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**Europardismo:
le politiche europee
della conoscenza**



MaCSIS

Master in Comunicazione della Scienza
e dell'Innovazione Sostenibile

AISA onlus



Associazione italiana per la promozione della scienza aperta

Cagliari 8-9/11/2013

UNIVERSITA' DEGLI STUDI
DI MILANO
BICOCCA

**DIPARTIMENTO DI
SOCIOLOGIA E RICERCA SOCIALE**

Via Bicocca degli Arcimboldi, 8
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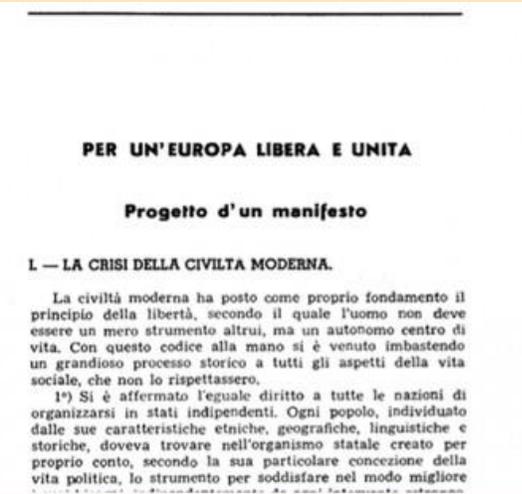
***Ventotene Manifesto* (1941-1944) conoscenza per la democrazia**



Tre principi

- Si è affermato il diritto uguale di tutte le nazioni di organizzarsi in Stati indipendenti.
- Si è affermato l'eguale diritto di tutti i cittadini alla formazione della volontà dello stato.
- Contro il dogmatismo autoritario, si è affermato il valore permanente dello spirito critico.

Questi sono i cambiamenti necessari per creare intorno al nuovo ordine un larghissimo strato di cittadini interessati al suo mantenimento, e per dare alla vita politica una consolidata impronta di libertà, impregnata di un forte senso di solidarietà sociale. Su queste basi, le libertà politiche potranno veramente avere un contenuto concreto, e non solo formale, per tutti, in quanto **la massa dei cittadini avrà una indipendenza ed una conoscenza sufficiente per esercitare un continuo ed efficace controllo sulla classe governante.**



Politiche europee
della conoscenza

- Ricerca
- Comunicazione
- Educazione

*“in today’s global economy knowledge is more like a **CURRENCY**: the trick is to make it work for you”*

Utilitarian argument

*“that’s why we want to turn European Union in an Innovation Union, the plan to get good ideas to market **FASTER**”*

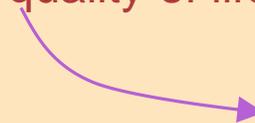
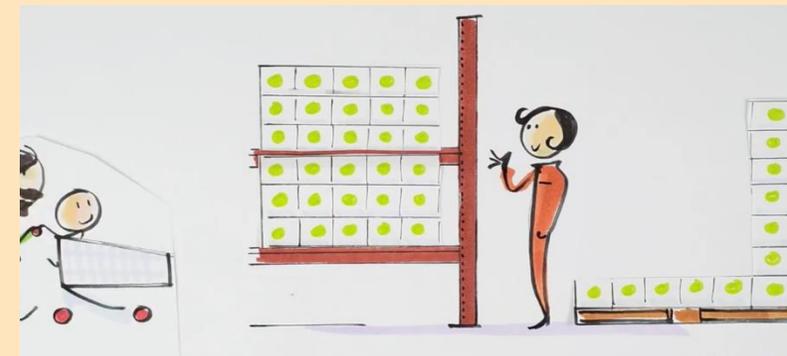
Acceleration, urgency

*“deliver innovation from the lab to the **MARKET** much faster than anyone dreamed in Europe”*

(Strong) economic orientation

*“to boost the economy, create jobs and **improve life**”*

Linear path from economic growth to quality of life



EC, 2014. Horizon 2020 video - General overview - European Commission. Available at: <http://ec.europa.eu/programmes/horizon2020/en/news/horizon-2020-video-general-overview> [Accessed March 25, 2015].

Ricerca: Horizon 2020



- **Positivismo:** nelle scienze naturali/sociali e nell'innovazione
- **Scientismo:** STEM (oppure non-scienza)
- **Naturalismo:** chi ha talento lo ha per natura, ed è meritevole
- **Paternalismo:** Science with and for society
- **Economicismo:** conoscenza come merce
- **Determinismo:** dissemination per la fiducia nella scienza
- **Short-termism:** lab-to-market
- **Quantofrenia:** numbers & deliverables
- **Managerialismo:** academic capitalism
- **Amministrativismo:** ricerca come servizio sociale

Dissemination

RESEARCH & INNOVATION

Participant Portal H2020 Online Manual

> H2020 Online Manual > Grants > Grant management >

Keeping records Amendments Reports & payment requests Deliverables

Dissemination & exploitation Communicating your project Acknowledgement of EU funding Checks, audits, reviews & investigations

Dissemination & Exploitation of results HOW TO

Under Horizon 2020, beneficiaries should engage in dissemination and exploitation activities. As Horizon 2020 is financed by EU citizens, it should benefit to the largest number and the fruits of the research reach society as a whole.

Dissemination means sharing research results with potential users - peers in the research field, industry, other commercial players and policymakers). By sharing your research results with the rest of the scientific community, you are contributing to the progress of science in general.

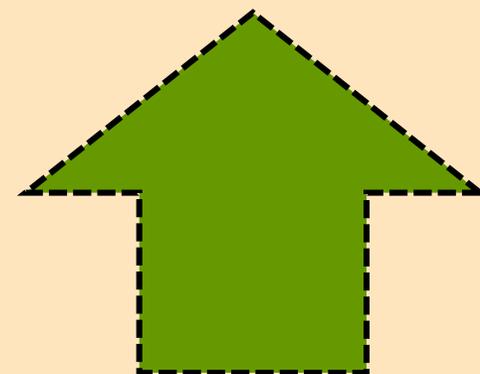
Whereas **exploitation** is the use of results for commercial purposes or in public policymaking.

Experience shows it's not always easy to meet these goals. As an applicant, it's useful to keep in mind the following:

There's often some overlap between between dissemination, exploitation and communication, especially for close-to-market projects. These guidelines are meant to help you. In addition the EU also provides a wide range of services to assist you in your dissemination and exploitation activities.

**Comunicazione:
Horizon 2020**

RRI (R.von Schomberg): Responsible Research and Innovation is a transparent, interactive process by which societal actors and innovators become **mutually responsive to each other with a view to the (ethical) acceptability, sustainability and societal desirability of the innovation process and its marketable products** (in order to allow a proper embedding of scientific and technological advances in our society)



RRI, Citizen science

Educazione: Science education now (Rocard 2007)



- Science to model **objective** reality
- **Science**: physical-, life-, computer-, and technology and, just for the purposes of the report, includes mathematics
- **Youngsters** do not develop interest for science taught in schools
- **Inductive** approach
- Inquiry-based science education (**problem solving**)

Errori!

A che serve la
scuola?

POPOLO-BAMBINO

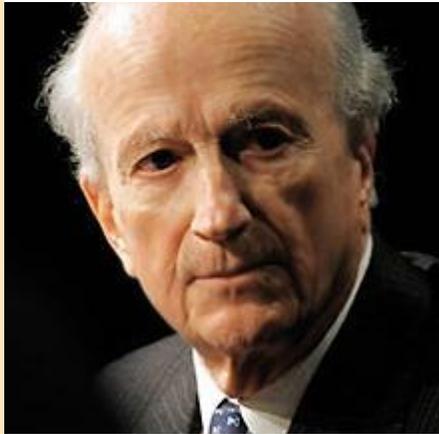
- Pio IX
- Vincenzo Cuoco
- Giuseppe Lombardo Radice
- Gaetano Salvemini
- Giovanni Gentile...

POPOLO DI CITTADINI

- John Dewey...
- Antonio Gramsci: operaio «filosofo senza saperlo», diminuire distanza «governanti-governati», «condurre il giovinetto fino alla soglia della scelta professionale, formandolo nel frattempo come persona capace di pensare, di studiare, di dirigere, o di controllare chi dirige»

- The original aim of my study was to estimate the money rate of return to college and high-school **education** in the United States. (1962)
→ Ho spiegato ai miei studenti...

POPOLO- MERCE



Gary
Becker

- For most parents, children are a source of psychic income or satisfaction, and, in the economist's terminology, children would be considered **a consumption good**. Children may sometimes provide money income and are then a production good as well. Moreover, neither the outlays on children nor the income yielded by them are fixed but vary in amount with the child's age, making children a durable consumption and production good. (1976)
→ *ho assicurato i miei figli...*
- The point of departure of my work on the family is the assumption that when men and women decide to marry, or have children, or divorce, they attempt to **raise their welfare by comparing benefits and cost**. (Nobel Lecture, 1992)
→ *ho assicurato mia moglie...*
- **Human capital**, intangible collective resources possessed by individuals and groups within a given population. These resources include all the knowledge, talents, skills, abilities, experience, intelligence, training, judgment, and wisdom possessed individually and collectively, the cumulative total of which represents a form of wealth available to nations and organizations to accomplish their goals. Human capital is available to generate material wealth for an economy or a private firm (Britannica.it)

→ **SCAMBIO DI MEZZI IN FINI** ←

1. Industria XIX sec.

Sostituzione di lavori 'skilled' attraverso la semplificazione delle operazioni. La conoscenza è concentrata nei manager.



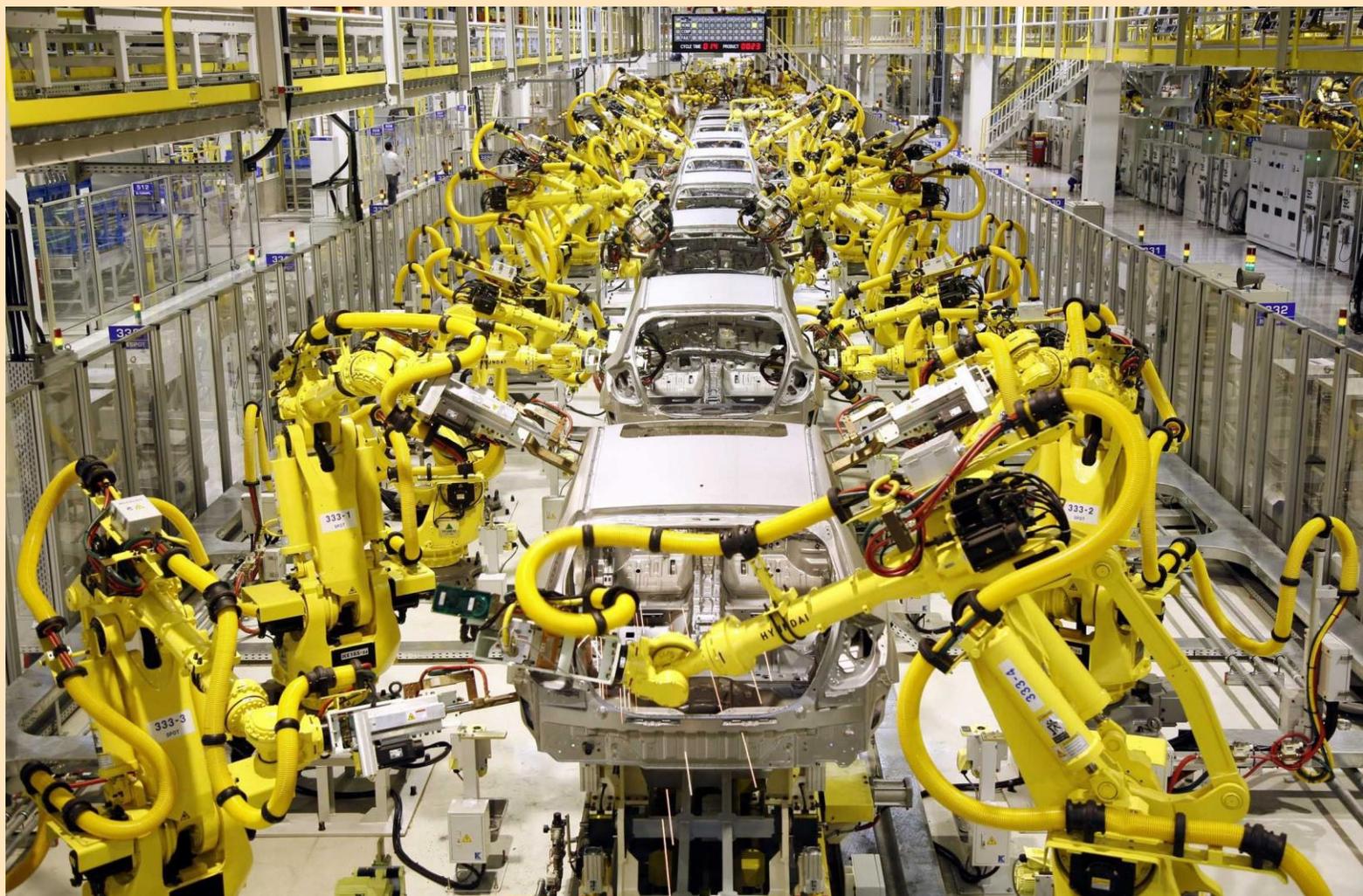
2. Computer XX sec.

Polarizzazione per sostituzione di posizioni salariali intermedie



3. Artificial Intelligence XXI sec.

- 47% dei posti di lavoro USA a rischio automazione
- si salvano i lavori ad alta intelligenza creativa e sociale



Growing

- 1 Analytical thinking and innovation
- 2 Active learning and learning strategies
- 3 Creativity, originality and initiative
- 4 Technology design and programming
- 5 Critical thinking and analysis
- 6 Complex problem-solving
- 7 Leadership and social influence
- 8 Emotional intelligence
- 9 Reasoning, problem-solving and ideation
- 10 Systems analysis and evaluation

Declining

- 1 Manual dexterity, endurance and precision
- 2 Memory, verbal, auditory and spatial abilities
- 3 Management of financial, material resources
- 4 Technology installation and maintenance
- 5 Reading, writing, math and active listening
- 6 Management of personnel
- 7 Quality control and safety awareness
- 8 Coordination and time management
- 9 Visual, auditory and speech abilities
- 10 Technology use, monitoring and control

Il futuro del lavoro

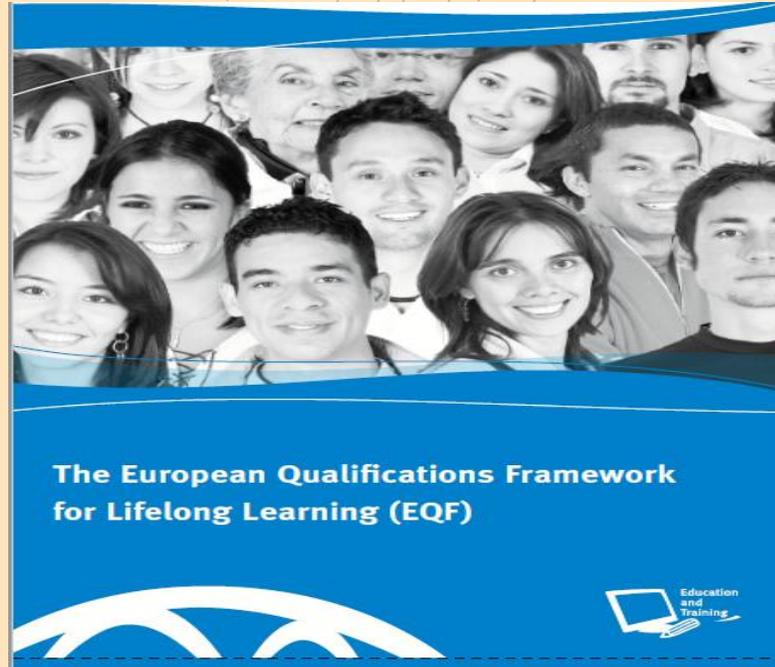
Source: Future of Jobs Report 2018, World Economic Forum

In many industries and countries, the most in-demand occupations or specialties did not exist 10 or even five years ago, and the pace of change is set to accelerate. By one popular estimate, 65% of children entering primary school today will ultimately end up working in completely new job types that don't yet exist.¹ In such a rapidly evolving employment landscape, the ability to anticipate and prepare for future skills requirements, job content and the aggregate effect on employment is increasingly critical for businesses, governments and individuals in order to fully seize the opportunities presented by these trends—and to mitigate undesirable outcomes.

World Economic Forum – The future of jobs and skills (2016)

Mossa n.1

EC 2008: la crisi non c'entra!



“**KNOWLEDGE**” means the **outcome of the assimilation of information through learning**. Knowledge is the body of **facts**, principles, theories and practices that is related to a field of work or study. In the context of the European Qualifications Framework, knowledge is described as theoretical and/or factual

“**SKILLS**” means the **ability to apply knowledge and use know-how to complete tasks and solve problems**. In the context of the European Qualifications Framework, skills are described as **cognitive** (involving the use of logical, intuitive and creative thinking) or **practical** (involving manual dexterity and the use of methods, materials, tools and instruments)

“**COMPETENCE**” means the **proven ability to use knowledge, skills and personal, social and/or methodological abilities, in work or study situations and in professional and personal development**. In the context of the European Qualifications Framework, competence is described in terms of responsibility and autonomy

Mossa n.2

EC 2018: *O, wonder! How many goodly creatures are there here! How beauteous mankind is! O brave new world, That has such people in't!*

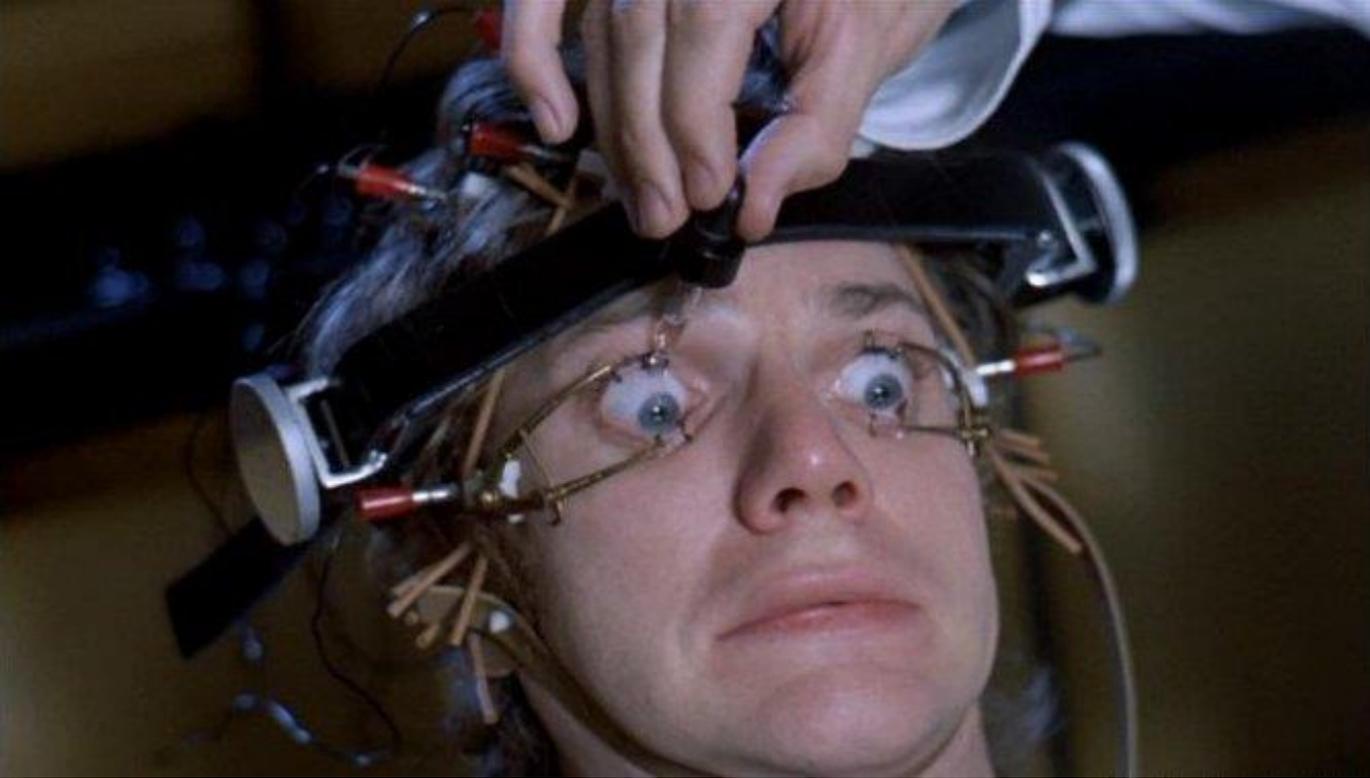


- It appears no longer sufficient to equip young people with a fixed set of skills or knowledge; they need to develop resilience, a broad set of **competences**, and the ability to adapt to change
- European Parliament and the European Commission pledge to working towards a Union "where young people receive the best education and training and can **study and find jobs** across the continent"
- Key competences are those competences all individuals need for personal fulfilment and development, employment, social inclusion and active citizenship. They are composed of 'knowledge, skills and **attitudes**' and go beyond the notion of only (academic) 'knowledge'.
- Education, training and learning settings face challenges in applying **competence-oriented approaches to teaching and learning**. Moving from a rather static conception of curricular content to a dynamic definition of the knowledge, skills and attitudes a learner needs to develop throughout the learning process requires a paradigm shift in education, training and learning, affecting the way it is organised and assessed.

Key competences

For the purposes of this Recommendation, **competences** are defined as a combination of knowledge, skills and attitudes, where:

- a) **knowledge** is composed of the facts and figures, concepts, ideas and theories which are already established and support the understanding of a certain area or subject;
- b) **skills** are defined as the ability and capacity to carry out processes and use the existing knowledge to achieve results;
- c) **ATTITUDES describe the disposition and mind-sets to act or react to ideas, persons or situations.**



competence

knowledge

skill

attitude

Estroversi

introverso: rinasci,
sarai più fortunato...

Due apprezzati *attitudes*

- **Enthusiasm** encompasses traits like sociability, friendliness, self-disclosure, gregariousness, and positive emotionality. Enthusiasm is primarily about social affiliation, but goes beyond sociability to include positive emotions, more generally, like joy, exuberance, and excitement.
- **Assertiveness** encompasses traits like leadership, dominance, provocativeness, activity, talkativeness, and persuasiveness. Assertiveness is more about social status than social affiliation.

S.B.Kaufman, *Scientific American* 9/6/2014

Quale politica?

Il fine della scuola non può esser fatto derivare immediatamente da una ricerca scientifica (o presunta tale), ma è frutto di una scelta politica: il risultato è infatti il cittadino di domani.

- Domanda espressa o sviluppo di civiltà?
- Educazione alle tecniche o alla tecnologia?
- Costruire un "esercito (post)industriale di riserva,, o diminuire la distanza governati-governanti?
- La conoscenza si trasmette (*k-transfer*) o si suscita?

Quale alternanza?

- Capitale = \$ + **idea imprenditoriale**
- Dove sono finite le scuole di formazione aziendale? L'Università non può sostituirle: per il bene delle imprese!
- Alternare ... cosa: il *lavoro* durante la formazione scolastica, o la *formazione* durante lo sviluppo lavorativo?
- Torniamo al *lavoro minorile*?
- Perché non reintrodurre il *servizio militare/civile obbligatorio* (3-6mesi) presso pubbliche amministrazioni, al termine del percorso di studi e "in linea con i loro piani di studi,,.

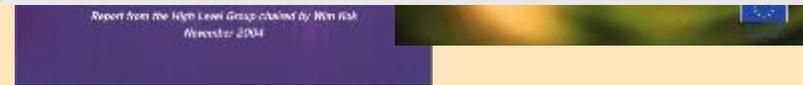
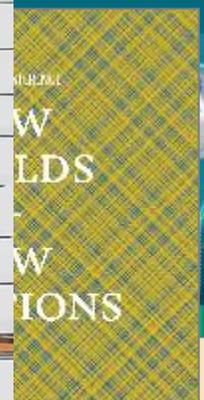
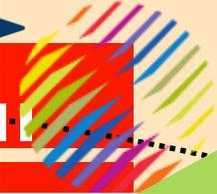
Alternando scuola e...



«inserire nella propria offerta formativa percorsi dedicati, promuovendo metodologie di insegnamento che favoriscono la dimensione pratica, una didattica incentrata sulla centralità dello studente e basata su casi reali, e valorizzando i collegamenti interdisciplinari presenti tra gli insegnamenti.» (Miur 2018)



Decadent parabola
from *k-for-democracy* to *k-for-...*



Ognuno faccia la sua parte...

From knowledgeable citizens to acquiescent consumers



«La scuola, come la vedo io, è un **ORGANO “COSTITUZIONALE”** [...], un organo vitale della democrazia così come noi la concepiamo. Se si dovesse fare un paragone tra l'organismo costituzionale e l'organismo umano, si dovrebbe dire che la scuola corrisponde a quegli organi che nell'organismo umano hanno la funzione di creare il sangue [...]. La scuola è organo centrale della democrazia perché ha la funzione di creare la **classe dirigente**, non solo nel senso di classe politica, di quella classe cioè che siede in parlamento e discute e parla (e magari urla), che è al vertice degli organi più propriamente politici, ma anche classe dirigente nel senso culturale e tecnico: coloro che sono a capo delle officine e delle aziende, che insegnano, che scrivono, artisti, professionisti, poeti. **Questo è il problema della democrazia, la creazione di questa classe, la quale non deve essere una casta ereditaria, chiusa, una oligarchia, una chiesa, un clero, un ordine. No.** Nel nostro pensiero di democrazia, la classe dirigente deve essere aperta e sempre rinnovata dall'afflusso verso l'alto degli elementi migliori di tutte le classi, di tutte le categorie.[...] Solo la scuola può permettere ai migliori di ogni classe di emergere e divenire classe dirigente.[...] L'articolo più importante della nostra Costituzione è **l'articolo 34** in cui si dice “la scuola è aperta a tutti. I capaci e i meritevoli, anche se privi di mezzi, hanno il diritto di raggiungere i gradi più alti degli studi”.»

Le due slide successive alla numero 24 contengono delle animazioni che si possono visualizzare solo aprendo l'allegato [Europarodismo-addendum.odp](#)