Digital school and flipped learning: two Trojan viruses from educational liberalism

A broad coalition of self-proclaimed experts, adventurous educationalists and self-righteous economists have taken advantage of the Coronavirus crisis and the subsequent closure of schools to bring two centrepieces of liberalism into the arena of educational debates. Namely: the digital school and "flipped learning". In this article we analyse these two strategies from three perspectives: the transmission of knowledge, educational inequalities and the economic context underlying this offensive.

Nico Hirtt,
Call for a democratic school, July 2020

This article is a slightly reworked version of a video-conference held on 30 June 2020 by the author, on the initiative of the Party of the European Left (EL)

In the real world, the lockdown resulting from COVID-19 has enabled the great majority of teachers to see what they had long suspected: that distance teaching and self-learning at home, especially through digital communication technologies, can at best only be stop-gap solutions imposed by exceptional circumstances or an occasional supplement to "face-to-face" teaching. The huge efforts made by many of them to maintain an educational relationship with their students, whether by email, by videoconference or by means of a platform dedicated to *e-learning*, will not have prevented the breakdown of social ties, the avalanche of dropouts and the deepening of social inequalities.

According to supporters of the digital school, the responsibility for this sad state of affairs is to be found in the lack of IT resources available to schools and in the lack of training in the correct use of these technologies by teachers. For these defenders of so-called "educational modernity", it was necessary to take full advantage of the crisis to "ensure that all schools participate in (a) general movement of educational transformation towards quality distance learning".[1] Paraphrasing Henry IV, they promise that, God willing, they will see to it that there is no worker's child in our capitalist school who doesn't have a PC or tablet on his or her desk.[2]

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1 Jean Hindriks and John Rizzo, members of the Itinera Institute, La Libre Belgique, 20 March 2020.

2 This promise is attributed to Henry IV: "If God gives me life, I will ensure there is no labourer in my kingdom who has not the means to have a chicken in his pot on Sundays"

Flipped learning

The lockdown has also given a boost to another fashionable doctrine: that of “flipped learning” or “flipped teaching”. Another? Not really, because a natural symbiosis seems to have developed between this pedagogy and the strategies for digitising education.

The principle of flipped learning is based on the idea that it would be useless to waste time in class transmitting theoretical knowledge: this could very well be done at home, via a video, a recorded lesson which can be accessed online, a scheduled course, etc. In this way, the time spent in class would be used to question, deepen and mobilise the knowledge that the student will have previously studied on his or her own, at home, probably in front of a computer or tablet screen. Here is the definition which the “Digital Educational Service” of the Wallonia-Brussels Federation gives to this type of learning:

> “Flipped learning means reversing or “flipping” the traditional concept of the classroom. The lecturing/teaching part of the course is delivered using ICT (video clips, self-study, virtual visits, podcasts, etc.). The discovery and learning of knowledge takes place outside the classroom, at the student’s own pace, while class time is devoted to active learning activities, debates and discussions. It can be said, therefore, that the transmissive part of the teaching is done remotely, outside the walls of the classroom while the “learning” part based on activities, interactions, discussions with the teacher, the other students, takes place ‘on site’, in class.”[3]

These claims about “flipped education” reveal a double error - or a double deception? On the one hand, they convey a caricature-type vision of the “traditional concept of the classroom”. But, on the other, by purporting to distance themselves from this traditional concept, paradoxically they are pushing it towards its most extreme form.

If the author of the above text is to be believed, the “traditional” teacher does nothing except rhyme off theoretical knowledge in the classroom, in front of pupils who are passively listening and recording his message. Undoubtedly we could find some teachers or professors who are letting the profession down in this way. But among our colleagues - and among the teachers under whom I had the pleasure of learning more than half a century ago - most do not fit this contemptuous description. The “transmissive part” of their lessons certainly does not just involve…transmission! Even during so-called “face-to-face” or “*ex-cathedra*” study sessions, they take breaks in the “transmission”, question their students, invite them to express their doubts or surprise, make sure that they have understood correctly, arouse their curiosity through small real or made-up digressions; they alternate explanations with questions, queries, dialogue, little problems; they generate discussions with pupils and between pupils, and interpret the bewilderment or lack of understanding in their expressions.

On the other hand, with flipped learning as with the digital school, that is to say, when “the transmissive part of the teaching is done at distance”, this

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[3] Hedwige D’Hocine, “Dossier TICE. La classe inversée : historique, principe et possibilités”, (“Flipped learning: history, principles and possibilities”) enseignement.be, 2017

is effectively reduced to passive listening, by the pupil, to a pre-recorded talk. One-way communication, which some believe they need to criticise in what they call “traditional education”, actually becomes a reality in the most radical way in their own project. It would be sufficient, they say, to “define the objectives of the lesson”, after which it would only be left “to choose the format of the work outside the classroom: video clips, documentaries, virtual visits to sites or museums, audio books, podcasts, books, articles…existing videos or videos produced by the teacher.”[4]

Theory and practice

In truth, flipped education, but also so-called “skills-based” learning, share with “traditional” education - at least in the caricature-type sense that they use - the same reductive vision of the relationship between theory and practice. If these three concepts are to be believed, theoretical knowledge would simply be unrefined “information” that you would just need to hear from a teacher, read on Wikipedia or discover on a “C'est pas sorcier” (“It's not rocket science”) programme, to be able to assimilate it. All that would then need to be done would be to use this knowledge in exercises and problems, which is done at home in the so-called “traditional” vision or in the classroom in the “flipped” concept. Under the skills-based approach, the problem is set out initially (“scenario”), before the pupils are sent off to watch a video or to search on Wikipedia for the theoretical elements that they need in order to resolve it. In either case, the argument is that the theory only makes sense to the extent that it is useful in practice.

However, whether on the educational level or on the epistemological level - in other words in the production and validation of knowledge - the relationship between theory and practice is in reality much more complex. In the process of developing knowledge, practical experience is essentially at the origin of “empirical” knowledge, that is to say simply factual: while walking, the hiker discovers a ford which allows him to cross a river; while playing, the child learns that the rattle falls to the ground when he lets go of it; by investigating working-class neighbourhoods or by working in them, Marx and Engels find out about the living conditions of the working class, etc.

But through recurring practice and the accumulation of empirical knowledge, questions will arise to which the answers are to be found in theory, that is to say, from an abstract representation attempting to provide a universal answer to specific questions: how to find a ford more quickly?; what is the general law which describes bodies falling?; why did the working class become poorer in the 19th century, despite the tremendous technical progress in machinery?

The answers to such questions are theories. They are the product of a process of abstract construction, which can include stages of generalisation, deduction, conceptualisation, induction, etc. For example, one might formulate the idea according to which fords would be found where rivers become wider; that the heavier bodies are, the more quickly they would fall;

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[4] ibid.

that the machine, by increasing labour productivity, should end up enriching everyone.

But the theory is then confronted with practical reality, with observation, generating surprises, contradictions which sometimes require a revision of existing ideas: to have a ford, it is necessary that the river widens but also that the current is fast there, otherwise we could very well find ourselves with a deep lake; without air friction or when it is negligible, all bodies fall with the same uniform accelerated motion, regardless of their mass; by replacing complex work with simple, repetitive work and by breaking down the old social relations which bound the skilled worker to his employer, mechanisation allowed 19th-century capitalists to increase the exploitation of the working class, thereby impoverishing rather than enriching it.

Therefore, practice is not only the goal of theoretical knowledge. It is also the source of questions which the theory is called upon to answer. And it is at the origin of empirical knowledge, the accumulation of which ends up generating “theoretical”, abstract knowledge. It produces observations which question all or part of the existing theories and force us to review our existing ideas. Finally, it is the ultimate and single criterion of the validity of theoretical knowledge.

We should add to all this that existing theories can in turn generate new theories. Mathematicians have done nothing else for centuries and centuries; the theoretical representation of the action of air friction combined with that of movement accelerated by weight makes it possible to construct a more correct theory for the fall of bodies; the Marxist analysis of worker exploitation in the 19th century combined with the study of the impact of information and communication technologies on work in the 21st century allow us to gain a better understanding of the current nature of this exploitation...and its indirect effect on educational policies, as we will see later.

It is this whole process of building knowledge that the good teacher will try to reproduce with his students. This does not necessarily imply so-called “active” principles of teaching, still less that the teacher lets himself fade into the background and forgets his role as leader and transmitter of explicit knowledge. But this supposes that he ensures that this non-stop to-ing and fro-ing between theory and practice, this repeated confrontation between the pupil's ideas and observation and/or other theories, will continue. In short, this supposes a teacher-student interaction which constitutes the soul of the educational relationship. It is precisely this relationship, this interaction, that the digital school tries to do without; or that flipped learning purports to relegate to tomorrow, when in fact it must be exactly concomitant with the transmission of knowledge; when it *is* the real and effective transmission of knowledge.

Let’s be clear. There are some exciting educational videos. There are some admirably well-constructed online courses. And it is certainly not contraindicated to gradually guide pupils towards getting to grips with new theories independently. The danger is not in the occasional use of digital or of the principles of flipped learning, but in elevating these to the status of pedagogical principles, of a system. Because then it is no longer about learning self-sufficiency skills, but rather the abandonment of our educational mission, at least of what is its most difficult and most important element: building knowledge.

Where does academic social inequality come from?

Some critics of the digital school focus on the fact that socially unequal access to machines would generate unequal opportunities for learning. They are not entirely mistaken, of course. In families where each child had their own personal computer, it was certainly easier to comply with distance learning instructions during the lockdown than in families where parents and children had to share a single device or, *a fortiori*, when no connection or no PC or tablet was available.

However, if it were just that, it would be sufficient to give all children a machine on an *ad hoc* basis and a connection to the network. But this would be to neglect other factors which generate inequity[5], which are more significant than access to hardware and whose effect is exacerbated by the digital school or by flipped teaching principles.

First of all, the material conditions for independent study/work at home are obviously very unequal. Some children have an individual room where they can work in peace, while others have to sit at the table in a room also used by others, shared with brothers, sisters, parents.

On the other hand, some children may be able to more easily or effectively call on an adult to help them with home study. When the educational institution abandons its essential role, namely the active transmission of knowledge via this pedagogical relationship which I spoke about above, then, more than ever, only those students who find individualised supervision outside the school environment, support, attention, answers to questions - which every child needs to be successful - will succeed. We are seriously mistaken if we are hoping to reduce inequalities by replacing homework by individual study on theory: the assistance of a competent adult is at least as essential to guide and support the student in understanding and getting to grips with new concepts as in the process of putting these into practice.

Finally, children do not “naturally” benefit from a positive relationship with academic knowledge and so with the demands of discipline, rigour, and effort required by working at home, even on a computer screen. Some have certainly taken on board the fact that academic success is the “normal” pathway in their communities; the pathway needed in order to become an engineer, a doctor, a lawyer, a teacher...like mum or dad. But for the children of the popular classes, who often are not bolstered by such professional ambitions, the relationship with school and with knowledge has to be built up day by day, hour by hour, in a constant dialogue between the teacher and the students. To the age-old question: “what's the use of me learning physics and history to work at McDonald's?”, we must respond by referring repeatedly to current events, to social life, to the major environmental and social problems which

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[5] I am referring here only to the educational dimension of academic inequalities. These factors are the ones which produce inequality during learning. Subsequently, structural factors - orientation, academic market - multiply these inequalities through social and academic segregation which we have described at length elsewhere.

concern them (or so that they are concerned about them...). It is about seizing the opportunities which arise, not before or after the “transmission” of knowledge, but precisely during this work, when an interesting question arises or when one observes that attention is wavering.

The trend is to reduce school time: shorter school days, periods of 45 minutes instead of 50, lesson times cancelled in favour of “interdisciplinary work”, “educational coordination” or useful training that is not always very convincing. This trend is likely to be strengthened further if the doctrines of “flipped learning” and the digital school continue to make inroads. This is undoubtedly quite well suited to children from the upper and middle classes, who can therefore enjoy a more comfortable pace of life, while benefiting at home from the help, supervision and enlightened support which they will have been deprived of at school. But for children from the popular classes, an ambitious and successful schooling means the opposite choice: more school! more time at school! And also a school that is open after class, during the weekend and during the holidays.

In the service of the markets

To understand the success - at least in the media - of the digital school and of flipped learning, we should not therefore be looking at educational theory. The truth is that these doctrines have come at the right time to meet the new educational expectations of capitalism.

Undermined by over-production capacities, the world economic system, which is running out of steam, is struggling to find new opportunities for growth. In the first place this generates a surplus of capital and therefore a search for new markets in which education is a prime target. Whence an initial, very basic, explanation of the discourse on the “essential digital revolution” in schools coveted by the GAFAM.[6]

Furthermore, the exacerbation of economic competition and the permanent tension that the economic context imposes on public finances combine to create an environment in which the School is required to reduce its costs - or at the very least to stop them growing - and to refocus on its “priorities”, namely its missions for the benefit of the economy. However, the educational expectations of the economic world have also changed, in particular under the pressure of changes in the world of work.

Let’s develop this point further.

Economic instability, combined with the accelerated pace of technological innovation, continues to reduce the time horizon for market predictability, technical production relations and therefore the requirements in terms of manpower and training. This is why the adaptability and flexibility of workers are now considered more important than their qualifications. According to the Council of European Ministers, it is necessary “to prepare citizens to be motivated and autonomous learners (...)

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[6] Acronym for the Web giants: Google, Apple, Facebook, Amazon and Microsoft

able to interpret the demands of a precarious labour market, in which jobs no longer last a lifetime". They must "take charge of their training in order to keep their skills up to date and preserve their value in the labour market".[7]

Another consequence: the extension or even polarisation of the levels of training required on the job market. For the many so-called "low-skilled" jobs, the number of which is exploding in the service sectors - counter sales, customer reception, workers in the *fast-food* sector, call-centre operators, delivery people, packers, etc.—, the required intellectual background is reduced to a requirement for adaptability and a few "basic skills": reading comprehension, elementary communication in one or two foreign languages, some concepts of maths, science and technology, a good dose of being at ease with digital, as well as some relational and social skills. The OECD is clear: "Not everyone will embrace a career in the dynamic 'new economy' sector. In fact, most will not, so school curricula cannot be designed as if everyone has to go far".[8]

The European Eurydice service concludes that "Schools are therefore forced to limit themselves to providing pupils with the bases which will enable them to develop their knowledge on their own".[9]

The most powerful components of Capital - high-tech companies and multinationals in the service sector - demand that the ordinary School should focus on this dual objective: flexibility and universal core competencies: that it does it well but that it does not seek to do more. It's a question of ensuring that everyone reaches a suitable level in the basics common to all jobs, that everyone has learned to fend for themselves when faced with new information or knowledge. Because once they are shared by all, these skills should no longer be recognised as qualifications in the labour market and may therefore be required of workers who are paid at the "unskilled" rate. Conversely, in the eyes of this Capital, it is useless to aim for a more ambitious common education. No need for great theories or classical literature, no need to study History or science in any depth, no need for a broad polytechnic or humanist education: all this will be provided sparingly, depending on the precise requirements of jobs at higher levels of qualification.

By encouraging the individualisation of learning and by giving more time and importance to the ability to use knowledge (skills) than to their conceptual understanding (theory), the digital school, flipped teaching and skills-based approach is responding perfectly to these requirements of cost reduction, flexibility and refocusing on the needs of the economy.

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[7] European Council (2012b). Conclusions of the Council of 26 November 2012 on education and training in the context of the Europe 2020 strategy – the contribution of education and training to economic recovery, growth and employment.

[8] OECD (2001). The school of the future. What future for our schools?

[9] Eurydice Unit of the European Commission (1997)

Contradictions

This vision of education is now promoted by major international bodies, such as the OECD, the World Bank or the European Commission, but also by powerful consultancies such as the McKinsey group. It is often justified in the name of so-called “modernity” and a pretence of “fairness”. Its advocates are generally in favour of the organisation of a common core of teaching up to the age of 15 or 16, centred on basic skills and independent learning. This makes it possible to reconcile the achievement of their minimum educational objectives, required for all citizens, workers and consumers, with the desire to limit the cost. The subsequent years of study will be devoted to differentiated and clearly hierarchical streams. This concept is already widely implemented in most of the more advanced countries. In French-speaking Belgium, it corresponds fairly closely to the aims of the Pact of Excellence (Pacte d’Excellence).

However, this vision runs up against internal contradictions, even within the dominant social classes.

A section of employers in fact fosters expectations which are a bit different in terms of the initial training for the workforce. Entrepreneurs in more traditional sectors, such as building or metal construction, have long complained of not being able to find enough qualified workers: masons, electricians, welders, etc. Often their complaints reflect less a real shortage than a competitive handicap when compared to sectors which may be content to recruit “unskilled” workers (i.e. flexible and “basic multi-skilled”). But the contradiction between these minority expectations and the dominant discourse is very real, with some arguing for a rapid orientation of the most “motivated” students towards technical or professional streams, and others advocating a longer common core in order to guarantee universal access to basic skills.

Another contradiction, and an even more subtle one, places the collective interests of the middle classes in opposition to the individual expectations of middle-class families. As holders of investments in equity portfolios, objectively the latter have an interest in supporting the dominant educational policy, described above: a minimalist common core, with the aim of acquisition by all of basic skills and a good level of adaptability, preferably at lower cost, so with no repeats, by using digital technology, reducing the volume of classroom hours, etc. But as families, as parents of children who in the future will be in competition in the job market, they are also keen to favour their own offspring and therefore support educational systems which promote social (and academic) segregation in the workplace to the benefit of elites, in particular through early streaming and a free school market.

This opposition results in policies which sometimes appear inconsistent on the part of the political parties. Broadly speaking, we can observe that the social-democratic approach to education defends the collective positions of big capital, whereas the traditional right-wing parties, which find their voters more in middle-class families and among small businesses, are rather more in favour

of selection and of educational “freedom”. We can also observe an objective alliance between Capital and certain strata of the left-wing intellectual *petite bourgeoisie* (lower middle class) — an important recruiting base for social-democratic parties — which sometimes tend to assimilate the demands of “rigour”, of “discipline” or of “effort” in education with forms of oppression or with factors which generate inequalities. The true class nature of such positions is obviously that the children of intellectual petite bourgeois families have less need of school for learning and development than others. For them, flipped schooling, the digital school, could work very well. Unfortunately, however, teachers and educationalists are also part of this social class and therefore often suffer from the same blinkered attitudes...

And what of the people in all this?

For the children of the ordinary popular classes and their parents, the problem has a quite different aspect. Of course, from an individual point of view, what they expect from school is that it will enable them to have access to employment, that it will provide them with an education which optimises their competitiveness on the job market. We could therefore see a certain convergence with the expectations of Capital.

However, the objective and collective interests of the popular classes are diametrically opposed. The COVID crisis has shown how the current production relationships, of which they are the first victims, are also overtaken by the scale of the health, environmental, cultural, economic and social challenges of modern societies. Badly used, with no planning, therefore within the context of capitalism, technical progress generates more problems than it can solve. As members of an exploited social class, which has nothing to gain from safeguarding capitalism, the children of the popular classes should carry the medium and long-term interests of a humanity which must urgently rid itself of collectively suicidal economic and social relationships.

Getting the popular classes to put this historical task, these collective interests, before their own specific interests, in the short term, with the competition for employment implies an enormous educational task. And above all, in the struggle to change the world, knowledge is an increasingly important weapon. Understanding the economy, understanding history, understanding science and technology, being proficient in multiple forms of expression and language, from the literary written form to mathematics, from oral discourse to physical expression... This is what the exploited classes need today, objectively, to understand the world and to change it. Because no-one else is going to do it for them.

However, it so happens that the children of ordinary people have only one way and one place to learn all this at present: the privileged and active relationship with a duly trained teacher, within this public body, this provider of instruction, training and education, which we call School.

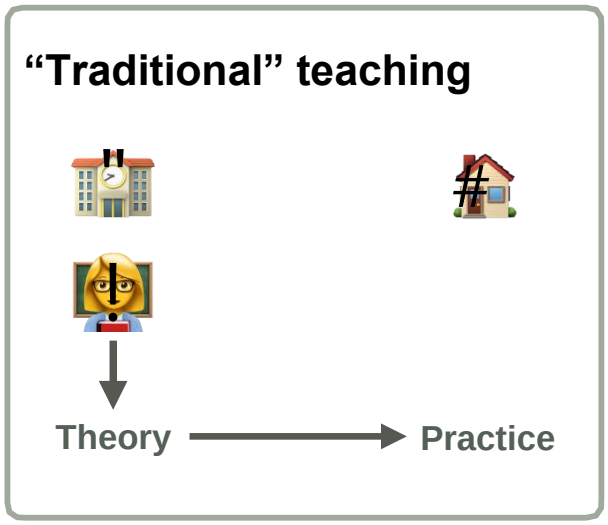
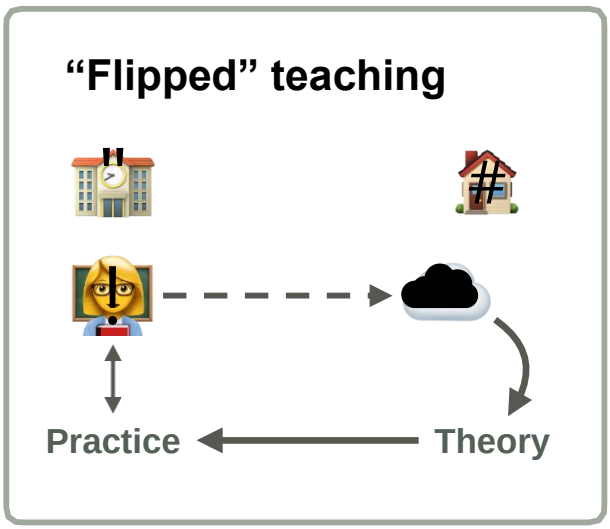


Figure 1



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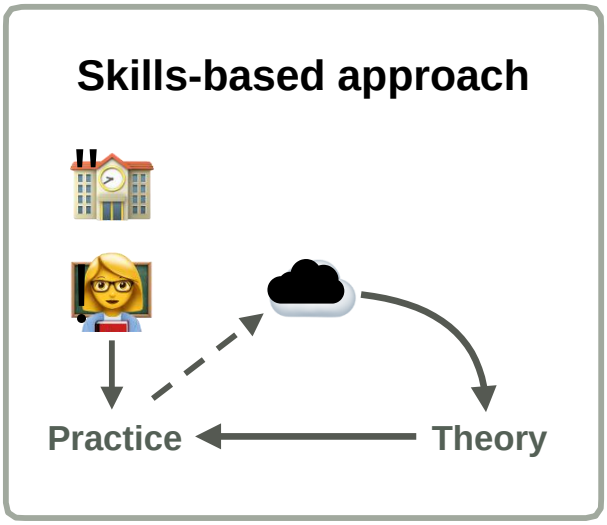

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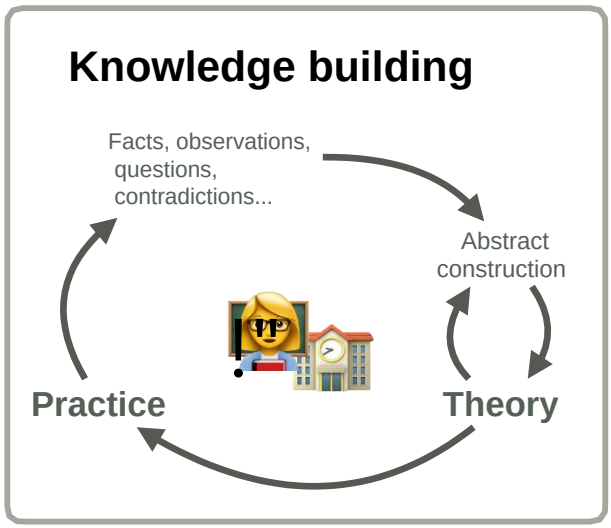


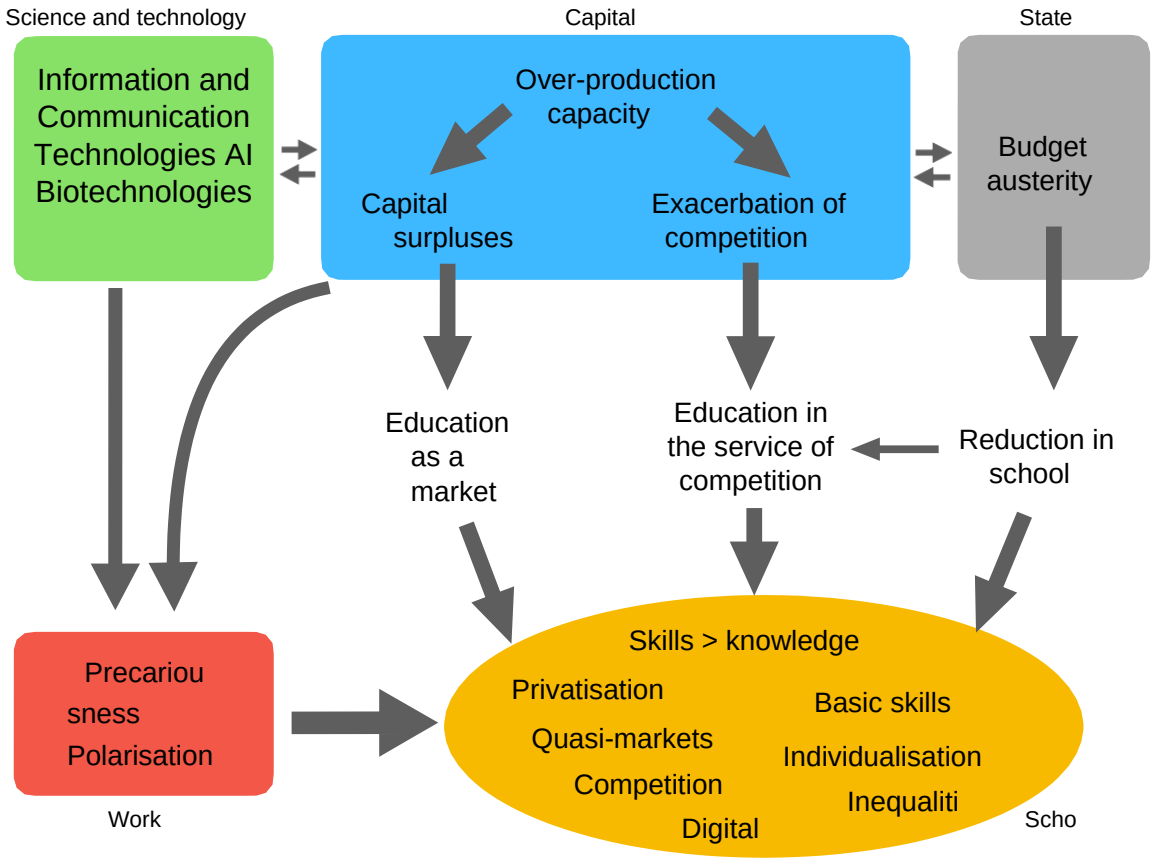
Figure 4

Educational approaches and theory-practice relationship

In the caricatured vision of “traditional” teaching (figure 1), the theory is simply stated by the teacher in class. Then the student applies the knowledge to exercises and problems at home. “Flipped” teaching (figure 2) reverses this process: the pupil studies the theory at home (typically on the internet using documents prepared by the teacher) and the work in class consists of using this knowledge under the supervision of and with help from the teacher. In the skills-based approach (figure 3) the main difference lies in the fact that the teacher starts by posing a practical problem. To solve it, the student must then do research (for example on the internet) to find the theoretical elements that he or she needs. The common characteristic of these three approaches is that they consider theory as mere information, for which it suffices to communicate or to look for on the Internet. As for the theory-practice relationship, it is purely utilitarian: theory serves practice.

In the real process of the production of knowledge (figure 4), the theory-practice relationship is cyclical: practice produces factual observations, questions, contradictions in relation to what we believed to be established. All of this, along with the theories already known, fuels a process of abstraction — generalisations, formulation of concepts, deductions, inductions — which produces theoretical knowledge. Then, its putting into practice or its verification in practice produce new observations, new questions, new contradictions. And so on. Any good educational theory

- whether “face-to-face” or "active", it doesn't matter - reproduces, in one form or another, this theory-practice cycle. The teacher plays a central role in this by highlighting essential observations and contradictions, by stimulating questions, by directing the process of abstraction and by explaining the theoretical concepts.


Science and technology
Capital
State
Information and Communication Technologies AI Biotechnologies
Over-production capacity
Capital surpluses
Exacerbation of competition
Budget austerity
Education as a market
Education in the service of competition
Reduction in school
Precariou sness Polarisation
Work
Skills > knowledge
Privatisation
Basic skills
Quasi-markets
Individualisation
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