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[3]<<It is not possible to respect the students, their dignity, their being-in-formation, their identity in progress, if we do not take into account the conditions in which they are living, if they we do not recognize the importance of the "knowledge that born from the experience" with which they arrive at school>> Freire P., *Pedagogia dell'autonomia. Saperi necessari per la pratica educativa*, Edizioni Gruppo Abele, Torino, 2014, pp. 55,56
[4]Ibidem, p.82

1.1 Situation of young people

This is a various and complex problematic: dissertation here is a modest try to resume the main key points of a multiple and varied issue, knowing it couldn't be 100% exhaustive.

1.1.1 Employability

In April 2013 the European Union started a new project, called Youth Guarantee, to implement youth employment, helping them by having a new job offers, a chance to follow the study path, a traineeship, or an apprenticeship (in a good quality form) within four months from job loss or cessation of study. Every member of EU is responsible for support network within it, and it's been financed by Social Europe Found[5]. In June 2015 the EU's Employment Committee evaluated this experiment positively and defined some key challenges:

a) A better guidance for NEETs[6]
b) Reinforced public services for employability
c) Reform of educational systems

In the same period, the Court of Audit presented a risk assessment to make ministers aware of possible obstacles:

a) The suitability of global finances for the entire project
b) What can be considered of a good quality, knowing they were talking about different situation for each country
c) The absence of an extensive monitoring system

In October 2016, the European Commission made an evaluation that registered 1,4 million of young unemployed less than in 2013.
What about now?

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[5] The whole cost of this project amounts to 50 billion euro per year (0,39% PIL). Cfr. EUROFOUND- Social inclusion of Young People, https://www.eurofound.europa.eu/publications/report/2015/labour-market-social-policies/social-inclusion-of-young-people (consulted 15/01/2018)
[6] NEET is the acronym for not (engaged) in education, employment or training: it's a worrying condition very common in Italian youth.

- ❖ February 2017: in EU 3,9 million of young people (under 25) were unemployed, and the unemployment rate was 17,3 % (it was 19,3% in February 2016, so we can say that a positive trend can be registered)
- ❖ Unemployment rates differ for each country: from 6,6% in Germany to almost 45,2% in Greece, 41,5% in Spain and 35,2% in Italy[7]

Italy represents one of the countries in which this project constitutes a significant input to reform labor market:

<< In Italy, the Youth Guarantee's implementation prompted changes that were reflected in the broader reform of Active Labour Market Policies initiated by the Jobs Act. The ad-hoc commission bringing together institutional actors involved in the YG's design and implementation set the basis for the National Agency for Active Labour Policies (ANPAL). The Agency is in place since January 2016 to coordinate a wide network of institutions and agencies (e.g. INPS, INAIL, and employment services, chambers of commerce, schools). With the Youth Guarantee, new methods of intervention were introduced on a national scale, including online registration on a dedicated portal and profiling of users; a standard set of nine YG interventions has been applied across the whole national territory. These methods will soon be applied to all the unemployed person who wants to log in at ANPAL portal for signing a personalised service agreement. The Youth Guarantee also triggered a major process of strengthening of the Public Employment Services, which played a central role in the delivery of the scheme. Finally, supporting these ongoing activities is the creation of a national database of young people registered with the Youth Guarantee scheme, which constitutes a first attempt to systematically monitor participants' progress (following initial registration and after accepting an offer), i.e. in terms of outcome, across the whole territory. Many of the above measures are ESF-supported and/or developed in the context of YEI implementation>>.[8]

A report about NEETs, from the European foundation for the improvement of living and working condition, confirms a substantial saving derived from these measures: without them, unemployed youth would cost 153 billion per year (1,21 of PIL).[9]

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[7] Cfr. Eurostat in http://www.consilium.europa.eu/it/policies/youth-employment/ (18/01/2018)
[8] Cfr. http://eur-lex.europa.eu/resource.html?uri=cellar:73591c12-8afc-11e6-b955-01aa75ed71a1.0001.02/DOC_2&format=PDF, p.48 (18/01/2018)
[9] Cfr. Eurofound,Neets report:
https://www.eurofound.europa.eu/sites/default/files/ef_files/pubdocs/2012/54/en/1/EF1254EN.pdf (18/01/2018)

Talking about Italy, ISTAT[10] corroborates, more or less, this trend: in 2017, there was an increase of +110,000 in 15-34 year old while a decrease in the unemployed and inactive (-7,8%= 243000 and -1,3%=173000)[11]. The rate of employability for people between fifteen years and sixty-four was, in October 2017, 58,1%.[12] For the 25-34 year range, this rate reaches 61,3%; the percentage for unemployed in this age band is 17,3%. What is alarming, is the number of young people who are inactive, which reaches25,9%.[13] The ESDE[14] from European Commission denounced the primacy of Italy for NEETs (19.9%, about 1 in 5); our country holds the third place for unemployment: 37,8/ of young people that are actively looking for a job can't find one. Together with Spain, Italy is the country where young people (in the range of 25-34 years) get the worst jobs: 15% of them who have a job for only a fixed period can be considered at risk of poverty. This condition has an impact on life decision, in terms of family, education, etc.[15]

To make a complete panoramic, we must refer to the Jobs act[16] promoted by Renzi's governance in 2014/2015: this is an attempt to reduce types of employment contracts. Listed below are the key points of this measure:

- ❖ Introduction of a permanent contract for new entrances with an increasing protection, that has different costs for companies depending on length of service
- ❖ After someone has been fired, he/she can be rehired only if he/she proves it was a discriminatory dismissal[17]: layoffs for economic reasons will no longer be covered
- ❖ Unemployment benefit is linked to workers' contributions' history. This act introduces Napsi, a benefit against involuntary unemployment that will last for 24 months
- ❖ Lay off is not recognized when a company closes: the employee is covered for all the other situations, only after other measures (i.e. cutting hours)

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[10] ISTAT is the Italian National Institute of Statistic, which handles social and economic surveys
[11] Cfr. ISTAT, Employed and unemployed, https://www.istat.it/it/archivio/208110 (18/01/2018)
[12] This trend is the result of a decrease of this rate for 25-49 years old people and an increase of it for over fifty people. At the same time, employed on fixed term rise, while permanent stay stable, and freelance decrease. Cfr.
http://www.ilsole24ore.com/pdf2010/Editrice/ILSOLE24ORE/ILSOLE24ORE/Online/_Oggetti_Embedded/Documenti/2017/11/30/Istat-Occupati-e-disoccupati.pdf (18/01/2018)
[13] Ivi
[14] ESDE is the annual report on employment and social developments in Europe
[15] Cfr. http://www.ilpost.it/2017/07/17/giovani-italia/
[16] The 8th of October 2014 Renzi's Governance obtained senate's confidence
[17] This can be only applied to permanent contracts with increasing protection

- ❖ Reduction of contract's types, with the abolition of work-for-hire and collaboration contracts
- ❖ Facultative parental leave can be extended, while the one paid will be given until the 6th year of children's age, for a maximum of 30%. The one not paid may be taken until the 12th year. Parents can ask for a part time instead of parental leave
- ❖ Re-sizing of companies is possible only if a global restructuring is necessary or if collective agreements provide them

1.1.2 Conditions of life

Worthy of mention, it's the ISTAT report about the satisfaction rate of Italian citizens[18]: in 2016, after five years, the global perception of life condition increased[19] like the opinion about economic situation. As we can see from the next graph, the maximum level of it is registered for high qualifications, for students and in particular for the degree category. Easy to be understood is the lowest rate of satisfaction for jobseekers, as itis increasing with higher education level.

a)

FIGURA 3. PERSONE DI 14 ANNI E OLTRE PER LIVELLO DI SODDISFAZIONE PER LA VITA NEL COMPLESSO PER CONDIZIONE PROFESSIONALE(a) E TITOLO DI STUDIO. Anno 2016, per 100 persone di 14 anni e oltre con le stesse caratteristiche e media
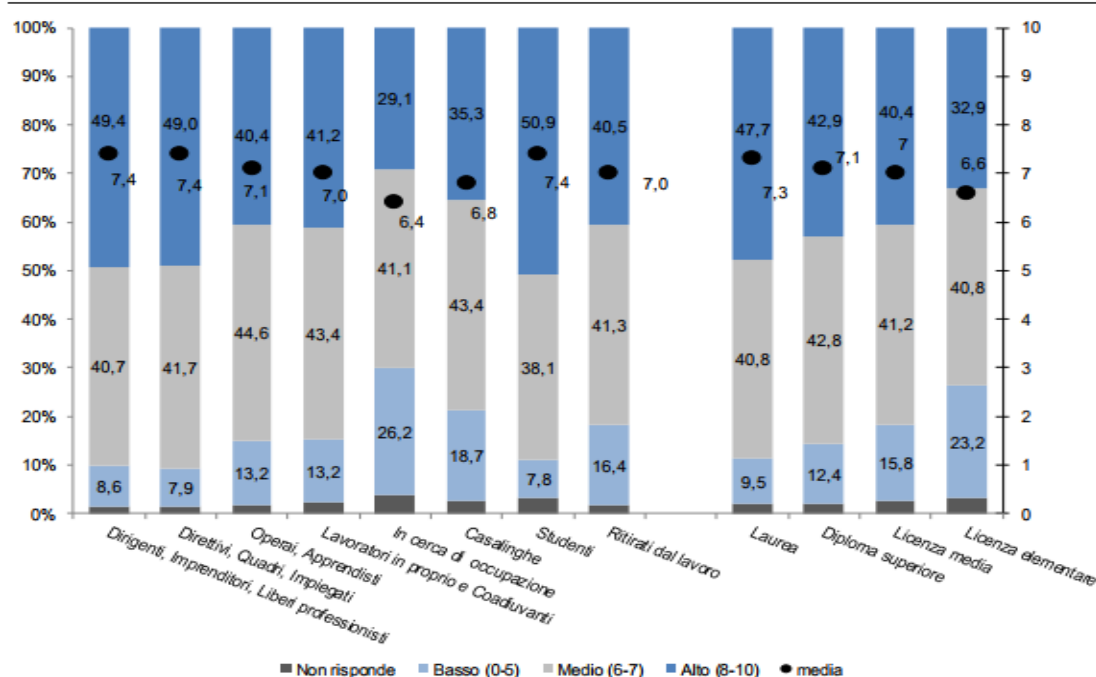
This second graph shows the real perception of families regarding their economic situation and resources: it provides a positive glimpse of this trend. In 2016 6,4% of families considered their situation had improved, compared to 4,8% in 2010; peaking of deterioration perception can be observed in 2013, with a 58,5%. In 2016 34,8% of families considered

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[18] Cfr. https://www.istat.it/it/files/2016/11/Report-soddisfazione-cittadini.pdf?title=Soddisfazione+dei+cittadini+-+22%2Fnov%2F2016+-+Testo+integrale+e+nota+metodologica.pdf

[19] That's not entirely true for the age range between 20 and 34 years old, that moves from 48% in 2011 to 41/42% in 2016

[20] Cfr.https://www.istat.it/it/files/2016/11/Report-soddisfazione-cittadini.pdf?title=Soddisfazione+dei+cittadini+-+22%2Fnov%2F2016+-+Testo+integrale+e+nota+metodologica.pdf, p. 4

their situation had got worse, while the remaining 58,3% thought it was unchanged. A similar trend may be seen for economic resources: in 2016 58,8 considered theirs appropriate (here too, the worst situation can be registered in 2013, with 48,6%), while the remaining believed them to be insufficient or scarce.

b)

FIGURA 8. FAMIGLIE PER VALUTAZIONE DELLA SITUAZIONE ECONOMICA RISPETTO ALL'ANNO PRECEDENTE E VALUTAZIONE DELLE RISORSE ECONOMICHE DELLA FAMIGLIA NEGLI ULTIMI 12 MESI. Anni 2010-2016, per 100 famiglie
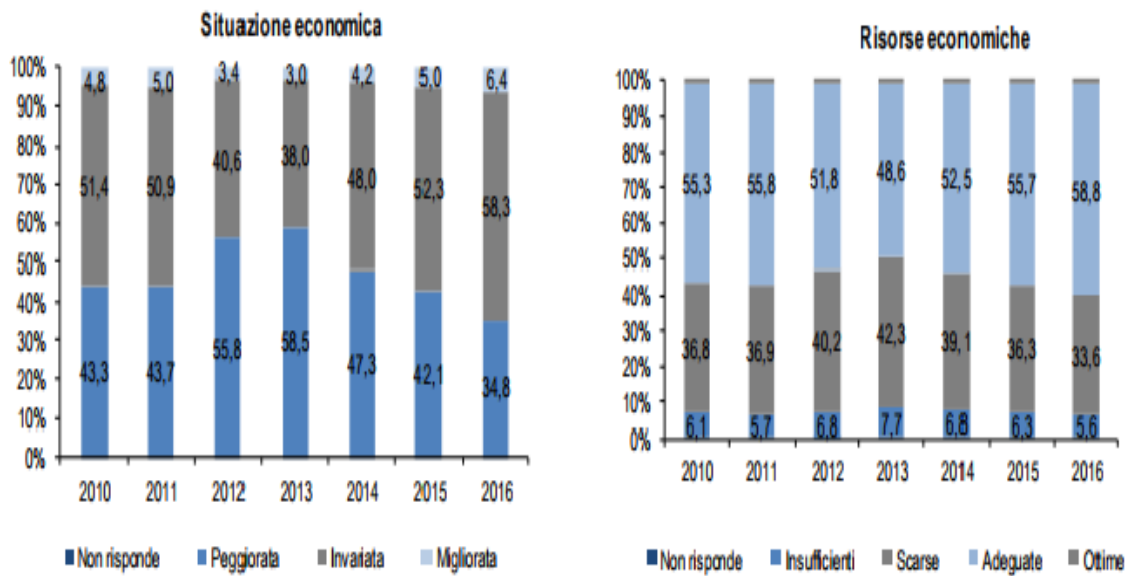
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The last graph of this paragraph might appear a little out of topic: it describes the interpersonal level of confidence, divided for employment situation and education level.

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[21] Ibidem, p. 11

c)

	Gran parte della gente è degna di fiducia	Bisogna stare molto attenti	Ritiene molto o abbastanza probabile di vedersi restituire il portafoglio perduto da:		
			Un vicino di casa	Un appartenente alle forze dell'ordine	Un perfetto sconosciuto
CONDIZIONE OCCUPAZIONALE (a)					
Occupati	23,5	74,9	73,7	83,3	13,5
Dirigenti, Imprenditori, Liberi professionisti	31,7	66,9	78,9	84,3	16,2
Direttivi, Quadri, Impiegati	27,8	70,7	78,1	86,0	15
Operai, Apprendisti	17,6	80,8	67,9	80,6	11,2
Lavoratori in proprio e Coadiuvanti	20,1	78,1	72,1	81,6	12,8
In cerca di nuova occupazione	16,3	80,2	63,7	78,4	11,4
In cerca di prima occupazione	20,4	76,0	61,8	79,1	11,2
Casalinghe	14,2	83,4	65,2	81,9	9,7
Studenti	21,2	75,9	73,1	81,2	13,1
Ritirati dal lavoro	17,1	81,3	68,5	84,4	10,7
Altra condizione	14,2	78,9	59,9	75,6	13
Totale	19,7	78,1	69,8	82,4	12,1
TITOLO DI STUDIO					
Laurea	32,5	65,6	79,9	85,4	16,7
Diploma superiore	21,6	76,6	73,2	84,0	13,1
Licenza media	16,5	81,1	66,1	80,4	10,4
Licenza elementare	11,6	85,5	61,6	80,3	9,5
Totale	19,7	78,1	69,8	82,4	12,1

(a) Per 100 persone di 15 anni e più con le stesse caratteristiche.

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I included these numbers because I think trust is one of our cultural problems. Individuals brought up with an intrinsic sense of mistrust and disillusion towards their neighbour, lead to an unproductive and inappropriate society system. This mechanism begins from the first education with some simple habits: the student who doesn't feel the teacher's trust becomes a wary citizen. A son/daughter who is not allowed to experience and maybe to make mistakes by an apprehensive parent, will become an insecure human being, who will not be able to take advantage of the multitude of opportunities this liquid society can give. Fortunately, education (if made in a correct way) can be very helpful: people with a higher education level feel more confident and consequently more equipped to face others. This can be crucial within our dissertation due to a deep reflection of didactic techniques activated for this course. Being an educator, a specialist of adult education, a teacher, a professor, necessarily implicates the question of what a didactic strategy leads to.

Recognizing all university participants as valuable elements for education experience can be instructive for all. Instead, there seems to be a pervasive sense of mistrust between

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[22] Ibidem, p. 14

different categories: on one side, students feel unworthy because professors and the system treat them as if they were churlish. If they expose a problem, they are probably lying; rooms must remain locked until a professor asks for the key because the equipment inside could be ruined or stolen. If a student is not attending the lessons, he/she is probably not trying hard enough.

On the other side, students usually throw out the baby with the bath water: all that is happening is against them, and no one wants to meet them requests. They don't have trust in a complex machine like university, where bureaucracy usually complicates every step. They don't feel like they have a voice, even if they have powerful tools to make themselves heard (such as questionnaires, head boys who can participate in meetings etc..). The main stream of this category is an unnatural conviction that this is how reality goes, nothing can be changed (much less by them) and if someone or something is different it is an exception they have to give thanks for. For these reasons, it's very important to raise individuals' awareness of their potential: if someone understand his own role in social dynamics, beautiful interactions can take place, because that person feels free. And freedom of being what we are good at usually leads to unexpected results.

1.2 University of Florence: Master course in Adult education, continuing training and pedagogical science

This analysis is focused on two cores:
   a) The global structure of the master course
   b) A brief analysis of student population

1.2.1 The master course

This master presents two different curricula: LM-57 in Adult education and continuing training and LM-85 in Pedagogical sciences. The first year offers 60 CFU[23] in common: the main distinction between them consist in 18 CFU during the second year. Depending on the choices made by students, we can define the next professional profiles:

- Local services agent for adult education
- Formative services agent for agencies

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[23] CFU is the acronym for University's formative credits. They are assigned in connection with the amount of hours for every single course: one credit matches twelve hours of frontal lesson

- Coordinator for cultural, educational and social services (both in the third sector, as no profit)
- Pedagogical and formative process expert

The student of this master can be defined as an educational leader, training manager, an educational and cultural project's expert.

Skills and competences developed by students after this course are laid out in the guide lines of humanities and educational studies school[24]:

- Knowledge and understanding
- Apply knowledge and understanding
- Making judgment in autonomy
- Communication skills
- Learning skills

Students' career and job's opportunities are the following:

- HR specialists
- Public relations specialists
- Researchers and technicians
- Teachers for professional training
- Experts in educational design
- Counsellors of orientation

This master offers frontal lessons, seminars and laboratories.

Every course has an on line page on a Moodle platform: the potential of this tool will be described in the next paragraphs.

From AY 2017/2018 this master offers the great opportunity of a double degree, cooperating with the university of Brno (Czech Republic). According to this path you must have a B2 English level and must sustain a motivational and attitudinal interview, for a maximum of

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[24] https://www.st-umaform.unifi.it/upload/sub/guida-dello-studente/2017-18/op3528-int_online.pdf

ten students per year. It consists in an experience abroad for a minimum of a 30 CFU taken in partner university[25], thanks to Erasmus funds.

The main location for the master activities (rooms, laboratory, library, teachers' offices) are located in Via Laura 48, in the center of Florence. Didactic, Erasmus and internship offices are in the same place. The administrative office is very close to them, in via Gino Capponi n. 9.

All the information you need can be found on the web site of this master course: lots of paperwork is made on line, such as the enrolment, the presentation of individual study plans, exams validation. That should facilitate who are not in Florence very often, should reduce paper documents, and should cut out office waiting times. Nevertheless, many aspects can be improved, like the student crowds in first year lessons and waiting times for exams. If an on line mode is very useful for many aspects, it's absolutely counterproductive if is not matched with a change of mind. I'll try to make myself clear: while this mechanism helps with practical organization, it may hamper the aspects of human relations. To manage it in a correct way, some simple rules must be observed like mutual respect in online conversation (e.g. email)[26] Let's consider the master in adult education: every year, the education area organizes an open day[27] to give all the information about bachelors and mater courses of the School.

Job placement office contributes with a series of seminars that should help students to approach work reality, or different kind of activities that might give new inputs for students' future. Its activity can be divided in four strands: career counselling, meetings with companies, initiative development and work training.

Students are invited to contribute to improve master course's offer trough a questionnaire for each exam they have to do. In an anonymous form, this can be a powerful instrument to give a feedback and maybe offer suggestions[28]. This master course has an intern group of evaluation: GAV (Gruppo di Auto Valutazione). Its duty consists in monitoring and assessing the course, closely linked with Didactic Committee and the Council.

There are three main tests sessions: the first (in January and February) has three appeals; the second takes place in June and July and offers three chances for all the students; and

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[25] They can be augmented with 18 cfu related to stages or paper degree's work
[26] Web's ethic will be studied in deep in chapter II
[27] This year it's programmed for the 23th of February
[28] All the anonymous results can be found on this web site: https://valmon.disia.unifi.it/sisvaldidat/unifi/. This link refers to AY 2016/2017

finally there is a September date. Two extraordinary sessions are set for part time students or anyone with medical certificates, in April and in December.

Beginning from this year, students can advance themselves by taking tests from subsequent years if they want. Examinations are usually set in oral or written form: some courses have one or two intermediates, depending on the teacher's organization, the course's content and the subject. Marks start from eighteen to thirty, and for supreme exhibition an "*honour*" can be given. Every course has its web profile with the full description of it: books and others staff could be different for attendant or not attendant students.

1.2.2 Students

During the AY 2016/2017, nineteen students graduated. Sixteen of them took part in the AlmaLaurea[29] survey, with an 82,4 % compilation rate. Most of them were female (84,2%) with an average age, at the time of graduation, of 29,1. According to the study, 47,4% of these students were resident in Florence's province: the others came from other provinces or other countries (5,3%). Half of the students claimed to have enrolled in this master for cultural and professional reasons. Most of them finished their course in time (68,4%) with an average length of 2,8 years. The 81,3% lived next to the University (less than an hour far) for more than half of studying path: 75% attended more than 75% of the lessons.

An interesting data came from working conditions: 68,8% of students had a work experience, but only 6,3% of them declared to have worked continuously for more than half of their study time (25% claimed to have part-time work; 37,5% an occasional or seasonal job).

Worthy of mention, is the judgment about university experience: 68,8% of the students gave a positive response (18,8% totally positive; 50% quite positive); 25,1% revealed a negative feedback (6,3% totally negative; 18,8% quite negative). A little more comforting is the opinion about student-professor relationship: 75,1% is positive instead of the negative 12,6%. Close to the total is the positive feedback to the relations with other students, with an 81,3%.

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[29] All data are taken by the XIX annual report of AlmaLaurea: in this case, it refers to the AY 2016/2017. Web:http://www2.almalaurea.it/cgi-php/universita/statistiche/framescheda.php?anno=2016&corstipo=LS&ateneo=70010&facolta=1252&gruppo=13&pa=70010&classe=11065&corso=tutti&postcorso=0480107305800001&isstella=0&disaggregazione=tutti&LANG=it&CONFIG=profile. This choice it's not casual: I know this is a very restrictive sample and it takes only graduated students, but Almalaura is, right now, the only source for certain data. Another will be delivered in the fourth chapter, made on Laboratory of formative process.

To the question "Would you enrol again to a master course?" students gave a worrying answer: just 37,5% said they would do it, choosing the same master in the same University; 6,3% said no, maybe another course but still in Florence. Another 37,5% would choose this course but not in Florence. 6,3% of students would not enrol to any master course again. That's a little bit alarming because it reveals a general dissatisfaction about the path taken or, more than that, the university chosen.

What can be helpful, it's a crossed analysis between all the categories showed above, and students who worked while studying. Unfortunately, AlmaLaurea investigation doesn't give data for group of less than five elements: for these reasons we can only rely on students who had particular work experiences such as a full time job or those who had worked regularly for more than half of the period of study (not working either during or out of lesson periods), occasional and seasonal work or part time[30]. This division is not very helpful since occasional jobs are compared with a seasonal one, and that is somewhat misleading. In the first case there are probably no problems in reconciling work and study whereas in the second case it could be quite difficult to attend lectures and exams.

1)
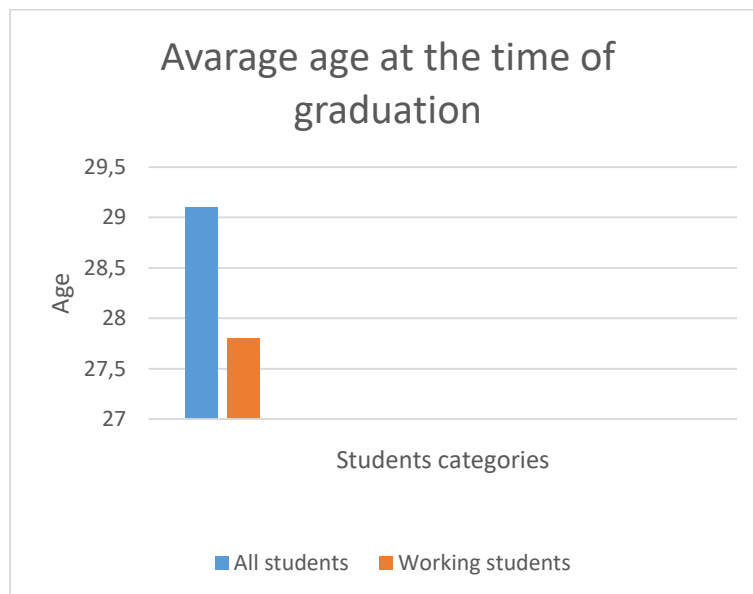
From this first graph, we can deduce that an average age at the time of graduation is lower for working students than the whole category of students. This data can be related with the age a student matriculates: a 40% of working students was on time or at least one year late

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[30] Of sixteen testimonies, only one is given by a working student (this category is made by people who had a full and continuous work during lessons period and out of it, for more than half of studying path) and four of them were made by students which had any working experience.

(against 31,6% of all students); 60% was two or more years late (68,4% for all students). If we consider the career of a typical Italian student we can say, hypothetically speaking, that we have a general delay compared to the perfect student path that should be finished at the age of 24. Many reasons must be considered and another data can be helpful: the period of studying. For this master course 2,8 average years are registered for whole student category, against 2,5 years for working students, with a delay of graduation of 0,4 years for the first class, and a 0,2 for the second. It results that there is a general higher celerity for people who work, that can be related with more motivation (whatever it is) compared to all of students.

2)
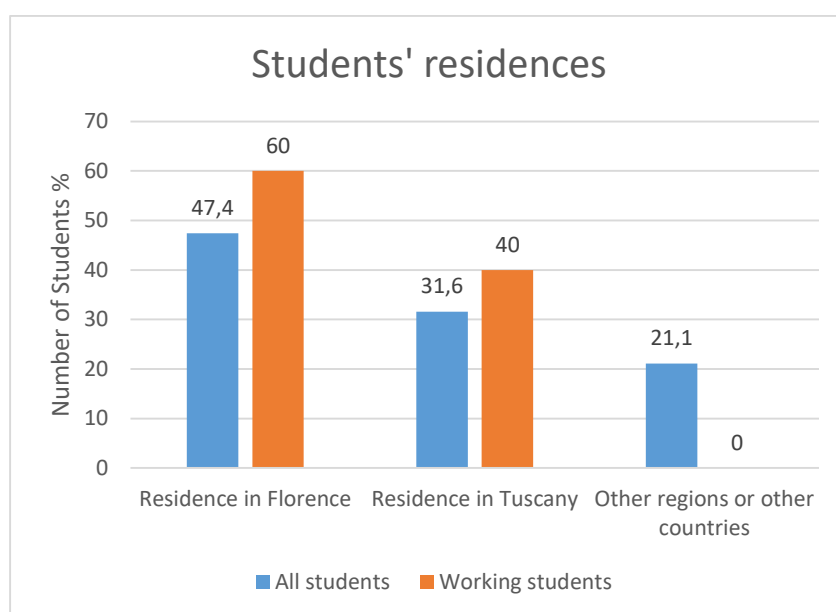
The second graph shows student' distribution for residence. Working students stay, for a large percentage, in Florence (or its province), 40% in other provinces of Tuscany. The whole category of students is divided in three classes: not just in the province of Florence (47,4%) or other Tuscan provinces (31,6%) but also a small number of other regions or even different countries (21,1%). In this last category we can include people who still leave their residence in the country/city/province of origin, but they move for study. From this report, none of them had a work experience. We may suppose that not all of residences registered here coincided with the effective domicile of the student. For this reason, it should be possible that a number of them commute, while some decided to rent a room/house for the period of study.

Let's take a look at the next graph, that shows the effective home conditions of student:

3)

Number of students who lived near Florence (less than an hour far)
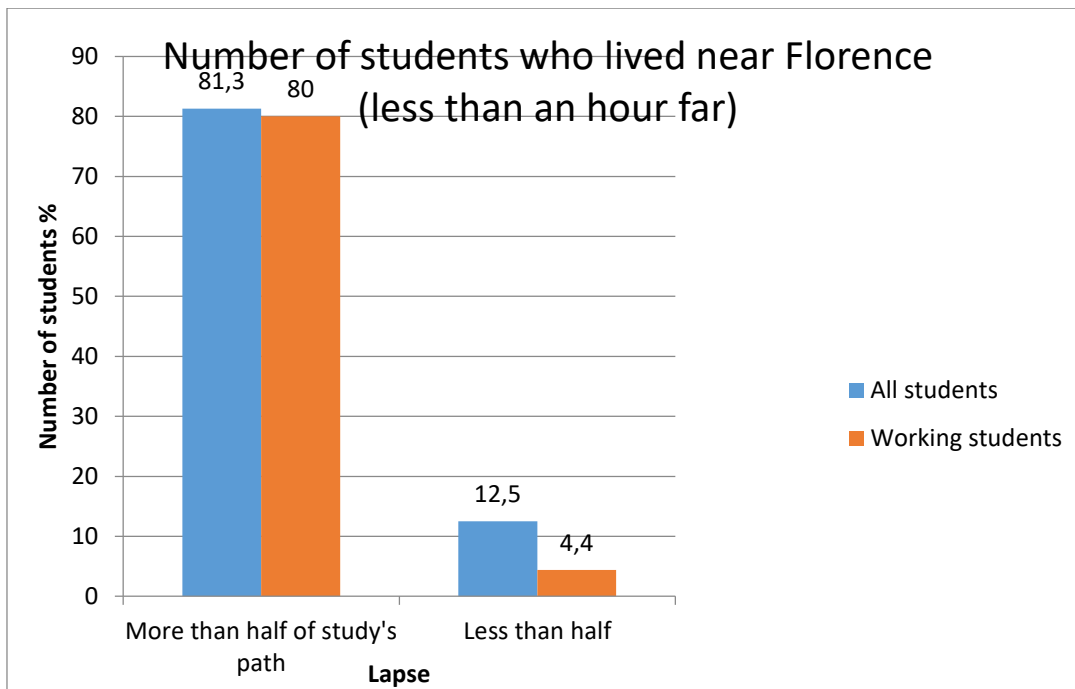
The 80% of working students lived for more than half of their period of study less than an hour form Florence (the number is more or less the same for the whole category). Another 4,4% lived near Florence, but for less than half of their study time (we don't know what they did for the rest of the time): remaining 15,6% probably lived far (nearly two students out of ten). This panoramic shows a multifactorial situation, that reveals a generalized mobility of students: it's very common to choose a place to study far from the birthplace, even if it requires that you to move frequently.

4)

Regularity of studying path
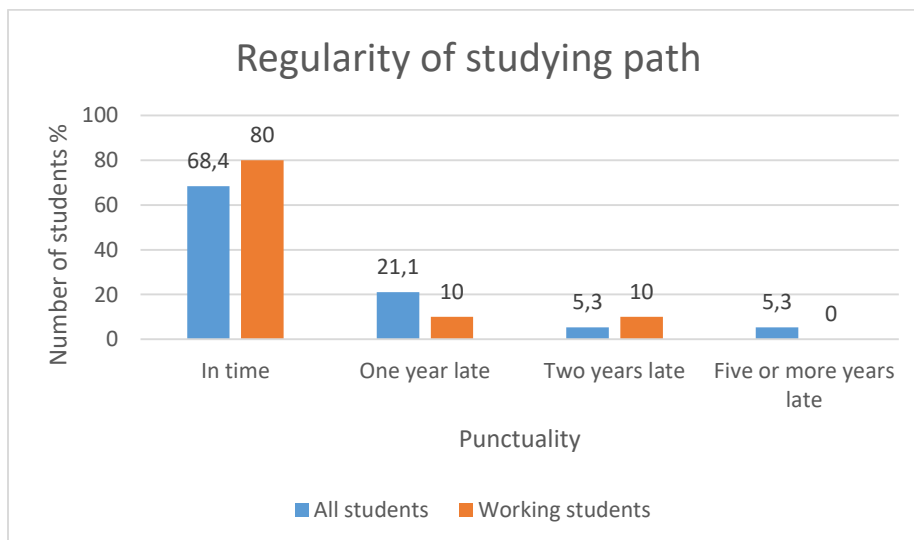
This fourth graph confirms what we have said about the first one. Working students are generally more in time than the whole category, with a percentage of 80, against 68,4%. It's curious that there are no working students that are five or more years late. That is probably linked with the reason of the delay: reconciling work and study is difficult but someone who has to pay for his/her study is more motivated to finish sooner than someone who has all paid by his/her parents. We need to understand why one in five of working students was one or two years late, while for the whole category the number grew one in four. It's possible that work is not the principle reason for the delay in study and maybe there are other causes that hinder the path.

5)
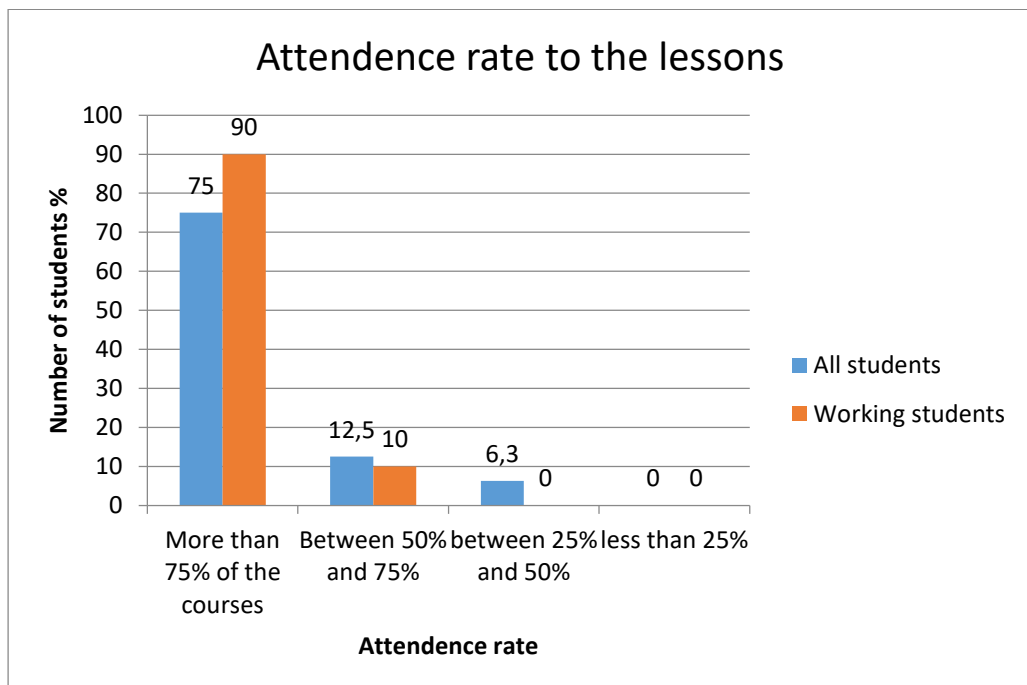
The attendance rate to the lessons is very high for both classes: working students followed more than half of the courses in class. This report does not include those students who did not attend. We must remember that our sample is very small, and can't represent the entire population of students.

The next three couples of graphs show the satisfaction rate of general university experience, relation with professors and with other students.

6) Global satisfaction of this master course

All students

- Totally yes 18,8
- More yes than not 50
- More not than yes 18,8
- Totally not 6,3

Working students

- Totally yes 30
- More yes than not 50
- More not than yes 0
- Totally not 10
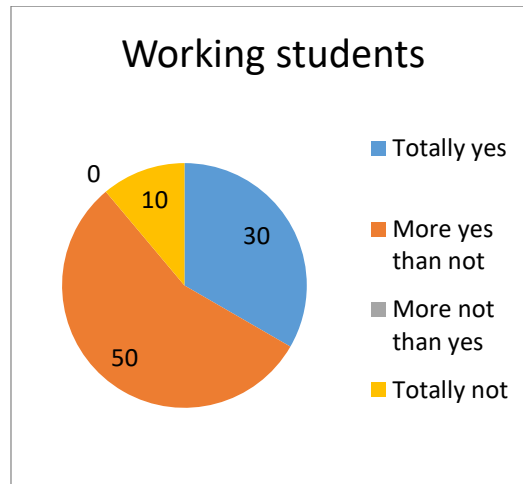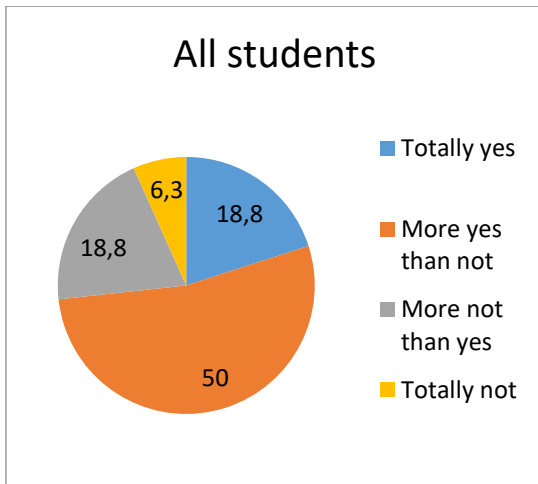
7) Satisfaction of relationship with professors

All students

- Totally yes 18,8
- More yes than not 56,3
- More not than yes 6,3
- Totally not 1,2

Working students

- Totally yes 20
- More yes than not 70
- More not than yes 0
- Totally not 0
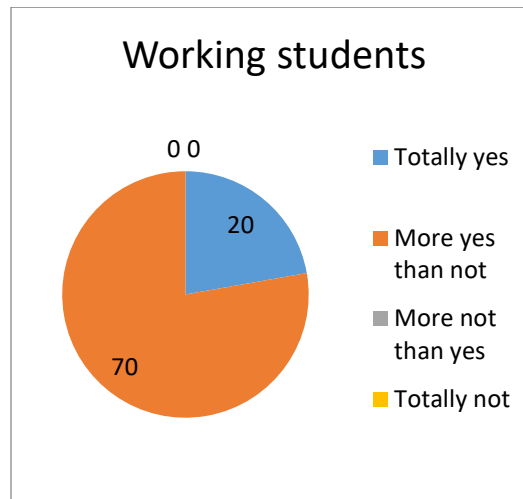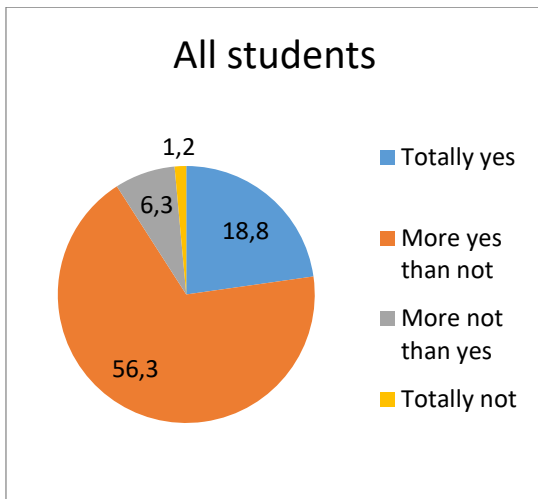
8) Satisfaction of relationship with other students

All students

- Totally yes 68,8
- More yes than not 12,5
- More not than yes 6,3
- Totally not 0

Working students

- Totally yes 80
- More yes than not 10
- More not than yes 0
- Totally not 1,2
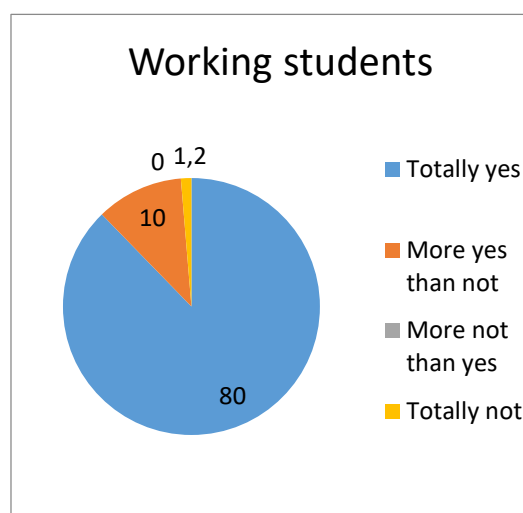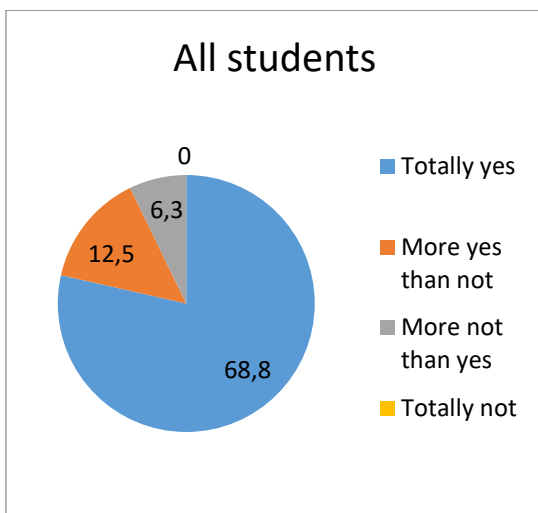
We have a better point of view from working students, who have a higher percentage of satisfaction than the whole category. Considering that a good number of students attended the most of the lessons, it's interesting to question why there is this kind of discrepancy. One supposition could be linked to the different way of approaching what a work experience gives to you, in terms of maturity, flexibility, relationship ability etc.

The same enthusiasm from working students can be found in the last graph: to the question "would you enrol again in a master course?" 50% of them gave a positive answer, choosing the same master and the same university. The whole category had a lower result, with a 37,5%: but 6,3% of them would choose the same university even if they enrolled in a different course. What can be said, it's that 75% of students were satisfied about the master choice (regardless of the university chosen): the number is quite the same for working students, with an 80%.

9)

Working students

- yes, at the same course in Florence
- Yes, but another course in Florence
- yes, at the same course but in another city
- Yes, but another course in another city
- No
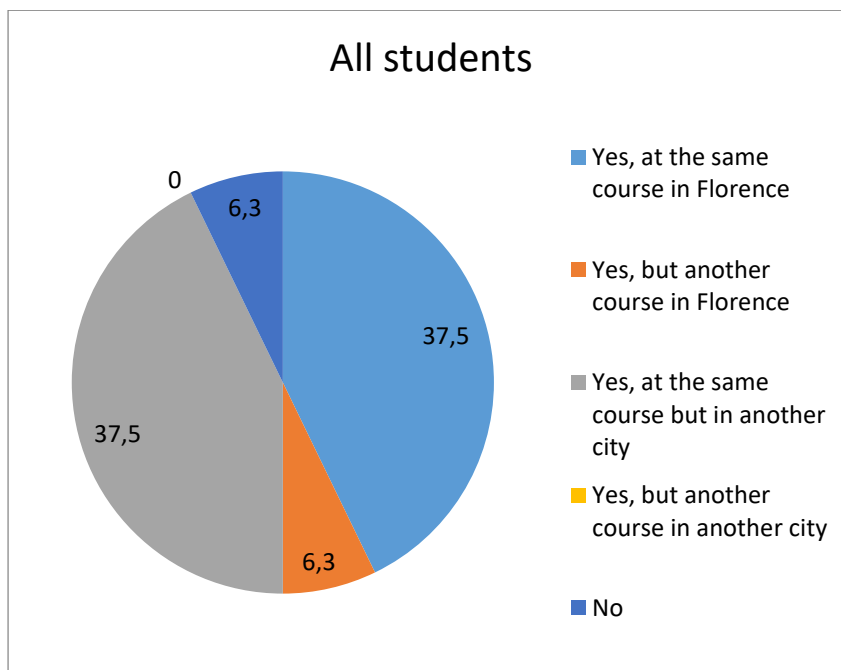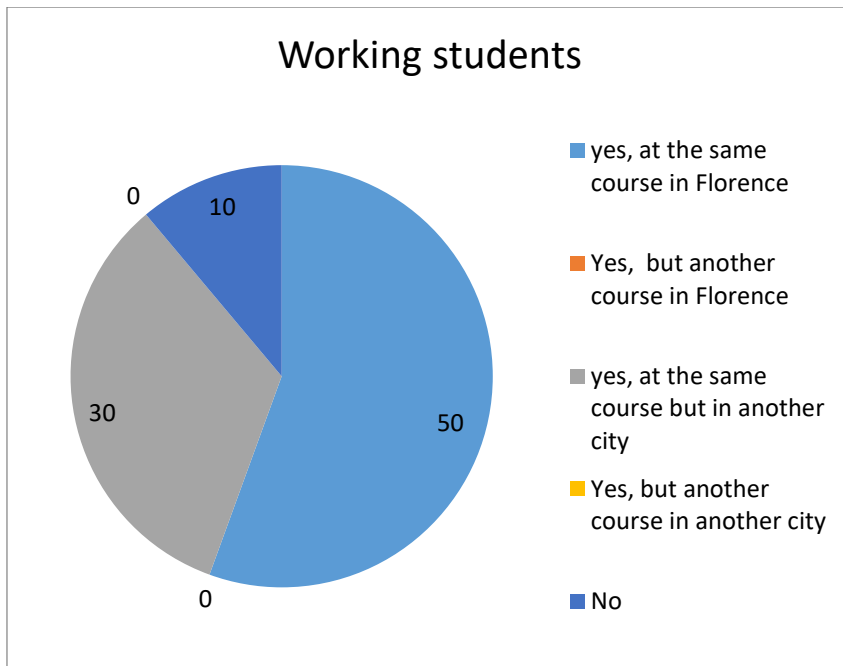
A little bit alarming is the number of students who would not enrol again to any master: 10% for working students, and 6,3 % for the whole category. That coincides with the rate of satisfaction of graph 6, that can't be found in the others two (graph 7 and 8). We can deduce that displeasure is not linked to human relations, but maybe to other conditions (general organization, master's contents, etc etc).

1.3 SIAF

SIAF[31] is the Computer system of Florence university: its duty consist in producing and providing computer systems (and storing related media) for intern and external users. The main criteria for its services are utility, quality, reliability and economy. Key goals for SIAF activity are:

- Supervising the functioning, adjustment and coordination of computer system of Florence university
- Managing the phone network and data, guaranteeing the connection with metropolitan, national and international networks
- Managing all the University online procedures

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[31] The official website is https://www.siaf.unifi.it/index.php

- Handling all the computers' data

- Providing services and technologies for statistic researches

- Providing new services for students, professors and technical and administrative staff

- Providing and developing services and underpinning technologies for distance learning, multimedia and online editing

- Ensuring counselling and assistance for didactic activities of SIAF's finality area

- Promoting and organizing formative activities on computer, telematics and multimedia services

- Etc.

The president of SIAF is Marcantonio Catelani; the executive manager is Marius Bogdan Spinu. SIAF center is located in Via delle Gore 2, in Florence.

SIAF is important for our study because it's responsible for Moodle platform and storage data. According to this duty, SIAF fixed a limit of 700 MG per hour for video teachers want to put on Moodle. This is a complex issue: a single data has two different kind of dimensions, one for its presence and one for its storage[32].

I asked how many Gb SIAF had for videos and this was the answer:

<<-Interviewer: "Ok, è chiaro. Ma allo stato attuale, con le vostre politiche, quanto spazio avete?"

-Tech: "Eh, non lo so... è una risposta a cui ti posso rispondere se andiamo di là. Credo che gli archivi di Moodle attualmente siano vicino ad un Tera per tutto quanto, considerando i 3 anni di piattaforma, forse si va ad un Tera e mezzo">>[33].

And it will have a different cost depending on the storage's setting:

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[32]<<Interviwer: "facendo un esempio pratico, per 700 MB di video, quanti MB di backup occorrono?"

Tech: "700 mega, forse anche di più, dipende quante copie ne vuoi tenere, quanto cambia il dato"

Riccardo: "si, diciamo che normalmente il backup ne tiene una copia e se questa copia la devi mantenere nel tempo lo spazio aumenta. I tuoi dati a differenza degli altri tipo quelli della posta elettronica e di file service, c'hanno una particolarità, non sono comprimibili. E quindi i tuoi 700 Megabytes rimangono 700 mega da salvare, da mantenere e da storicizzare e non si possono ridurre. I sistemi moderni tendono a copiare per lo meno tre volte il dato, quindi i tuoi 700 mega diventano già 2 Giga e 10">> << Interviewer: "Let us take a practical example: how many backup's MB we need for 700 MB of videos?"

-Tech: " 700 MB, maybe more: it depends on how many copies you want to take and on data's nature>> testimony taken from. SIAF's interview

[33] << Interviewer: "ok, it's clear! But with our politics, how much space do you have currently?"

-Tech: "Well, I don't know… I can answer you only if we go over there. I think Moodle's filing system is close to one Terabyte including all functioning. Maybe we can get to 1.5 Terabyte, considering three years of platform activity"

<<-Tech: "La posta elettronica per esempio che è un tipo di dato non strutturato, i corsi Moodle che sono video che sono materiale poco strutturato che hanno diversi fabbisogni di tipo tecnologico, di accesso, di mantenimento, di salvataggio e di archiviazione. In questo momento, per il motivo soprattutto di economia, noi abbiamo un'unica infrastruttura che è orientata all'altra parte. E i grandi spazi necessari per la posta sia per la parte di produzione multimediale, sia la parte di didattica poggiano sulla stessa infrastruttura e hanno performance incredibili ma un costo alto. E una possibilità di scalare che è limitata perché per esempio, il nostro costo a terabyte supera i 1000 euro, anzi, siamo vicini ai 1500 /terabyte che è un costo altissimo. Ci sono altre tecnologie, specialmente negli ultimi tempi stanno invadendo il mercato, che permettono con una semantica completamente diversa di accesso e di utilizzo di mantenere una grande quantità di dati a costi più bassi per tera, tipo 150/250/tera. Ora, noi ospitiamo tutto questo in una infrastruttura che è preziosa. Siccome le esigenze stanno crescendo in modo quasi esponenziale, noi dovremo in un prossimo futuro diversificare in qualche modo l'infrastruttura, lasciare quella core businness con le tecnologie che abbiamo e invece pensare ad un'infrastruttura che noi chiamiamo secondaria più orientata alla grossa massa di dati, un utilizzo diverso e performance inferiori, nel futuro. In questo momento, non ce lo abbiamo. Per cui se tu mi dicessi, solo per il mio corso ho bisogno di 4 terabytes l'anno sono io il primo a dirti che non ce la facciamo, almeno che tu tiri fuori tanti di quei soldi per permettere alla nostra infrastruttura, con l'attuale tecnologia, di crescere e di affrontare queste dimensioni. Ma sarebbe uno spreco perché io ti garantisco l'accesso ai dati in un millisecondo ma a te questo, che invece è essenziale a chi fa gli stipendi, non interessa. Mentre interessa lo grande spazio, la possibilità di aver questi dati e averli in linea, magari con cose molto vecchie">>.[34]

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[34] << Tech: "For example, e-mail is an unstructured type of data; Moodle courses which have videos, that are unstructured material, have different technological, access, maintenance, saving and archiving needs. At this moment, especially for financial problems, we have a single infrastructure that is oriented to the other side. And the large spaces needed for mail, for both the multimedia production part and the teaching part, are based on the same infrastructure and have incredible performances but with high costs. And a chance to overcome this is limited because, for example, our cost per terabyte exceeds 1000 euros, indeed, we are close to 1500 / terabyte which is a very high cost. There are other technologies, especially in recent times which are invading the market, and allow with a completely different semantics of access and use to maintain a large amount of data at lower costs for Tera, like 150/250 / Tera. Now, we host all this in an infrastructure that is precious. As the needs are growing almost exponentially, in a near future we will have to diversify the infrastructure in some way, leave that core businness with the technologies we have and instead think of an infrastructure that we call secondary more oriented to the large mass of data, different use and lower performance in the future. Right now, we do not have it. So if you tell me, only for my course I need 4 terabytes a year I'm the first to tell you that we cannot do it, at least you pull out so much money to allow our infrastructure, with the current technology, to grow and to address these dimensions. But it would be a waste because I guarantee you access to data in a millisecond but to you this, which is essential to those who make the salaries, does not care. While interested in the large space, the possibility of having these data and have them online, perhaps with very old things>> Ivi

SIAF uses Teleskill as a web conference system, but it hasn't a useful organization for a massive quantitative of video's data.

<<-Interviewer: "Quindi quali sono le prospettive future?"

-Riccardo: "per il prossimo anno si parla di 100/200 Terabytes per la parte secondaria, che comporta qualche problema a livello di backup, per lo storico più che per il salvataggio in caso di guasto">>.[35]

It seems SIAF has a massive amount of data, with different treatment depending on their nature. It's starting a long and difficult journey to innovate its structure, but it will not be easy or fast. Although, something apparently is changing, with a progressive awareness process on the necessity of new systems: very important for that, is the modest attempt to make teachers aware of the importance of the Moodle platform'. <<C'è un progetto pilota che sta andando molto bene. Quest'anno a Firenze ci sono dei tecnologi, ora ci sarà un bando di concorso, ci sarà una figura di tecnologo, non so se ce ne sarà più di una, che dovrà iniziare ad affiancare noi come ausilio al docente anche per queste cose. Quindi si inizia, non è poco, è no stravolgimento culturale>>.[36] It's vital to understand that this changing can't be just structural or barely technical but it must be accompanied by a didactic innovation and reconsideration of the strategy played. Like every big public machine, it has various lines of thoughts, one of them with a heavy traditional print: if they recognize the necessity of this change and the absolute need of a team work for this kind of problematics on one hand, they seem to be very rigid in putting these words into practice in the other. <<È chiaro che lì poi interviene anche un discorso di SIAF perché per fare bene questa cosa occorre che tutti gli attori lavorino insieme, in un progetto che da una parte verifica la corrispondenza di quello che facciamo con le regole compressive, dall'altra parte gestisce la parte multimediale e dall'altra parte noi gestiamo la parte di storage di questa roba qui che di distribuzione, quindi catalogandola verificandola e perché no, facendo dei report e del monitoraggio su quello che accade. Diciamo che concettualmente sapremmo cosa fare, servono i server, lui te li trova, loro ti dicono come fare a collegare il video al singolo corso, tipologia di professore, studenti e quant'altro, ma ad oggi penso che non abbiamo nulla di tutto ciò. Anche perché i video cominciano ad essere pensanti e quindi bisogna valutare un po' dove tenerli. A me piacerebbe

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[35] << - Interviewer: "So what are the future prospects?" -Riccardo: "for next year we are talking about 100/200 Terabytes for the secondary part, which involves some problems at the backup level, for the historian more than for saving in case of failure">> Ivi.

[36] << There is a pilot project that is going very well. This year in Florence there are technologists, now there will be a competition announcement, there will be a technologist, I do not know if there will be more than one, which will have to start to support us as an aid to the teacher for these things. So it starts, it's not cheap, it's no cultural upheaval >> Ivi

molto dare una mano e cercare anche con dei progetti sperimentali di introdurre un po' di innovazione tecnologica anche nella didattica. Per questo darei una mano volentieri, ma ad oggi non ne abbiamo notizie se non Moodle. Per il discorso dello statuto, se l'università dovesse cambiare la tipologia di didattica dovrebbe cambiare un sacco di cose, quindi proprio a livello ministeriale, appuntamenti e tutto il resto e cambia il modo. Non credo che l'università di Firenze ad oggi vuole fare questo passaggio perché è difficile insomma. Poi sai, oggi se si parla di università on line viene vista come una cosa che lo fa un privato e quindi di qualità scarsa. Le università on line nella mente dello studente classico vengono associate a qualcosa che non è proprio l'università vera>>.[37]

1.4 Moodle platform

Moodle is the acronym for Modular Object-Oriented Dynamic Learning Environment. It's an open source software, in PHP and Java script. Created by Martin Dougiamas in 2002, this platform is usually used for educational settings. It provides many tools: forum, chat, blog, wiki, glossary, quiz. Its modular structure allows to customize contents and functionalities. Access to the platform requires just an internet connection.

Moodle is based on a constructionism philosophy: learning's efficient is maximized if the student is involved in an educational process by making concrete objects. That's straight related to the constructivism: knowledge is constantly and actively built during learning development. It's not a simple transfer of something prepacked: everything we learn is the result of our making-experience of the world. This point of view has a social connotation: the learning protagonist is not just the individual but the community he/she is part of, that creates something new, based on the sharing on meanings. It's obvious it's not an objective

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[37] << It is clear that there is also a speech by SIAF there because in order to do this thing well it is necessary that all the actors work together, in a project that on one side verifies the correspondence of what we do with the compression rules, on the other manages the multimedia part and another side we manage the storage part of this stuff here that of distribution, then cataloging it by checking it and why not, making reports and monitoring what happens. Let's say that conceptually we would know what to do, serve servers, he finds them, they tell you how to connect the video to the single course, type of professor, students and so on, but today I think we have nothing of this. Also because the videos start to be thinking and therefore we have to evaluate a little where to keep them. I would really like to lend a hand and also try with experimental projects to introduce a bit of technological innovation also in teaching. For this I would gladly give a hand, but to date we have nothing but Moodle. For the speech of the statute, if the university were to change the type of teaching should change a lot of things, so at ministerial level, appointments and everything else and change the way. I do not think that the University of Florence today wants to make this passage because it is difficult in fact. Then you know, today if we talk about online universities it is seen as something that makes it a private and therefore of poor quality. Online universities in the mind of the classical student are associated with something that is not really the true university >> Ivi

perception: it's made by a personal interpretation instead, born from social and physical world interactions.

For this reason, Moodle can be used for online courses (e-learning, blended, self-learning), encouraging students' participation. They can intervene in forums, exchange doubts and impressions, send messages by chat or email, have access to all the stuff put in by the teacher, work on interviews and questionnaires etc. Teachers, on their side, have multiple options to shape the structure of their courses: they have access to the last participants' log; they might set a keyword to enter or let it free; they can make a schedule calendar of the main events of the course; they have access to quiz result (statistics and percentage of answers); they can give a private feedback for each homework; they may set an individual return to monitor the single student's activity etc.

Unfortunately, Moodle is, in this master course, scratching the surfing of its potential: it usually is just a place to put handout or links, considered like a granted tool and not a place in which a collaborative work is possible[38]. To make aware of the multiple options Moodle has, the University of Florence started The DiDel project (DiDattica in eLearning): addressed to all teachers, it's an attempt to raise awareness about its potentials. It's a multi-faceted tool, composed of three main channels: a series of seminars, specific to each schools; some of them are completely full, reason why an addicted series are reasonable to think. These seminars are focusing on technical aspects: how to set a course on Moodle, platform possibilities and criticism. The second field is centered on didactic aspects but to this day they have a lukewarm response, with a low number of participants if we look at the whole group of professors[39]. At the end two tutors were chosen to be a link between SIAF and teachers: they have specific time tables in front office for anyone who needs assistance during his/her path. This is surely not enough but it's still a promising beginning, a sign that something it's changing.

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[38] <<"Perché la piattaforma di Moodle c'è ed è a disposizione di tutti i docenti che però mettono contenuti fatti da loro..."
-Francesca: "diciamo che è di tipo erogativo standard, nemmeno multimediale. Quindi ci mettono il materiale didattico e basta. Un po' di più il forum, ma sempre in modalità quasi esclusivamente erogativo">> << "Because the moodle platform is there and is available to all the teachers but they put content made by them ..."
-Francesca: "let's say it is standard, even multimedia. So they just bring us the teaching materials. A little more the forum, but always in an almost exclusively distributive mode ">> Ibidem

[39] On the 7th of February 2018, in Via Laura, there will be the first course addressed to all the professors of Education, about e-learning and the DiDeL project. Cfr. https://e-l.unifi.it/course/index.php?categoryid=585 (consulted 15/01/2018)

Chapter II: Technologies and educational interventions: how they can be combined in an efficient and effective way

 First of all, we can start with a series of definitions about what learning is and which characteristics its process has, trying to understand the main structure of a blended learning and its impacts on students' path.

 At the beginning, learning was assimilated with teaching. We know today that this perspective is very restrictive and learners are a fundamental part of this process, not just by receiving information, but also by co-building a new structure, by putting together new inputs and previous knowledge.

 In the twenties, learning psychology was centered on behaviourism: all was reduced on interactions that can be observed, and every human activity was explained just in terms of a response to a stimulus. It was believed that nothing could be changed or built in the head of humans. This line of thought couldn't explain why some people were able to imitate unreinforced behaviours. In the seventies, this linear process was enriched by cognitivism: the learning process wasn't composed just by a visible part, but also by all cognitive elaborations present in the mind. <<The mental processes transform the information received through the eyes and ears into knowledge and skills within the human memory. Learning takes place, thanks to a process activated within the working memory (short-term memory), for which purpose it uses knowledge and skills retrieved from the long-term memory. The new knowledge and skills are then stored in this memory>>.[40] Consequently, the Artificial Intelligence field emerged, trying to simulate human activities. A third line of thought built upon the first two: the constructivism where the subject assumes an active role. What we can experience is dependent on our way to attribute meanings, to build and to create. In this sense, teachers are more like researchers: their work is constantly and systematically verified, thanks to a continuous comparison between each other. Interesting in this time line, is the perception of the presence of computer in class: if for the first two strands it was just a tool used to replicate the teacher's role, knowledge in constructivism isn't pre organized. For this

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[40] *Cfr. Alonso F., & Lòpez G., & Manrique D., Vines J.M., (2005) An instructional model for web-based e-learning education with a blended learning process approach. BJIET, British Journal of Educational Technologies, 36 (2), p. 217*

reason virtual settings and multi user systems took place allowing access to multiple learning and teaching occasions.[41]

2.1 Lesson structure: the instructional model

With the advent of technologies in the field of education, not only as a support for teachers, but also as added-valued tools, lessons had to be redesigned. There are a lot of possible combinations of frontal lessons involving technologies. Intervention can be assembled by demanding a part (greater or lesser) to traditional technological means or to some more sophisticated ones, but still staying in an "in presence" modality. Otherwise, technological support can be so invasive that it could replace face to face interactions: in this case the entire educational intervention can be completely fulfilled on line (distance education) or both on line and in presence (blended education and similar).

Instructional design can be defined as a set of rules governing an appropriate choice of educational methods, taking into consideration learning condition and teaching typologies[42]. A fundamental contribution for ID' development is provided by R.M. Gagnè with *The condition of learning:* the author defines eight learning forms (signal learning, stimulus-response, motor concatenation, verbal chaining, multiple discrimination learning, concepts of learning, principles of learning and problem solving) which require nine different teaching approaches (attention stimulation, informing students about prefixed goal, stimulation of pre-existing memory, giving a stimulus, learning guide, practice promotion, giving a feedback, evaluation of performance, improving transfer and absorption).

For an in deep study of lesson structure, it's advisable to divide this process in stages: we will considered the e – learning instructional model indicated in the article *An instructional model for web-based e-learning education with a blended learning process approach*[43]. For the authors, this method is composed of seven phases (in yellow):

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[41] Cfr., Ligorio B., *Come si impara, come si apprende,* Carocci editore, Roma, 2003, p. 9

[42] Cfr. Ranieri M., *E-learning: Modelli e strategie didattiche,* Erickson, Trento, 2005.

[43] <<The e-learning instructional model is based on the fact that the training should enable learners to apply the concepts learned at their workplace and evaluate the results. That is, it should provide the pragmatic level and the practical tools for the learners to be able to put into practice what they have learned.>> cfr Alonso F. & Lòpez G. & Manrique D., Vines J.M op cit,

Below is a structural diagram showing the following boxes and connections:

Psychopedagogical prescriptions — Structure content, promote effective cognitive processes and further effective collaboration activities

Analysis — · Learner characteristics and needs (student analysis) · Learning environment · Available resources

Design — · Learning approach · Structure information · Define standards · Execution criteria · Required achievement

Development — · Practical learning process: -Strategies -Events sequence -Learning tools -Resources to be used

Implementation — · Construction of the learning process

Execution — · Execution of the Didactic Units by the learner

Educational contents — · Contents to be taught: -Knowledge -Tasks · Knowledge graph

Theoretical self-paced learning — · Present information (road map) · Set activities and exercises (individual and collaborative)

Practical self-paced learning — · DU structure: -Learning tree -Lesson structure and content

Didactic Units — · E-lessons

Evaluation — · Gather information · Analyse results

Learning objectives — · Primary · Secondary -Hierarchise objectives

Review — · Of analysis · Of design · Of development · Of implementation

Objectives achieved — Yes / No

a) Analysis

Choosing an educational intervention structure is not simple because it depends on a combination of different elements, that need to be mixed to create an efficient and effective lesson[44]:

- People who we are dealing with
- Learning environments
- Available resources

University context includes many different situations: in time /not in time students; workers who want to update their knowledge; people with one, two or three other degrees; mums or dads with children, jobs and many other things to manage; every person bring his/her own

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[44] The difference between effective and efficient must be clear: the first term means capability of doing something; doing it with the minimum of resources available is efficient. This difference is important if we think about concrete settings, where problem of resources is very common.

story, made of its peculiarity. This melting pot can be seen as an obstacle: having so many different situations to deal with can be a little bit scaring because it means teachers must find a common language that can suitable for the majority and of course this is not at all simple. Despite this, this aspect can be the strength of an educational intervention; if it's clear that the student is one of the main actor of this process and he/she can have an active role in all of this, previous experiences can be used to integrate, enrich and develop lessons. It may happen that a linear explanation of a concept can be transformed into a mutual exchange of experiences between members of the class (it may cover not just frontal lessons, but also a virtual class, using tools like forum, chats etc., etc.). For this reason, a good teacher should start from students' needs: an educational intervention will be efficient and effective only if it will be useful for students (and dare I say, for teachers) but also economically sustainable for the institution.

Goals we have set are usually designed based on previous experiences, course's subjects and teachers' assumptions of what can be interesting for students. Sometimes a discrepancy can happen between what a teacher thought was the adequate strategy and the reality. In this case it is important to maintain a flexible behaviour, remembering that if an intervention has a perfect formal form but it doesn't respond to real needs, it is practically useless. For this reason, a continuous review of previous scheme is recommended: the primary means for this action is a dialogue between participants. Feedbacks from users are fundamental: they can be collected from usual school assignments, even if they can be influenced by a traditional evaluation system.

And finally, being aware of the real prospective of subjects involved may help to design a perimeter in which the intervention should stay: not just the economic side (which limit cannot be crossed) but also the professional potential of participants, that seems to be the plus of a great interaction (this is the side that can be pushed a little bit more). Practical aspects should be investigated: places, timelines, teaching materials, available technologies etc. etc. In this phase the "architect" decides what to teach: according to the authors, two types of document must be produced, one for learning objectives, and one for educational contents (knowledge and skills a student must achieve and tasks to be developed[45]).

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[45] << Knowledge is the set of facts, concepts, and processes that the learner has to use properly to solve future problems related to the subject to be studied. The tasks are the set of procedures and principles that can be used to solve given sub problems within the domain in question>> Cfr. Alonso F. & Lòpez G. & Manrique D., Vines J.M op. cit.

b) Design

In this phase how to teach is decided: criteria, learning approach, procedures, concept achieved, structure of given information etc. etc. Authors suggest a road map or a diagram to individuate learning objectives, and a set of exercise and activities. All depends on what we want to teach, aims, and context (learners, environments, previous knowledge).

c) Development

This phase describes the practical learning process: strategies, resources, learning tools, and an exact sequence of events for each lesson. The document that might be produced is a learning tree made up of the best possible road maps in the second phase, strictly bound to the prefixed learning target.

d) Implementation

Implementation consists in setting out the platform and each unit inside it, sometimes even building the software.

e) Execution

Learners are the protagonists of this phase. Execution is usually precious to understand what people have learned and what possible problems emerged.

f) Evaluation

  Given that a valuation method must be used, it's worthy to reflect on which can be the best one to measure quality and efficiency of an education project without devaluating students as people, and their learning process. Let's try to understand the different methods used in each type of lesson:

1. *Courses entirely carried out with face to face lessons*: the mark system is the most common: it links students' performances to votes, so it seems more an evaluation about students' knowledge than a global feedback about the course. Only a deeper analysis could give back a correlation between the effectiveness of teacher's work and students' marks (and thus logically students' knowledge). And this relation can't be linear: students' performance (and the corresponding vote) is not directly linked to teacher's proficiency. First of all, it's just one shot, and it could be based on

personal students' condition (anxiety, fear, sickness, shyness, etc. etc.). This aspect may be analysed along with two different perspectives: a bad or good mark might not be related to teacher's performance. However, a global pattern may show the presence of problems without revealing typologies. The other method used at Florence University is the anonymous questionnaire that every student has to do after the end of the course: despite its nameless form, it has usually been done with a sort of fear in one way, and a recklessness in the other. That happened because questionnaires are given before the undergoing of an examination and students are concerned about possible reprisals from teachers; on the other side an awareness about its potential is very low: students don't seem to understand they can give a real feedback, believing that no one will look at them. Also the length of the survey discourages: there are a lot of questions which require a certain amount of time to be compiled. Another method could be mentioned that is completely subjective, because it's not obligatory and it depends on the teachers' will of getting involved: it's the continuous feedback given by students during frontal lessons, made by questions, interactions, attentions, work group results. This system is strictly related to teachers' empathy, because it demands a constant focus on verbal and non verbal actions and a persistent open mind setting; only this last action allows an ongoing reimagining and it's probably the only way to reach a global positive payback.

2. *Blended courses*: for this second category, all the three methods described above may be carried out. The difference lies in what supports are applied and what proportion is used for each of them. Every course needs a final vote, assigned through one or more checks during its lifetime: they could be allocated as online homework or in just one final exam (not necessary face to face). A final questionnaire could be given to have a global judgment of students' experience. Each of them may be carried out on line or in presence, as category a). The main difference consists in the third method of evaluation, which can be the same of face to face interactions, except for an adjustment of the on line part. The vehicles by which people interact can be multiple: chats, blogs, forums, emails. In a virtual class, all of them can be used to communicate: what it's necessary is the role of mediator, usually taken by the

teacher[46]. He/she may benefit from his/her position to collect feedback (not only about achieved knowledge but also about new skills: how a student has worked to improve his/her initial condition; which instrument he /she has used; how many time he/she had interacted in social spaces and with other participants etc. etc.). If feedbacks are positive (objectives from the first phase are achieved), the learning process can go on (or end). If not, a review phase is necessary.

3. *Entirely on line courses:* as point a) and b), methods used for evaluating the efficiency of an educational intervention are multiple. The difference with previous category lies in entirely on line modality: the question is if an absence of direct contact can denature evaluation process. One could envisage that options one (marks and assignments) and two (questionnaires) don't change much in terms of effectiveness

g) Review

This is the time to analyse the results of evaluation: every stage must be reviewed.

The blended approach complexity is evident: made of two stages, this method has a reasoned planning at the bottom which will progressively become shorter as experience grows. The executive part must be constantly monitored and cultivated: for this reason, a big amount of time must be taken during the life of the course. Because of its condition, blended intervention needs an in deep reflection about communication techniques used.

Both pedagogical reflections and technical skills are required: since the description about formal organization method has been described, let's have a look at the ethical approach a blended intervention should be built on.

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[46] It might be interesting if someone alternately assigned a mediator role to students: this could be worthwhile for interactions and inter personal dynamics. How a student behaves while his/her role is a mediator? And how it changes when he/she's only a student? Does the first role influence the other (and vice-versa)?

2.2 Ethical aspects

2.2.1 Communication

The Communication Process
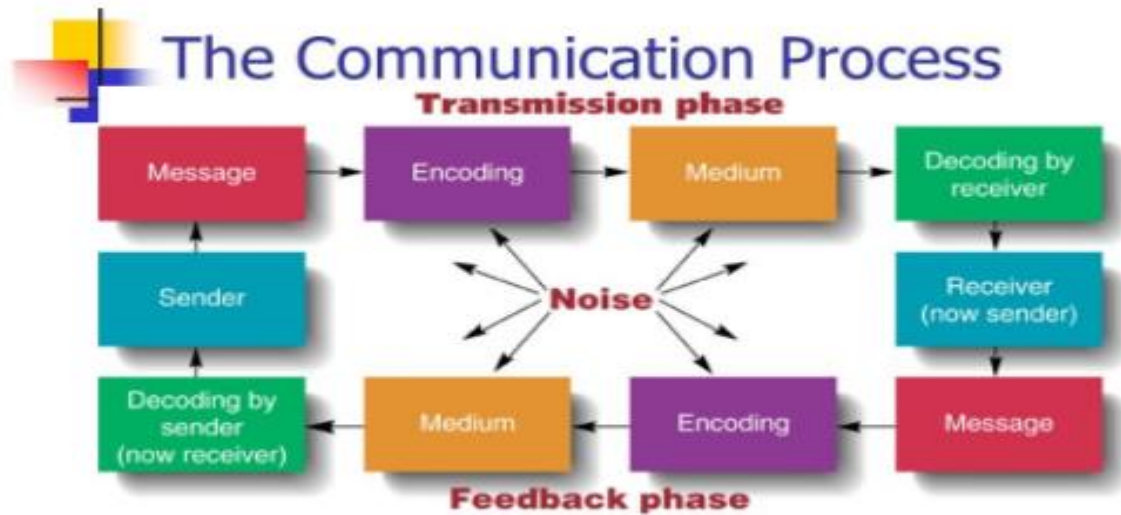
Given that communication may be defined as an exchange process of information between two or more subjects, in a specific context, it's understandable that it has two directions. For this reason, it's a process of mutual influence which must be objective- oriented. Having this aspect clear, it may be helpful in the review stage to understand if interventions have been successful. Tools by which educational intervention has been made are very important and influence the entire communication process. Because of multi- level aspects, a single exchange could be a vehicle of different messages: at the level of verbal communication it could say something, but at the same time it could have completely different (sometimes opposite) meanings at the nonverbal level.[47] For this reason, a reflection about communication is necessary since communication beyond the screen can be even more misleading than the face to face one. Interpretation plays an important role: a teacher could try to say something, while students understand something else. A kind of mutual language is required, to be certain that one's interpretation is as close as possible to other's ones;

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[47] Verbal communication can be classified in semantic, syntactic, oral and written language. Nonverbal communication can be analysed by means of kinesics, proxemics, aesthetic and calligraphy. And finally we can individuate a third category: para-verbal communication which contains tones' volume, rhythm, pauses, silences.

furthermore, a speech tuned to others must be activated. Since our goal is sending a message and be understood by others, we must be careful about the language we use. The reference point is the grammar chosen for the exchange: it will help to reach a similar interpretation, even if it's very unlikely it will be the same. Single perception depends on cognitive maps we have built by making experiences: it can be defined as the combination of meanings or values we've attributed to single events (for this reason there are differences between people's interpretations).

Worth to be mentioned are the five axioms of communication:

1) One cannot not communicate
2) Every communication has a content and relationship aspect such that the latter classifies the former and is therefore a meta-communication
3) The nature of a relationship is dependent on the punctuation of the partners' communication procedures
4) Human communication involves both digital and analogic modalities
5) Inter-human communication procedures are either symmetric or complementary, depending on whether the relationship of the partners is based on differences or parity

This is not the right place to deepen all these famous points: what we must remember is that having an efficient exchange[48] implicates a shared codex, a common language, a listening attitude[49] and an awareness of the global process.

2.2.2 Practical attitudes to be implemented

An ethical code can be drawn up: to be part of a community (on line or not), a respectful attitude must be taken. Staying beyond the screen usually allows people to act without any filter: screens become a shield behind which it's possible to give a voice to any kind of behaviour, frustration, fear etc. etc. as we are not sharing the same real space.

It's usually more difficult to loosen up while someone is physically in front of you.

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[48] It's made of five elements: sender, receiver, message content, communication channel and codex
[49] This element allows to tune in and target the intervention.

Responsibility of our actions must be taken: awareness about our influence on other people should be implemented, in order to balance freedom's expression and respect.

Clarity and simplicity helps the message to be correctly received, as a proper use of available means. This last aspect is very important for on line communication: let's think about Facebook, and posts written every day. Or an e-mail you need to send trying to find a job. Or maybe, a skype call for an interview. Social networks, platforms, every kind of software, are common tools nowadays: unfortunately, it doesn't mean we know how to use them.

In a blended education intervention, being aware of necessary instruments it's very important. First of all, because they are an extreme resource only if we can use them properly. Let us take the example of a forum, like the one we have on Moodle platform for each course at Florence University. Usually used for on line interaction, forums are one of the greater resources of our time. This is a place to confront, to discuss, to ask and to answer, to help people and to measure our own proficiency. Forum are very common and deal with almost every kind of problematic a person has to face: but without a code to follow, it could turn it into chaos. If we think about a learning environment, we could believe it's used to exchange information about studied subject: what should a space be like this to be attractive, to involve people and to encourage them expressing doubts and perplexities?

It should be dynamic: reading the same questions communicate a sense of recurrence, repetition, like nothing had changed. It also provides the participant with a sense of one-way interaction, as the only purpose was have information and nothing more: the individual asks without having read the previous message, as if to say, "I'm the only one that matters to me". Some people might answer in the name of one's own sweet self, pleased about their own knowledge, but in the long run it would be boring. So maybe we can define the first two rules: don't ask if it had already been asked and pursue mutual exchange. Be informed yourself, read earlier post and interact not just for having information, but also to share your expertise. Collaboration must be sought, especially today that labour market requires more and more skills and knowledge: it becomes impossible to work alone. Instead, cooperative and collaborative[50] work might lead to objective proposed for the common good[51]. <<L'etica che ispira i *forum hacker* determina regole il cui rispetto rappresenta il vero

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[50] There is a subtle difference between collaboration and cooperation: the first term means two or more people working together for the same aim; cooperation work is pursued by people with different aims but with the same final objective.

[51] Encourage concrete and collaborative work: the more it's linked to professional and personal students' interests, the more their contribution will be enriching and lived.

lasciapassare per poter partecipare. Sono regole utili per garantire la salute di una qualsiasi comunità *online*. In successione: studiare il contesto del problema prima di chiedere – le fonti non mancano; cercare nel *forum* se altri hanno posto la medesima domanda e se ci sono state risposte; descrivere i tentativi fatti in maniera sintetica ma chiara – mostrare di avere studiato, di averci provato; evitare inutili giri di parole, tuttavia essere cortesi; una volta trovata la soluzione di un problema, diffonderla subito nel *forum*. Se in una qualsiasi forma di didattica *online* il docente riesce ad innescare un meccanismo del genere, i benefici saranno molteplici. Lasciar volare domande e risposte nella comunità evita che l'insegnante si trasformi in un collo di bottiglia dove gli stessi temi vengono ripetuti inutilmente; le risposte fra pari fanno risparmiare tempo e alimentano il gruppo, scatta così l'apprendimento cooperativo. La comunità si autoalimenta e diviene un alleato del docente.>>[52]

As we have said at the beginning of this paragraph, be respectful. Seeing people being attacked for their interventions, being violated in their own freedom of speech, might discourage new approaches. On the contrary, an inclusive behaviour may make participants feel comfortable: politeness and kindness are welcomed!

On the other hand, forum in an educational context should be cultivated, at least at the beginning of its life. The teacher/tutor/ombudsman is responsible for forum dynamics: he/she has the duty to raise the class as a community. Especially because of the novelty of this particular reality, ways of doing this are not very clear from the start. The teacher's role is divided between breaking the ice, giving examples of how an interaction can be conducted and supervising future developments. As Andreas Formiconi says, *show up and teach*![53]: never make the student feel alone. It's human not to be always in time with answers and advice: just say "Hello, I'm here, I will answer you as soon as I can. But don't worry, I've seen your request, I'm thinking about it, you will have my support". Without this kind of approach, forum will probably die (contrary to the first thing we have sad about being

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[52] <<Ethical hacker's forum has rules which must be respected to be part of it. They are very useful for each on line community. In succession: before asking, study the many context- sources; look in other forums for the same question and eventually for answers; describe attempts in a clear and synthetic way- showing you have studied or you have tried; avoid beating arbout the bush, and be polite; once you have found a solution, spread it in another forum. If a teacher can trigger this kind of mechanism in an on line didactic (whatever it is), benefits will be several. Letting questions and answers fly freely in the on line community avoids the teacher becoming constricted with the same themes being vainly repeated. Peer to peer answers save time and allow the group to grow, thus launching cooperative learning.>>+ Cfr.Formiconi A., *La tortuosa via della didattica on line*, p.112 Full text can be found in PDF in the following link: http://www.fupress.net/index.php/sf/article/view/18564/17266 (14/02/2018)
[53] Ivi

dynamic). Community becomes the center of this approach: all technical skills have their *raison d'être* in developing and feeding relationship[54].

Another suggestion is to stay open: take advantage of the multiple benefits an IT tool has. Don't get hung up on specific solution, but on the contrary facilitate commingling of arrangements.

2.2.3 Blended learning: yes or no?

Blended learning is not always an appropriate approach: this choice depends on the situation we have to face. Channel through which learning is provided are varied: the most common is platform use. Even if multiple options can be added, platforms are usually employed in granted form, by slides/video uploading. To be honest, lots of solutions can focus on student's active role, even by platform's use[55].

Drawing up a pros and cons list can be helpful for this complicated decision. The plus side being a method specifically designed for reaching lots of people. Web based communication helps cutting down time and space obstacle: that's amazing if we think about multiple and varied student's conditions. It mixes in presence meetings with on line interaction: human relationships are cultivated in both. Some people might find face to face approach more suitable for their needs: misunderstandings can be solved more quickly thanks to nonverbal communication and a physical interface. At the beginning of educational intervention it is very useful to create the sense of a group: an in sync meeting is recommended with regular schedule, to take stock of the knowledge achieved and to unravel possible doubts. Just be careful that doing in presence sessions does put people with different necessities at a disadvantage (e.g. work, living place far from the school etc. etc.). In other words, do it but with awareness of real students' necessities. On the other hand, on line approaches make shy people more comfortable in taking part in class discussions: it is also very useful if customers have different habits and they can't be connected simultaneously. It also gives time to reflect on topics that have been dealt with: everyone has his/her own study method and time to internalize. Having free access to all available sources allows an individualized path which can be very productive: it also helps an in depth reflection because of the opportunity to read/see/listen whenever we need to. Digital teaching materials allow a customized intervention, with a high feedback quality; they can be also reused and readapted according

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[54] Cfr. https://iamarf.org/2015/04/08/questi-vostri-commenti-sono-molto-importanti-linf14/
[55] E.g. flipping method, blogs, forum, wiki pages, collaborative writing, tagging, bookmarking, web feed etc. etc.

to multiple necessities. Learning can be developed in a collaborative way, mixing people from very different origins (not just physical, social and cultural, but also educational preparation: we can say this method relies on democratic sense. Another positive aspect can be individuated in practical elements: a blended method doesn't always require physical spaces to interact, which means minor costs for infrastructures.

By contrast, several computer items should be considered: all the participants must have a device to connect to the server and an internet connection that should support videos and all the material the course provides[56]. On the other hand, providing agencies should build a strong server system for data maintenance, storage and backup. It's also very expensive in terms of time and energies engaged, in the execution phase, contrary to the traditional education method. As we have said in previous sub-paragraph, teachers or tutors must consider a wide- ranging amount of time dedicated for community's life. If not properly implemented, the blended method can be dispersive: people might feel alone and lost beyond their monitors. A real community must be created and cultivated: if not, the added value given by collaborative work can't be improved and learning is impoverished. Thinking of university course, another position should be expected: the tutor. This function is vital for a correct educational intervention development: he/she should support professors in implementation and execution phases[57]. Even if this role can't be ignored, it could be very expensive paying two figures for each course. Another difficulty might be the knowledge and the confidence with IT tools: it requires specialised skills that are usually not required for traditional methods. If they are not present, specific training must be planned: that means an extra cost for the agency/school/university.

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[56] This aspect might seem minor if we think about countries with a strong internet connection, but it could be very troubled if we consider not just third-world countries poverty but also situation such as those in Italy, in which people are daily faced with weak nets, or very isolated places with no connections at all.

[57] Usually professors are very busy in all their tasks: not just didactic aspects but also researchers' duties and perhaps institutional ones. Because of their competences, they are responsible for course contents and didactic project: tutors may support practical aspects like tool implementation, community life monitoring, uploading didactic materials etc. etc.

2.3 Distance education: e-learning as means of Lifelong learning

Distance education is not a new phenomenon. It is interesting how it developed in line with new technologies, using them to solve the problem of distance. Moore and Kearsley set out five phases: the first of these can be located at the end of XIX sec with the railway lines' development; thanks to this, postal service was improved and it facilitated the launching of mail-order didactic. In the twenties, the second phase coincided with television and radio: the broadcast era. Progressively, social development leads to a new conception of university: Open Universities were born and thanks to a systematic vision of distance education, they used every kind of technologies to extract education from usual contexts. In 80' video conferences came up: the fourth phase is delineated by distance education's sync. The fifth phase matches with the coming of internet: an entire world opened up![58]

Internet pervades every aspect of life: we can talk about global digitalization. A tool made of many facets, it messed up and overturned paradigms, relations' mechanism and socialization. It's a wide resource: dynamism, speed, complexity; we are faced with an overhaul of time and space. Maria Ranieri writes about delocalised and relocated space (uncoupling of physical spaces) and time's variable density (time is distended or contracted by necessities)[59].

Today we can trace back distance education to online teaching, even if we know it's more complicated than that: we have said that e learning is one of the possible tools used to reach students, especially in lifelong learning context.

The concept of Lifelong learning can be defined as << l'idea cioè di una formazione al di là dei limiti spazio-temporali tradizionalmente imposti dai sistemi educativi estesa durante tutto l'arco della vita >>[60]. As we can imagine, the educational paradigm's redefinition requires a new methodological approach, and technologies may help in this. <<L'educazione 'una volta sola', su cui ha poggiato il sistema scuola, appare sempre più inadeguata dinanzi alle recenti istanze sociali: il rapporto tra vita e apprendimento si è rovesciato in quanto non si tratta più di un apprendimento per la vita, ma di una vita per apprendere; la richiesta che viene avanzata è quella di sistemi dislocabili nel corso dell'intera esistenza, accessibili da

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[58] Cfr. Moore M. G., Kearsley G., *Distance education. A systems view of online learning,* in Formiconi A.R., *La tortuosa via della didattica on line nell'università,* Studi sulla Formazione, 2016. Full text can be found in PDF to the following link: http://www.fupress.net/index.php/sf/article/view/18564/17266

[59] Cfr. Ranieri M., *E-learning: Modelli e strategie didattiche,* Erickson,Trento,2005.

[60] << the idea of education beyond temporal and physical limits imposed by traditional educational systems, which last lifelong>> Cfr. Calvani A. *Dall'educazione a distanza all'e learning,* in http://www.treccani.it/enciclopedia/dall-educazione-a-distanza-all-e-learning_%28XXI-Secolo%29/

ogni luogo. Garantire a tutti un apprendimento secondo le proprie necessità, rispettando bisogni di ciascuno in ogni condizione, tempo e luogo: questa è la sfida con cui la società contemporanea dichiara di volersi confrontare. A questo punto nei programmi d'azione europei del lifelong learning del 21° sec. entra prepotentemente l'e-learning>>.[61] Lifelong learning and e-learning fit perfectly in this new approach: unfortunately, e-learning's journey wasn't easy at all. The Italian educational system had trouble accepting second wind: it has usually been characterised by rigidity towards big changes on one hand, and outside and bottom pressure on the other.

Predicting Moocs experience[62], in 2003 Italy recognizes telematics universities with "*Decreto Moratti-Stanca*"[63]: from that moment on, this kind of reality took place. Together with the massive open online courses' experience, EU introduced the LLP (Lifelong learning programme)[64]: it defines European action programmes for lifelong learning. EU aspires to become an engine of development for knowledge society by promoting social cohesion, employability and environmental protection for future generations[65]. Not long after, on the 18th December 2006, European parliament and council approved a recommendation on key competences for lifelong learning:

1) Communication in the mother tongue;

2) Communication in foreign languages;

3) Mathematical competence and basic competences in science and technology;

4) Digital competence;

5) Learning to learn;

6) Social and civic competences;

7) Sense of initiative and entrepreneurship;

8) Cultural awareness and expression

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[61] <<One time education, which was the base of the school system, looks more and more inadequate faced with recent social requests: relationship between life and education overturned since it's not just one learning process for each life, but it's an entire existence for learning; lifelong lasting mobile systems, accessible from everywhere, are requested. Ensuring an appropriate education by fulfilling the needs of everyone in every condition, time and place; that's the challenge the contemporary society declares to face up to. At this point, e learning comes in to European lifelong learning action programmes of 21st century>> Ivi.

[62] The first official Mooc was edited by George Siemens and Stephen Downes in 2007, with Connectivism and Connective Knowledge's course, which had 2200 members.

[63] Previous law 341/1990 provided for private and public consortia for university's distance education. Decreto Moratti –Stanca was being criticised for flourishing of pseudo universities with a low offer's quality in the name of technological standards to be respected.

[64] On the 15th of November 2006

[65] In this context the Erasmus project was developed, as Comenius, Leonardo da Vinci and Grundtvig

<< The key competences are all considered equally important, because each of them can contribute to a successful life in a knowledge society. Many of the competences overlap and interlock: aspects essential to one domain will support 30.12.2006 EN Official Journal of the European Union L 394/13 competence in another. Competence in the fundamental basic skills of language, literacy, numeracy and in information and communication technologies (ICT) is an essential foundation for learning, and learning to learn supports all learning activities. There are a number of themes that are applied throughout the Reference Framework: critical thinking, creativity, initiative, problem solving, risk assessment, decision taking, and constructive management of feelings play a role in all eight key competences>>[66].

In the last chapter we will see how distance education may help in achieving key competences listed above.

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[66] Full text can be consulted in PDF at the link http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32006H0962&from=EN

Chapter III: Methodology of research

Methodology is the first step of an accurate and in depth planning of research which consist in a global reflection on the organization of the work we are going to do. It's a complex and indispensable process for a strict investigation, especially if we are using a qualitative method that required a strictness which we can't take from the numbers. The choice to avoid a quantitative method is not accidental, in fact it resides in the nature of the paper's topic. Talking of relationships between two or more persons, more over if they are in a formative and educational setting, presupposes a complex system of factors which can't be reduced in a set of numbers and labels. In the past, this kind of approach was blamed for a lack in scientific knowledge's lack. Luigina Mortari indicates some epistemological virtues that must be observed to keep your research strict:

- Make explicit choices and frame of values
- Start a constant criticism of yourself and others participants
- Consider the error as an opportunity for reflection
- Publish the results obtained
- Share not only conclusions but also data
- Keep transparency in the flow of reason[67]

The author divides the analysis in six points: in her opinion, a good research needs a reflection on the paradigm, the epistemology, the philosophy, the method, the strategy, and the technique of the research[68]. In the next paragraphs there is a brief panoramic of these points.

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[67] Cfr. Mortari L., *Cultura della ricerca pedagogica: prospettive epistemologiche*, Carocci editore, Roma, 2007, p. 64-65

[68] Cfr. Mortari L., *op. cit.*

3.1 Paradigm and epistemology of the research

Epistemologìa termine coniato (1854) dal filosofo scozz. J. F. Ferrìer [...]. In un'accezione più moderna e corrente, [...], s'intende per epistemologia l'indagine critica intorno alla struttura e ai metodi (osservazione, sperimentazione e inferenza) delle scienze, riguardo anche ai problemi del loro sviluppo e della loro interazione[69]

The paradigm of the research is a set of assumptions or premises that guides you into the work. Through it, you can individuate what your research consist of, the object and how it can be analysed, the procedures implemented and the purpose which has to be achieved. To facilitate the study of the paradigm it is useful to individuate its main structures of it.

Until the end of IXX century, the most used paradigm (in every research field) was the positivistic one: originated by Cartesio, Newton and Galileo's theories, this paradigm was characterized by a quantitative vision of science, which could be analysed with a mathematical and analytic approach to reach the only true knowledge of the world. The main mechanisms that rules the reality could be summarized by laws of physics. There was no space for feelings or emotions: everything was reduced to an interaction between atoms. One of the main critics made to this kind of approach was the reductionism: the results produced weren't generalizable, so it wasn't possible to explain some particular cases. The researcher wasn't included in the analysis: his contribute was only scientific and not human, he didn't have any influence on what he was observing. The impulse of the positivistic paradigm crisis was given by the Heisenberg's principle of indeterminacy that asserted an unpredictability of reality. Phenomenon couldn't be described for certain: due to this new awareness, at the beginning of XX century a new kind of approach was started, with the name of ecological paradigm. For this point of view, reality is studied according to a relational vision: the individual and the eco-organization around it feed each other in a mutual and continuous interchange. This fluid interaction between the subject and the world is characterized by the unpredictable of the evolution, the complexity, and a new concept of objectivity of the real, made by an empathic and dynamic vision instead of fixed mathematical principles.

Mortari identifies in the naturalistic/ecological epistemology the most suitable way to analyze an educational context. This requires a flexibility in its structure, which can't be

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[69] In a more modern and current meaning, [...] we mean by epistemology the critical investigation of the structure and methods (observation, experimentation and inference) of the sciences, also regarding the problems of their development and their interaction Cfr. http://www.treccani.it/vocabolario/epistemologia/ (03/10/17)

prefixed but has to be changed during the process: it emerges according to an evolutionary logic. The main components of the naturalistic epistemology are:

- a qualitative method, perfect to catch the human setting;

- a targeted sampling, made by significant informers which can be changed during the survey according to the information which emerged;

- working theories which have to satisfy criteria of credibility[70], transferability[71], dependability[72] and confirmability[73] to produce a reliable research;

- an inductive analysis of the data, making categories not first but during the process;

- an open ended approach that requires a continuous comparison between researchers and foreign participants;

- specific epistemic practices such as a prolonged involvement in the context[74], a continuous overview[75], triangulation[76], peer- debriefing[77], member checks[78];

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[70] << Non ci sono criteri oggettivi per stabilire che una teoria è valida, al massimo può essere convincente rispetto alla procedura seguita per costruirla [...] Ciò che è interessante perseguire è che i risultati siano condivisi dai partecipanti alla ricerca, solo in questo caso si può parlare di credibilità>> <<There are no objective criteria to establish the theory's validity, at most it can be convincing with respect to the procedure followed to build it [...] What is interesting to pursue is that the results are shared by the research participants, only in this case we can talk about credibility>> Ibidem, p. 67

[71] <<[...] nel senso di produrre elementi che possono aiutare ad illuminare qualche aspetto dei fenomeni analoghi a quello rispetto al quale la teoria è stata costruita>> << [...] in the sense of producing elements that can help clarify some aspect of the phenomena analogous to that the theory was built on >> Ibidem, p. 68

[72] <<Non esiste una conoscenza certa, al massimo fornisce elementi che risultano funzionare per la comprensione del tipo di fenomeni cui può essere applicata>> << There is no certain knowledge, at most it provides elements that work to understand the type of phenomena to which it can be applied >>Ivi.

[73] <<La conoscenza [...] risponde al criterio di confermatività se è emersa da un'adeguata negoziazione esercitata sulla base di evidenze raccolte nel corso dell'indagine>> << Knowledge [...] responds to the criterion of confirmativeness if it emerged from an adequate negotiation exercised on the basis of evidence gathered during the survey >> Lincoln, Guba, p. 189 in Mortari L., op. cit. p.68

[74] << Il ricercatore deve dedicare molto tempo a contestualizzarsi nell'ambiente scelto per la ricerca. Si può stabilire che è stato dedicato tempo sufficiente quando il ricercatore ha acquisito un modo di interpretare gli eventi simile a quello dei nativi>> << The researcher must devote a lot of time to contextualize in the environment chosen for the research. It can be established that sufficient time has been devoted when the researcher has acquired a way of interpreting events similar to that of natives >> Erlandson et al., p. 30 in Mortari L., op. cit. p. 70

[75] << [...] è importante esercitare con continuità la capacità di osservare, in modo da costruire uno sguardo sensibile ad ogni dettaglio>> << [...] it is important to constantly exercise the ability to observe, so as to build a sensitive look at every detail >> Mortari L., op. cit. p. 70

[76] <<[...] è opportuno attivare una triangolazione nella raccolta dei dati, ossia una diversificazione delle tecniche e delle fonti cui attingere per raccogliere i dati>> << [...] it is advisable to activate a triangulation in data collection, ie a diversification of techniques and sources to draw on to collect data >> Ibidem, p. 71

[77] <<è importante che il ricercatore preveda incontri con altri professionisti della ricerca perché il confronto con uno sguardo esterno ma esperto aiuta ad individuare le proprie distorsioni epistemiche>> << it is important that the researcher foresees meetings with other research professionals because the comparison with an external but expert look helps to identify their epistemic distortions >> Ivi.

[78] << Quello di confrontare gli esiti del proprio lavoro di ricerca con i soggetti partecipanti è considerato un imperativo epistemico, al punto da ritenere che nessun risultato possa essere incluso in un report se prima non è stato sottoposto alla verifica del member checks. Questa fase del lavoro di ricerca è certamente importante, ma non può essere considerata una condizione essenziale per valicare una ricerca>> << That of comparing the results of the research work with the participating subjects is considered an epistemic imperative, to the point

- a phase of negotiated outcomes, helped by an emic view to find a shared solution

 The main tool of this kind of research is the human being, flexible and useful for his investigative skills. For a complete investigation, the naturalistic epistemology needs a report of the research that helps the reflection in every step of the investigation.

 Also Chiara Sità offers a set of key points to achieve the knowledge in a phenomenological way:

- trust in what appears: the principle of validity is the evidence. How we live is how the reality appears to our eyes;

 - epochè: it means we need to approach the problem by interrupting our usual perspective, avoiding the knowledge built since then[79];

- the notion of intentional subject and an intersubjective validation;

- empathy[80], to get closer to the subject and to build a relationship based on trust;

- auto reflection: the ability to be present in the knowledge process. This state of the subject can be reassumed in a light area in which the researcher makes his choice clear and an opaque background made by the automatism of the thought that remains implicit;

- intersubjective corroboration

 What it can be noticed, is the importance of an open mind set because of the unpredictable nature of the educational framework, and a continuous process of reflection not just with others, but also in an internal perspective. This state has to be taken in every step of the work to make the researcher conscious and responsible for his choices. At this point we can say

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of believing that no results can be included in a report if before it has not been subjected to the verification of the member checks. This phase of the research work is certainly important, but it cannot be considered an essential condition for validating a research >> Ivi.

[79] << Sospendere le prospettive abituali significa per il ricercatore mettere (temporaneamente) da parte le conoscenze scientifiche di cui dispone, i giudizi e i pregiudizi, comprese le teorie esplicative ritenute comunemente affidabili per giungere ad una posizione paradossale che considera l'ovvio come problematico ed enigmatico. Questo atteggiamento ci consente di avvicinarsi alla posizione di apertura alle cose come appaiono [...] L'esito dell'epochè non è uno scetticismo radicale : l'esistenza del mondo è fuori dubbio, ma occorre comprendere questa sua indubitabilità>> << Suspending the usual perspectives means for the researcher to put (temporarily) aside the scientific knowledge at his disposal, the judgments and the prejudices, including the explanatory theories considered commonly reliable to reach a paradoxical position that considers the obvious as problematic and enigmatic . This attitude allows us to approach the position of openness to things as they appear [...] The outcome of the epochè is not a radical skepticism: the existence of the world is beyond doubt, but we must understand its indubitability >> Sità C., *Indagare l'esperienza. L'intervista fenomenologica nella ricerca educativa,* Carocci editore, Roma, 2012, p.39

[80]<<Insieme di atti che caratterizzano l'accostarsi all'esperienza vissuta di un altro>> << A set of acts that characterize the approach to the lived experience of another >> Stein in Sità C., op.cit.

that the subject has the most important role, as a researcher or also as an informer. For the first, a continuous presence on the work is required; for the second the multiple facts he has experienced become not only the point where to start but also a connection with the reality. Because of the setting of this kind of study, that is not a laboratory but a natural contest, it's important to value the emergence of the difference, in order to create knowledge. Facing the unpredictable, going through the uncertain, making it in a circular and recursive logic that force a continuous retroaction are the mile stones of this approach.

This kind of paradigm is suitable to this work for many reasons: we start from real needs of the university population, on the basis of testimonies and surveys collected from worker students and academic investigations. The setting in completely natural and experimental: it requires a continuous adjustment of the methodology, and a no-stop reflection, while information is emerging. The approach is mostly qualitative, but it uses data which have been collected in a quantitative way. All this work is featured by an incessant comparison with specialists, experiential sources and people who can make a contribution with their life experiences. For this reason, there isn't a prefixed sampling, but it has been constructed during the analysis. Flexibility and an open mind setting let us approach a foreign field like this, full of unexpected events: the first thing to remember is that we are studying a natural context with a former structure which we have to adapt to, making it a better answer for clients. The ecological nature of this work can be seen in two levels: the first is featured by the continuous interchange between the setting we are talking with and the product of the research. We can consider this system like a macro organism that feeds itself with the news taken for elaborating on the one hand, and the endless movement of the world of university and the society above it on the other. A second level can be found within this work, through the interaction between every part and every actor involved.

3.2 Philosophy of the research

<<La filosofia è [...] una forza di interrogazione e di riflessione che verte non solo sulle conoscenze e della condizione umana, ma anche sui grandi problemi della vita. In questo senso il filosofo dovrebbe ovunque stimolare l'attitudine critica e l'autocritica>>[81]

The word philosophy results from the combination between the Greek *philein* that means love and the word *sophìa,* in English knowledge. If we read the definition in the Treccani dictionary, philosophia is <<quell'attività del pensiero che tende a ricercare quanto rimane stabile in ogni esperienza e costantemente valido come criterio dell'operare [...] cosicché compito della filosofia è oggi, per lo più, quello di chiarire problemi metodologici ed epistemologici, legati a specifici ambiti>>[82]. For this reason, when we talk about philosophy of research we mean a system of criteria, principles, ideas that are used by the researcher to build his work: with epistemology and the paradigm, philosophy can be considered the foundation of the research palace.

Luigina Mortari identifies three main currents for the ecological paradigm: the phenomenological philosophy, the critical philosophy and the participatory philosophy.

3.2.1 Phenomenological philosophy

This current is characterized by a strict description of the object: a loyal picture of the reality is the only way to find the acts of conscience essence. This principle of loyalty is possible if the research goes in the way the facts lead it (principle of evidence), and if the researcher let himself be guided beyond the appearances to get as close as possible to the essence (principle of transcendence). To act in this way, Mortari suggests eight phenomenological cognitive acts:

- opened attention[83]: it's a listening mood that requires a passive mind to deactivate preknowledge forms

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[81] << Philosophy is [...] a force of interrogation and reflection that concerns not only the knowledge and the human condition, but also the great problems of life. In this sense the philosopher should everywhere stimulate the critical attitude and self-criticism >> Morin E., *La testa ben fatta. Riforma dell'insegnamento e riforma del pensiero,* Raffaello Cortina Editore, Milano, 2000 p. 54

[82] << that activity of thought that tends to seek what remains stable in every experience and constantly valid as a criterion of working [...] so that the task of philosophy is today, most of all, that of clarifying methodological and epistemological problems, linked to specific fields >> http://www.treccani.it/vocabolario/filosofia/ (03/10/17)

[83] <<L'attenzione aperta è la disposizione a cogliere fedelmente il modo in cui il fenomeno si dà a conoscere>> << Open attention is the disposition to faithfully capture the way in which the phenomenon makes itself known >> Cfr. Mortari L., op. cit. p. 91

- don't seek[84]

- have an empty mind[85]: set yourself free from any form of attachment

- be disoriented: it helps to discover new cognitive path

- hospitality mood: be in a responsive and receptive state

- phenomenological language: it's characterized by short and few words[86]

- thinking capable of feeling: thanks to the empathy, emotions take a big role in the cognitive act

- auto reflection: it's linked to a responsibility on what is thought

3.2.2 Critics Philosophy

This kind of approach takes the first step to the assumption that society is divided in social classes that are very different in terms of the power given to them. Oppression by the strongest and a passive state for the weakest are inevitable: sensibleness to this mechanism is the only way a man can react. That's why the critical philosophy is characterized by a transformative function of the society and a political responsibility of the researcher that has to develop the awareness over life's social and cultural contradictions, otherwise the research can't be considered valid. To expose the cultural power, language has a vital role: communication need to be built to withstand to the main dominant language and to create new forms of connection. This current is impregnated with social value: for this reason, great attention is paid to testimony of minorities (e.g. feminist thought[87]). As the first, this philosophy required a state of empathy and listening as well as a long process of meditation: all these features link the critical approach to a qualitative method. The final purpose of this current is to find a positive alternative to the reality.

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[84] <<Accogliere l'originaria datità dell'altro richiede alla mente di abbandonare la tensione ad esercitare qualsiasi tipo di imposizione sul modo in cui l'altro viene-alla-presenza>> << Welcoming the original dating of the other requires the mind to abandon the tension to exercise any kind of imposition on the way in which the other comes-to-presence >> Ibidem, p. 93

[85] This is linked to the concept of epochè, act in the research (professional state) and in every aspect of life (radical state)

[86] We can say there is an epochè for the language too. It's essential to set your way of speaking free of the obvious and redundant

[87] <<Tema centrale dell'epistemologia femminista diventa l'esperienza, l'esperienza vissuta, dove il pensare si intreccia col sentire, dove l'agire è sempre anche un patire la realtà.>> << Central theme of feminist epistemology becomes experience, lived experience, where thinking is intertwined with feeling, where action is always also a suffering from reality. >> Ibidem, p. 134

3.2.3 Participatory Philosophy

  The aim of this philosophy is a useful product for participants to improve their life: it has a transformative purpose as the critic current but not just in terms of awareness. The core of this approach is the collaborative work: participants become co-researchers: that's why we can call this form a dialogical investigation made by a community of research. Here we find a democratic connotation that is not present in the others two (where testimonies and experiences are important but the participant's provisions are limited to this). There is a co-work made by an explicit knowledge of researchers and an experiential contribute of practical people. This dialogue works if every part of the deal recognizes the role the other part has.

3.2.4 Philosophy of this research

  This work uses a mixed approach, in order to answer more correctly to the nature of the object studied. At the first sight, the purpose pursued is very near to what we can find in the participatory philosophy: create something that can improve university's image on the market and help worker student in their studying path. But if we reflect for a moment, this work has a transformative side typical of the second approach: we start with the assumption (generated by data and testimonies, not in an axiom form) that university creates a sort of system of classes within itself. This strong demarcation between workers and full time students generate a penalizing policy for those who are not present at the same time the lesson is taken. The model here created tries to level this inequality.

  However, some cognitive acts implemented sounds like those described in phenomenological philosophy: the principle of loyalty is essential during the data collection and the first reconnaissance of the situation. A strict description of the facts without former preconceptions may help to get closer to reality that, despite everything, is at least in one small part influenced by the opinion of the researcher (this topic will be faced in the next paragraphs). A big role is given to the emotions: the attention given to participants is full of emotive shades. That's where empathy shows its power, helping to build a confidence relationship that make the actors feel comfortable in their role. This state of mind can be found in the first part of this work, when foreign testimonies are being collected and it's necessary to deeply understand the dynamics of their social conditions (e.g. the origins of workers' situations, how they feel according to their university path, which social mechanism they have to reckon with). Epoché takes part in this drama, helping the researcher suspend his judgment in view of a clear and more possible vision of the situation.

That doesn't allow the researcher to stay away from the problem: after a profound and exhaustive, former analysis, it's his duty to explicit his thought, for the social aims told at the beginning of this sub paragraph.

3.3 Method of research

The method of the research is a set of flexible guide lines that define the area the researcher has to stay in: it's not prefixed but indeed it can be changed during the process indeed. Mortari individuates three main types of methods in the ecological paradigm, but theory is almost never the same as the reality: because of the nature of covered topics, usually it is a good practice to mix all of them to create an ad hoc method, more suitable for the single case and useful to go straight to the core.

3.3.1 Grounded theory

This is an inductive theory implemented by Barney Glaser and Anselm Strauss, that starts from a single case and through a circular report and recursive procedure wants to analyze and interpret the collected data. All these procedures (collecting, analyzing and interpreting) are not consequential but they are bonded by a dialogic procedure. It's clearly a qualitative method, that looks like the phenomenological implant for the principle of loyalty and the flexibility of the elaboration. To build a grounded research there are some points to be aware of:

a) Individuate an investigation area
b) Focus on the problem of the research: the topics must be quite unknown[88]
c) Choose a collecting data's technique, that's usually qualitative
d) Data analysis: it's an open coding/axial coding process which consist in a data's conceptualization made by labels. These tabs have to be grouped in macro categories whose capacities need to be individuated but at the same time they need to be linked by connections. This process is summarized in the next figure:

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[88] <<Affrontare questioni importanti per le quali non esistono risposte è una condizione necessaria per poter sviluppare teorie>> << Addressing important issues for which there are no answers is a necessary condition for developing theories >> Ibidem, p. 152

Grounded theory's data analysis
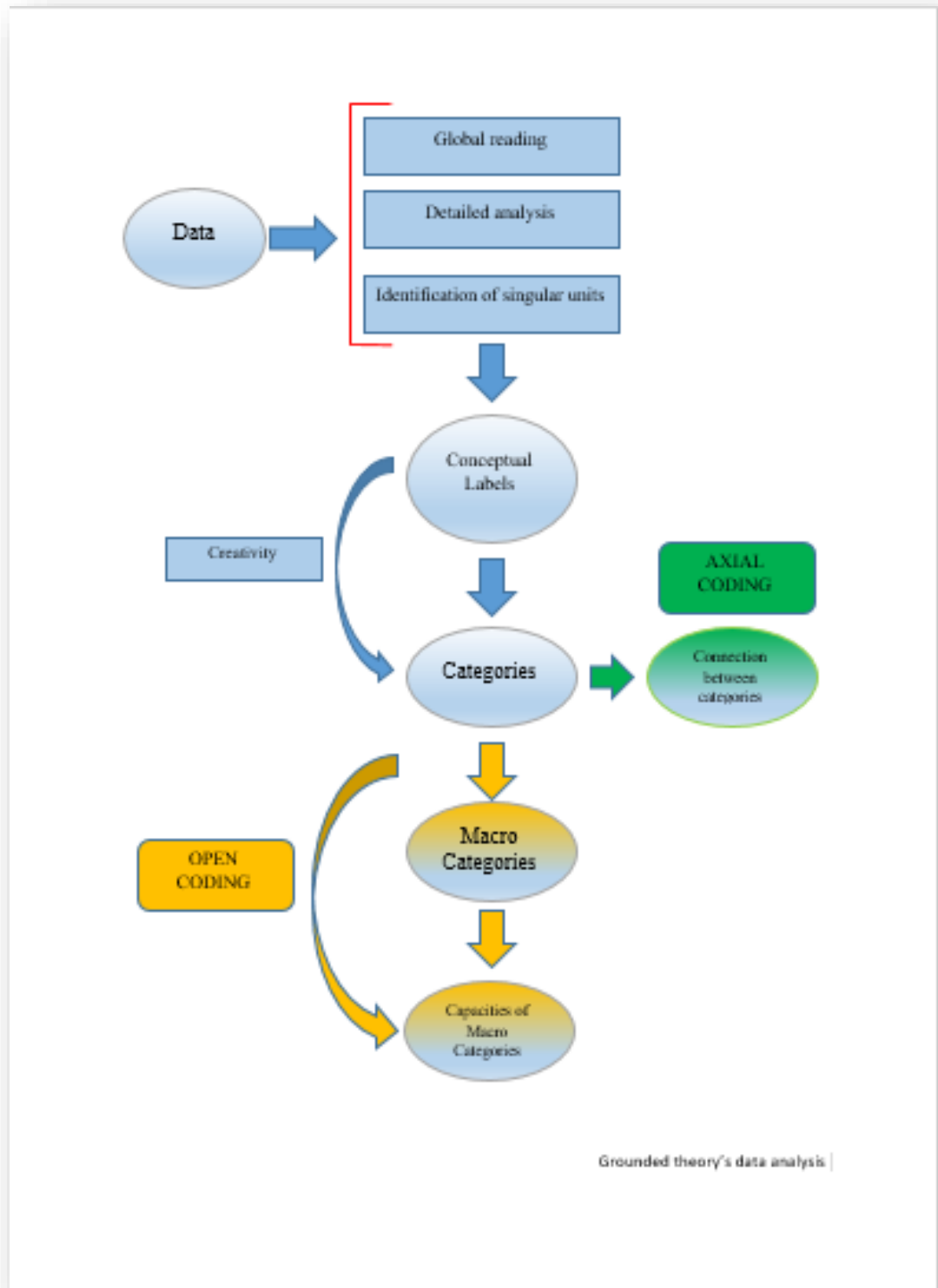
After an operation of abstraction and an individuation of the core category, theory starts to take shape.

During the writing process, it's useful to make memos, following the rule od "*Stop and memo*"[89]. This process is very important because thanks to it you can fix ideas and all the process between data and theory. Memos can be made with no rules (logic or linguistic): they just need to be descriptive and they have to be classifiable. The grounded theory must be relevant, modifiable, adequate ad treatable: if it complies with these four criteria, we can say we have a transcending theory[90].

3.3.2 Phenomenological- eidetic method

This type of method was formalized by the Duquesne School in Pittsburg. It's featured by an object-centered prospective: the experience becomes important if it is taken like it's lived by participants. That's why an exhaustive description must be taken, to analyse the structure behind and individuate the invariant parts. Also this method has some phases that must to be observed as well:

a) Identify the object that must be unstudied and relevant for the researcher

b) Identify the participants that have to have some connection with the object

c) Collect the data by interviews, deep descriptions, and an epochè state of mind

d) Analyse data collected through three main operations:
   ➢ Outline the horizons of meanings
   ➢ Identify the clusters of meanings
   ➢ Make a textural and structural description

3.3.3 Narrative inquiry

<<L'intervistatore deve essenzialmente ascoltare. Le vostre conoscenze e la vostra voce dovrebbero rimanere sullo sfondo, in quanto fonti di supporto e di incoraggiamento>> [91]

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[89] <<Scrivere un memo significa rendere conto della vita della mente che accompagna il processo di ricerca>> << Writing a memo means giving an account of the life of the mind that accompanies the research process >> Ibidem, p. 160

[90] <<Postura cognitiva che spinge a creare nuove idee, nuove possibilità epistemiche, a ridefinire continuamente il metodo, a mettere a fuoco altri lati del problema indagato>> << Cognitive posture that pushes to create new ideas, new epistemic possibilities, to continuously redefine the method, to focus on other sides of the problem investigated >> Ibidem, p. 163

[91] << The interviewer must essentially listen. Your knowledge and your voice should remain in the background, as sources of support and encouragement >> Demetrio D., *Raccontarsi. L'autobiografia come cura di sé,* Raffaello Cortina editore, Milano, 1996, p. 53

As the name suggests, this kind of method is centered on the subjective narration of the experience. That means a change on the paradigm from an objective truth, to a narrative one. Tell the own experience can help the narrator to access to some parts of him that were hidden since then: that is the demiurgic power of the narration. Telling the own story means to relate what we think and the actions made. That imposes a meditation on relevancy of the storytelling and the rigorousness of the text collected. On the other side, the researcher must be in a listening posture, not only cognitive, but also emotive. Like the others qualitative methods, the narrative inquiry has no criteria that define it: the only valid principle is the loyalty to the process, that must to be explained in all its procedures.   Taken from Dewey, this method uses the categories of interaction (<< chiedere che tra gli elementi attorno ai quali costruire la narrazione ci siano le relazioni che si vengono a strutturare, destrutturare e riorganizzare tra tutti quelli implicati nella ricerca, sia i partecipanti sia i ricercatori >>)[92], continuity (<< Chiede che il raccontare tenga conto non solo del presente in cui la ricerca accade ma anche del passato recente in cui l'esperienza si situa e del futuro verso il quale si apre >>)[93], situational (<< Rendere conto della qualità dei contesti dove la ricerca si sviluppa >>)[94] and inward/outward dimension (<< Col termine inward si individuano come oggetto di attenzione le condizioni interiori che accompagnano, permeandolo, il processo di ricerca [...]; col termine outward vengono indicate quelle condizioni ambientali che danno forma ai vincoli e alle possibilità di ricerca >>)[95].

  The narrative inquiry requires a narrative report, that follow the main steps of the research: beginning with an introductive part on literature review, following with the epistemology choice made, it ends with data, results and critical reflections. This kind of writing is called "*back and forthing*" for its continuous making and unmaking of the scripture. Typical of this method is the response group, made by researcher and participants: it's a reflection space used to have a critical sight on activated procedures. The most important tools are the language used and the construction of the speech: in narrative inquiry it's recommended to use a verb form that communicate probability and possibility, to express better its nature of text in progress.

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[92] << requires that among the elements around which the narration is to be built there are the relationships that are structured, destructured and reorganized among all those involved in the research, both the participants and the researchers >> Mortari L., *op. cit.*, p. 183-184

[93] << He asks that the story take into account not only the present in which the research happens but also the recent past in which the experience is located and the future towards which it opens >> Ibidem, p.184

[94] << To realize the quality of the contexts where the research develops >> Ivi.

[95] << The term inward identifies the inner conditions that accompany, permeating, the research process [...]; the term outward indicates the environmental conditions that give shape to the constraints and the possibilities of research >>Ivi.

3.3.4 What about this paper

As for the philosophy, this work has a mixed method, consisting of some longitudinal actions on one hand, and some sequential actions on the other. These are summarized in the next figure:

Longitudinal Actions
- Theories founded on data and testimonies
- Continuous dialogical comparison
- Listening, respect, hermeneutic sensibility
- Back and forthing
- Diary
- Flexibility and recursion
- Epochè

Sequential Actions
- Thematic focus
- Involvement of the participants
- Gathering of good testimonies
- Look at the whole set
- Individuation of significant units
- Cross sectional analysis
- Creation of a multi levels description

As we can see, this paper is based on testimonies given by different subjects: SIAF's staff, Guido Guidi, and a few students. SIAF's Staff helped by explaining and describing the functioning of the informatics system of Florence university: archives and memory space, back up, technical advice, future perspectives. The interview to Mr. Guidi was centered on communication aspects, due to his experience on media communication. Finally, students

gave us some feedbacks about the system of teaching and the didactic organization, illustrating their needs depending on their fruition of university services. For the first two cases, interviews were semi-structured and they were developed around some key aspects: they were first recorded, and then transcribed. Subjects were informed on these procedures and they could choose to stay anonymous if they preferred. The place to collect the testimonies was chosen by the subject, usually his/her work place, according to his/her availability. Testimonies of the students were collected by a questionnaire on Moodle platform, deeply explained in chapter four.

Because of the complexity of the topic, a continuous dialogical comparison was necessary following the "*back and forthing*" logic of narrative inquiry method. Starting with a rough vision of the problem, it became more and more defined as data come out, getting to a more definite theory. That required much exercise of flexibility and adaptation, starting with an open mind status in order to make a continuous reflection and recursion on the steps done. To keep track of this path, all the thoughts, the ideas, the hypothesis were written on a diary that can be found in the appendix. That helped to fix some points and started up an active and constant reflection and questioning on the phases crossed. Starting with a not well defined theory required an attitude of epochè, to clear the mind of all pre concepts the researcher had, staying in a listening and open position to accept external inputs with a not judging attitude.

In parallel with longitudinal actions, other sequential have been put in place: not necessary in the figure's order, these steps were followed not just for the whole problem but also for every micro analysis given by a singular developed topic. Starting with a global vision, the process evolves in a more defined theory, helped by dividing the main themes into categories: that outlines a qualitative problem and it creates relations to reflect on.

3.4 Strategies of research

Strategia: <<La tecnica di individuare gli obiettivi generali di qualsiasi settore di attività pubbliche e private, nonché i modi e i mezzi più opportuni per raggiungerli>>[96]

As it can be deduced from the definition above, the strategy is a set of tools implemented to reach the prefixed goals in the most appropriate way. According to the object and the finality, Mortari analyses two types of strategies: the case study and the action research.

3.4.1 Case study

This approach is used for a specific analysis of a particular case, in order to achieve an intimate comprehension of the phenomenon. Because of the depth level of analysis, it's necessary to activate a triangulation of different methods, following the principles of concreteness and contextuality. The case study's object is usually a process and not a fact: that means it requires a long term observation to catch the evolution of dynamics involved. Luigina Mortari individuates two typologies: the *intrinsic case study,* used when <<il fenomeno oggetto di studio è preso in considerazione nella sua unicità, perché si suppone fornisca dati interessanti; detto altrimenti, il suo essere interessante non è deciso su una base di analogia con atri casi o perché consente di affrontare una certa tematica, ma perché è interessante nella sua singolarità>>[97] and the *instrumental case study,* << Quando il caso oggetto di studio è preso in considerazione perché si ritiene possa far luce su certe questioni o per rifinire una teoria ritenuta incompleta. Non è il fenomeno in sé ad interessare, ma le informazioni che può fornire rispetto ad un'area di studi già definita; per questa ragione l'individuazione del caso non si basa sul criterio del valore intrinseco bensì dell'utilità strumentale>> [98].

The procedure activated for a case study is very close to the method implemented in this research. It can be divided in seven steps:

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[96] Strategy: << The technique of identifying the general objectives of any sector of public and private activities, as well as the most appropriate ways and means to reach them >> Cfr. http://www.treccani.it/vocabolario/strategia/ (09/10/17)

[97] << the phenomenon studied is taken into consideration in its uniqueness, because it is supposed to provide interesting data; otherwise, its interesting being is not decided on a basis of analogy with other cases or because it allows us to deal with a certain theme, but because it is interesting in its singularity >>
Stake 1994 in Mortari L. *op cit*. p 205

[98] << When the case under study is taken into consideration because it is believed to shed light on certain issues or to refine a theory deemed incomplete. It is not the phenomenon in itself that interests, but the information it can provide compared to an already defined area of study; for this reason, the identification of the case is not based on the criterion of intrinsic value but rather on the instrumental utility >> Mortari L. *op cit*., p 205-206

a) Identify the problem and its meaningfulness for pedagogical field

b) Define the identity of the phenomenon and the researcher's tasks

c) Outline the horizons of the research (time and space)

d) Define the data collection techniques

e) Plan the process

f) Implement the process through a linear logic and a circular logic

g) Write a report and publish it

3.4.2 Action research

  This is a strategy for an on-field research, based on a collaboration between researchers and professionals in order to improve the context analysed. It's characterized by a circular process, with a non linear planning. Experience is at the center of this approach, to realize significant results for the community: that's why it is so important to have the collaborations of people directly involved in the context. This cooperation develops the researcher's skills, but at the same time it has a social and political value for people who practise in this field. The process of action research can be schematized as follows, even if some parts need to be repeated in a recursive procedure:

a) Identify the problem

b) Analytical analysis of possibilities and bounds

c) Ideate a process

d) Plan the process: phase 1, phase 2, phase 3…

e) Implement the process:

Phase 1

  I.   Collect the data

 II.   Examine all the data collected

III.   Evaluate this phase: there are four choices:

- Go to phase 2

- Go to phase 2 after a reflection on data given from phase 1

- Do the phase 1 again

- Return to the ideative phase to reprogramme a better strategy

Phase 2

  I.   Collect the data

 II.   Examine all the data collected…

f) Critical evaluation of the process, two possibilities:

- Process ends
- Process needs to be redefined

g) Edit an analytical document and publish it

In order to use an action research strategy, it helps to start gradually, make a careful plan, outline realistic timesheets, involve others, take the appropriate time for writing.

3.5 Techniques for the data's collection

There are lots of tools that can be used to collect data, depending on the field analysed, the method used, the philosophy at the base of the work. For this paper two techniques were practiced:

3.5.1 Observation

Observation is a particular tool that can be made in a lab or in a natural contest. It's possible to talk about observation when the subject observed <<non deve alterare il proprio normale comportamento nella situazione data per rispondere alle richieste dello sperimentatore>>[99]. In other words, the researcher must renounce control of the independent variables: that's the difference from an experiment. Depending on the structure imposed by the researcher on the setting, it's possible to individuate two typologies of observation in a natural context (observations in lab are common, but for the topic developed in this paper they are not relevant): structured and not structured study.

At the base of the modern concept of observations there is the methodological contribution of ethology and all the work done to give an accurate and systemic description of animal's behaviour. The main principles of an ethologic approach are a study conducted in a natural setting, a non-invasive observation and an analytical and non evaluative description of behaviour observed: the data analysis is built through micro categories. That meticulous process can't avoid a subjective influence, at least in a small part. This particular technique

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[99] << it must not alter their normal behavior in the given situation to respond to the investigator's requests>> D'Odorico L., *L'osservazione del comportamento infantile*, Cortina, Milano, 1990, p.17 in Mantovani S. *Problemi, possibilità e limiti della ricerca sul campo in educazione*, Mondadori Bruno, Milano, 1998, p. 85-86

is common in educational situations too, starting with Piaget who used to observe his three children, and in psychoanalysis.

 In this paper, observation wasn't used to capture a particular action or to check a former hypothesis: however, through it the researcher tried to formalize some principles for a mixed didactic method of teaching. Observations were taken in a class setting, during the lessons: the researcher was sitting with the other students to have their perspective. The teacher was informed of this procedure: that could have influenced the first minutes of the lesson, after which natural behaviour was supposedly restored because the teacher concentrated his/her attention on the class. The reflection was helped by recording videos of lessons which were put on moodle platform: thanks to them, it was possible to have another point of view of the same setting, but also an instrument for micro-analysis. With a procedure like "observe-stop-reflect- rewind/start-observe…" particulars missed the first time can now be individuated. After the detection, materials on the video and the one taken by the researcher were compared: having two or more researchers would have been ideal to reduce the subjective factor, but that wasn't possible because of the exclusive nature of a thesis paper.

3.5.2 Interviews and surveys
<<Il silenzio è forse la forma più forte di comunicazione non verbale, quella che per l'intervistatore è più gravida di senso>>[100]

 As written in paragraph 3.3.4, this work makes use of testimonies of four different subjects. Before starting a brief analysis of each of them, it's useful to define a set of techniques necessary for a good construction of a survey. The first thing to focus attention on, is the semi structured form of these interviews; Bichi[101] defines three different typologies:

1) Standardized interview: it's the classic survey with prefixed questions decided in advance. The interviewer has a directive role in his relation with the participant. Answers must be put in categories and transposed in data for a quantitative analysis. For this reason, this technique isn't used in phenomenological research.

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[100] << Silence is perhaps the strongest form of non-verbal communication, the one that for the interviewer is more pregnant with meaning >> Cfr. Ledoux in Kanizsa S., *Che ne pensi? L'intervista nella pratica didattica*, Carocci editore, Roma, 2013, p. 63

[101] Cfr. Bichi R., *L'intervista biografica. Una proposta metodologica,* Vita e Pensiero, Milano, 2002 in Sità C. *op. cit.*

2) Semi-structured interview: this instrument has an intermediate definition ex ante and a variable directivity rate. The researcher must construct a trace with prefixed thematic areas. The person interviewed can answer as he/she wish and the question order can be changed. It's a flexible technique used in many approach like eidetic, IPA, phenomenological research. Typical of the latter is the focused interview, where participants can narrate their experience: questions are the same for all, but contributions made are typical of each life.

3) Not directive interview: this is used in psychoanalysis, with an opening stimulus question. The person interviewed leads the dialogue, and the researcher has only a vague idea of the topic but none of its development.

All three approaches have a knowledge finality and they are built around a relationship between the researcher and the person being interviewed, but they differ for the rate of structure and the typology of questions. A relationship that, according to Vanna Boffo, can be defined in its general meaning, as the original structure without which humanity loses its sense of existence. It's just through the relationship that education can be conveyed in four stages: biological dimension, inculturation, learning and training[102].

The researcher's attitude must be made of active listening and empathy, to help the experience[103] come out and the subject feel comfortable. Very important is the non-judging posture, in order to have a more realistic portrait of the experience as possible: keeping the mind clear of preconceptions may help to achieve the real essence of the phenomenon studied[104].

The first interview took place on the 4th of October in Via delle Gore, Florence, at the SIAF center. It lasted about two hours and it involved the researcher, the president Marcantonio Catelani, the executive Mariu Bogdan Spinu, the manager for e-learning and SIAF training Francesca Pezzato, the manager of back-up system Riccardo Oletti and two technicians. The issues developed were the current situation of SIAF, the organization of income data, the storage and back-up system and future perspective related to this project. The first part of

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[102] Boffo V., R*elazioni educative. Tra comunicazione e cura,* Apogeo, Milano, 2011
[103] Experiences lived by subjects are, for Husserl, the only, authentic << mondo-per-l'uomo. IL mondo della vita è il serbatoio dal quale attingere per qualsiasi scienza poiché è in quel luogo che si realizza l'incontro tra soggetto intenzionale e mondo esterno>> << world-for-man. The world of life is the reservoir from which to draw for any science because it is in that place that the meeting takes place between the intentional subject and the outside world >> Cfr. Bertolini P. in Cambi F., Santelli Beccegato L., (a cura di), *Modelli di formazione. La rete teorica del novecento pedagogico,* UTET libreria, Torino, 2004, p. 49
[104] This can be linked to the epoché concept explained at the beginning of this chapter

this interview was collegial, and it took place in a meeting room near the machine area. The second part consisted in a tour of the place where the machines were and a deeper explanation of the storage and back-up system. The atmosphere was almost informal, depending on the subject the researcher was referring to. All the dialogues were recorded and all the subjects were informed.

On the 18th of October I went to Professor Boffo office. She couldn't give me any information about students: she told me that all she had was on AlmaLaurea's web page. After a brief presentation of my work, she gave me her point of view about general guidelines of adult education, the world of universities and the continuous training. She admitted that the University of Florence is not equipped for an on line offer: not just for finances, but also for a political choice. However, she supported this choice because she believes in the power of human relations: in her opinion it is essential for a complete education's experience. She agreed when I provided evidence of a large part of labour market that we cannot crossed, but she thinks this is not generated by university deficiency. She gave this responsibility to funding's deficiency, political orientations and decisions about continuous education: territory-university relationship is crucial, but it's not the only one. What has to be changed, is the political relation between university and local authorities. <<Il problema non sta nella tecnica o negli strumenti, ancora una volta, ma sta nell'impianto generale di modifica della cultura>>.[105]

And following the advice of SIAF's STAFF, the same day I met Guido Guidi, who is currently working for Florence University in the multimedia content production's area. As for Vanna Boffo's meeting, it was an informal talk on the technological equipment of the School of humanistic and education studies, but more over on appropriate recording techniques.

As mentioned above, students have been involved as the main source for this analysis: the questionnaire attached in the Annex was submitted on the 2nd of January, 2018 on Moodle platform of laboratory on training processes. Out of 50 participants, 15 of them gave a feedback by taking part on the survey. Made up of four areas, the questionnaire includes a first group of questions directed to a first knowledge of student's condition: type of university's course he/she is attending; working /family's condition. A second area ask about the student's approach to this specific course: attendance rate; usage of given tools. Then, a

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[105] << The problem does not lie in the technique or in the tools, once again, but it is in the general system of modification of the culture >> Cfr Annex

third group of questions seeks to clarify specific information on video lesson and video tutorial: how students used them; students' opinion on their quality and utility, just as techniques used on video tutorial. And finally, a fourth area regards learning with tool used: students are called to account for their opinions on subjective experience, analysing how a blended approach can influence learning process. The questionnaire was totally anonymous and administrated completely on line.

Chapter IV: A blended approach built on lab of educational process management experience

As I have indicated several times in this paper, I am conscious of the complexity of a blended approach. I am repeating how difficult it is to choose the right educational method because I think this is the core of the dissertation. We can build as many categories as we wish, trying to divide and catalogue different measures, but it probably will not be very useful. Even if a classification can help to compare various situations, it's always related to a simplification and almost certainly to a reduction. And since we are talking about education and therefore communication and exchanges of experiences, we must be aware of the multilevel aspects these topics have. For this reason, we can't include this project in a blended category, even if it shows some typical aspects of it. It has an enriched face to face approach, made of typical frontal lessons and an on line scaffolding. Lessons in class were combined with some specific tools taken from online education: forum, recorded lessons and videos for the deepening of main concepts. The On line part wasn't substitutive of meetings in presence: both these sides were matched to meet the needs of the whole audience.

This chapter presents an experimental proposal which certainly needs to be improved, but it can be a good starting point for the future.

4.1 Description of the activities

According to the instructional model explained in chapter II, we can follow its steps even if they are not all present and not in the same order.

The analysis was made partly before the beginning of lessons and mostly during the first meeting. The teacher took the assignment for this lab and he designed the course in terms of contents, topics and aims to achieve. Design phase and development were not so strict as the model of chapter II shows.

A Moodle platform was used since this is the e-learning system provided by the University of Florence. He set up the structure by dividing its home page into five sections: the first part, named "What's going on", collected the key tools for an on line educational setting. There you could find the pool[106],to gather feedbacks for the didactical improvement, and the forum:

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[106] At the beginning of the lab course, this section offered a general investigation took from previous courses of past years: at the end of this experience it was enriched with specific questions on tools used in this academic year. The last part of this chapter will analyse in depth the answers given by students.

by clicking on it, the forum page opened and students could interface with the virtual class, proposing a new topic or commenting on someone else's. The professor put all recordings of the class lessons onto the video recording section[107]. The diary: there, students had to upload a file with a description of their experience, saying how they had lived lab experiment, difficulties and achievements. The diary is a narrative and subjective part which can be very powerful because it allows the teacher to enter a personalized dimension: suddenly, a single student takes shape and becomes a person. It's a special "weapon" which helps to create a link between the teacher and the learner: it is more valuable if we think that one of the main problem of an on line education is the distance created between participants. If the student is free to be him/herself, he/she will produce a true story that give precious information as feedback of the didactic intervention and also a general profile of who we are dealing with. The last point of this part was a summary of provided activities: this is one of the main rules of an on line educational operation. To make activities and aims clear may facilitate learners' path: it compensates for misunderstandings generated by the distance. The remaining four sections were dedicated to single topics: there one can find articles and book references, slides and any kind of teaching materials. On the left side of the home page there was a notice board with the teacher's communications: the same information was delivered by email to each participant. Under this section there was a calendar with future events: lessons, appointments, exams. We can see how each single part was designed for making a comfortable environment to create a sense of community and an efficient communication setting with it.

The first innovation of this experiment was the promotion of a simple survey which helped the teacher to know learners. The initial part of the first lesson was centered on getting to know each other: by means of the mentimeter.com[108] web service, he posed a series of questions which could be answered right away during the presentation. As this part of analysis couldn't be done before lessons began (but at the same time we can recognize its importance for the efficiency of our intervention), it was worthwhile to devote some time to it. This interactive tool was very helpful for two reasons: it allowed every student to participate (not just who was in class: through a code the teacher gave, every student could

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[107] At the time of this lab, the teacher used an external storage for his records because SIAF had an infrastructure which wasn't able to sustain and to provide quickly a certain number of videos. For this reason, he uploaded his records in a private server and he put the link on his blog page. Cfr. http://iamarf.ch/labfp/
[108] Cfr. https://www.mentimeter.com/?utm_campaign=powered%20by%20mentimeter%20button&utm_medium=web-link&utm_source=govote&_ga=2.119140361.1859930111.1519834191-1383766573.1519834191

give his contribution and the answer were updated in real time) and it was available for the entire duration of the course. Space and time limits were exceeded, according to the positive quality of online education.

Design and development phases were spread during the course life: while new needs came out, the teacher behaved in a flexible way to answer to the best.

Before talking about the execution phase, let's have a look at the techniques used to record a lesson. First of all, we need to understand that we haven't a recording studio specially equipped for this kind of activity. We are totally on the field: the light, the audio, the setting, are not very appropriate because we use a classroom that is usually noisy, with bad acoustic and scarce lighting. Fortunately, modern technology is sufficient to create a product with enough quality even if it can't be compared to professional ones[109].

For our scope, we need a computer with a recording software. The teacher used to use a Camtasia, but any kind of stable recording software could do the job. For example, you can use OBS[110], an open source software for recording and streaming[111]. Both of them have the screen casting, which is fundamental if we want to record the activity on the desktop. The importance of the screen casting is obvious if we think about a teacher who is explaining something with slides or images on his/her computer. We have two choices: we can record the projected image or we can edit the screen. In the first case, we will have less quality unless we have a professional instrument, but as we have said before, it's not our situation. Using the screen casting helps to have a clear image of the video and it leaves the camera free to record something else (for example the teacher, or a student): on the editing stage it is possible to combine those recordings and have a complete panoramic of what was happened in class.[112] OBS and Camtasia both have their own audio. But because of the unprofessional setting, it's advisable to have a different and external audio source: In our case in our case a dedicated microphone was used[113]. The microphone input amplification

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[109] We must have our purpose clearly in mind: we don't need a professional quality but only an efficient one: if our product can be decently seen and heard we have achieved the goal

[110] Cfr. https://obsproject.com/

[111] The software's choice is completely subjective: one of the main aspect could be the budget: however, even a paid software is affordable. For example, Camstasia costs of $199,00 Cfr. http://shop.techsmith.com/store/techsm/en_GB/pd/productID.289432000 (01/03/2018)

[112] For example, the screen cast's service on screencast.com has a monthly or a yearly subscription which costs respectively $ 9,95 and $ 99,95. But using recording software with screencast function in it can solve the problem and save money. Cfr. https://www.techsmith.com/screencastcom.html?_ga=2.230674076.1660400976.1506089225-2141967001.1506089225 (01/03/2018)

[113]You can find it on Amazon, full accessorizes, at 195 € Cfr.https://www.amazon.it/Zoom-Registratore-digitale-accessori-APH-

should be adjusted to the middle of its range so that small corrections can be made during the post processing. A good practice may be to have a second source to record, like a Go Pro action camera: this particular solution features a wide-angle visual, which is good. If we have a large space to capture and there is no cameraman who can follow the subject, a wide angle can be the right solution with only few movements (e.g. a first shooting can be set on the teacher, another can be done in class' direction, taking the whole audience)[114]. A double recording can be vital if something interferes with the correct execution[115]. Once we have all these files from different sources, we need to edit them in order to make an acceptable product. Live filming produces a big amount of downtimes which need to be arranged, as its audio quality: a real editing has to be done. Like for the recording, we have many editing software and the choice is up to the teacher.

Being on the field doesn't need a particular script: although, after the lesson it requires a certain amount of time for editing. This process will require less time as the teacher/tutor progressively will become more expert, not only in editing but also during the lesson. Small precautions can be very helpful in saving time[116]: to do this procedure alone can be quite difficult, since the teacher have to think about the educational actions too. With a tutor who can dedicate his/her attention only to technical aspects it should be a little bit easier.

In the first place the project didn't include additional in depth-videos, but we decided to expand the proposal by doing one for each lesson. We hoped they would help students, by having other food for thought: comments on video should have been integrated in forum discussions. As a matter of fact, this didn't happen: after the second video the teacher decided to begin the next lesson based on the video of the previous one, sometimes starting from the latest concepts, sometimes letting the discussion flow in class.

Video-Tutorials had a completely different organization: first of all, they were filmed in a prepared set and not in a classroom as the recorded lessons. They were not included at the beginning of the lab project, but they took shape going forward. All of them were projected on the base of concepts expressed in the lesson before.

2N/dp/B005GOGHPM/ref=pd_lpo_sbs_267_t_2?_encoding=UTF8&psc=1&refRID=9YYQ6WPQTXP5SN WDG024 (01/03/2018)

[114] One of the possible disadvantage could be the battery's limitations (which can be overcome by an auxiliary battery or a power bank) or those of the memory (external SD cards can be set to expand it)

[115] Go Pro action camera has its own audio recording, but cheaper solutions haven't a very good quality for it, especially for wide locals like university classes. Prices go from 200,00 € upwards. Cfr. https://shop.gopro.com/EMEA/cameras/hero6-black/CHDHX-601-master.html (01/03/2018)

[116] For example, it could be a good practise to divide the recording into shorter clips: this could help in the editing phase and also to upload them. At the same time, it allows you to have all under control.

The first video summarized the main values this lab wanted to share, and the techniques used to do it. The method chosen was the puzzle: it was very expensive in terms of time, not just as the project is concerned but the effective execution. Every example which could be used for conveying principles, was demonstrated by means of small tutorials. This is a first example of recording (puzzle) and screen casting (tutorials): to record puzzle sequences I needed an external support because I had to use both hands to make the puzzle and I did not have a camera with proper supports[117]. This was an inconvenience which should be solved in order to optimise resources. Audio file was recorded with a Samsung telephone microphone: this was possible, again, because I was in a small quiet room and the mic used was powerful enough: different settings should require more professional tools. To make screen casting shoots I used OBS and Shotcut to cut the video tutorial. This first video was an experiment: it took me a lot of time because I had to get familiar with all these tools. I did nine audio files, three scree cast shoots and three editing tests, in about a week.

The second video, based on the first lesson, was focused on concepts of chaos, freedom and knowledge. It didn't include the puzzle system, because I didn't find a suitable camera and I didn't have the support of a second person. I basically used the screen casting with OBS but at the end I inserted a piece of the fiction "The Big Bang Theory"[118]. It was a gamble for many reasons: not everyone is familiar with fictions and maybe not with this one in particular: some people may not like this kind of genre and he/she can be less reactive to this stimulus. In the next lesson I asked if the message was clear even for people not used to this fiction (or fiction in general): I received positive feedback both from those who knew it and from those who had a first approach. For this second experiment I took five file audio (recorded separately as the first time), six screen cast files and only one editing file.

The third video was about inclusive communication and it was built around a series of talks about a special project called "Il cervello accessibile"[119]: screen cast shoots were interspersed by specialists' contribution on disability and inclusive communication.

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[117] We utilized a Nikon camera to shoot all the puzzle sequence. We made a unique film which was snapped and spaced out by tutorials

[118] <<The Big Bang Theory is an American television sitcom created by Chuck Lorre and Bill Prady, both of whom serve as executive producers on the series, along with Steven Molaro.
The show is primarily centered on five characters living in Pasadena, California: Leonard Hofstadter and Sheldon Cooper, both physicists at Caltech, who share an apartment; Penny, a waitress and aspiring actress who later becomes a pharmaceutical representative and who lives across the hall; and Leonard and Sheldon's similarly geeky and socially awkward friends and co-workers, aerospace engineer Howard Wolowitz and astrophysicist Raj Koothrappali. The geekiness and intellect of the four men are contrasted for comic effect with Penny's social skills and common sense>> Cfr https://en.wikipedia.org/wiki/The_Big_Bang_Theory (03/03/2018)

[119] "The accessible brain" Cfr. https://ilcervelloaccessibile.wordpress.com/progetto/ (03/03/2018)

According to this topic, I included subtitles to meet the needs of a student with hearings problems. To add subtitles I used Amara[120], a collaborative subtitling platform, completely free. After creating an account, Amara asks you to insert a link: you can't upload a file because Amara does a streaming of it, it doesn't store the file. For this reason, I used YouTube to create a link for my videos. Once done, you can type what you hear; then you need to sync images with writing and finally you can review the entire work. This is quite a long process which can be very useful for inclusion, not just in case of disability but, for example, in facing different spoken languages. Once you have finished, you get a link with video and subtitles, not a file (for the reason below). From this video onwards, these works were presented in class at the beginning of the lesson and, successively, they were put in the teacher's page: this was done trying to create a debate on presented topics.

The fourth production was the recording of a Prezi presentation: Prezi[121] is a software to make interactive presentations and it offers a free solution (with reduced capacities) or different types of subscription with multiple services. The free version doesn't allow you to export the presentation, so I recorded it with screen casting function of OBS. This video is focused on communication's aspects and values of an on line community. I took just one screen cast file and one audio file. At this moment of my work, editing became faster because I refined the assembly techniques. Even for this video I added subtitles with Amara, using YouTube to create a link.

The last video was a mix of different solutions used in previous videos. I included a monologue on creativity of Beppe Severgnini, and I interspersed it with screen casting files and external videos. I recorded only one file audio for the entire video, which I divided later during the editing. The problem of this video was its size: because of the big percentage of videos, Shotcut could not export it and it crashed every time I tried to start the process. It took many days to understand what the problem was: first I thought there was a damaged file in it because the crush always happened at the same moment (approximately on 9 minutes and 60 sec). Then I realized the file was too big so I had to separate it in three parts. After Shotcut exported them, I used Avidemux[122] to put them together: with one file, I uploaded it on YouTube to make subtitles with Amara.

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[120] Cfr. https://amara.org/it/subtitling-platform/. Amara is a very interesting tool because it works on collaboration: every video produced can be seen from the Amara's community, and can be integrated from other users. It happens that several people work to the same video, and do subtitles in different languages.
[121] Cfr. https://prezi.com/
[122] << *Avidemux* is a free video editor designed for simple cutting, filtering and encoding tasks. It supports many file types, including AVI, DVD compatible MPEG files, MP4 and ASF, using a variety of codecs. Tasks can

All these videos start with the same theme song: this was thought in order to create a sense of continuity and belonging to this lab project.

Lessons started on the 8th of November 2017 and finished the on 13th of December, for a total of six face to face meetings of three hours each. But the parallel on line life course is longer, as we can see from the graphics below. This dissociation can be quite difficult to manage, if we think about the practical actions this kind of approach needs: unlike traditional didactic approach, all the solutions which involve an on line part have a completely different perception of time. Let's take the example of the forum: while lessons in presence are taking place, it's quite obvious you have to dedicate some time to handle the online part. However, to make this experience complete for all the participant, you have to expect an extra amount of time for those students who don't follow the course while it's actually going on. It is the case that energies employed to maintain the course alive need to last much longer and it can be quite difficult because participants gradually decrease. So it's advisable to fix a term beyond which a student has the access to the materials on the platform, but he/she can't take part of on line community, which has a natural time life and cannot last forever[123].

Forum activity was high: participants were 52 (teacher included). From the 5th of November 2017 to the 25th of February 2018 the report of posts was the following:

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be automated using projects, job queue and powerful scripting capabilities>> Cfr. avidemux.sourceforge.net/(03/03/2018)

[123] Many of free Moocs offer all the materials for many years after the official end of the course, therefore it's not possible to interact with the online community

B024481 (B196) - Laboratorio di Gestione dei Processi Formativi 2017-2018 - Interventi (tutti i ruoli)
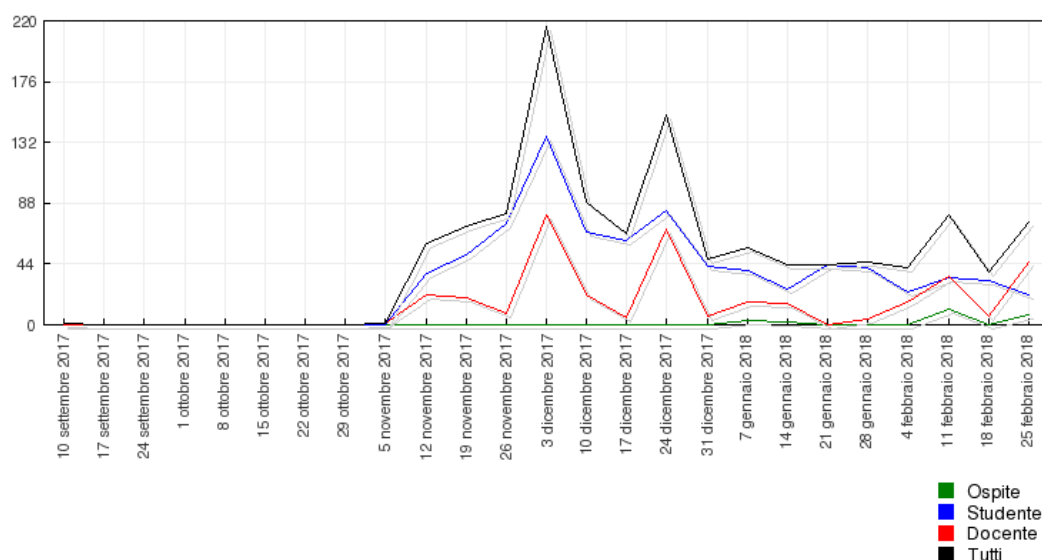
124

Students wrote 811 posts, while those of teacher were 372, with a peak on the 3rd of December 2017.

Read posts were much more:

B024481 (B196) - Laboratorio di Gestione dei Processi Formativi 2017-2018 - Letture (tutti i ruoli)

125

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[124] Last seen on the 1st of March 2018
[125] Last seen on the 1st of March 2018

As we can see, this second graph shows a different distribution: the number of read posts increases, but only for people who are not registered as students[126]. However, students read posts on the forum 4921 times, while teacher 937.
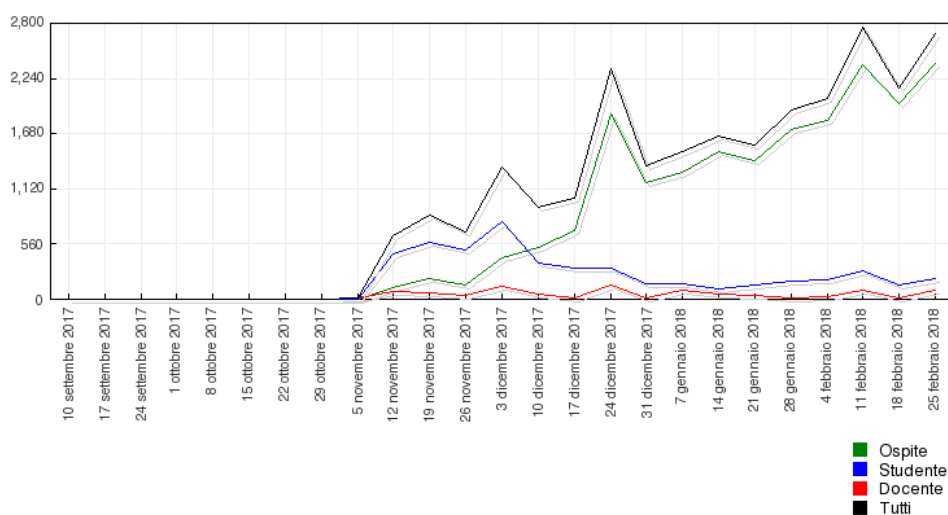
Evaluation was made through a survey which was uploaded on the lab's platform on the 2nd of January: of 52 participants we had, on the 7th of March, 15 feedbacks. The questionnaire has eighteen yes-or-no questions, with an additional request to motivate the answer for many of them. There were four areas: the first of them included general questions about the student, such as the master course he/she is enrolled in, the condition of application (part time or ordinary student), his/her work conditions and if he/she is in time or not. The second part was centered on rate attendance and the using of different tools offered; the following six questions, contained in area three, investigated the satisfaction about video lessons and video tutorials, by asking an opinion on the quality and the techniques used. The last group of questions tried to link this approach to knowledge process, seeking student's suggestions. The end of the questionnaire was dedicated to student's free comments.

This survey was necessary to evaluate the course's organization and its communication and it gave a precious feedback. As far as the student's work evaluation is concerned. the teacher asked everyone not just for a constant update of their steps in the forum, but also the writing of a diary to be uploaded in the platform 15/20 days before the exam.

The procedure for booking the exam was composed by two sections: an "official" procedure, provided by university, which allowed students to verbalize the exam in the on line profile, and an "unofficial" form. This second way was thought in order to avoid the usual queues of students the day of the exam: by a Doodle[127] the student could choose the specific time he/she wanted to take the oral test. Every day of examinations had nine time slots of one hour each. Each time slot could be booked by a maximum of four students. Thus, the student queue is kept below 4 people, with the advantage of avoiding wasting time and chaos in the hallway.

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[126] One of the first rule of this course was the enrolment on the lab course: it was a necessary operation to create an identity in this community

[127] Doodle is an on line system to plan meeting or events by a pool between two or more people. It integrates sync your calendar and it offers a personalized dashboard. It offers a free version and a Premium ones. Cfr https://doodle.com/en_GB/

4.2 Survey's results

All the fifteen students were enrolled in our master course: six of them have specified the curricula in Pedagogical science and one in Adult education. Two of them are part-time students (13,33%), while 33,33 % (five students out of fifteen) had a job which hampered regular attendance of lectures. Another 13,33% had a domestic condition which compromised their participation in class: one student declared to live too far, and another had a son with health problems. Four students in fifteen were not in time.

The attendance rate was 100% for 20% of the students (three out of fifteen), 75% for 40% of them and 50% for five students. Only one student declared to have never been in class. Utilization rate of offered tools is promising: 40% used them sometimes, while 20% did it often and 33,33% always. An interesting data comes from which tools were more used: 80% (12 students) declared to have watched the recorded lessons while 60 % (9 students) used video tutorial; another 40% (6 students) read documents and books. Recorded lessons were helpful for the following reasons: student who wanted to watch the lessons they had already attended again (53,33% corresponding to eight students out of fifteen); students who couldn't attend (80% corresponding to twelve students out of fifteen); students who wanted to deepen some concepts (40% corresponding to six students out of fourteen)[128].

Video tutorial helped: to clarify some concepts (73,33% corresponding to 11 students out of fifteen); to integrate teacher's lessons (53,33% corresponding to 8 students out of fifteen); to deepen explained topics (33,33 corresponding to 5 students out of fifteen)[129].

Quality of video tutorials and of recorded lessons was sufficient for 100 % of students: 20 % of them (three students out of fifteen) were quite satisfied; 53,33 % (eight students out of fifteen) were very pleased while 26.67% (four students out of fifteen) were fully met.

Talking about communication strategies used in video tutorials, students said that: visual synthesizers[130] were very immediate from the communicative point of view (eight students

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[128] This particular option asks how students decided to deepen and half of them declared to have done it by a confrontation with other people, such as colleagues in forum.

[129] As for recorded lesson, students who used video tutorial to deepen treated concepts, chose a collaborative way to confront by asking friends and colleagues

[130] Visual synthesizers mean puzzle and lists on word files

out of fifteen)[131] as the use of telefilms' clips (46,67% of the students)[132] and specialists' contributions (46,67 % too)[133].

Opinions about the connections that this kind of tools can generate between students and the lab, are highly positive: 26,67% thought they were quite enough helpful, 46,67% thought they were very useful and 26,67% believed they were totally serviceable for creating a valid answer to students' needs. For the participants, this method helped students who couldn't attend, by making them not feel excluded if they missed one or more meetings: moreover, someone evidenced how it facilitated peer to peer collaboration and personalized study path. For someone else, the tools helped to deepen concepts already explained because students could watch lessons as many times as they wanted, in different context like their own house and because they facilitate discussions and dialogues. Most of the students retained this method positive for learning process[134]: someone thought it enriched the offer and it helped by deepening concepts[135]. Others pointed out that this method made learning more pleasant[136], sometimes by reducing stress[137], sometimes by mutual assistance.

From the other side, most of the students thought that the exclusive use of on line method was not positive for learning: << Non credo che l'utilizzo di soli strumenti online sia sufficiente per l'apprendimento, anche perchè molti studenti possono trovare difficoltà nell'utilizzo della tecnologia per una serie di motivi diversi: dalla mancanza dei mezzi a disposizione alla poca dimestichezza nell'uso della tecnologia. Per questo credo che sia

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[131] Four students thought this method was quite communicative (26,67%) while one considered it fully useful (6,67%)

[132] One student considered it to be not very communicative (6,67%), while it was quite enough for four of them (26,67%); only a single student felt totally fulfilled

[133] Specialist contributions were quite enough immediate for three students (20%) and totally for two of them (13,33%)

[134] 53,33% sustained it was very helpful, while 26,67 % felt totally fulfilled

[135] <<si, perchè lo studente ha cosi un materiale più ricco e variegato a cui fare riferimento>> << yes, because the student has a richer and more varied material to refer to>>; << i forum e le registrazioni aiutano molto nell' approfondire gli argomenti trattati a lezione>> << forums and recordings help a lot in deepening the topics covered in class>>; << Perché hanno il potere di approfondire i concetti esposti alle lezioni e estrapolare i concetti nascosti che magari ti erano sfuggiti>> << Because they have the power to deepen the concepts exposed in the lessons and extrapolate the hidden concepts that you might have missed>>

[136] <<L'utilizzo di più materiali didattici, e non solo dei libri di testo, può aiutare gli studenti ad ampliare i propri interessi ed entrare in contatto con nuove realtà, rendendo l'apprendimento stesso più piacevole>> <<The use of more educational materials, and not just textbooks, can help students to expand their interests and get in touch with new realities, making learning more enjoyable>>

[137] << L'aver avuto accesso a materiali sempre disponibili e liberamente fruibili mi ha consente di ridurre l'ansia: poter guardare/ascoltare le lezioni in qualsiasi momento e intervenire sul forum coi propri tempi, per quanto mi riguarda, è molto rassicurante!>> << Having access to materials always available and freely usable allows me to reduce anxiety: being able to watch / listen to the lessons at any time and intervene on the forum at your own pace, as far as I'm concerned, is very reassuring!>>

sempre bene integrare gli strumenti online con i mezzi più "tradizionali">>[138]. Someone believed that face to face approach gives more confidence because the student is not completly alone <<Credo che l'incontro face-to-face conferisca sicurezza al discente, dato sicuramente dalle sicurezze di andare in un ambiente fisico, fare domande dirette e ricevere risposte immediate, non dover essere completamente autonomo, come nella modalità blended>>[139]. Although, most of them recognize the IT as an important presence in our society, which can be very useful if it's properly handled: <<Tutti utilizziamo questi strumenti ogni giorno fanno parte del nostro quotidiano, perchè far finta che proprio qui in un'aula universitaria non esistano>>[140]; <<occorre saper equilibrare tecnologia e presenza>>[141].

Blended education develops competences with a quality not less than that of a face to face approach: most of the student agree with it[142]. <<In un corso blended ritengo che sia possibile sviluppare più tipologie di competenze, questo ovviamente dipende dall'utilizzo che si fa degli strumenti online i quali, di per sé, sono neutri>>[143]. Blended approach helps the students to get used to new tools which are not very common in traditional context: <<grazie a questa modalità di insegnamento abbiamo imparato l'utilizzo di nuovi strumenti online sicuramente molto validi ed utili>>[144]. <<Credo che non sia tanto la modalità in cui si volge un corso ma la qualità dei contenuti e l'organizzazione del corso. Ho frequentato corsi face-to-face che mi hanno lasciato moltissime conoscenze che spero che si trasformino in competenze. La modalità blended ha un solo punto negativo, secondo il mio punto di vista personale, ovvero l'assenteismo voluto>>[145]: according to someone's experience, the competences developed don't depend on the type of method but on the quality of it's organization.

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[138]<< I do not think that using only online tools is sufficient for learning, also because many students may find difficulty in using technology for a number of different reasons: from the lack of available resources to the lack of familiarity in use of technology. This is why I believe it is always good idea to integrate online tools with the most "traditional" means >>

[139]<<I believe that the face-to-face meeting confers security to the learner, given by the certainty of going into a physical environment, asking direct questions and receiving immediate answers, not having to be completely autonomous, as in the blended mode>>

[140] <<We all use these tools every day, they are part of our daily life: why pretend that right here, in a university classroom, they do not exist?>>

[141] <<We need to know how to balance technology and presence>>

[142] 73,33% of the students thought so, while 13,33% believed that competences of a blended approach are a little bit inferior than those developed in a face to face method; another 13,33% was more pessimistic and considered blended learning much less formative than traditional one

[143]<<I think that in a blended course it is possible to develop more types of skills: this obviously depends on the use of online tools which, in themselves, are neutral>>

[144]<<thanks to this teaching method we have learned the use of new online tools that are certainly very valid and useful>>

[145]<<I believe that it is not so much the manner in which the course is aimed, but the quality of the contents and the organization of the course. I attended face-to-face courses that gave me a lot of knowledge that I hope will

Students were unanimous in their desire to have the same tools in other courses.

4.3 Review phase

One third of the students (five out of fifteen) had a job that interfered with normal attendance but only two of them were part time students. The other two had family's issues so they couldn't always be in class. We can see that even in such a small number as fifteen students, almost half were often unable to be present during lessons in class[146]. An on line scaffolding was precious to make students more comfortable, to put them at ease and even to help them to stay on even: <<I materiali forniti, come pure la libertà di guardarli, ascoltarli, visionarli e scaricarli, consentono a qualsiasi utente di partecipare al corso nel modo che preferisce dunque mette ciascuno a proprio agio>>[147]. We could discuss the reasons why a student can't be present and we could hypothesize they were unable to attend lessons due to work. We could think they are in bad faith but at the same time we should ask ourselves if this could change facts: what would happen if we didn't provide an on line support? Would they come instead of missing lessons? I think if someone does not want to participate, he/she does not do it anyway: choosing a punitive path in order to force them to come, is unproductive and completely non educational. The strategy must be the opposite: instead of imposing them the be present we need to attract students and make them feel comfortable in their participation (if something is attractive, students who have the possibility will certainly come: at the same time, you give them all the chance to all of them to be on a par and not be frustrated for their absence). We should consider a pedagogical approach based on motivation instead of penalization. We must not fear the absence in classes: students who need human contacts will surely show up. If we think they need it, we should make them feel its importance, not impose it. A correct educational approach should start from a mutual trust agreement: this is the basics of pedagogy. Even when you relate with a child you need to approach him/her with the aim of building a structure inside him/her and a constraint doesn't allow this. The first step is to make the student feel we trust them! With this approach, teachers develop in learners a sense of autonomy: they can organize their student's path in complete freedom, not giving up to some choices because they are forced to do so by the organization of courses.

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turn into skills. The blended mode has only one negative point, according to my personal point of view: the voluntary absenteeism>>

[146] 40% of the student attended half of the lessons or less

[147] <<The materials provided, as well as the freedom to watch them, listen to them, view and download them, allow any user to take part in the course in the way he prefers, thus making everyone feel at ease>>

Everything should be handy! Whether 100% expressed the wish to have this kind of organization in other courses should make us think!

Another point we can't ignore, is the positive feedback given for the relation between learning and a blended approach. Students are of the opinion that a total online structure penalizes the learning process but a mix of physical and online presence with the assistance of a proper organization can stimulate and enrich it. They are demonstrating the consciousness of the human relations' importance but at the same time they are aware of the youth situation which is usually not very simple these days.

For all of these reasons we can deduce that giving more tools can never be a bad thing: this is not the reason for classes' desertion[148] and it's a teacher's duty to pay attention to real needs.

On the other hand, this method has its negative points: it needs a solid planning which is expensive in terms of energies and finances, even more if one has to build something completely new. And it needs an awareness from both the actors: on one side, teachers have to understand the different organization this approach required, changing a status   that has been perpetuated for years. True changes are always traumatic, especially if we are talking about a rooted custom: if we want to record a lesson we should act in order to make the recording understandable for all: it means we should think about our movements, and the way we are organizing spaces and interactions in class. This is a completely different approach that needs a constant focusing and it's not very simple when we are on the field. From the other side, students must become aware of their active role and such kind of difficulty that can be observed in this experience: only fifteen out of fifty students spent time to give us a feedback. I've been thinking about why this happened: I reached the conclusion that except for a percentage of them that doesn't care, they don't fully realize the importance of their contribution and the effectiveness of it. This implicates a meditation on the paradigm which can't be run out with a single course: is necessary a redefinition and/or a reappropriation of proper roles and it will take a collective effort.

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[148] Some student declared that this approach encourages the attendance: <<Lo studente con l'utilizzo di diversi stumenti può essere stimolato ulteriormente a frequentare le lezioni>> << The student with the use of different tools can be further stimulated to attend classes>>

4.4 Future perspectives: PF24 courses and "Upload file" service

We can individuate one example of blended learning which was recently experienced in this university, called PF 24[149]. It's a set of courses that the university offered in accordance with DM 616/2017[150], to give the possibility of signing up for a national competition for teaching in middle and high schools FIT[151]. Those procedures were made in a transitional modality because of the deadlines, and they were regulated by a specific (ordinance 1191/2017[152]): twenty seven courses of six credits[153] each were organized, twenty two in presence and five in e-learning modality (in this case 3 CFU were in presence and 3 CFU on line by recorded lessons). Participants were both students of University of Florence and externals: in order to facilitate the organization with eventual jobs, lessons were concentrated on the whole day of Thursdays and Fridays and on Saturday mornings. Attendance was not compulsory and each course had a final exam in order to obtain necessary credits: students had three chances to pass it, otherwise they have to make a second signing up next year. Fees ranged from 0 to 90 euros for each course, depending on ISEE[154], plus one stamp duty of 16 € and 50 € for general fees lump sum. Every course had a referent teacher who was responsible for lay out and contents of the course's platform and a referent tutor who had to upload slides and video lessons and he /she had to assist teachers during lessons. Tutors were not IT specialists: they received indications and one day of specific training in order to manage platform functions. Lessons were recorded with Teleskill, a special software with which the university of Florence has an agreement with: this choice created some problems because of the instability of network connectivity. It turned out that every three lectures, two experienced at least one conncectivity interruption. For this reason, all the recorded lessons were registered in a private modality (students could not see them as they were happening)

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[149] PF means Percorso Formativo (Learning process): 24 are the CFU required

[150] Cfr. http://www.miur.gov.it/-/modalita-acquisizione-dei-crediti-formativi-universitari-e-accademici-di-cui-all-art-5-del-decreto-legislativo-13-aprile-2017-n-59

[151] FIT is a national competition for teaching in middle and high schools: to sign up, the candidate needs requirements requested for access to the competition classes for teaching in middle and high schools and the possession of 24 university credits obtained in at least 3 of the 4 areas covered by the D.M. 616/2017

[152] Cfr. https://www.unifi.it/upload/sub/percorsi_formativi_24cfu/dr_approvazione_regolamento_24cfu.pdf

[153] One credit amounts to six hours of frontal lesson

[154] ISEE is the indicator of the equivalent economic situation: it derives from the relationship between the Ise (a parameter which determines the economic situation of the family unit and it is stemmed from the sum of incomes and 20% of the movable and real estate assets of the entire family unit)
 and the parameter deduced from the equivalence scale (established by law) that varies according to the number and quality of the family members

and they were successively uploaded by tutors. Another inconvenient was the politics adopted to upload files on Moodle: SIAF guaranteed the service with a manual check within 48 working hours. This means that a lesson recorded on Friday was available on Monday or Tuesday: the only way to upload files independently was to create clips of at most 50 MB in size. One of the problem faced was the reticence of teachers in accepting this new approach: some of them didn't want to be recorded, others wanted to play back the files back before they were published. The PF24 experiment showed the difficulty of understanding the importance to upload all the equipment in advance. This implicated a planning ahead which is not as common as we think. Despite that, some of the teachers accepted the news and put themselves out there by taking the risk of something that hadn't been done before (sometimes earnings applauses from the audience too). It was an amazing occasion for the university to experiment a new reality and to live in person something it could be part of the future. Also the urgency of short time and the initial instable organization has encouraged cooperation and team work between tutors and coordinating teachers. Thanks to a Whatsapp group all the participants could keep each other updated and could ask and provide mutual help: problems were discussed together as well as possible solutions.

Worthy of mention is another new service called "Upload file": it's a new procedure to upload files, following on from FP24 experience. Teachers can use Teleskill[155] or other systems: in the latter case, files need to be sent to SIAF STAFF through Upload File service[156]. Responsible for these operations is the unit of E-learning and Computer training which doesn't take care of postproduction phases[157] though. The two conditions to upload files are the following: file size not more than 700 MB and not more than 5.8 MB/min[158]. The Upload file service is available only for teachers holding a course: files will be uploaded in hiding modality so the professor will decide when to uncover them. At the same time a cycle of meeting was arranged: it is called "Workshop on video recording methods" and will be held by Andreas Formiconi, who will try to teach how to use OBS[159].

As we can see, something is slowly changing: it will probably take a long time to get used to it and to implement a method that abides the laws but at the same time meets needs which are real and stronger more each day.

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[155] In this case, files are uploaded automatically on the platform within forty-eight working hours
[156] For this option the time taken depends on jobs in the queue
[157] These operations are delegated to Communication and Public Engagement area while support for alternative video production systems is managed by Andreas Formiconi
[158] As for the PF24, files which are less than 50 MB can be uploaded in autonomy
[159] To date 06/03/2018 there are two meetings on the schedule: the first is set on 26th of March and the second is expected for 7th of May. Both of them will be arranged in SIAF with a maximum of eighteen subscribers

Conclusions

>>Una scuola basata sulle prestazioni più che sulle relazioni è inefficace, perché l'apprendimento non è addestramento alla performance come per un animale, ma assunzione autonoma del sapere consolidato per affrontare qualsiasi prova (lo specifico del cervello giovane è innovare partendo da ciò che è valido in una tradizione). Gli educatori non sono falegnami, Geppetto non può rendere Pinocchio un bambino vero con i suoi strumenti. Gli educatori somigliano più a giardinieri che mettono terra e semi in condizione di dar frutto, ma il modo in cui accadrà è soggetto alle variabili del caos della vita e soprattutto al tempo, che in biologia non conosce sconti o recuperi tardivi. Il tempo non dato a un bambino o a un adolescente non ci viene restituito.>>[160]

We can conclude that it's all about relationships. Or at least, most of it.

This experience showed how important human contacts are: it could seem a contradiction when we talk about on line tools, but as I have tried to explain in this dissertation, it isn't. The attention given to our neighbour is at the bottom of true relations: the listening to expressed needs leads to what Alessandro D'Avenia calls an "H_2O bond"[161]. This particular expression wants to focus on mutual enrichment produced by a healthy connection between the student and the teacher. In H_2O bond, every element must give something in order to create a new molecule which will have different characteristics compared to the starting elements: equally it can be said also for the educational relationship, where the subjects involved will no longer be the same as before. If our aim is taking care of students, first we must be aware of the change they are going through. And second, we need to find a solution that is right for new situations like a class composed of different types of learners. ICT are just a resource which needs to be adapted, not the only possible way. University can mix them with a high quality educational intervention, in order to be more attractive in a market which is full of options. Traditional offers have to compete with more dynamic solutions

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[160] <<A school based on performance rather than on relationships is ineffective, because learning is not performance training as for an animal, but it is an independent assumption of consolidated knowledge to face any kind of test (the specificity of the young brain is to innovate, starting from what is valid in a tradition). Educators are not carpenters, Geppetto cannot make Pinocchio become a real child with his instruments. Educators are more like gardeners who put soil and seeds in a position to bear fruit, but the way it will happen is subjected to the variables of the chaos of life and, above all, to time, which in biology knows no discounts or late recoveries. The time not given to a child or adolescent cannot returned.>> Cfr. D'Avenia A., La formula dell'acqua, *Corriere della sera*, Letti da rifare, 8, 2018.   The entire article can be found in the following web site: http://www.corriere.it/alessandro-davenia-letti-da-rifare/18_marzo_12/formula-dell-acqua-alessandro-d-avenia-letti-da-rifare-625ba8ec-255c-11e8-8868-620b5c6d46c4.shtml

[161] Ivi

such as telematic universities: open to more perspectives can be profitable. For these reasons, a blended approach can be an appropriate option for the university and the students as well: the quality of a proposal stays not in how much bureaucracy can be fulfilled (even if it's clear that rules, laws and financial limits need to be respected) but meeting users' requests. Offering just a single option is a luxury that university probably cannot afford. At the same time, I have tried to explain why a mix of on line and in presence approaches develop a sense of cooperation and contribution in the community which is more typical of on line settings. This particular aspect can be very helpful in the labour market if we think that now, more than ever, team working is the center of our job activities. The current Italian pedagogical approach leaves out this side in favour of individual performances.

The Lab of Educational Process Management allowed me to have a different point of view: for once I was in an external position and I could monitor dynamics which were not so obvious when I attended as a student. Not being concentrated on the subject let me be free to notice the quality of students' interactions and the performance of the teacher: I could make a critical overview of what I was living. To change the observation point was amazing and a little bit difficult at the same time: I tested myself in every step I made.

The relation with students was a little bit strange: I was in a middle position between them and the teacher. They were a little prevented because I wasn't in a learning position with them (even if I was learning a lot) but at the same time they felt more free to ask me questions rather than the professor. So it happened that while I was wandering around Florence, some of them stopped me on the street to ask me questions about the course. They were looking for advice, asking me for a dialogue which is very uncommon with teachers. I think this is a privileged position because it allows you to be free to focus on the relation you are building and on the real need of who you are in front of, without a judgmental approach which is typical of a school setup. At the same time students were more relaxed and they could be themselves with no fear of being inappropriate.

Video recording was completely new for me, as all the software I used. Together with hard skills, this lab required me to raise softs skills such as flexibility and adaptability (let's think about the introduction of subtitles when one student came up with a special request for his handicap). It helped me to develop problem solving skills, by comparing with tools I was not familiar with: every difficulty was an occasion to think of possible solutions and to learn too. Due to the nature of my role in this lab, I tried to implement a communication ability: for the first time I asked myself which could be the right approach to get to a class. Was my intervention comprehensible to every one? Was I clear about what I wanted to say? Was it

helpful for them? These are some of the many questions I asked myself every time I did something in this course, from simply talking in class to the video tutorials on the platform. I continuously put myself under discussion: it was very stimulating because I finally gauged my capabilities in a constructive way.

The choice to write in English was a bet as well. This is my first work in a foreign language and it wasn't at all easy, more if we think that my master course was totally provided in Italian, with few exceptions of books and lab courses. English is slowly entering our university but it clashes with Italian mentality that is culturally deprived of language learning.

We can see that this was a path of growth in many senses, not just personal but even professional. This experience gave me the opportunity to stay on the other side of an educational offer: thanks to this, I learned about the planning phase which can be very articulated; I went in depth with technical aspects (e.g. the analysis of a Moodle platform setting); I realized how satisfying it can be to take care of people. So basically, how beautiful it is to do a good job, even more if it's helpful for others.

As Antoine de Saint-Exupéry wrote in "The little prince", we have to be domesticated like the fox explained to the prince: <<[…] Che cosa vuol dire "addomesticare"?>> << È una cosa da molto dimenticata. Vuol dire "creare legami"...>>[162]. We have to get used to a new idea of educational relationship: but it is a slow process which requires time and patience. << La volpe tacque e guardò a lungo il piccolo principe: << Per favore... addomesticami>>, disse. << Volentieri>>, rispose il piccolo principe, <<ma non ho molto tempo, però. Ho da scoprire degli amici, e da conoscere molte cose>>. <<Non si conoscono che le cose che si addomesticano>>, disse la volpe. <<Gli uomini non hanno più tempo di conoscere nulla [...]>> << Che bisogna fare?>> domandò il piccolo principe. << Bisogna essere molto pazienti>> rispose la volpe. << In principio tu ti sederai un po' lontano da me, così, nell'erba. Io ti guarderò con la coda dell'occhio e tu non dirai nulla. Le parole sono una fonte di malintesi. Ma ogni giorno tu potrai sederti un po' più vicino...>>[163]. We need to build our customs, to make our activities unique for the class we are facing. It can be difficoult, and it

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[162] << What does it mean to "tame"? >> << It's a thing which has been long forgotten. It means "creating bonds">> Cfr De Saint- Exupéry A. *Il Piccolo Principe,* Tascabili Bompiani, Milano, 1988, p. 91-92

[163] "The fox fell silent and looked at the little prince for a long time:" Please ... tame me" he said. << Gladly >>, the little prince answered, << but I do not have much time, though. I have to discover new friends, and to know many things >>. "We only know the things that are tamed," said the fox. <<Men have no more time to learn anything [...] >> << What must we do? >> Asked the little prince. << We must be very patient >> answered the fox. <<In the beginning you will sit a little distant from me, like that, in the grass. I will look at you from the corner of my eye and you will not say anything. Words are a cause of misunderstandings. But every day you can sit a little closer ... >> Ivi, p. 93-94

can be dangerous like all new activities: << ma allora che ci guadagni?>> << Ci guadagno>>, disse la volpe, << il colore del grano>>[164].

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[164] <<but what will you gain then? <<I gain>>, said the fox, <<the colour of wheat >> Ivi, p.95,96

Anne*x*

A)

Questionario di gradimento su video lezioni e tutorial di approfondimento per il laboratorio di gestione dei processi formativi a.a 2017/2018

Area 1)

- A quale corso di laurea sei iscritto/a?
  …………………………………………………………………………………………
  …………………………..

- Sei uno/a studente/ssa part time?
  Sì ☐   No ☐

- Sei attualmente impiegato/a in una qualsiasi attività lavorativa che ti impedisce di frequentare regolarmente le lezioni?
  Sì ☐   No ☐

- Hai una condizione familiare che non ti permette di frequentare regolarmente le lezioni?
  Sì ☐   No ☐
  Se sì specificare quale (es: figli, parenti a carico, genitori anziani, mancanza di mezzi per arrivare   in   università):
  …………………………………………………………………………………………
  ……………….

- Sei uno/a studente/ssa fuori corso?
  Sì ☐   No ☐

Area 2)

- Hai frequentato le lezioni?
  Mai ☐   Poche (1 o 2) ☐   La metà (3) ☐   Quasi tutte (4 o 5) ☐   Tutte ☐

- Hai usufruito dei materiali forniti dal professore sulla piattaforma moodle?
  Mai ☐   Poco ☐   A volte ☐   Spesso ☐   Sempre ☐
  Se sì, quali? (E' possibile barrare più di una casella)
  ☐ Libri e documenti
  ☐ Video registrazioni delle lezioni (formato audio e/o video)
  ☐ Video tutorial di approfondimento
  Se no, perché?
  …………………………………………………………………………………………
  …………………………………………………………………………………………
  …………………………………………………………………………………………
  …………………….

Area 3) (riservata esclusivamente a coloro che hanno usufruito dei materiali video delle lezioni)

- Le registrazioni delle lezioni ti sono risultate utili per:
  ☐ Rivedere/rivivere eventuali passaggi della lezione frequentata
  ☐ Assistere alla lezione non avendo potuto frequentare

☐ Approfondire alcuni concetti
☐ Altro
…………………………………………………………………………………………………
………………………………………………………
Nel caso in cui si sia barrata la casella n.3, spiegare come hai approfondito gli argomenti trattati (es: confronto sul forum, ricerca personale, confronto con amici/familiari/colleghi,altro)
…………………………………………………………………………………………………
…………………………………………………………………………………………………
…………………………………………………………………………………………………
…………………..

- I video tutorial sono serviti per:
☐ Approfondire alcuni concetti
☐ Chiarificare argomenti trattati
☐ Integrare le lezioni svolte dal professore
☐ Altro
…………………………………………………………………………………………
………………………………………………………
Nel caso in cui si sia barrata la casella n.1, spiegare come hai approfondito gli argomenti trattati (es: confronto sul forum, ricerca personale, confronto con amici/familiari/colleghi,altro)
…………………………………………………………………………………………………
…………………………………………………………………………………………………
…………………………………………………………………………………………………
…………………..

- La qualità delle registrazioni delle lezioni è risultata sufficiente per comprendere quanto veniva mostrato?
Sì ☐   ☐   ☐   No   Altro
…………………………………………………………………………..

- La qualità dei video tutorial è risultata sufficiente per comprendere quanto veniva mostrato?
Sì ☐   ☐   ☐   No   Altro
…………………………………………………………………………..

- Ti ritieni complessivamente soddisfatto degli strumenti video forniti dal corso?
Per niente ☐   Poco ☐   Abbastanza ☐   Molto ☐   Del tutto ☐
Motivi la sua risposta:
…………………………………………………………………………………………………
………………………………………………………………….

- Quali delle tecniche utilizzate nei video tutorial reputi più immediate, dal punto di vista comunicativo?
☐ La presentazione di contenuti attraverso sintetizzatori visivi (es: puzzle del primo video, elenchi su pagina word)
Per niente ☐   Poco ☐   Abbastanza ☐   Molto ☐   Del tutto ☐
☐ L'uso di mezzi comunicativi provenienti da diversi contesti (es: spezzoni di telefilm)
Per niente ☐   Poco ☐   Abbastanza ☐   Molto ☐   Del tutto ☐
☐ L'integrazione di diversi contributi (giornalisti, pedagogisti, scrittori)

Per niente ☐   Poco ☐   Abbastanza ☐   Molto ☐   Del tutto ☐

Area 4)

- Ritieni che la tipologia di materiali forniti aumenti il contatto dello studente con il corso, andando incontro alle diverse esigenze della classe?
  Per niente ☐   Poco ☐   Abbastanza ☐   Molto ☐   Del tutto ☐
  Motivi la sua risposta:
  ………………………………………………………………………………………………
  …………………………………………………

- Ritieni che l'insieme di strumenti utilizzati nel corso (forum, registrazioni delle lezioni, video tutorial) possa influenzare positivamente l'apprendimento dello studente?
  Per niente ☐   Poco ☐   Abbastanza ☐   Molto ☐   Del tutto ☐
  Motiva la tua risposta:
  ………………………………………………………………………………………………
  …………………………………………………

- Ritieni che l'utilizzo esclusivo di strumenti on line depauperi il meccanismo di apprendimento?
  Per niente ☐   Poco ☐   Abbastanza ☐   Molto ☐   Del tutto ☐
  Motiva la tua risposta:
  ………………………………………………………………………………………………
  …………………………………………………

- Ritieni che le competenze sviluppate all'interno di un corso blended (modalità mista on line e in presenza) siano inferiori rispetto ad un corso sviluppato interamente face to face (in presenza)?
  Per niente ☐   Poco ☐   Abbastanza ☐   Molto ☐   Del tutto ☐
  Motiva la tua risposta:
  ………………………………………………………………………………………………
  …………………………………………………

- Gradiresti avere a disposizione strumenti simili per altri corsi all'interno del suo percorso di laurea?
  Sì ☐   ☐   ☐   No   Altro
  ……………………………………………………………………..

- Commenti, consigli, critiche
  ………………………………………………………………………………………………
  ………………………………………………………………………………………………
  ………………………………………………………………………………………………
  ………………………………………………………………………………………………
  ………………………………………………………………………………………………
  …………………………………………………………………...

A.1)

Questionnaire on students' satisfaction of video lessons and video tutorials of Lab in Educational Processes Management A.Y. 2017/2018

Area 1)

- Which degree course are you enrolled in?
  …………………………………………………………………………………………………
  …………………………..

- Are you a part time student?
  Yes ☐   No ☐

- Are you currently employed in any work activity that prevents you from attending classes regularly?
  Yes ☐   No ☐

- Have you got a domestic condition which doesn't allow you to attend classes regularly?
  Yes ☐   No ☐
  If the answer is yes, specify (e.g.: children, dependent relatives, elderly parents, lack of means of transport to reach the university):
  …………………………………………………………………………………………………
  ………………….

- Are you a student out of course?
  Yes ☐   No ☐

Area 2)

- Have you ever attended lessons in class?
  Never ☐   Few (1 or 2) ☐   Half of them (3) ☐   Almost all of them (4 o 5) ☐
  All of them ☐

- Have you ever used the tools put on the Moodle platform by the teacher?
  Never ☐   A little ☐   Sometimes ☐   Often ☐   Always ☐
  If the answer is yes, specify which (You can choose more than one)
  ☐ Books and documents
  ☐ Recorded lessons (audio and/or video format)
  ☐ Video tutorials
  If the answer is no, specify why:
  …………………………………………………………………………………………………
  …………………………………………………….…………………………………………
  …………………………………………………………………………………………………
  …………………….

Area 3) (only for students who used video tools)

- Recorded lessons were useful to:
  ☐ Review/live again some steps of the attended lesson
  ☐ Watch the lesson if you couldn't attend
  ☐ Deepen some concepts

94

☐ Other

……………………………………………………………………………………………………

…………………………………………………………

In case you have chosen answer n.3, please explain how you deepened the topics (e.g.: by the forum, personal research, comparison with friends/relatives/colleagues, other)

……………………………………………………………………………………………………

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…………………..

- The video tutorials were helpful to:

☐ Deepen some concepts
☐ Clarify the covered topics
☐ Integrate the lessons of the teacher
☐ Other

……………………………………………………………………………………………………

…………………………………………………………

In case you have chosen answer n.1, please explain how you deepened the topics (e.g.: by the forum, personal research, comparison with friends/relatives/colleagues, other)

……………………………………………………………………………………………………

……………………………………………………………………………………………………

……………………………………………………………………………………………………

…………………..

- Was the quality of the recorded lessons sufficient for a good comprehension of what was showed?

Yes ☐   No ☐   Other ☐

…………………………………………………………………………..

- Was the quality of the video tutorials sufficient for a good comprehension of what was showed?

Yes ☐   No ☐   Other ☐

…………………………………………………………………………..

- Do you consider yourself satisfied with the videos provided?

No way ☐   A little ☐   Enough ☐   A lot ☐   Completely ☐

Please, explain the reason for your answer:

……………………………………………………………………………………………………

………………………………………………………………….

- Which of the techniques used in the video tutorial do you consider more immediate regarding the communication?

☐ The contents presented with visual synthesizers (e.g.: the puzzle in the first video, the list on a word page)

No way ☐   A little ☐   Enough ☐   A lot ☐   Completely ☐

☐ the use of communcative tools from different contexts (e.g.: the clips of telefilm)

No way ☐   A little ☐   Enough ☐   A lot ☐   Completely ☐

☐ The integration of different contributions (journalists, pedagogues, writers)

No way ☐   A little ☐   Enough ☐   A lot ☐   Completely ☐

Area 4)

- Do you think that the typology of provided tools increases contact between the student and the course, by meeting the different needs of the class?

  No way ☐   A little ☐   Enough ☐   A lot ☐   Completely ☐

  Please, explain the reason for your answer:

  ………………………………………………………………………………………………
  ……………………………………………………

- Do you think that the tools used during the course (forum, recorded lessons, video tutorials) can positively influence student learning?

  No way ☐   A little ☐   Enough ☐   A lot ☐   Completely ☐

  Please, explain the reason for your answer:

  ………………………………………………………………………………………………
  …………………………………………………….

- Do you think that the exclusive usage of on line tools can denature the learning process?

  No way ☐   A little ☐   Enough ☐   A lot ☐ Completely ☐

  Please, explain the reason for your answer:

  ………………………………………………………………………………………………
  ……………………………………………………

- Do you think that the competences developed during a blended course are inferior to those developed in a traditional face to face course?

  No way ☐   A little ☐   Enough ☐   A lot ☐   Completely ☐

  Please, explain the reason for your answer:

  ………………………………………………………………………………………………
  ……………………………………………………

- Would you like to have the same opportunity in other courses?

  Yes ☐   No ☐   Other ☐

………………………………………………………………………..

- Please, give here any comments, suggestions or reviews that you want:

  ………………………………………………………………………………………………
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Bibliography

Alonso F., & Lòpez G., & Manrique D., Vines J.M., (2005) An instructional model for web-based e-learning education with a blended learning process approach. BJIET, British Journal of Educational Technologies, 36 (2), p. 217-235

Anichini A., Boffo V., Cambi F., Mariani A., Toschi L., *Comunicazione formativa. Percorsi riflessivi e ambiti di ricerca,* Apogeo, Milano, 2012

Bocchi G., Ceruti M., *Educazione e globalizzazione,* Raffaello Cortina editore, Milano, 2004

Boffo V., R*elazioni educative. Tra comunicazione e cura,* Apogeo, Milano, 2011

Breslow L. & Chen X., DeBoer J., (2018) Analyzing productive learning behaviours for students using immediate corrective feedback in a blended learning environment. *Computer & Education, 117,* p. 59-74

Calvani A., *Principi dell'istruzione e strategie per insegnare: criteri per una didattica efficace,* Carocci Editore, Roma, 2011

Cambi F., Santelli Beccegato L., (a cura di), *Modelli di formazione. La rete teorica del novecento pedagogico,* UTET libreria, Torino, 2004

Chmiel A. S., & Shaha M., Schneider D.K., (2017) Introduction of blended learning in a master program: Delevolping an integrative mixed method evaluation framework. *Nurse Education Today, 48* p. 172-179

Demetrio D., *Raccontarsi. L'autobiografia come cura di sé,* Raffaello Cortina editore, Milano, 1996

De Saint- Exupéry A. *Il Piccolo Principe,* Tascabili Bompiani, Milano, 1988

Duffy T.M., Kirkley J.R*., Learner-centered theory and practice in distance education: cases from higher education*, Mahwan, London NY, L. Erlbaum, 2004

Ellis R.A., & Pardo A., Han F., (2016) Quality in blended learning environments – Significant differences in how students approach learning collaborations. *Computers & education, 102*, p. 90-102

Federighi P*., Liberare la domanda di formazione. Politiche pubbliche di economia della Formazione,* EdUP, Roma, 2006

Formiconi A.R., *La tortuosa via della didattica on line nell'università,* Studi sulla Formazione, 2016

Freire P., *Pedagogia dell'autonomia. Saperi necessari per la pratica educativa*, Edizioni Gruppo Abele, Torino, 2014

Garavaglia A., *Didattica on line. Dai modelli alle tecniche*, Milano, Unicopli, 2010

Garrison D. R., Kanuka H., (2004) Blended learning: Uncovering its transformative potential in higher education. The Internet and Higher Education, 7 (2) p. 95-105

Holton III E.F., Knowles M.S., Swanson R.A., *Quando l'adulto impara. Andragogia e sviluppo della persona,* Franco Angeli, Milano, 2008

Kanizsa S., *Che ne pensi? L'intervista nella pratica didattica*, Carocci editore, Roma, 2013

Kearsley G., Moore M.G., *Distance education. A system view of online learning*,

Keegan D., *Theoretical principles of distance education*, London New York : Routledge, 1993

Ligorio B., *Come si impara, come si apprende,* Carocci editore, Roma, 2003

Mantovani S. *Problemi, possibilità e limiti della ricerca sul campo in educazione*, Mondadori Bruno, Milano, 1998

Morabito M. G., *Online distance education: historical perspective and pratical application* \USA! : Dissertation. com ; 1999

Morin E., *La testa ben fatta. Riforma dell'insegnamento e riforma del pensiero,* Raffaello Cortina Editore, Milano, 2000

Mortari L., *Cultura della ricerca pedagogica: prospettive epistemologiche,* Carocci editore, Roma, 2007

Motteram G., (2006) 'Blended' education and the transformation of teachers: a long-term case study in postgraduate UK Higher Education. BJIET, British Journal of Educational Technologies, 37 (1), p. 17-30

Odoardi C. (a cura di), *Valori e innovazione. Mobilitare le risorse umane nelle organizzazioni*, Apogeo, Milano, 2012

Orefice P., *Pedagogia sociale. L'educazione tra saperi e società*, Bruno Mondadori, Milano, 2011

Pieri M., Ranieri M., *Mobile learning. Dimensioni teoriche, modelli didattici, scenari applicativi, Unicopli, Milano,2014*

Ranieri M., *E-learning: Modelli e strategie didattiche,* Erickson, Trento,2005

Sità C., *Indagare l'esperienza. L'intervista fenomenologica nella ricerca educativa,* Carocci editore, Roma, 2012

Web site list

ALMALAUREA, XIX INDAGINE-

http://www2.almalaurea.it/cgi-

php/universita/statistiche/framescheda.php?anno=2016&corstipo=LS&ateneo=70010&faco

lta=1252&gruppo=13&pa=70010&classe=11065&corso=tutti&postcorso=0480107305800

001&isstella=0&disaggregazione=tutti&LANG=it&CONFIG=profilo

AMARA-

https://amara.org/it/subtitling-platform/

ART ATTACK-

https://en.wikipedia.org/wiki/Art_Attack

AVIDEMUX-

avidemux.sourceforge.net/

CAMTASIA-

http://shop.techsmith.com/store/techsm/en_GB/pd/productID.289432000

COMMISSION STAFF WORKING PROGRAM-

http://eur-lex.europa.eu/resource.html?uri=cellar:73591c12-8afc-11e6-b955-

01aa75ed71a1.0001.02/DOC_2&format=PDF

CONSIGLIO EUROPEO-

http://www.consilium.europa.eu/it/policies/youth-employment/

CORSI GESTIONE MOODLE-

https://e-l.unifi.it/course/index.php?categoryid=585

DM 616/2017-

http://www.miur.gov.it/-/modalita-acquisizione-dei-crediti-formativi-universitari-e-

accademici-di-cui-all-art-5-del-decreto-legislativo-13-aprile-2017-n-59

DOODLE-

https://doodle.com/en_GB/

ENCICLOPEDIA TRECCANI-

http://www.treccani.it/enciclopedia/knowledge-society_(Lessico-del-XXI-Secolo)/

EUROFOUND, NEETs REPORT-

https://www.eurofound.europa.eu/sites/default/files/ef_files/pubdocs/2012/54/en/1/EF1254
EN.pdf

EUROFOUND, SOCIAL INCLUSION OF YOUNG PEOPLE -

https://www.eurofound.europa.eu/publications/report/2015/labour-market-social-
policies/social-inclusion-of-young-people

GUIDA DELLO STUDENTE-

https://www.st-umaform.unifi.it/upload/sub/guida-dello-studente/2017-18/op3528-
int_online.pdf

GO PRO ACTION CAMERA-

https://shop.gopro.com/EMEA/cameras/hero6-black/CHDHX-601-master.html

IL CERVELLO ACCESSIBILE-

https://ilcervelloaccessibile.wordpress.com/progetto/

IL POST-

http://www.ilpost.it/2017/07/17/giovani-italia/

IL SOLE 24 ORE-

http://www.ilsole24ore.com/pdf2010/Editrice/ILSOLE24ORE/ILSOLE24ORE/Online/_Og
getti_Embedded/Documenti/2017/11/30/Istat-Occupati-e-disoccupati.pdf

ISTAT, ARCHIVIO-

https://www.istat.it/it/archivio/208110

ISTAT-REPORT SODDISFAZIONE CITTADINI

https://www.istat.it/it/files/2016/11/Report-soddisfazione-
cittadini.pdf?title=Soddisfazione+dei+cittadini+-+22%2Fnov%2F2016+-
+Testo+integrale+e+nota+metodologica.pdf

LA FORMULA DELL'ACQUA-

http://www.corriere.it/alessandro-davenia-letti-da-rifare/18_marzo_12/formula-dell-acqua-
alessandro-d-avenia-letti-da-rifare-625ba8ec-255c-11e8-8868-620b5c6d46c4.shtml

MENTIMETER-

https://www.mentimeter.com/?utm_campaign=powered%20by%20mentimeter%20button&
utm_medium=web-
link&utm_source=govote&_ga=2.119140361.1859930111.1519834191-
1383766573.1519834191

OBS-

https://obsproject.com/

PREZI-

https://prezi.com/

REGOLAMENTO PF24-

https://www.unifi.it/upload/sub/percorsi_formativi_24cfu/dr_approvazione_regolamento_2
4cfu.pdf

SCREENCAST.COM-

https://www.techsmith.com/screencastcom.html?_ga=2.230674076.1660400976.15060892
25-2141967001.1506089225

SIAF-

https://www.siaf.unifi.it/index.php

THE BIG BANG THEORY-

https://en.wikipedia.org/wiki/The_Big_Bang_Theory

VALMON-

https://valmon.disia.unifi.it/sisvaldidat/unifi/

ZOOM AMAZON-

https://www.amazon.it/Zoom-Registratore-digitale-accessori-APH-

2N/dp/B005GOGHPM/ref=pd_lpo_sbs_267_t_2?_encoding=UTF8&psc=1&refRID=9YY

Q6WPQTXP5SNWDG024