Is the professor still useful in the age of the Internet?

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Abstract

Purpose: The work sets out to evaluate what impact the Internet may have on university teaching. Leaving aside the evident advantages that have been produced by this technology and considering its all-pervasive nature in the daily life of today, the accent here is placed on those things that may be regarded as the threats and opportunities that have been opened for higher education.

Methodology: To appraise the various factors drawn into this argument a short survey of students and teachers was conducted at the Department of Management at the University of Verona.

Findings: Higher education cannot ignore this disruptive technology, but consideration of certain face-to-face areas of the education process leads to the view that blended educational methods with both online and face-to-face activities is the way forward to best meet the needs and demands of students.

Practical implications: The paper lends itself to initiating discussion in the university as institution on the planning of the processes of change which will inevitably affect universities.

Originality/value: These aspects have as yet still not been addressed much in the literature, particularly by way of direct investigation in the field.

Keywords

disruptive technologies; innovation; face to face course; on line course; higher education

1. Introduction: origin and aims of this work

The following thoughts have two origins. One, a rereading after some time of a question discussed in the past (2007) by Umberto Eco in, "la bustina di Minerva", his regular column in a well-regarded Italian political and financial weekly magazine. The other, observations on what is happening in university lecture theatres, especially in those that are well attended where there is general use of technologies connected to the Internet and the palpable effects of this on the abilities of students to listen and the challenge that this presents for the lecturer in terms of his or her public speaking.

The "irreverent" question raised by Umberto Eco was one provocatively posed by a student to a professor: "excuse me, but what is your use in the age of the Internet?"

The suggestion is that the information available on the Internet is infinitely greater than the knowledge possessed by the lecturer, who in the student's question is implicitly therefore superseded by the technology.

It is only an apparently rhetorical question and the answer almost inevitably distinguishes between information (the Internet) and education (through the teacher).

It is indubitably true that the Web contains a quantity of information that goes beyond the knowledge of any professor. The problem would appear therefore to be resolved by making it clear that information is one thing and seeking it out is quite another. It is a matter of selecting, accepting or rejecting information and putting it all in some sort of logical order so the proper conclusions in relation to the purposes for which it was sought in the first place. That is, as has been said, it is necessary to distinguish between providing information (transferring news and data) and teaching (generating selective and interpretative abilities).

As a matter of fact the question was already historically mooted at the time of the introduction of the printing press and the spread of books. The same question could have been posed in the face of the mass diffusion of information through the cinema, the radio and television. In each of these cases the situation has always resolved itself with the "survival" of the teacher. If anything these innovations have expanded the public audience that is reached by the teacher.

The exponential development of the use of the Web, and its all-pervasive nature, has led to our taking up the question again in an effort to understand the current situation. In particular that is whether behind the scenes there are aspects that would suggest a more complete answer than that formulated, or whether there really is nothing new under the sun and that lecturers will continue to carry on the role that they have always had, fundamentally that of educating their students, as something which cannot be taken away by any kind of technology.

It could in effect be argued that the Internet, as a technology based on the diffusion and sharing of necessarily digital "objects", such as information and knowledge, the student now has everything he or she needs to be able to teach him or herself. The teacher would thus no longer be needed or required only for the construction of objects that would then be uploaded to the Web.

It should not indeed by forgotten how technology has "taken over" many services, whether manual (of the barman) or intellectual (the bank cashier, the shop assistant in great retail stores or travel agents' booking services) and that it is rapidly extending its range to take in professional activities such as architectural drawings. Given the very nature of the Internet, that is to say a completely revolutionary technology, there have been changes within professions that seemed quite untouchable, such as those of the physician and the lawyer, and such changes have become apparent to all. The patients and the clients in the Internet age are better informed and more critical and quite able to put the professional on the back foot thanks to the knowledge he or she has been able to glean from the Web. In the university and

in education in general the spread of online courses is a matter of fact and online degrees are no longer anything new.

The critical point for the university teacher in the traditional lecture hall environment, that is face to face with the students, is not so much the existence of the Web itself as the impact all the connected phenomena, such as Google, Facebook, Twitter, You Tube and WhatsApp, not to mention the simple email, have on two essential aspects of human and social life, namely listening and time itself.

The fact is that at the time of Guttenberg, the introduction of the printed book was a new technology which aimed at the spread of knowledge and as a support for learning. A long time however was associated with the use of this technology time which favoured further thought, reflection, discussion and dialogue.

Today Twitter, like all the most communication technologies, is all about the short term, the instant, the immediate and it could indeed be said that it inhabits the world of short time. This speeding up leaves no spaces for the spread of reflective thought as the door opens to the age of briefism, distraction, superficiality (Bartezzaghi, 2012) and, we could add, an age of magic. This is magic as the omnipotence produced by a technology that covers everything and has no access barriers, providing an immediate response, or appearance of a response, to every question.

The result is all that which is not brief, like a lesson or lecture, may seem to be somewhat passé , out of its time, because it is far from the frisson of the instant where no further thought is needed and only the superficiality of an immediate response is sought (on the value of slowness see Baccarani, 2008).

It should be said, on the other hand, that the anxiety of being an active participant in a network increasingly prevents people from participating in any discussion that does not take part in virtual space because "you are available to the network", "you fear exclusion from the network". In this way there is a pressure to abandon and exclude from real life every more demanding form of participation. It is a reality consisting of pure virtuality that makes it ever more difficult to raise the gaze to look the other in the eye and engage in a dialogue that is not mediated by technology. The phenomenon is ever more evident during lectures as the teacher becomes increasingly aware of the difficulty in having students make their own opinions public for fear of its being judged by others. There is sometimes a fear of not having something interesting to say, as well also as a difficulty in actually building a dialogue that is not entertained in virtual space.

These attitudes also have a negative effect on the ability of people to listen to all forms of human communication, which needs by its nature longer timescales and pauses for reflection.

It is often also found that students in the university lecture hall, especially where this is crowded, never switch off their mobile device from its Web connection, even though its presence in silent mode may not be evident to the teacher. It continues however to divert the attention of the student in the various ways proposed by the technology on its continuous day-to-day basis.

An artificial silence is therefore generated. It is an unreal silence because it consists of a succession of visual messages or various mute cues that produce their siren calls for attention; it is in short a "deafening silence".

The result is that the levels of attention in the lecture theatre may appear to the lecturer to be very high but this may not be so where the students' attention is constantly being called upon by information that is circulating on the Web.

It goes without saying that this puts the teacher in the position of having to "invent" ways of reaching that are capable of holding the audience's attention in ways that prevents those in attendance from succumbing to the call of the Web.

The preference for "briefism" introduced by the speeds imposed by such technology also has negative effects abilities to concentrate and on reading and working on written material of substance: The consequent risk is a flattening out the contents and to the "barbaric" cutting and pasting found on the Web. It is a short step from this to delegating all content to a search engine, and one which has in part already been carried out by the Google selections.

It is true on the other hand that the Internet and all its technologies have great advantages that can be seen everywhere, perhaps even more keenly felt by those of the generation of the undersigned who lived in the prehistoric times (40 years ago) when we used cyclostyle duplicating machine with copy-paper to spread ideas, along with telephone booths used for the lack of a complete network to get to answer a question. There was a slowness in obtaining information where it is available today with a simple computer click. With the passage of time came the fax and the weird and mysterious science-fiction sounds produced on establishing a connection, while we waited with childlike awe, as if in a dream, as this magic opened up the scenarios of the world.

It is also true that the speed itself is by its nature exhilarating because it embodies the challenges of primacy and a projection towards ever new horizons.

We cannot fail to observe how human progress through technology has changed and inevitably continues to change the behaviour of individuals. The car, cutlery, writing and the telephone have all profoundly changed our experience of reality, offering us new possibilities and imposing new boundaries. There has also been a steady convergence between the human and the artificial, with mechanical and electronic prostheses of various kinds available, pace-makers, blue tooth, Google glasses and the use of robots that become ever more human in their ways of working (Borgmann, 1984).

If, however all of this is governed by a technology the seductive fascination of which becomes an agent that prevails over the user himself, where the question shifts from "what can we do with the technology" to "what can the technology do with us", the question certainly begins to take on a quite different hue. There is a risk that there will be weakening of thought and the disappearance of critical abilities, with results that are shown with a visionary clarity by such works as Fahrenheit 451by Ray Bradbury, 2001 A Space Odyssey by Arthur C. Clarke and George Orwell's 1984.

In this regard we share the fear expressed by Umberto Galimberti where he says: "I fear that information technology will change our intelligence, rendering it ever more "convergent", while the fact is history moves forward only through the presence of "divergent" intelligences. Convergent intelligence is that which finds the solution to the problem starting out from how the problem has been posed (in the case of information technology this is the "program"). Divergent intelligence finds the solution by turning the terms of the problem on its head, as Copernicus did when he came up with the hypothesis that it was not the Earth but the sun at the centre of the universe. It is clear that the Powers that be gain advantages from mass convergent intelligences, and hence uniform intelligences, the "standard thought", even where it is not actually a "standard feeling" (Galimberti, 2014).

From this perspective the challenge the Internet poses for the university teacher and the teaching processes of the universities themselves would seem to be quite different from that brought about by the spread of the book and the revolution represented by the printing press. The challenge throws up questions that demand some thought to ensure that the opportunity presented by these wonderful technologies does not transform itself into a threat to a culture that as yet today, is fortunately possessed of human traits.

On the basis of these premises and to get ourselves moving forward on this matter we put the question referred to at the beginning to two groups of students and to all the colleagues at the Company Economy Department of the University of Verona.

The thought in the following pages was thus developed in the specific educational context of company economics and management studies.

The idea has been to start a discussion with the aim of evaluating in which direction the profession of university teacher should be moving in the context of this environment described above.

2. An outline of the study conducted and some possible scenarios for university educational methods

As briefly mentioned the study gathered the thoughts of the students directly, while the students themselves were divided into two groups, and the teachers who interact with them were also called upon to give their views.

It should be said from the start that the work does not claim to provide indications that have a general validity, both because the study is limited to the cultural environment of that of the company management department and also because the groups were not selected on a random basis.

This is an exploratory study. What we set out to do with this study was simply to identify some areas for debate, within which an analysis could be offered of the phenomenon in question from a multiplicity of points of view that could grasp the deeper aspects of the issue.

What emerged from the study was however sufficient for the author to form a first view of the phenomenon as submitted to the attention of the interested reader, at least to the extent that the reader may be stimulated to wish to reject or refute its content.

The two groups of students were taken from the first year and the final undergraduate years of Company Economics studies.

In the first case there were 16 volunteer students taking part in the study after attending a crowded course that involved the participation of an average of 150 students. In the latter case there were 28 students that amounted to the totality of a fifth year class at the end of lessons, reduced therefore on account of approaching examinations and the absence of any requirement for their physical attendance at lessons.

As has been said, as regards the teachers, an attempt was made to involve all colleagues of the Company Economics Department of the University of Verona, with a total of 49 people excluding the undersigned author.

The qualitative method used was that of the direct interview structure.

The students were asked to answer the following question as hypothetically asked by a student contemporary of theirs: "according to you what is the use of the university teacher in the age of the Internet?".

The colleagues in the department, after presentation of the initiative at the council of the department, were asked to participate by giving their answers to the question cited at the beginning, as received from a hypothetical student: "excuse me but what is your role in the age of the Internet?".

The questions were put in such a way as to elicit open answers that were also therefore descriptive on the part of those participating in the study, which in the case of the students had to put down their thoughts in written form over a time of 15 minutes.

The university teachers, on the other hand, were left a free choice for their response time, with only a date given as the final term for the sending in of the responses. 21 of the 49 colleagues (43%), myself excluded, answered within the given term while for the others the request had to be repeated until in total 43 replies.

Not all of the responses obtained were used. The ones which were excluded were those that revealed a "dutiful" response by their tenor rather than one actively felt. By way of example

consider the response of a colleague that would have replied to the student concerning his presence in the lecture theatre in the age of the Internet: "Excuse me, but in the age of the Internet, why did you bother enrolling at university?"

Thus in the group of first year students, of the sixteen taking part in the study we were able to use all 16 answers, possibly because of their voluntary adherence to the study. In the case of the final year students we were able to use 18 replies from the 28 participants (64%),while in the teacher's group we could use 30 responses out of 43 (70%).

With regard in particular to the teachers' group we found in the answers some evaluations which were referable to possible university teaching scenarios in connection with the spread of the Internet and communication-related technologies. These scenarios take up the broad debate on the advisability-necessity to open up the university to online teaching.

There are essentially 4 possible scenarios we consider worth outlining before introducing the results of the survey and these can be summarised as follows:

- the dominant and colonising teacher, international reference points of excellence in research and education that will transmit their lessons on line, "the word". The local teacher will have only to adapt the concepts and models to the local context and answer the queries of students;
- the specialist teacher, who realises on line courses and puts them up on line, carrying out supporting activities for the students, dedicating the majority of his or her time to research;
- the Hollywood teacher, realises on line courses with authentically cinematic productions based on a specific screenplay and story;
- the interactive teacher, holds face to face courses integrated with the use of modern technologies relying on students for the co-creation of the courses.

Obviously these scenarios may be variously combined as between each other, as they may also be aligned with others introduced as a result of further observations of or developments in the available technology.

What can be said up to this point is that the responses gathered lead to the complete exclusion of the possibility of continuing with face to face courses that ignore the spread of these modern communications systems. This is due to the principle of symmetry between reality and humanity in the face of the changes that technological innovation inevitably brings.

This factors concerned must in any case lead to some soul searching on what kind of education is offered by the university in the light of the strategic choices that the Internet calls into play. It is not only therefore for companies and business (Porter, 2008) but also for educational institutions in general and universities in particular (Useem, 2014), due also to the innumerable vectors of change created by the enduring economic crisis, by the reduction in public funding for universities and by the need to have revenues from students. There is an ever more clearly delineated prospect of the need for continuous learning and the spread of the disruptive technology that is the Internet (Henry et al., 2014).

3. What is the use of the university teacher in the age of the Internet: students' answers

As previously mentioned the answers received from the students are divided into two groups, those from first year and those from final year students who chosen to continue with studies after the first three-year undergraduate period. The first group was faced with the radical changes to the organisation and teaching procedures at university as compared with those they had experienced at secondary school, while the latter group was close to leaving their educational experience at university and to approaching the world of the employment market.

As indicated the responses were open so they had to be broken down into summary types which were subsequently grouped together on the basis of similarities of substance, rather than in terms of the way that they were expressed.

The results were the following in order of prevalence.

The university teacher is useful in the age of the Internet where he or she (first year students):

1. Is able to transmit, emotion, passion and interest in the subject presented 9
2. Is able to give a sense and meaning to the information and spread critical and selective abilities 5
3. Is able to foster dialogue and generate forms of personal and social interaction 4
4. Is able to act as a guide and mentor 2

The number of answers exceeds the number of colleagues actively taking part in the study (16) because some gave more than one answer.

Some of the phrases that can be taken from the answers formulated clearly stress the above points:

"What we are studying must be learnt with passion and interest and these can be transmitted by a person not by a machine".

"The university teacher is essential because he or she can make sense of the data and becomes a point of reference for us where able to transmit wisdom and the ability to get by in real situations".

"What students need is human contact as they seek to be acknowledged".

"The university teacher is like a director of works at a mine and he must provide suitable tools for the extraction of the precious stones".

The university teacher is useful in the age of the Internet where he or she (final year students):

1. Is able to general forms of personal and social interaction 11
2. Is able to transmit, emotion, passion and interest in the subject presented 7
3. Is able to make sense of the information and spread critical and selective abilities to the students 6
4. Is able to act as mentor and guide 3

The number of answers exceeds the number of colleagues actively taking part in the study (18) because some gave more than one answer.

In the same way it is also in this case useful to consider a selection of phrases from the responses elicited:

"Learning and the cultural growth of a person depends on dialogue and the interpersonal exchange of knowledge and experience".

"The university teacher has an important role because he or she conveys their passion for the subject taught, involving us in the subject in ways that help as the think between the lines, on condition that the teacher is motivated and believes in what he or she is doing".

"The key role of the university teacher is that of connected in the various arguments binding them together by a logical thread that can uniquely and personally enrich the appreciation of the students and their ability to bring a critical ability to the subject".

"The university teacher should be a guide that sheds light on the chaos of the Web".

All of the answers, albeit with stylistic variations, recognised the importance of the role of the university teacher.

All incidentally also confirmed the importance of the Internet and emphasised the need to know how to use it according to discriminating criteria for analysis, assessment and selection of information indicated on the Web.

From the responses elicited a classification of homogenous categories can be made in each of the two surveys, differing however due to their hierarchical positioning as regards the replies gathered from those of the first and those of the fifth year.

The groups had in common the positioning of the role of the university teacher as guide and mentor in the final position, which reinforces the importance of understanding how to analyse, evaluate and select the information from the Internet, stressing quite other reasons for the importance of the university teacher.

The reasons given in support of the value of the university teacher sketch out an almost ideal picture who at the beginning must be able to convey emotions capable of stimulating interest, love and passion for his or her subject, whatever that may be, while at the end of the time at the course of studies the ability emphasised is that of fostering dialogue and forms of personal and social interaction in a context that is in any case founded on the critical and selective abilities of the student.

4. "Excuse me, but what use is your role in the age of the Internet?"

In the case also of the faculty teachers themselves there answers elicited were open so it was necessary on reading them to categorise them according to summary concepts which were then grouped according to similarity of meaning, irrespective of manner of expression of the views, according to a similar procedure therefore to that followed for the students.

The results obtained were those shown here in obtained in order of prevalence.

In the Internet age I, (Department colleagues) am here to:

1. Engage in dialogue for the building of knowledge together   10
2. Communicate passion, enthusiasm and an appetite for knowledge   9
3. Develop human relations   8
4. Transmit tacit knowledge, experiences and emotions   7
5. Foster curiosity, doubt, openness to new things and to discussion   6
6. Stimulate problem solving faculties   5
7. Be a guide and facilitator of learning   5
8. Generate and ability to read between the lines and understand complexity   4
9. Inspire, educate, open up the mind to dreams   3

As with the previous survey the number of answers exceeds the number of colleagues actively taking part in the study (30) because some gave more than one answer.

Also in this case it is useful to take up some significant phrases from the responses of the teaching staff distinguishing between Phd students, researchers and associate and full professors, considering their different experiences and their degree of proximity to Internet technologies, with particular regard also to the young people who were born in the age of the Internet.

Phd Student:

> "I am here so that you can see in my eyes the passion I have for my job, which includes answering your questions, I am here to transmit my curiosity for the subject to you and be stimulated by your own curiosity, I am here because we can exchange our ideas and our opinions".

Researchers:

"It is up to us to transform the risk of having our place taken by a smart phone, tablet or personal computer as we get rid of the activities of lesser value and focus on those most useful to the student's learning process".

"The students are immersed in the technology and the teacher should also be able to use it as an educational tool".

"What the teacher gets across in the lecture room is not just a question of facts, but also a narrative, a joint enterprise, the transmission of ideas, passion and also of doubts".

"In the lecture theatre the teacher no only a notion but it is also a story, joint participation and the transmission of ideas, of passion and also of doubts".

"I believe that the student-teacher relationship (as well also as student-student relationship) not only develops knowledge but also reinforces positive values of sharing and being together. In this way we are also building a little piece of our society".

"The university teacher can be a trainer for dialogue, for comparison and for relationships that are all essential aspects for the growth of the individual and for the creation of knowledge".

"In the age of the Internet the constant bombardment of opinions means we have to find the time to create "our own opinion" and the university teacher should in his or her lesson give us back that building time to free our thoughts and really call them into question".

Associate professors:

"I am here to educate, in its etymological sense of leading the person out, to carry out a task that cannot be left to the Web, one made up enthusiasm, experience, dreams and examples".

"The learning processes require the presence of the person capable of transferring the logic to deal with a complex problem (the mainframe) and the experience accumulated in dealing with problems (expertise)".

Full professor

"The Internet informs, the teacher forms".

"If teaching is interactive and participatory the role of the teachers continues to be fundamental, but that is really only possible where the teaching is of a relatively small number of students. When there are hundreds of people in the lecture theatre I do not see a great deal of difference from learning at a distance and traditional lessons".

"There are some human connotations that the university teacher can transmit that cannot be substituted by other means: passion, the throw-away joke, feelings and the improvised example".

"Real learning requires an act of trust (I would almost dare to say love) between he who gives and he who takes, producing a virtuous circle thanks to which he or she who gives also takes and he or she who takes also gives. That is why the Internet cannot replace the teacher in the essential role of facilitator of learning".

"My work is to pose questions, trace logical threads, find connections between apparently unlinked pieces of information, all those things that the Internet cannot do".

I of course also have my own personal answer to the question as formulated. My answer was written before being in a position to read the replies of my colleagues of the students and, albeit with some differences, follows the general thread of the responses of department colleagues.

Having said this, the response I would personally have given to the student's question would be would have been that shown in the lines that follow, listed in the order of my personal priority.

In the Internet age I, (Claudio Baccarani) am here to:

1. *Give value to human conversation and convey emotions*
2. *Foster curiosity and the ability to ask oneself questions*
3. *Shake up and encourage creative thought*
4. *Seek to read complexity*
5. *Emphasis the role of the individual in groups*
6. *Create the conditions under which the student can learn to learn*

Apart from the question of any analyses of the differences and similarities between the opinions of my colleagues and my own personal view, a matter I would not consider as having a particular cognitive significance, I do feel it is useful to note how each response illustrated that there exists a problem that goes well beyond what was apparently introduced by the initial question.

As previously stated, all the views collected emphasise the revolutionary force of this technology, as well as the challenges that it throws up.

They also however draw attention to the differences between this technology and the nature of face to face teaching which should be safeguarded in the interests of the students as a person wishing to actively participate in the life of the community.

What there is no longer space for in the new world of communications media is the lesson based on the simple conveyance of notions and knowledge in a one-way flow from teacher to student.

5. The university teacher still has a useful role if ….: considerations opened up for debate

At this point, on the basis of the results of the study conducted and of the thoughts gathered in the preceding points, certain thoughts arise that open areas for debate on the subject raised.

1. The Internet and its applications belong to technologies that are disruptive in nature even for the university environment due to the changes brought about by global connections free from space and time boundaries and in large part also not subject to cost restrictions
2. Much more information is carried on the Web than can be possessed by the university teacher, but this information is not always in itself valid due to the absence of filters for the entry of information and data onto the Net. The importance of the role of the

university teacher as guide for the student in his or her choice of high value sources is assured, as regards the fact finding and educational value of these sources.

3. Given the "discreet charm" of the Web and the risks it brings with it in terms of superficiality and the rarefaction of human relations, the teacher has also to act to sustain a form of "technological intelligence" capable of reading this technology and adapting to his or her own needs.

4. Support must be give to sustain "divergent intelligence" able to find innovative solutions by turning the terms of the problem on their head rather than being limited to use of direct "convergent intelligence" applied to solving the give problems, that means working to keep the mind opened to the new (Mc Cullogh, 2014).

5. Knowledge is an eminent candidate for putting into digital form, at least its explicit part, which could lead to the thought that the Internet will lead to the replacement of the lecture theatre with digitalisation of courses of the MOOC type (Massive Open Online Course), despite the difficulties that have been encountered with the experiments thus far embarked upon. There are a number of factors that are pushing in this direction, among which the need to reduce the costs of university education and the opportunities that are opening up in the field of continuous learning by virtue of the gradual disappearance of old forms of employment and the rise of new kinds of work that are still not easy to define (The Economist, 2014).

6. There are however some aspects of the matter that lead to the view that the value of face to face teaching emerges with renewed force as the way to give critical competence to the students so that they become endowed with an autonomous ability to analyse, judge and select information.

7. In reality the effort and the practical tasks involved in being physically present at a lesson or lecture (including preparing oneself, going out, getting to the location, getting seated in the hall, following the lesson, remaining there after it with the teacher and the other students) amounts to a "liturgy", or a "rite" that confers sense, importance and existential value on the activity itself and puts the student mentally in a place that he or she cannot be when in front of a PC screen or a tablet.

8. It is quite a different thing following a video lesson, even if this in an interactive form, from being at the lesson live. It is like the difference between seeing a film at home and going to the cinema, where in the former case the "disturbance" variables are innumerable, while in the latter concentration is facilitated for viewing the screen, also by virtue of the collective participation in something that gives something that cannot be received in virtual space.

9. The contemporaneousness of the event makes the lesson a different experience because in seeing the lesson in a replayed viewing the connection with the others, with their interests, their questions, their emotions and doubts is lost, all of which convey the sense of taking part in something that is bigger than and that transcends the single individual (Ward and Shortt, 2013).

10. The university teacher is a living being that explains, interacts, specifies, makes mistakes, makes corrections, interprets, constructs and enriches, generating a fuller cognitive experience than that received in virtual education.

11. Emotional exchange is created with the teacher that moulds and facilitates learning through the telling of stories and narration of experiences that also lead to the common construction of the learning process.

12. The Internet in any case represents however a formidable opportunity to enrich and renew educational formulae, which means that the university teacher must frequent the networks of relationships used by their students in order to enter into dialogue with them, arouse their interest and curiosity and increase interaction and dialogue levels.

13. The network may also facilitate the common construction of the educational process by integrating the teacher's knowledge and that of the students on what is available on line with regard to the subjects under examination and put to the attention of the students.

14. The importance of this factors pushes in the direction of maintenance of the face to face educational activities and excluding the revolutionary "everything on line" scenario. But the pressure of the new excludes the scenario "nothing new under the sun" that is the classic face to face situation that retains its appeal only in advanced courses where the institutional part is reduced (Michel et al., 2009). So, more consistently with the demand of students and social growth seems to be a "blended" scenario with an institutional on line part and an applied and critical lecture theatre part with small groups distributed through the week at suitable hours (Bailey et al., 2014; Poon, 2012).

15. Many of the advantage of face to face tuition in the lecture theatre are lost where the hall has a very large audience such as to make interaction difficult. In these case Internet technology could turn out to offer a great opportunity: it could in fact break down the course into a part of the knowledge that is explicitly communicable in digital form and a tacit and experiential part that is divulged to the assembled hall divided into small alternating groups at different times and where these groups interact between themselves and with the lecturer.

16. The digitalised student already exists; in a sense the student who does not come to lectures can already be considered such. Even if not studying using digital forms he or she is studying in the absence of the university teacher those subjects that are on the curriculum, while the Web could also help to get round this situation with the introduction of on line courses for the explicit part of the material and dedicated evening and weekend encounters for detail interactive examination of the subject on a face to face basis.

17. To go down this path it's not so easy because the teacher has: to love what he or she teachers, to play the role of teacher with true empathy, to use innovative educational methods while changing the ways of doing the same things where the changes are only apparent since the public is always changing (Baccarani, 1999).

18. Besides, the teachers must be able to draw on certain theatricality capable of conveying emotions with the narration of the knowledge and capable of involving the students in the common construct of the educational process, where this is fun, stimulates interest and snuffs out any boredom before it has a chance to form in the lecture hall. It can be said that the university teacher has to play the following roles:
   - Scene setter, director and actor in the educational performance
   - Listener to emotions
   - Stimulator of curiosity
   - Question poser
   - Response builder
   - Spreader of creativity
   - Pointer to the importance of the individual
   - Project inspirer
   - Group trainer
   - Surveyor of the future

   and in these roles he must be contemporaneously: brilliant and humble, willing to listen and authoritative, sensitive and demanding, curious and reflective and stimulating and competent.

19. Will all of these roles be reproducible by robot professors with respect to which the human beings will carry out ancillary functions because the machines will be more highly evolved than they are? It is just this frontier of artificial intelligence that the colossuses of

the Google and Network are working on (Rampini, 2014) in their explorations of the power of this technology

20. If the speed of technological change over the past 40 years is considered it is very hard to believe it is true. Would it not be an idea to reread the writers who took a look into the future (such as Isaac Asimov, Ray Bradbury, Arthur C. Clarke and George Orwell) and begin to see them as builders of scenarios rather of fantasies?

21. So, the answer to the opening question is yes, the professor is still useful. For the time being the technology will not able to substitute the teacher, but for the future… it is another challenging story.

Not to end here, some quotes to think about

Good teaching is more about giving the right questions than the right answers, Josef Albers

What the teacher is, is more important that what he teaches, Soren Kierkegaard

I dream of one day founding a school in which young people could learn without boredom, and would be stimulated to pose problems and discuss them, Karl Popper

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