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# Digital Education: International Perspectives, Local Responses

Persone, Ambienti, Didattica:
verso un modello integrato
per l'innovazione

Univesrità di Padova
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Federica Web Learning
Università di Napoli Federico II

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- There is a contradiction in the name itself of Universitas. The ambition and the message of open research and culture, and yet with a limited access

- The relevant cost of high-quality education remains a decisive element in limiting the democratic role of universities.

## A closed Universe

There is a contradiction in the name itself of Universitas. The ambition and the message of open research and culture, and yet with a limited access.
The development of human knowledge has been fueled by the protection of intellectual property, which has turned into an instrument of social, economic and political privilege.
It is only with the advent of large-scale public universities that the conditions have been created for a truly open academic environment. But it still is a highly controversial process. Most US top-ranking universities remain the bastion of elite enrollments, with European academic institutions lacking the financial means to remain competitive on the scientific cutting edge while also fulfilling their mission of inclusiveness.
The relevant cost of high-quality education remains a decisive element in limiting the democratic role of universities.
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- Place and scale can be considered the most relevant among the various factors contributing to the costs of tertiary education.
- Then came digitalization. Breaking the place barriers and promoting large scale distribution at very low costs.

## Place and scale ./.

Place and scale can be considered the most relevant among the various factors contributing to the costs of tertiary education. The costs of constructing and maintaining campus buildings and facilities as well as the costs for student lodgings and transportation account for a large percentage of the overall tuition expenditures. Place also contributes in an indirect way, by largely limiting scalability: academic teaching is still managed as several centuries ago, in a closed room for a small number of attendees.
Then came digitalization. As we well know from the penetration of digitalization in other sectors – from e-commerce to fintech and to e-health – breaking the place barriers and promoting large scale distribution at very low costs are the fundamental drivers of the digital revolution.


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- By being open access and with a massive global reach, MOOCs had the potential to disrupt both pillars of universities' economic constraints.
- Clayton Christensen: A disruptive innovation
- Ten years later, we know that this has not been the case. No disruption has taken place.
- However… the future is fast arriving

## ./. Place and scale

With the sudden eruption of MOOCs on the global academic scene in the early tens of this century, many observers followed Clayton M. Christensen's clue that this may have well been a case of disruptive innovation. By being open access and with a massive global reach, MOOCs had the potential to disrupt both pillars of universities' economic constraints. The time seemed to have come for universities to at last fulfill their universal mission.

Ten years later, we know that this has not been the case. No disruption has taken place. Changes brought about by digitalization have been important, in some areas of the globe even very important. But a bird's eye view of the overall academic system, at this moment, shows no sign of a radical transformation.

However, also as a result of the Covid exceptional boost, the forces of change are gaining momentum. And it is becoming all the more urgent for those in charge, at various levels, of the university governance to become aware that the future is fast arriving.

- Online learning is a complex phenomenon. A comprehensive picture is offered by a recent issue of Rivista di Digital Politics, available open access.
- I shall follow Mark Brown's guidelines in his article on «Major trends shaping online learning futures». RdP 3/21
- With a few additions which reflect my professional experience.

## Online learning: A decalogue

Online learning is a complex phenomenon. Its evolution over the last thirty years can be analyzed from a variety of perspectives, with a growing empirical literature. A comprehensive picture is offered by a recent issue of Rivista di Digital Politics with a focus on «Online education», available open access, with several articles in English and a few in Italian. A distinction now to a large extent obsolete thanks to translator software as deepL.
For the sake of time, I shall limit myself here to a sketchy overview, leaving everyone free to go deeper into any topic through a personal GPT conversation with the articles.
In my recap, I shall follow Mark Brown's guidelines in his article on «Major trends shaping online learning futures». I am lucky that, by speaking after him, he may be kind enough to accept my version of these trends, with a few additions which reflect my professional experience.

- OER, Open Educational Resources, movement was the original spark
- Making the best educational resources from top ranking institutions available worldwide for free.
- the magic of MOOCs: merging open access with the standard format of academic education: a course.
- With its lessons, units, reading materials and videos.

## Openness ./.

Open e-learning has a glorious history, dating back to the pioneer experience of the OER, Open Educational Resources, movement first promoted by a joint venture of MIT and the Mellon Foundation in the early years of this century. This was the original spark that indicated the possibility of making the best educational resources from top ranking institutions available worldwide for free. Interest, motivation and dedication began sprawling around the academic community, with more and more teachers becoming engaged into this new experiment.
Yet, it was only with the invention of the MOOCs that openness became a winning card. In fact, the magic of MOOCs consisted in merging the open access to educational resources with the standard format of academic education: a course. With its lessons, units, reading materials and – most important – videos.

- Videos were a crucial addition to the basic OER resources
- The other crucial addition were social media.
- The timeframe of social media explosion has been largely coincident with the MOOC era
- and a decisive factor for its rapid global diffusion.

## ./. Openness

Videos were a crucial addition to the basic OER resources, and could only become easily available – and downloadable – thanks to the recent progresses of ICT communication infrastructure.
The other crucial addition were social media. The timeframe of social media explosion has been largely coincident with the MOOC era, and a decisive factor for its rapid global diffusion.

- a massive audience is the most radical change brought by e-learning to the traditional teaching practice
- the sheer growth in the number of students offers the teacher international visibility
- mass attendance can produce an important economic contribution
- moving to an open and massive clss requires pedagogical and technological skills

## Massive

With over 250 million students enrolled in the major MOOC platforms globally and a growing number of courses passing the 1million learners' mark, the move to a massive audience can be considered the most radical change brought by e-learning to the traditional teaching practice. In three main respects.
First, the sheer growth in the number of students offers the teacher an unprecedented opportunity of international visibility. Second, depending on the business model, mass attendance can produce an important economic contribution to the author/platform/university. Third, moving from a closed classroom to an open and massive one requires pedagogical and technological skills leading to an upgrade and diversification of the teaching workforce.
With the exception of a small minority of dedicated and pedagogically savvy pioneers, academic teaching has been left – for centuries – to the personal skills of individual teachers. With digital education this era is drawing to an end, as can be seen from several universities starting to invest into online teaching and learning training centers

- interactivity is the core feature of the cyberspace
- Electronic interaction has an infinite potential.
- Online interaction is different than traditional face to face. It has got its tools, rules, and an extremely vast array of opportunities.
- online interaction is the Eldorado of digital education

## Interactivity

Everyone having access to Internet and to social media knows that interactivity is the core feature of the cyberspace. Everyone, except teachers. The ideological crusade against e-learning has largely centered around the lack of interaction between teachers and their students. The opposite is rather the case. Electronic interaction has an infinite potential. Of course, online interaction is different than traditional face to face. It has got its tools, rules, and an extremely vast array of opportunities. Wait and see when GPT will be embedded into online courses. Indeed online interaction is the Eldorado of digital education, and the race to how better to exploit it is the gold race of the e-learning frontier.

- Up to the Covid breakdown, there seemed to be a clearcut divide between online and onsite.
- Then, Covid lock-down turned distance learning into a mass experience, and the line between on site and online has been blurred.
- Hybrid learning has become the new goal, and the one where a lot of the innovation and competition is going to take place.

## Convergence

Up to the Covid breakdown, there seemed to be a clearcut divide between online and onsite. Onsite was the universal norm, with very few and mostly irrelevant exceptions among the leading academic institutions. Online was the residual territory of second-class universities, or corporate training. MOOCs introduced for the first time the challenge of ivy league online courses making e-learning appealing for highly motivated students.
Then, Covid lock-down turned distance learning into a mass experience. The result is that for larger and larger cohorts of the students' population the line between on site and online has been blurred. Hybrid learning has become the new goal, and the one where a lot of the innovation and competition is going to take place.

- The leverage of digital expansion, in all sectors, is the use of data.
- data can help improve students' performance in relation to their attitudes and goals. exceptional
- Yet, privacy regulation can be easily turned into a bureaucratic nightmare.

## Datafication

The leverage of digital expansion, in all sectors, is the use of data. Data have been extremely important for the rapid success of MOOC platforms as Coursera and edX, driving their marketing strategies and disciplinary choices. And data can bring exceptional improvements to the analysis of students' behavior, and to contributing to improve their performance in relation to their attitudes and goals. Yet, the use of data finds a legal and ethical barrier in a normative framework which is not easy to manage, with the risk that bureaucratic red tape becomes an impediment to innovation.

- The speed and scale of digital penetration is largely dependent on software standardization.
- MOOCs success story has been based on the business model of a few global platforms.
- With Covid' Great Onlining, the giant ICT corporations have imposed their oligopolistic control
- A red flag for the future of digital education

## Standardization

Students and teachers approach e-learning through a large variety of electronic tools. This is part of the flexibility and pluralism of the Internet environment.
At the same time, the speed and scale of digital penetration is largely dependent on software standardization. MOOCs success story has been based on the business model of a few global platforms – Coursera, edX, Future Learn – concentrating both the offer and the demand of innovative e-learning.
As the new game became much bigger when Covid 19 forced the Great Onlining, this was the chance for the giant ICT corporations to impose their oligopolistic control, by turning their telecommunication platforms – like Meet and Teams – into the gatekeepers of distance learning.
The poor quality and numerous limitations of these platforms for the needs and audiences of e-learning is a red flag for the future of technological – and economic - control over digital education.

- This is the fastest and most far reaching of all digitalization breakthrough
- where universities have the most favorable cost-benefits ratio
- TEMPS: a joint venture btw UniPd and Federica
- Italian degrees in English can become extremely appealing for students from the Mediterranean and the Asian countries.

## Internationalization

This is perhaps the fastest and most far reaching of all digitalization breakthrough, the one where universities have the most favorable cost-benefits ratio for eliminating the place and scale barriers.
The joint venture between Federica and the University of Padova with the TEMPS degree is a clear example of how numbers and quality can stick together in a path-breaking new learning experience.
The main limitation is bureaucratic. But once we succeed in loosening up access constraints, Italian degrees in English will become extremely appealing for students, especially from Eastern Europe and from the Mediterranean and the Asian countries.

- MOOC platforms have merged top quality academic content with the rapidly emerging market of continuous education.
- A move from the 3+2 Bologna framework to the extremely larger one of 30+20.
- Universities can exploit their prestigious background with Master degrees, now in skyrocketing demand on the continuous education market.

## Life-long learning

This may sound as the most difficult challenge to pursue, as it seems to fall outside the traditional university territory. Quite to the contrary, on both economic and bureaucratic grounds, it is the easiest to implement. In fact, a large part of the successful expansion of the big MOOC platforms stems out of their capacity of merging top quality academic content with the rapidly emerging market of continuous education. I have been using frequently the formula of a move from the 3+2 Bologna framework to the extremely larger one of 30+20.

The main advantages for universities lie in their well established and prestigious background with Master degrees, now in skyrocketing demand on the continuous education market. A competitive edge which is fostered by the possibility of a much easier normative adaptation to the e-learning format and distribution channels versus the first and second level degrees.

- As long as universities operate in a protected environment, their natural tendency will be to self-reproduction.
- Three limitations to this conservative trend
- The diminution of public funding, also in coincidence with a demographic decline
- will push universities to look for new ways to expand their audiences

## Competition ./.

I have left to the end the three most thorny issues. The main driver of innovation, needless to say, is competition. As long as universities operate in a protected environment, their natural tendency will be to self-reproduction, with little if any changes. There are, at the present, three limitations to this conservative trend.
The first one is the diminution of public funding, also in coincidence with a demographic decline, which will necessarily push universities to look for new ways to expand their audiences, outside their closed walls, towards the emerging market of lifelong learning.

- The pressure from a student population that is starting to consider digital education not just as an option, but as a right.
- The astonishing numbers of the rise of private universities in the digital environment, over the last three years.

## ./. Competition

Second comes the pressure from a student population that is starting to consider digital education not just as an option, but as a right.

Third and foremost is competition from outside the public protection. The astonishing numbers of the rise of private universities in the digital environment, over the last three years, show how the balance of academic power may shift towards new actors.

- The penetration of academic institutions from other language environments
- the exponential growth of MOOCs and e-learning in India and China.
- With the diffusion of instant translator software digital education is becoming the main territory for the conquest of cultural hegemony.

## Colonization

We see a – possibly – even darker picture if we consider the penetration of academic institutions from other language environments, with cultural and political implications we can only begin to envision. There is no time here to go into the exponential growth of MOOCs and e-learning in India and China, which had a tremendous surge in the Covid and post-Covid years. But, with the diffusion of instant translator software it has become all too clear that digital education is becoming the main territory for the conquest of cultural hegemony. The latest AI GPT evolution only adds speed and risk to this vital political challenge.

- The market forces are taking the lead over public institutions.
- Whenever innovation is at stakes, private actors can see the trend more clearly and catch the momentum much more quickly.
- However, there is ample space for individual universities to break new grounds and become trendsetters within their national academic community.

## Governance ./.

Here we come to the final – and crucial – question. How shall universities face the challenge of digital education? What is the landscape going to be, say, ten years from now?
As you may imagine, I do not have this answer.
What we can clearly see is that the market forces, at the moment, are taking the lead over public institutions. Whenever innovation is at stakes, private actors can see the trend more clearly and catch the momentum much more quickly..
However, this should not become an alibi for diminishing our efforts and commitment for a more inclusive and advanced learning environment.
While the overall macro picture indicates the emergence of new corporate actors and geopolitical forces, there is ample space for individual universities to break new grounds and become trendsetters within their national academic community.

- The path-breaking experience of ASU, Arizona State University, which has become the largest American university, with over 120k students comprising an e-learning cohort of 40thousand.
- While at the same time raising its academic standards and reputation, and considerably expanding its international constituency.

## ./. Governance

In some respects, one may even conclude that the sluggish reaction of most universities leaves more room for the few ones which are keen to exploit the vast array of opportunities that digital education provides.
In our journal, we have dedicated ample space to the analysis of the path-breaking experience of ASU, Arizona State University, which has become the largest American university, with over 120k students comprising an e-learning cohort of 40thousand. While at the same time raising its academic standards and reputation, and considerably expanding its international constituency.
As it is often the case with success stories of this entity, a good deal of the merit belongs to the governance, with an enlightened President who has run Arizona State over the last twenty years. Well, by saying this I am well aware that it may sound as an excuse for all Italian rectors, with their limited six years mandate…

# 15 anni di Federica Web Learning

- ★ Produzione Digitale
- ★ Innovazione Didattica
- ★ Networking
- ★ Internazionalizzazione
- ★ Ricerca & Innovazione

# Produzione Digitale / La Fabbrica

**50+**

professionisti multimediali

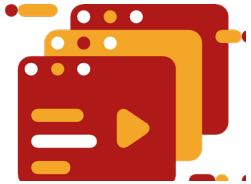
# Produzione Digitale / Iscritti

# Produzione Digitale / Learning Objects

**500**
MOOCs

**3.500**
Lezioni

**10.000**
Unità didattiche



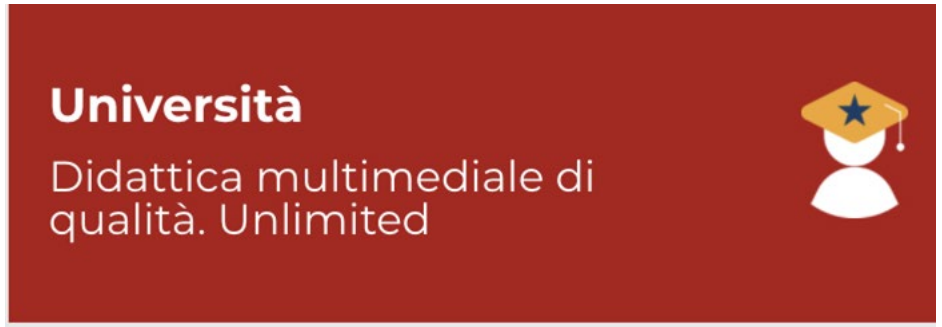
**150.000**
Slides

**10.000**
Video

**100.000**
Links

# Innovazione Didattica / Linee Formative

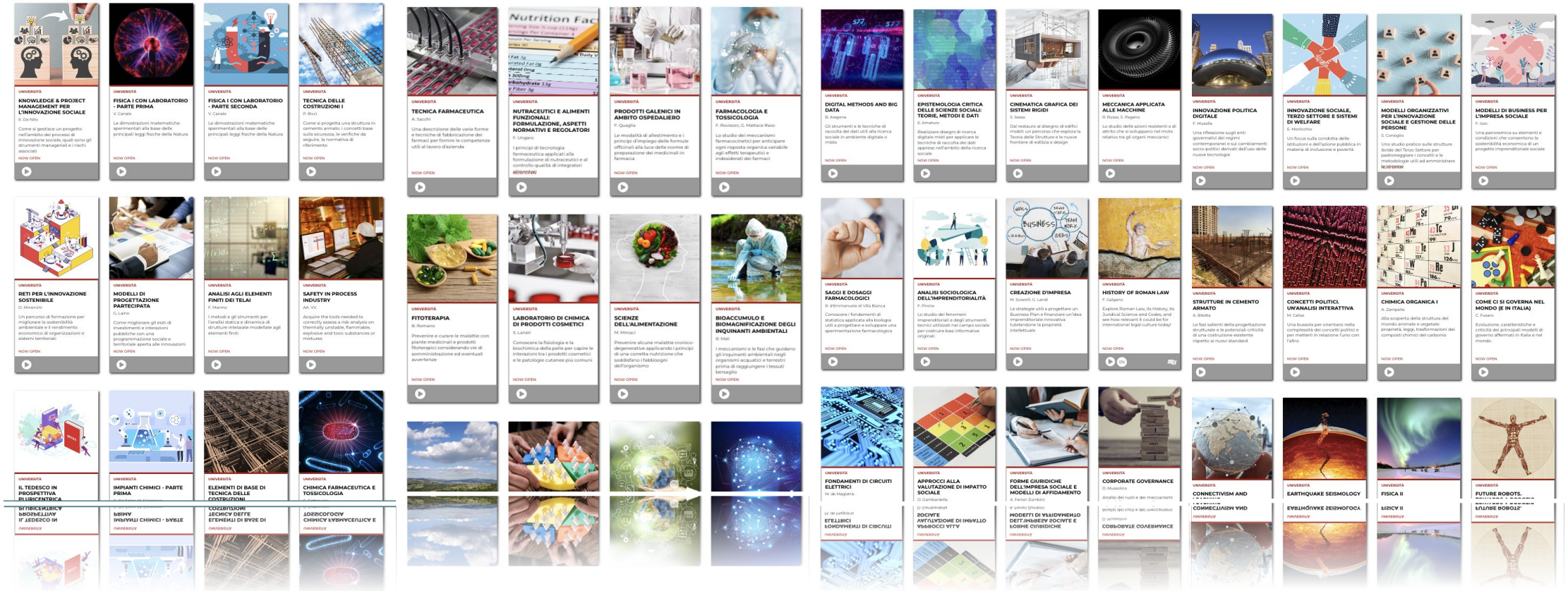
**ORIENTAMENTO**




**UNIVERSITÀ**

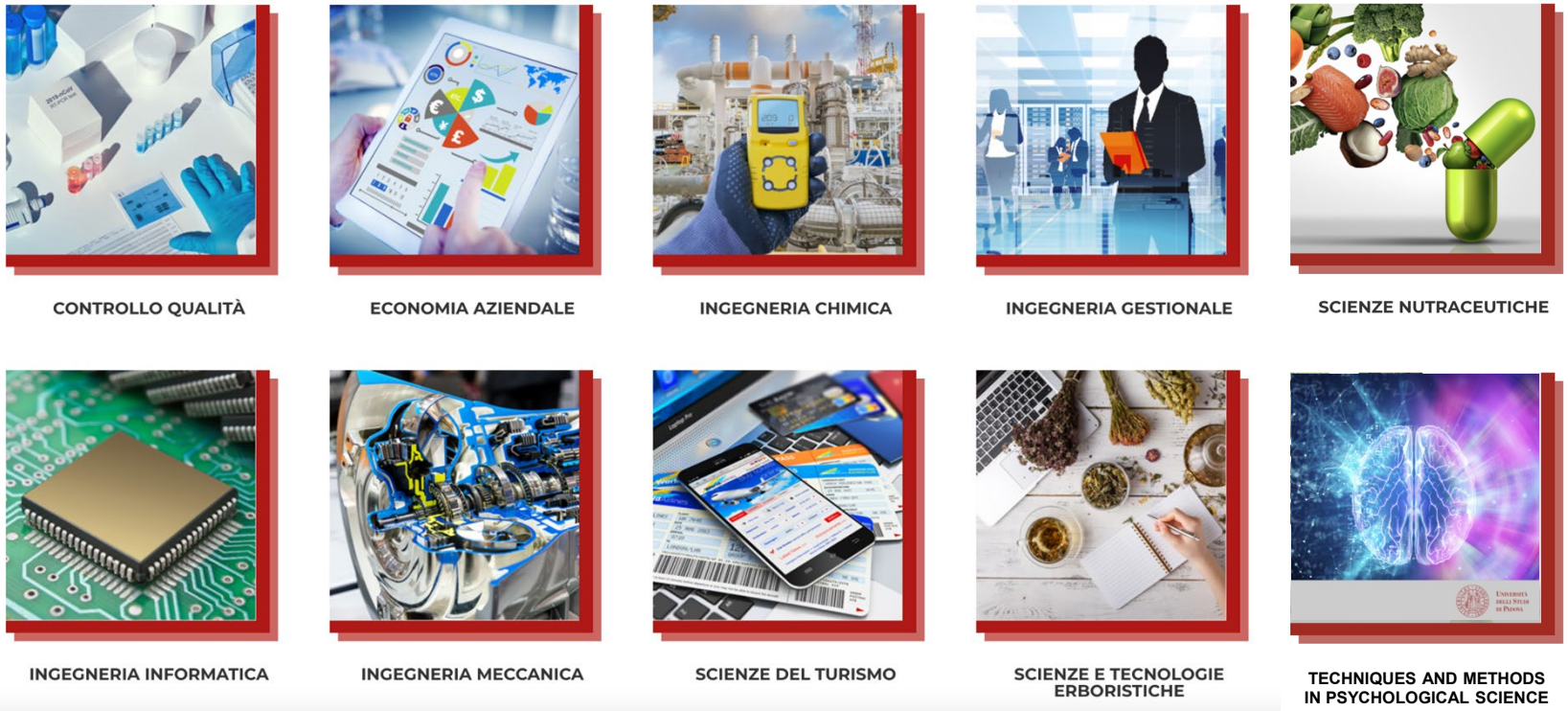
**LIFELONG LEARNING**

# Innovazione Didattica / Linee Formative / Università




## Corsi curriculari

# Innovazione Didattica / Linee Formative / **Università**




**10 Lauree Triennali**

# Innovazione Didattica / Linee Formative / **Università**

**ECONOMIA AZIENDALE LM**

INGEGNERIA MECCANICA PER L'ENERGIA E L'AMBIENTE LM

**INNOVAZIONE SOCIALE LM**

INDUSTRIAL CHEMISTRY FOR CIRCULAR AND BIO ECONOMY

**Università**

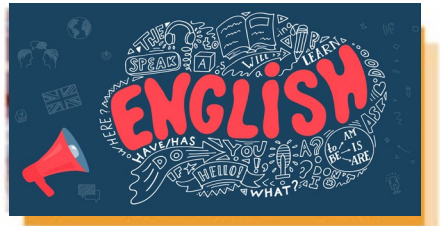
Didattica multimediale di qualità. Unlimited

## 4 Lauree Magistrali

# **Innovazione Didattica** / Linee Formative / **Lifelong Learning**

SMARTWORKING SFIDE & OPPORTUNITÀ

SOFT SKILLS




ENGLISH

BUSINESS INNOVATION & DIGITAL TRANSFORMATION

DATA VISUALIZATION

DATA SCIENCE CON PYTHON E R

ROBOTICS GOES MOOCS

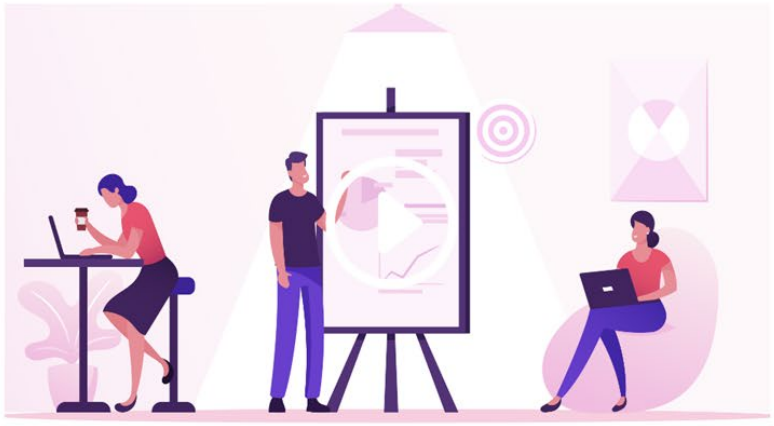
ITALIAN LANGUAGE & CULTURE

LA GOVERNANCE PUBBLICA DEI DATI

SMART EXPORT ACADEMY

**and more…**

# **Innovazione Didattica** / Linee Formative / **Lifelong Learning**

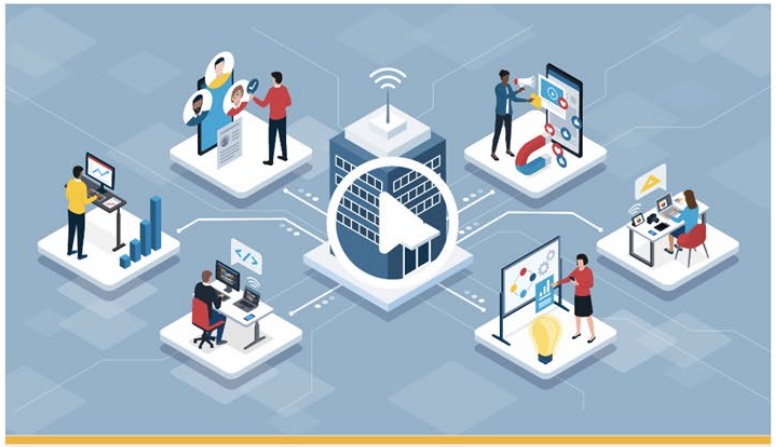


FEDERICA PRO

**SMARTWORKING – SFIDE E OPPORTUNITÀ**

Affronta in modo consapevole e positivo lo smartworking gestendo in modo efficace spazi, relazioni e strumenti per migliorare il tuo lavoro.

VAI AL CORSO



FEDERICA PRO

**REMOTE MANAGEMENT**

Le strategie per gestire il lavoro a distanza favorendo la produttività, il team building e l'impiego delle risorse tecnologiche disponibili

VAI AL PROGRAMMA

# Innovazione Didattica / Linee Formative / **Lifelong Learning**

- A1 - English
- A2 - English
- B1 - English
- B2 - English
- C1 - English

Coming soon

- A1 - Français
- A2 - Français

Coming soon

- A1 - Deutsch
- A2 - Deutsch

Coming soon

- A1 - Español
- A2 - Español

# Integrazione Didattica / Linee Formative / **Lifelong Learning**

Università degli Studi di Napoli Federico II

Università degli Studi di Milano Bicocca

Università degli Studi della Campania Luigi Vanvitelli

I Lincei per la Scuola Fondazione

Il programma “Intelligenza Artificiale e Scienza dei Dati” si occupa di due settori strategici per lo sviluppo tecnologico ed economico del Paese.
L’Intelligenza artificiale gioca un ruolo di primo piano nella nostra quotidianità, pensiamo soltanto alla domotica, agli assistenti virtuali come Siri o Alexa o al riconoscimento vocale dei nostri smartphone. Conoscere i linguaggi di programmazione Python e R consente di istruire computer e macchine a svolgere determinate funzioni e a fare in modo che replichino alcune caratteristiche umane.
”Intelligenza artificiale e Scienza dei dati” si compone di quattro percorsi strutturati per difficoltà crescente. Alla fine di ogni programma acquisirai competenze approfondite e specifiche sulle tematiche trattate. Imparerai il corretto utilizzo degli strumenti e dei linguaggi di programmazione attualmente più richiesti.

Il percorso di apprendimento è così articolato:

1. **Intelligenza artificiale e scienza dei dati – le basi**
2. **Machine learning e ingegneria della conoscenza**
3. **Il sistema cognitivo e il web**
4. **Python e R: introduzione alla programmazione**

# Innovazione Didattica / Linee Formative / **Lifelong Learning**

SMART EXPORT

L'accademia digitale per l'internazionalizzazione

**Smart Export Academy** è uno strumento innovativo di sostegno alla crescita internazionale del **sistema imprenditoriale italiano.** Con Smart Export aziende e professionisti beneficiano gratuitamente di percorsi di alta formazione manageriale e digitale per l'internazionalizzazione.
Il progetto nasce dalla collaborazione tra **Ministero degli Affari Esteri e della Cooperazione Internazionale** (MAECI), **Agenzia per la promozione all'estero e l'internazionalizzazione delle imprese italiane** (Agenzia ICE). **Conferenza dei Rettori delle Università italiane** (CRUI), **Federica Web Learning dell'Università di Napoli Federico II.**
Smart Export si articola in **6 percorsi formativi** ciascuno composto da 5 lezioni, fruibili on-line nell'arco di dodici mesi.
Smart Export è un progetto di alta formazione accademica, concepito come un percorso di accompagnamento personalizzato delle imprese nei mercati esteri.

# Internazionalizzazione / Economics & Finance

**Federica Web Learning** ha realizzato, in collaborazione con il **Dipartimento di Scienze Economiche e Statistiche** (DiSES), **2 dei 4 programmi online: Finance e Labor, development & policy evaluation.**

I 4 programmi sono composti complessivamente da **22 corsi** e nascono dall'esperienza dei docenti del **Master in Economics and Finance** (MEF), offerto dal Dipartimento di Scienze Economiche e Statistiche (DiSES) e giunto quest'anno alla sua **27esima edizione**.

**Ognuno dei 4 programmi di Economics & Finance** ha un focus diverso e potrà essere **fruito in maniera autonoma**.

DiSES
Dipartimento di Scienze Economiche e Statistiche

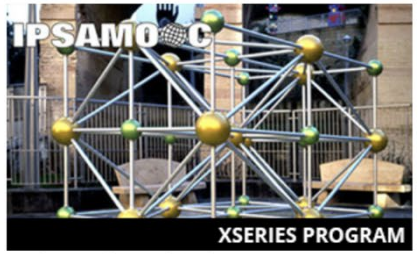
# Internazionalizzazione / MOOC Platforms internazionali

Con **oltre 270mila iscrizioni**, la Federico II è la **prima Università italiana su** [edX](), piattaforma Harvard&MIT.

**Federica è anche su** [Coursera]() - primo provider MOOC mondiale con oltre **82 milioni di utenti** - attraverso il primo programma in lingua italiana in **Data Science**, per lo sviluppo di competenze nei linguaggi **R e Python**.

# Internazionalizzazione / IPSA MOOC

Comparative Political Systems



Understanding Political Concepts

Comparative Research Designs and Methods

Democracy and Autocracy: Theories and Empirical Findings

Contemporary Issues in World Politics

Global Politics

Teoria Politica

**+85.000** iscritti edX

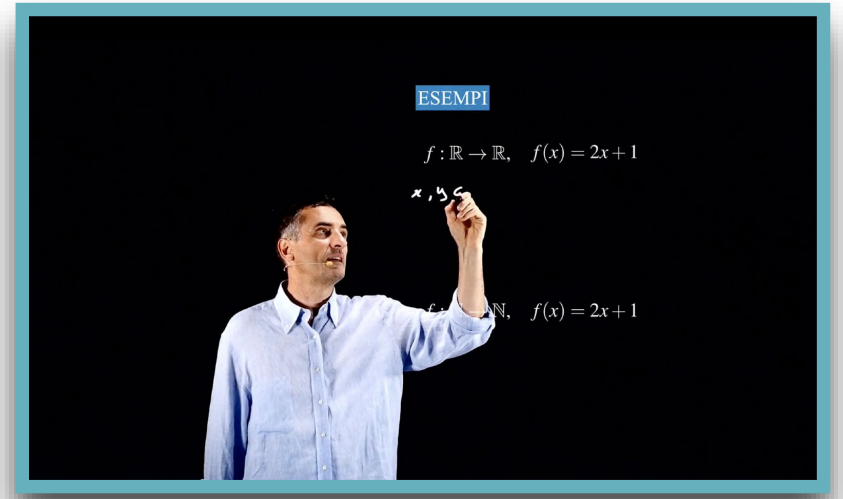
# Networking / Rete consolidata di collaborazioni

# Innovazione Didattica / Linee Formative / **Orientamento**

## I MOOC di Federica e CISIA per le conoscenze di base e i test

**Studenti e neodiplomati** possono **migliorare le proprie conoscenze e competenze** o **prepararsi ai TOLC**, i test universitari per valutare le conoscenze iniziali.

I corsi realizzati da **Federica Web Learning** in collaborazione con il **CISIA** (Consorzio Interuniversitario Sistemi Integrati per l'Accesso) sono stati progettati per supportare e consentire l'autovalutazione in diversi contesti.




**+100.000**
iscritti

**Coming soon:** Chimica di base, Biologia di base, Ragionamento logico

# Internazionalizzazione / TEMPS

The bachelor course “**Techniques and Methods in Psychological Science**” uses distance learning to allow access to high-quality training in the psychological field. The course is oriented towards a clinical and methodological preparation.
It includes the basic knowledge that characterize the different sectors of Psychology, the methods of scientific investigation, the skills on cognitive and emotional processes and their psychobiological bases.

The distance teaching provided includes two components: online teaching delivered through **MOOC on Federica** and **interactive teaching on the LMS platform**.

TECHNIQUES AND METHODS IN PSYCHOLOGICAL SCIENCE

N. course

13 courses

# Grazie!

UNIVERSITÀ DEGLI STUDI DI NAPOLI
FEDERICO II

Federica
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