Teaching as Social Influence:

Empowering Teachers to Become Agents of Social Change

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Abstract

Teachers carry out a number of roles in the educational system. Their primary role is to help all students develop knowledge and skills, but, most of the time, they take on the role of gatekeepers: They evaluate students and exercise selection on the basis of performance. We analyze the roles of teachers through the lens of the literature on social influence, and put forward the proposal that teaching is a form of social influence. We review existing research on the mechanisms that explain the differential effects teachers may have on students' learning, students' prospects and, therefore, educational justice. We conclude that if teachers endorse the role of mentors—instead of that of gatekeepers—focusing on the development of their students' knowledge, they can promote deep study, long-term learning, and equality of treatment. Such an approach could help design teacher training and school reform so as to maximize the learning potential of all students and empower teachers to become active agents of profound individual and social change.

Keywords: teaching, social influence, selection, education, inequalities.

Teaching as Social Influence:
Empowering Teachers to Become Agents of Social Change

Teachers are expected to endorse several, sometimes incompatible, roles in the educational system. Their primary role is to help all students develop knowledge and skills, but, most of the time, they take on the role of gatekeepers: They deliver their teaching content and then allocate grades and diplomas on the basis of their students' performance. This provocative statement clashes with the representation that most of us have of teachers, and the considerable efforts they make to develop students' knowledge and skills. However, three well-documented phenomena support the idea that teachers are viewed, and view themselves, as gatekeepers, mainly concerned with the assessment of students' performance.

Firstly, the vast majority of teachers use grades to assess performance at a given moment — performance in a one-shot test—and compare students, instead of evaluating students' learning, i.e., the development of students' knowledge acquisition over time (e.g., Knight & Yorke, 2003; Pulfrey, Buchs, & Butera, 2011). Secondly, the widespread practice of "teaching to the test", i.e., teaching how to succeed at a given test, conveys the notion that learning is not about acquiring knowledge but rather about adapting oneself to a selection system (e.g., Firestone, Schorr, & Monfils, 2004). Third, as they move through their professional career, teachers run the risk of switching from the belief that their students' intelligence is malleable and able to grow, to the belief that intelligence is in fact a fixed entity that cannot change (e.g., Lynott & Woolfolk, 1994; Mugny & Carugati, 1989). In sum, teachers often focus mostly on their students' current abilities and achievements, instead of the ways in which they can advance students' knowledge and skills.

In this article, we consider teaching as a form of social influence. In line with an early definition developed in social psychology, we view social influence as the force that produces change (French & Raven, 1959). Teachers can thus be considered as agents of social

influence to the extent that their teaching has the potential to produce change in their students, for instance an increase in the students' level of knowledge. The emphasis on change is important as it underlines the fact that teachers can indeed overcome their gatekeeping role as assessors of students' abilities and have an impact on students' actual learning. We argue that such an approach could help teachers design their practices so as to maximize the learning potential of all their students. It would also empower teachers to become mentors, that is, agents that facilitate deep, long-lasting individual and social change.

The Two Roles of Teachers

Teachers are trained and socialized to work in a very specific environment, one in which they are confronted with multiple goals (Barron & Harackiewicz, 2001; De Dreu, Nijstad, & Van Knippenberg, 2008). Indeed, the educational system—from primary school to tertiary education—is organized around at least two major functions: One is, obviously, education, and the other is, somehow less obviously, selection (Darnon, Dompnier, Delmas, Pulfrey, & Butera, 2009; Dornbusch, Glasgow, & Lin, 1996). Starting with the first function, *education* is the prototypical function of school, based on the goal of transmitting the knowledge and skills that are deemed important or useful in a given society, both in order to uphold that society's traditional knowledge (Sani, Bowe, Herrera, Manna, Cossa, Miao, & Zhou, 2007), and to prepare the students to enter the job market (Deutsch, 1979). Schools also serve the purpose of conveying values that policy-makers of each country have set for their educational system, among which ensuring equal access to educational resources features prominently, in most Western countries at least (Autin, Batruch, & Butera, 2015).

As soon as the American and French revolutions promoted the idea that merit—and not wealth—should be the criterion to reward students with good grades and diplomas, the school system has been entrusted with a second function, namely *selection* (Breen, 2004: Carson, 2006). It is important to note that, while early definitions of merit mainly included

stable and quantifiable traits such as talent, abilities and intelligence (Carson, 2006; Croizet, 2012; Gould, 1981), more recent conceptualizations also referred to constructs that are believed to be under individual control, such as competence, relative input and effort (Deutsch, 1975; Son Hing, Bobocel, Zanna, Garcia, Gee, & Orazietti, 2011). In line with this principle, the educational systems of most industrialized countries have developed an assessment system aimed at quantifying performance (represented by grades), and a series of milestones—such as end of the year summative assessments, tracking and streaming and school counseling—that filter students and assign them to the curricula and trainings that are supposed to correspond to their level of performance (Batruch, Autin, & Butera, 2019; Dompnier, Darnon, Delmas, & Butera, 2008; Duru-Bellat & Tenret, 2012). In this respect, we define gatekeeping as the use of the selection tools provided by the system (grading, tracking, …) to open and close the educational gates (pass-fail a year, diplomas, …) that lead to curricula with varying duration and prestige (Batruch et al., 2019).

The distinction between education and selection laid out for schools also applies to teachers. Teachers are trained and socialized to adapt to the specific requirements of their educational system (Zeichner & Gore, 1990); thus, in a system where the same persons have to satisfy two goals, they should learn to operate with and within the same multi-finality system (Kruglanski, Köpetz, Bélanger, Chun, Orehek, & Fishbach, 2013), and therefore endorse both the role of educator and that of gatekeeper. However, three lines of research converge to suggest that teachers overemphasize their role as gatekeepers, and that their students concur in viewing them as such. We start by reviewing these three lines of research and then discuss the possible consequences of such a professional representation.

Selective Assessment

The first line of research indicates that assessment is mainly used by teachers to evaluate performance and less so as a means to further learning. There is indeed a wealth of

studies that show how to use formative assessment (Bennett, 2011; Sadler, 1989)—also known as assessment for learning—, which is seen as a cycle of specific feedback provided to the learner, aimed at correcting errors, mastering skills, improving proficiency and stimulating learning (Bloom, Hasting, & Madaus, 1971). There is also ample evidence that formative assessment does result in learning gains (Back & Wiliam, 1998). However, most teachers use normative assessment (Knight & Yorke, 2003, Pulfrey, Buchs, & Butera, 2011). Normative assessment consists in attributing a value—most of the time a grade—to a student's performance, so that the value of performance is visible by the target student (Marshall & Weinstein, 1984). Moreover, grades help to differentiate students (Monteil, 1989), and they facilitate the ranking and selection of students (Glaser, 1963). In other words, the assessment method most widely used by teachers—and promoted by schools—is normative assessment (most often grades), and that is also the assessment method that makes it easiest to select students.

A study by Autin et al. (2015) showed that these two constructs, namely normative assessments and selection, are part of the beliefs that people share about the functions of educational systems. Their results revealed that the more participants viewed selection as the main function of school, the more they perceived normative assessment as a useful assessment tool. Interestingly, this effect was mediated by the belief that normative assessment serves a principle of meritocratic justice, namely equity (defined in this study as the reward of talent and work; Deutsch, 1979). In contrast, the less participants viewed selection as the main function of school, the more they perceived formative assessment as useful, an effect mediated by the belief that formative assessment serves a different type of justice: compensatory justice (i.e., equality and need). In sum, the most widespread assessment method—grades—is associated with a representation of school as having a function of selection. The use of grades also happens to give teachers the role of gatekeepers.

Selective Teaching

The second line of research that documents the gatekeeping role of teachers is the one concerned with the widespread practice of "teaching to the test". Of course, teaching can be geared towards furthering students' learning, developing their interest and sustaining their knowledge acquisition (Darnon et al., 2009; Meece, Anderman, & Anderman, 2006). However, several authors have noted that it is quite difficult for teachers to implement such mastery goals in a system where comparative performance and normative assessment determine the students' prospects, and performance goals are promoted instead (Blumenfeld, 1992; Urdan, 2004).

Teaching to the test is a practice that prioritizes adaptation to a selection system over the actual acquisition of knowledge (e.g., Firestone et al., 2004). It frequently occurs in systems in which teaching and assessment are performed by different actors, and is thought to be adopted because teachers feel the pressure of the responsibility for their students' success in high-stakes tests (Popham, 2001), especially when the performance of their school is visible or salient (Jennings & Bearak, 2014). Thus, again, a selective environment is associated with teachers working as gatekeepers, focusing on the measure of immediate performance (the test) rather than the transmission of knowledge, skills and competences.

Selective Representations

Finally, teachers may endorse the role of gatekeepers because little by little they start seeing their teaching as less effective in transforming their students' minds than they had hoped initially. A great deal of research has shown that in order for students to learn effectively, they need to see their own intelligence as malleable, likely to grow, rather than a fixed entity unlikely to evolve (Dweck, 2000). These positive effects are not limited to learning and achievement but extend to other important outcomes such as health and coping with stress (Yeager, Johnson, Spitzer, Trzesniewski, Powers, & Dweck, 2014). Likewise, the

more teachers view their students' intelligence as malleable the more they are likely to have a beneficial effect on student learning, as such a representation is likely to influence how the students themselves perceive their potential (Dweck, 2006). Indeed, in general teachers report they do perceive student intelligence as malleable more than they report believing it to be fixed. However certain exceptions exist: teachers working with disabled persons (Enea-Drapeau, Carlier, & Huguet, 2017) for example. Furthermore, mathematics teachers are more likely to report that they believe intelligence is fixed than teachers in the domains of languages, sciences and practical disciplines (Jonsson, Beach, Korp, & Erlandson, 2012. A study with implicit measures confirmed that science teachers, compared to liberal arts teachers, display a negative association between "intelligence" and "modifiable" (Mascret, Roussel, & Cury, 2015). Moreover, some research suggests that teachers' beliefs about the malleability of intelligence should have a positive impact of students' achievement especially when students have matching beliefs about malleability (Yorke & Knight, 2004).

One of the main reasons to become a teacher in the first place is often to make a difference in the lives of their students (e.g., Nesje, Brandmo, & Berger, 2018). But it so happens that such a belief does not necessarily survive the teachers' professional practice. Research has shown that over the course of their career, and although they overall declare that students' intelligence is malleable, teachers become more and more convinced that their students' cognitive abilities cannot be changed (e.g., Georgiou, 2008). In their early study on the social representations of intelligence, Mugny and Carugati (1989) showed that in-service, compared to pre-service, teachers displayed a more pronounced set of beliefs that refer to students' abilities as a natural entity. They were more likely to believe that intelligence is heritable, that some children are gifted, and that it is important to pay attention to genetic development. And, relatedly, they were less likely to hold the view that teachers should intervene in the students' learning process with stimulation and challenges. In sum, and

paradoxically, after a few years of professional development, teachers tend to be more convinced that their role is limited to assessing and sorting students as a function of their innate abilities.

Before we delve into the consequences of such a selective mindset, it is important to note that teachers are trained, socialized and embedded in a selective educational system, one in which success is defined in terms of outperforming others (Darnon et al., 2009). Given such a context, it would be a mistake to consider that the role of gatekeepers is the outcome of the dispositional characteristics of those who have chosen to become teachers. The fact that, as noted above, a selective grading system is already in place when they start their service and that they develop a more selective representation of their students' abilities suggest that teachers pass on in their practice the norms and values already present in the environment in which they have been socialized and trained.

Consequences of a selective educational system

What is the problem with the representation of school as a system where selection takes place? And, why would one need to be concerned if teachers are dedicated to assessing students' performance, comparing such performances, sorting and ranking students, and tracking them as a function of their achievements? After all, selection is one of the official functions of school (Darnon et al., 2009). The problem is that the salience of selection as a primary function in schools, along with the accompanying role of teachers as gatekeepers, brings with it a set of unwelcome consequences.

Research has shown that threatening social comparisons and over-reliance on performance goals (in particular, performance-approach goals, i.e., the desire to outperform others; Elliot & McGregor, 2001) impairs fundamental processes implied in learning, such as attention (Muller & Butera, 2007) and working memory (Crouzevialle & Butera, 2013, 2017). They also increase the risk of promoting a form of learning that is neither long-lasting nor

deep (Butler, 1987), as it is based on surface processing of the learning material (Elliot, McGregor, & Gable, 1999; Harackiewicz, Barron, Tauer, Carter, & Elliot, 2000). Moreover, normative assessment has been found to reduce important antecedents of learning, such as intrinsic motivation (Pulfrey, Darnon, & Butera, 2013) and feelings of autonomy (Pulfrey, Buchs, & Butera, 2011). It also impairs crucial social competences such as the ability to effectively cooperate with classmates (Toma & Butera, 2009), the tendency to share information (Hayek, Toma, Oberlé, & Butera, 2015, study 1)—even when grades are merely primed (Hayek, Toma, Oberlé, & Butera, 2015, study 2)—, and to collaborate in a coordinated manner (Hayek, Toma, Guidotti, Oberlé, & Butera, 2017). Finally, the salience of the selective function of the educational system has been shown to lead disadvantaged students to underperform and recreate existing patterns of social inequalities based on gender (e.g., Souchal, Toczek-Capelle, Darnon, Smeding, Butera, & Martinot, 2014) and social class (Smeding, Darnon, Souchal, Toczeck-Capelle, & Butera, 2013). It also leads evaluators to discriminate against disadvantaged students and reproduce existing social class inequalities (Autin, Batruch, & Butera, 2019; Batruch, Autin, Bataillard, & Butera, 2019).

Such a grim picture illustrates an important paradox. On the one hand, teachers possess the training, tools, and pedagogical freedom to nurture their students, and produce deep, long-lasting and far-reaching learning. This is actually what the educational function of school requires them to do. On the other hand, the pervasive emphasis on merit, performance and selection that permeates the educational system of most industrialized countries, along with the ubiquitous use of normative assessment, render the teachers' role as gatekeepers their predominant mission. As a consequence, they contribute to ratifying the existing differences in performance among students and miss the opportunity to produce deep and long-lasting individual learning and, possibly, social change. It is interesting to note in this respect that research has shown that this may even be the case at the level of a whole country. Falcon

(2012), in a study with eight different birth-cohorts born between 1912 and 1974, pointed out that, progress in the liberalization and democratization of education aside, inequality of opportunity in the educational system has not changed in Switzerland over the whole of the 20th Century Moreover, a study that combined 30 international large-scale assessments over 50 years, in 100 countries, with about 5.8 million students, found robust evidence that achievement gaps due to socio-economic status have actually been increasing over the past 50 years across the majority of countries in the study (Chmielewski, 2019).

Teaching, Learning and Levels of Influence

We argue that teachers do not have to blindly accept the role of gatekeepers in a predominantly selective educational environment. They also have the option to become real mentors, that is agents of deep and long-lasting individual and social change, by fostering their students' progression in the acquisition of new knowledge and skills, thereby improving their future prospects. Teaching has the potential to produce profound changes in that it not only provides new knowledge to students, but can also foster interest (Hidi & Renninger, 2006), intrinsic motivation (Deci, Nezlek, & Sheinman, 1981) and aspirations (Rosenfeld & Zander, 1961) that can make learning long-lasting, and even result in the virtuous circle of life-long learning (McCombs, 1991). In the previous section, we have discussed the roles of teachers; in the present section we turn to the types of learning teachers can induce. In particular, it is important for education to distinguish surface from deep learning, as it takes time to move from surface learning, i.e., simple memorizing of unrelated elements of the learning material, to deep learning, i.e., abstract representations of the relations between elements (Biggs & Collins, 1982). In the educational sciences, several taxonomies of learning have been developed, mostly based on Bloom's (1956) seminal work, which theorize multiple levels of learning, differentiated by the increasingly complex cognitive processes involved in each one. To simplify, it is possible to categorize these various levels of learning into two

general ones (Brabrand & Dahl, 2009). On the one hand, surface learning is characterized by quantitative mechanisms, such as reciting, naming, describing or executing an algorithm; on the other hand, deep learning is characterized by qualitative mechanisms, such as analyzing, integrating, generalizing or predicting (cf. Biggs, 2003; see Table 1).

One might argue that the level of learning that students achieve, either surface or deep, is due to the students' dispositions, in particular their level of motivation and ability. However, a wealth of research in educational psychology has long documented that teachers can influence both the motivation and achievement of their students, and that this is typically a function of the classroom climate (Djigic & Stojiljkovic, 2011; Fraser, 1989) or the classroom goal structure (Meece et al., 2006) they create through their practices. In this respect, we propose to analyze the roles of teachers in the classroom through the lens of the extant literature on social influence. As such, we are considering teaching as a form of social influence.

Social influence appears to provide a relevant theoretical framework to discuss the type of impact that teachers can have. Indeed, research on social influence has distinguished various levels at which influence can occur (Moscovici, 1976, 1980). It has long shown that, in order to accurately account for influence processes, it is important to understand that change is not necessarily a uniform phenomenon, and may sometimes occur only at a public and immediate level and disappear at a private or delayed level (e.g., Kelman, 1958). It may also appear only after a delay or at a latent level (e.g., Hovland, Lumsdaine, & Sheffield, 1949; Moscovici, 1980). To draw a parallel with the classification presented above for learning, it is possible to categorize these various processes into two general levels of influence (Moscovici, 1980). On the one hand, manifest influence is characterized by quantitative mechanisms, such as compliance, imitation or adoption; on the other hand, latent

influence is characterized by qualitative mechanisms, such as processing, validating or appropriation (cf. Quiamzade, Mugny, & Butera, 2013; see Table 1).

Thus it is important to understand when and why teachers may induce surface study and mere imitation (manifest or surface influence), and/or deep study and true appropriation (i.e., real integration of new knowledge). In order to explore this issue we will make the connection between the body of work reviewed above on the roles of teachers and the research conducted by social influence researchers on the different levels of individual and social change (see Table 2). Indeed, as we will see, this latter body of research has shown that controlling, threatening, competitive environments—such as those that put teachers in the role of gatekeepers—lead to short-lived influence processes, resulting in surface information processing and surface learning outcomes (Table 2, first line). This research has also shown that autonomy-supporting, non-threatening, cooperative environments have the potential to render teachers real mentors and lead to long-lasting influence processes, resulting in deep information processing and deep learning outcomes (Table 2, second line).

We believe that such an analysis can illustrate how important it is for teachers to consider the depth, duration and consequences of learning, beyond sheer performance. We also believe that—if implemented in evidence-based teacher training and school reform—such an analysis could help teachers design their practices so as to maximize the learning potential of all their students, instead of restraining themselves to the role of institutional gatekeepers. Doing so may empower them to become agents of individual and social change. We first discuss existing research on the mechanisms that may explain the differential effects teachers may have on students' learning, and then move to the differential effects teachers may have on students' prospects and, therefore, on educational justice.

Teachers' Influence on Students' Learning

The first contribution that social influence research can offer pertains to the characterization of learning. Learning has been defined in multiple ways in psychology and it is beyond the scope of the present article to provide either a synthesis or yet another definition (see, for example, the classic by Hilgard & Bower, 1975). Instead, the aforementioned focus on levels of influence can be used to address the question of what kind of learning teachers may expect to induce. In this respect, the literature on socio-cognitive conflict has studied how interpersonal influence may bring children who interact—either among themselves (e.g., Mugny & Doise, 1978) or with an adult (e.g., Mugny, Lévy, & Doise, 1978)—to integrate new dimensions of knowledge into their pre-existing cognitive schemes, which may result in cognitive development (Doise & Mugny, 1984; Perret-Clermont, 1980). In particular, this line of research has pointed out that to evaluate learning it is important to consider the stability of the newly acquired knowledge over time—i.e., whether learners maintain their learning outcomes after a delay—and the ability to argue based on this acquisition—i.e., whether learners may explain in different ways what they have learned (e.g., Butera, Darnon, & Mugny, 2011). In an early study, Doise, Mugny and Perret-Clermont (1975; see also 1976) contended that when genuine cognitive progress takes place, children also acquire the ability to solve similar or related problems after several days. Moreover, these children develop a differentiated set of arguments to justify their solution, thereby showing that they can see the same problem from different points of view (see Doise & Mugny, 1984, or Bell, Grossen, & Perret-Clermont, 1985, for several examples). Thus, it is important for teachers to consider that learning may correspond to different types of change, from immediate, temporary learning to learning that lasts in time and allows generalization and appropriate argumentation.

The second contribution of social influence research pertains to the mechanisms that link varieties of teacher-student interactions to types of learning. Conflict Elaboration Theory

(Pérez & Mugny, 1993; 1996) has proposed that different patterns of influence result from different conflicts that may arise around a certain task in the interaction between a source of influence and a target. In particular, further refinements of the theory have noted that a more knowledgeable source (e.g., a teacher) may interact with a less knowledgeable target of influence (e.g., a student) in a more or less threatening way, focusing for instance on relative status vs. knowledge transmission (e.g., Mugny, Butera, & Falomir, 2001; Quiamzade & Mugny, 2001). This line of research has shown that two distinct mechanisms proceed from these two forms of interaction, called, respectively, *informational constraint* and *informational dependence,* that lead to mere imitation (compliance) vs. long-lasting knowledge appropriation (Table 2, columns 2, 4 and 5).

Before we delve into the specifics of these two mechanisms, it is important to comment on the role and relevance of threat. More recent developments of Conflict Elaboration Theory as applied to cognitive tasks posit that the pattern of influence that will be observed after an interaction of two partners depends not only on the relative level of competence of each partner, but also on the meaning that the partners attribute to social comparison between their levels of competence (Quiamzade, Mugny, & Butera, 2013, 2014). Indeed, depending on what is salient in the learning context (e.g., competition vs. cooperation, learning vs. performance goals), students may be more focused either on the status differential between source and target or on the knowledge transmitted (Butera & Darnon, 2017; Muller & Fayant, 2010).

Let us consider the relationship with which this article is concerned, namely that of a higher competence source (a teacher) with a lower competence target (a student). When selection is the salient feature of the educational system, and teachers take the role of gatekeepers, students fear the consequences of assessment because it may imply both an identity threat, in terms of absolute feedback or relative rank in the class, and a positional

threat, in terms of not passing the year or not being accepted onto a future program of studies that they want to follow. In this situation (first line of Table 2), social comparison is threatening for a student because the teaching potential of the teacher becomes of secondary importance, when compared with the teacher's potential influence in terms of reward and punishment (i.e., the grades the teacher distributes and their consequences). On the contrary, when the educational function of the system prevails, and teachers can take the role of mentors, students can focus on the epistemic aspects of the relationship, i.e., on the transmission of knowledge. In this situation (second line of Table 2), social comparison is not threatening for the student because the teaching potential of the teacher becomes of primary importance, and the student can focus on the informational support provided in the interaction. Selection and gatekeeping, on the one hand, and education and mentoring, on the other hand, elicit two distinct mechanisms with distinct consequences: informational constraint and informational dependence, respectively.

Informational constraint.

Informational constraint arises when a lower competence target feels threatened in the relation with a more competent other. As mentioned above, threat may derive from various elements of the context, from evaluative pressure exerted by the source or the environment, to the power that the source has over the target. Threat can derive from the fact that an upward social comparison may deplete self-esteem (e.g., Morse & Gergen, 1970) or from the fact that comparison with the other may represent a public display of failure or incompetence (e.g., Monteil, 1989). For example, teachers who put forward their institutional position, their age or their experience to assert their authority and justify their credibility may very well be threatening to their students. Threat can also derive from the perception that the superior other does not have sufficient epistemic superiority to make her or his position legitimate (Ellis & Kruglanski, 1992). For example, students may feel threatened by teachers they do not respect,

because they have to comply with teachers whose credibility is not granted. In other words, any contextual element that makes social comparison between target and source threatening elicits an informational constraint. Whatever the reason for the threat, informational constraint is a mechanism that focuses the target on the status differential with the source, more than on the knowledge that is being transmitted, as if the key issue salient in the status asymmetry is the the difference in power rather than the difference in competence (Quiamzade & Mugny, 2001).

With teachers as gatekeepers, grading in a selective perspective represents a mighty source of threat, as grading is in the teacher's hands and therefore constitutes an instrument of power. There is a longstanding tradition in psychological research that shows that when a source is perceived as powerful, in particular as able to administer rewards and punishments, it is likely to be perceived as an external pressure, and to elicit controlled motivation—whereby individuals are driven mostly by rewards and punishments—and surface learning strategies (Kohn, 1999; Ryan & Deci, 2000). In sum, it is likely that teachers who are viewed as gatekeepers elicit informational constraint, controlled motivation and surface learning because of the power of selecting students that is implied by such role and thus the threat they represent for the student (Table 2, column 2).

What are the consequences of these mechanisms? Research on social influence has shown that a source that exerts control over the target may at best induce compliance or imitation at the immediate or manifest level, but such influence disappears as soon as control is no longer in place (Heilman, 1976; Kelman, 1958). Subsequent research has identified that informational constraint may produce imitation but does not result in any further cognitive processing (Maggi, Butera, & Mugny, 1996), as there is likely to be a sort of socio-cognitive disengagement (Table 2, columns 4 and 5).

These findings are supported by the fact that when a high competence source is threatening, a low competence target does not elaborate on the information provided by the source. In an experiment, psychology students started by answering a series of questions that assessed their beliefs about the ideal structure of a group of friends (Mugny, Tafani, Butera, & Pigière, 1998). They were then given a text that argued against their beliefs, written by either a higher status (a researcher) or a similar status source (a student). The participants were then asked to rate their own and the source's competence on a series of scales, in such a way as to induce either a threatening or a non-threatening social comparison: The participants rated themselves and the source on either independent scales (they could allocate up to 100 points separately to the source and to themselves) or negatively interdependent scales (they distributed 100 points to both, i.e., the higher the score of the source, the lower their own). The latter condition introduces a threat in social comparison in that it emphasizes that the competence of one can only be asserted at the detriment of the competence of the other. At the end of the study, the beliefs regarding the ideal structure of a group of friends were assessed in order to create an index of the extent to which appropriation had taken place, and the position of the influence source had been elaborated and integrated by the target. The results showed that the higher competence source in the threatening, negatively interdependent social comparison condition, was the least influential on the appropriation measure, even though it produced imitation. This is what teachers can expect if they set out to transmit knowledge in a threatening environment in which they are viewed more as a source of power than as a source that promotes learning.

Informational dependence.

Informational dependence arises when a lower competence target of influence is not threatened by the superior competence of the source, and may even be inspired by it (Buunk, Peiró, & Griffioen, 2007; Lockwood & Kunda, 2000). Again, the context is an important

determinant of such a serene relationship. This is especially important in the educational domain where assessment can be used as a step towards learning (Allal, 2010), errors can be used as opportunities to improve (Metcalfe, 2017) and feedback can be used as a contribution to self-assessment and knowledge development (Kluger & DeNisi, 1996). Informational dependence is a mechanism that focuses the target on the content that the source may transfer, because what is salient in the relationship is the source's superior competence, rather than the difference in status (Mugny et al., 2001). On a more motivational level, research on self-determination has shown that a source that is perceived as caring and supporting is likely to elicit autonomous motivation and deep study strategies (Ryan & Deci, 2020). In sum, it is likely that teachers who are viewed as mentors and inspiring sources of influence, elicit informational dependence, autonomous motivation and deep study, because of the supportive climate that is implied by such a role (Table 2, column 2).

In terms of consequences, the seminal study by Kelman (1958), cited above, also showed that an expert source that builds its message on scholarship and trustworthiness has the potential to yield a form of influence that remains even after the interaction. Moreover, work on social influence in cooperative learning has revealed that, when cooperation is based on sharing and explaining information, rather than comparison between partners of their respective knowledge of the subject, the higher competence of a source is associated with higher delayed learning of the target (Buchs, Butera, & Mugny, 2004). As such, it constitutes a form of knowledge appropriation (Table 2, columns 4 and 5).

It is interesting to note that knowledge appropriation is associated with intensive cognitive processing and elaboration. A study by Quiamzade, Tomei and Butera (2000) showed that such appropriation might occur when a competent superior source is not threatening. Participants of the study were asked to identify words in a series of letter strings; the majority of words they identified corresponded to a forward sequence, from left to right,

as it was to be expected from French-speaking participants. They were then confronted with the answers given by an influence source, who successfully used a backward sequence, from right to left. This source was presented as either an expert (a seasoned Scrabble player) or a novice. Participants also had to rate their competence and that of the source, either on threatening, negatively interdependent scales, or on independent scales, like in the Mugny et al. (1998) study presented above. The crucial measure was the solution of a final anagram, in which several words could be found using a forward, backward or mixed strategy. The proportion of words found by using the mixed strategy was considered as a measure of intensive cognitive processing and elaboration, resulting in the integration of the participant's and the source's strategies. If we focus on the conditions with an expert source, results showed that the integrative strategy was used to a higher extent when social comparison was not threatening, beyond imitation. These results are relevant to teachers' behaviour, as teaching can lead to a great deal of knowledge integration provided that pupils do not see their teachers' competence as a sign of their own incompetence.

Teachers' Influence on Students' Prospects

In the previous section we have discussed how teachers can influence their students' cognitive-level outcomes, from motivation to learning, depending on the role they take, that of gatekeeper or mentor. Moreover, not only can teachers indirectly influence their students' future prospects by promoting more or less effective learning (cf. Perret-Clermont & Schubauer-Leoni, 1981, but they can also directly intervene in the selection process. In the present section we consider two selection tools, normative assessment and tracking, that can impact the academic and, in the long run, professional opportunities of students, over and above their actual level of performance.

Rosenthal and Jacobson (1968) brought to the limelight the Pygmalion effect, whereby teachers' expectations about their students produced a self-fulfilling prophecy (Merton, 1948)

that led students to perform consistently with those expectations. More recent research has specified that this process unfolds following three stages: "(a) Teachers develop expectations, (b) teachers treat students differently depending on their expectations, and (c) students react to this treatment in expectancy-confirming ways" (Jussim, 1986, p. 429). However, it has also been noted that it remains unclear what is the most influential stage in the production of the effect, and whether the size of the effect is actually meaningful (Jussim & Harber, 2005). Importantly for the argument developed in the present section, Jussim and Harber (2005) also reported that, although effect sizes are overall modest, they are larger in studies with students of lower economic background, especially if they are underachievers, and with African American students in the USA. This observation has been recently supported by a meta-analysis that comprised experimental studies on subjective grading of student work (e.g., essay writing). The analysis revealed that evaluators do give lower grades to students that belong to stigmatized groups (Malouff & Thorsteinsson, 2016).

Are teachers biased by their expectations and their prejudices? Some authors believe so. For instance, Sprietsma (2013) and Rangvid (2015), who documented the existence of an unwarranted lower grading of, respectively, immigrant and lower social class students, interpret this effect as the result of the teachers' prejudiced expectations based on the students' background. In the remainder of this section we present two lines of research that question this view and support the conceptual analysis we propose in this article: The behavior teachers adopt, and the influence they yield, depend on the role they endorse, namely gatekeepers or mentors.

Assessing students.

In a series of four experiments, Autin et al. (2019) set out to study the effect of the type of assessment, either selective or not, on the differential assessment of students from higher or lower SES. In the first two experiments, participants were asked to assess a dictation

test allegedly produced by a student. The test was the same for all participants and contained the same mistakes, inserted in the written text by the experimenters. Participants were also given the student's file, allegedly because they did not know the student, which reported a series of demographical pieces of information, including the parents' occupation. This was used to subtly manipulate the student's social class: The file reported that the parents either were high-status professionals or had manual jobs. At that point, participants were asked to find and underline all the mistakes in the dictation, and evaluate it through either normative (grades) or formative assessment (corrective feedback). The key dependent measure was the number of mistakes evaluators found in the test.

The results of both experiments revealed that when participants used normative assessment, they found more mistakes in the low-SES student's dictation than in that of the high-SES student, whereas this difference was reduced and non-significant when they used formative assessment. Thus, the use of normative assessment led evaluators to artificially reproduce the social class achievement gap that exists in all OECD countries (OECD, 2013a). However, we have argued that normative assessment may confer the role of gatekeepers to teachers *because* it is the quintessential assessment used for selection, and not because of some personal bias. This argument was supported by the aforementioned results of Autin et al. (2015), showing a positive association between the belief that selection is the main function of school and the perceived usefulness of normative assessment. To test this argument, the third and fourth experiments added a supplementary variable to the design of the first two: The purpose of the assessment was presented either as selection (decide whether the student should move to the next grade or not) or as education (propose learning strategies that help the student improve). The results suggested that evaluators found more mistakes in the low-SES student's dictation than in that of the high-SES student when assessment was presented as selection rather than education. Finally, the results of a small-scale meta-analysis

on the four experiments confirmed that evaluators artificially created a larger SES performance gap when assessment was selective—either implicitly (when grades were being used to assess) or explicitly (when the function of the test was selection)—rather than a tool to promote learning. This result highlights the fact that it is not the type of assessment *per se* that matters, but the intention with which the assessment is used that can be detrimental for students. It is also worth noting that in none of the experiments was this effect moderated by the evaluators' personal characteristics, such as level of competence or their own social class. The effects appear to be driven by the function of assessment and not by the personal characteristics of the evaluators, or by a general labeling effect due to the knowledge of the student's social class (as in Darley & Gross, 1983). In sum, it seems that bias in grading results less from a personal bias of evaluators than from the function that is salient in the educational system in which they operate. This conclusion is also supported by another study in which evaluators gave a lower grade to the dictation test of a low-SES student than to that of a high-SES student, especially in a condition where the student was enrolled in a more, rather than less, prestigious and selective track (Batruch, Autin, & Butera, 2017).

Tracking students.

A different line of research found similar results with another selection tool, namely tracking. Tracking involves grouping students as a function of their level of achievement. Different practices can be found in different countries—from grouping at the class level to grouping in separate curricula—but most OECD countries adopt one form of tracking or another (OECD, 2013b). Tracking is an extremely powerful form of selection, as students are progressively or abruptly separated (depending on the type of tracking), and students of different achievement levels are separated in shorter or longer curricula, often in different schools. Such a selection appears to favor students from higher social classes, as several

studies have documented a larger social class achievement gap in systems where tracking is in place, as compared with more comprehensive systems (Chmielewski, 2014).

Batruch et al. (2019) tested the idea that at least part of this gap may be due to the selective nature of tracking itself, because the salience of such a selective system could prompt evaluators to reproduce the segregation that can be observed in society. In two experiments Swiss participants were given the school report of a student at the end of grade 6, i.e., when students begin to be tracked in Switzerland based on their grades. The report showed a borderline case, with grades slightly below the requirements to enter the higher track, designed to lead to higher education. The participants were asked to read a booklet with the pupil's usual socio-demographic data and the school report, and make a recommendation by indicating to what extent this student would be fit for the higher and the lower track (designed to lead to vocational training). The booklet also contained information about parents' occupation —they were either high-status professionals or had manual jobs. The results of both experiments revealed a consistent pattern: Despite the fact that the grades in the school report were identical for all students, a low-SES student was deemed more suitable for the lower track than a high-SES student, and a high-SES student was deemed more suitable for the higher track than a low-SES student. Thus, evaluators reproduced the achievement gap that exists in society even when students had identical grades. Neither the participants' own social class (Experiment 1), nor the number of years of experience as a teacher (Experiment 2, all participants were teachers) moderated these effects. A third study also manipulated the representation of the function of schooling, emphasizing either selection (the goal of schooling being "to orient students according to academic abilities and maximize everyone's potential") or education (the goal of schooling being "to develop skills and give students the opportunity to progress mastery of their knowledge", p. 484). The results showed that, for the lower track, the most suitable student appeared to be the low-SES pupil in the

selection condition and the least suitable was the high-SES pupil in the selection condition; for the higher track, the most suitable student appeared to be the high-SES pupil in the selection condition and the least suitable was the low-SES pupil in the selection condition.

In other words, conceiving school as a place of selection goes hand in hand with the role of tracking and exacerbates the tendency of evaluators—whatever their personal characteristics—to provide high SES-students with an unwarranted advantage: getting access to the higher track despite not meeting the grade cut-off point. We have noted that tracking is present in different forms in all OECD countries (OECD, 2013b) and that, although low-SES students are consistently over-represented in lower tracks, larger social class achievement gaps appear in systems where tracking is more based on segregating students in impermeable curricula (Chmielewski, 2014). The present results provide experimental evidence that even with identical overall performance level, low-SES students are more likely to be steered towards lower tracks.

As summarized in Figure 1, it is likely that teachers end up reproducing social inequalities in environments where selection is considered more important than education, merit is promoted, and normative assessment is used. After all, gatekeepers are in charge of opening and closing doors. However, they may also wish to endorse quite a different role, that of mentors, and aim at equality of treatment for all students in an environment where the educational function of school is clearly favored, equality is promoted and formative assessment is used. Let us see how.

Empowering Teachers to Become Agents of Social Change: Individual- and Societal-Level Policies

Educational practices are often judged by their ability to meet the needs of a country's economy, and selection practices make no exception. In his seminal 1979 article, Morton Deutsch noted that "… the schools serve as a socializing influence on children to accept the

dominant values within their society. Grades, by serving as a motivating value dispensed by a controlling authority, enormously facilitate the socialization of the young …" (p. 393), and that "… one of the main functions of the artificial shortage of good grades is (…) to contribute to a belief in the competitive meritocratic ideology" (p. 394). As a consequence, we have argued, teachers are viewed, and view themselves, as gatekeepers whose role is to filter students based on measured performance, and assign them to the social positions they merit (e.g., Arrow, 1978).

In this section, we will discuss how teacher training could be redesigned to empower teachers to take up the role of mentors, with the capacity to durably affect both learning and academic improvement for all students. We will address both the individual level – what knowledge can be offered to inform teachers' awareness and practices – and the structural level – what factors should be considered in educational institutions that may or may not produce change in teaching practices. In the first part of this section we will provide a series of suggestions that, in our opinion, may be helpful in informing teachers about the mechanisms described in this article, and enriching their professional practices.

However, implementing such training at a societal level is another challenge. Teachers are not only agents of a selective system, but—since they are trained, socialized and embedded in this system—they are also targets of its influence and thus might be reluctant to change their practices. Moreover, school principals might not authorize them to attend such a teacher training, and colleagues, parents and students might not allow them to apply what they have learned. In the second part of this section, we will discuss the type of school reform that would be needed to make such a teacher training acceptable and effective.

Teacher Training

Perhaps, a preliminary question to ask is whether additional training is needed. One might argue that teachers know the mechanisms we have reviewed and are aware of the

impact they can have on their students. This may be so, but we believe that these mechanisms are not fully integrated, and that teachers usually underestimate how much they can contribute to their students' academic and social development. Anecdotally, when we are invited to speak to groups of teachers by their professional associations and unions, we regularly share the results reviewed in the present article with them, they are nearly always surprised, both by the phenomena we describe and the consequences of them. Aside from these personal experiences, three observations argue for the need to integrate these results in regular teacher training or continuing education. Firstly, we have seen that over the course of their career, teachers may become disillusioned and less convinced that students can change. Secondly, teachers often favor continuing education courses that address didactics and specific questions related to their own academic domain, instead of pedagogy courses that address the question of the social context of learning. Finally, although social psychology and educational sciences have a long history of cross-fertilization in research, they are not fully integrated in teacher training and are often studied by pre-service and in-service teachers as separate disciplines. We aim to present here an example of how social psychology and educational sciences can be integrated and hope that this will be a source of inspiration for teachers. Thus, how can it be translated into an evidence-based teacher training course, whether in initial or continuing education?

It is beyond the scope of this article to provide a full-fledged course and its syllabus. Instead, we wish to highlight the main points around which a course could revolve. We have selected the three points that, in our opinion, have the potential to empower teachers and lead them to realize how much difference they can make for their pupils.

1) *Teaching is social influence*. This may seem obvious, but it is not. The work we have reviewed shows that many of the findings offered by social psychological research on social influence are relevant for teaching. They are relevant because they help us realize (a)

what fine-grained mechanisms are involved in the act of teaching, both at the teacher and at the student level (e.g., informational constraint or dependence); (b) what consequences for learning are to be expected (e.g., mere imitation vs. true appropriation); (c) that consequences for learning may appear at an immediate and manifest level, but also at a delayed and latent level, and it is therefore important to monitor learning outcomes in a comprehensive way; (d) that learning is not the only end-result of teaching and that other outcomes, like the those related to educational justice are also to be considered.

One concrete way for teachers to observe these dynamics is to implement cooperative learning in their classes. Several handbooks have been published, many with basic lesson structures and ready-to-use exercises (e.g., Johnson, Johnson, & Holubec, 2008; Johnson, Johnson, & Smith, 2007), which make cooperative learning easy to include in teacher training. Cooperative learning refers to a set of educational methods that require students to work in groups on a joint task, following five basic principles (e.g., Butera & Buchs, 2019; Johnson & Johnson, 2009): Students share a common goal (positive interdependence), are responsible for one another (responsibility), help each other and exchange needed resources (promotive interactions), learn how to communicate effectively (social skills), and reflect upon group dynamics (group processing).

Creating such a cooperative setting based on mutual exchanges is ideal as it provides a perfect platform for the aforementioned four consequences that derive from teaching as social influence. More specifically, it enables (a) the fine-grained mechanisms involved in teaching to become apparent in the level of autonomy with which students interact (more autonomous if informational dependence has taken place); (b and c) the appropriation of knowledge and the depth of learning to become apparent in the students' ability to explain, solve problems and adapt to other group members' difficulties; and (d) cooperative learning to be not only effective in terms of learning and achievement (see Hattie's, 2008, synthesis of several meta-

analyses), but also in terms of educational justice. This has been shown to improve social relations within the classroom (Johnson & Johnson, 1989), and in particular to increase the acceptance of students from different (Sharan, 2010), or ethnic backgrounds (Aronson & Patnoe, 1997), as well as of students with disabilities (Johnson, Johnson, & Maruyama, 1983).

2) *Teachers may be either gatekeepers or mentors*. We have reviewed the reasons why teachers are often seen, and see themselves, as gatekeepers of the educational system. But we have also reviewed an extensive body of research that shows that the mere fact of seeing themselves as committed to education instead of selection results in important changes in terms of learning and educational justice. It is important to note that choosing to be mentors instead of gatekeepers entails choosing the principle of equality (the nurturing of all students) instead of that of equity (the nurturing of only the students who merit it the most), but it does not mean that mentors need to sacrifice the good students and reduce educational standards to devote their time and efforts to the students who need more attention (a phenomenon called "dumbing down", e.g., Haggis, 2006). Indeed, the choice between nurturing all students and nurturing only the best students exists only in a competitive and selective system, where competence is assessed by comparison with others. In a cooperative system, on the contrary, the good students can collaborate with other students on the same task, and share their knowledge and skills while at the same time refining these skills via their interactions: Research on peer tutoring has shown benefits for both the tutee and the tutor (see for instance Cohen, Kulik, & Kulik's meta-analysis, 1982), and teachers willing to set up a cooperative working system in their class can capitalize on these effects.

In this respect, decision makers who would like to implement this point in teacher training could find concrete examples in the literature on peer tutoring. As mentioned above, a meta-analysis shows that peer tutoring yields positive effects for both the tutee and the tutor (Cohen et al., 1982), and several concrete methods to implement it in the classroom have been

developed, from "reciprocal peer tutoring" (Fantuzzo & Ginsburg-Block, 1998) to "class-wide peer tutoring" (Arreaga-Mayer, Terry, & Greenwood, 1998). The common principle in these methods is that the tutor and the tutee work in a context of mutual interest, as they know that both benefit from the interaction. Tutees, on the one hand, benefit from the more advanced knowledge of tutors, not only because of the transfer of knowledge but also because the interaction allows them to ask all the relevant questions and receive feedback (up to 100 times more than in ordinary classwork, according to Merrill, Reiser, Merrill, & Landes, 1995). Tutors, on the other hand, benefit from the questions asked by the tutees, as this allows them to refresh their knowledge, reinforce its comprehension and generalize it (Allen, 1983). In sum, the use of peer tutoring can allow teachers to be mentors (and nurture all students) without any need to be gatekeepers (and nurture only the best students).

3) *Considering levels of influence may help teachers to reconsider their assessment practices*. We have reviewed the reasons why the use of grades is so pervasive, and discussed how normative assessment only captures instant performance. The literature on social influence, and in particular the one that distinguishes various levels of influence, demonstrates how grades are not a sensitive enough tool for the assessment of learning. Learning can occur at different levels and after a delay, and therefore assessment should be conceived as an iterative process that follows the evolution of students' learning, which very often evolves at different speeds for different students.

The most obvious practical solution to address this issue would be to stop using normative grades and evaluate the students' work through formative assessment. Instead of evaluating instant performance with a grade that reflects the position of a student in comparison with the others, formative assessment consists of constructive feedback on what knowledge and skills are needed to progress towards a set instructional goal, and in assessing such progress in a recurrent way (Allal, 2010; Black & Wiliam, 2009). Formative assessment

has been used for several decades and meta-analytic evidence shows that its use yields positive effects on knowledge and skill acquisition, and on achievement (Black & Wiliam, 1998). However, even though formative assessment can be easily taught in teacher training, its use depends on decisions that are beyond teachers' control, as assessment methods within the same educational system have to be aligned. This question therefore needs to be treated at the level of school reform and this will be discussed in the next section.

To conclude this section, we have noted that such a teacher training—although we present here only the basic principles—has the potential to empower teachers and help them realize how much difference they can make in their students' learning, and academic and professional careers. How could such empowerment come about? Two potential mechanisms are self-efficacy and inoculation. Starting with the first mechanism, self-efficacy is a set of beliefs in one's ability to carry out desired courses of action to reach valued goals (Bandura, 1977). In the case of teachers, such goals may range from technical aspects (e.g., the use of a given technology or pedagogical method) to more general objectives (e.g., contributing to their pupils' development; cf. Hoy, Hoy, & Davis, 2009). It is an important mechanism as it has been shown to be consistently associated with teaching effectiveness (student achievement or evaluated teaching performance; see Klassen & Tze's, 2014, meta-analysis). We believe that the principles we have put forward in this article may help teachers improve their self-efficacy, as focusing on the contribution they can offer their students is a form of self-transcendent goal that has been shown to be associated with teachers' self-efficacy (Barni, Danioni, & Benevene, 2019).

The second mechanism, inoculation, derives its name from an analogy made by McGuire (e.g., 1964) with immunology, which refers to the fact that exposure to arguments and counter-arguments in favor and against an attitudinal object creates a reaction (just like a vaccine does) that makes one's attitude more resistant (see Banas & Rains', 2010, for a meta-

analysis on the effectiveness of inoculation). Training that expounds both sides of the teaching experience—the educational and selection functions of school, the roles as mentor and as gatekeeper, the students' surface and deep study, their immediate and delayed learning—may contribute to more confidence to be able to make a difference on the part of teachers, and hopefully prevent such undesirable events as the decline of their beliefs in the malleability of their students' intelligence (Mugny & Carugati, 1989).

School Reform

Jussim and Harber's (2005) article starts with the following sentence: "*Teacher expectations*. The term has been known to inspire righteous indignation for teachers' supposed role in creating inequalities" (p. 131). But what is this role and where does it come from? In our article, by arguing that teaching is social influence, we posit that teachers are both sources and targets of influence. Following the comments we have made above on the effects that teachers may yield as sources of influence, we move to what it means for teachers to be targets of influence.

Several studies reviewed here converge in showing that when school and assessment are presented as having a selection function, teachers behave in a selective way and end up reproducing existing social inequalities, whereas when school and assessment are presented as having an educational function, teachers behave in a more egalitarian way and disparities in the way they treat the different pupils in their classes are reduced (Autin et al., 2019; Batruch et al., 2017; 2019). These results imply that the values, norms and practices that surround teachers during their professional activities have an impact on their behavior. This may seem trivial to seasoned social psychologists, but it has a non-trivial consequence: Devising a teacher training program along the lines suggested above may not work, i.e., may not result in learning that teachers can then apply in their everyday activities. Several factors may prevent a teacher's wish to act in accordance with such a training. First, in most industrialized

countries, a neo-liberal ideology prevails (Kasser, Kanner, Cohn, & Ryan, 2007) and promotes economic system justification (Jost & Hunyady, 2005), self-enhancement values of power and achievement (Schwartz, 2007), and performance approach goals that aim at outperforming others (Pulfrey & Butera, 2013). Teachers may adhere, at least to some extent, to such a pervasive ideological climate and they may concur with a selective view of the role of school and teachers. Even if they are interested in this type of training, their school principal, or the authority that approves continuing education courses, may not authorize them to attend. Or teacher education schools or departments may not agree to include such a course in their initial training curriculum.

Let us now imagine that a teacher has followed the course and returns to school full of enthusiasm and new ideas. The implementation of those new ideas might be discouraged by disapproving school authorities or colleagues, worried parents and puzzled students. A few years ago, in a personal communication with one of the authors of this article, David and Roger Johnson—who have devoted their career to research on cooperative learning (Johnson & Johnson, 2009), but also to training teachers—noted that very often teachers who had followed their training course on cooperative learning went back to school, practiced what they had learned for a while and then stopped for the reasons mentioned above.

What could be done, then? Johnson and Johnson, in the same personal communication, also noted that in teacher training it is important to train groups, not individuals. If a whole school—or even a whole district, region, canton, country, depending on the local organization of education—took the training, then one single teacher would be less likely to be perceived as deviant (Levine, 1989), as all the teachers would then share the same reality (Echterhoff, Higgins, & Levine, 2009). In this respect, allowing such a collective training operation would amount to initiating, at least partially, a top-down reform of the educational system, a change in norms initiated by the institution (Tankard & Paluck, 2016).

Such a reform would necessitate not only a change in how teacher training is organized, but above and beyond that, a change in the norms, values, teaching practices, and assessment tools that are taught. This would require that the decision makers be convinced, which may be difficult given the general tendency of those who govern the education system to favor selective tools and policies.

In fact, for more than a century, a number of schools and pedagogical methods have claimed that teaching should focus on actual learning, the promotion of a nurturing relationship between teachers and students (and among students), the respect of differences in psychological and cognitive development, and the avoidance of competition. These methods go under the denomination of "new", alternative, humanistic or progressive education, and have been promoted by famous thinkers such as John Dewey, Maria Montessori, Susan Isaacs, Rudolf Steiner, Célestin Freinet, just to name a few (see for instance Röhrs & Lenhart's handbook, 1995). However, their focus on learning and social justice notwithstanding, these methods are used by and large in private schools and benefit only a small proportion of the population (Sullivan, 1996). We have noted above that teachers as mentors are devoted to maximizing the learning potential of all students, and this is what most teachers do in their class when they work in a progressive education school. But all the students in a classroom or even in a whole set of schools that work with progressive education are only a minority of all the students who have the right to be educated within any one age group. This is why school reform should be implemented at the most comprehensive level possible: If teachers act as mentors only in a limited number of private schools, in terms of educational justice they paradoxically act as gatekeepers, by excluding all the students—the vast majority—who cannot afford private education.

Conclusion

In this article we have argued that, owing to the emphasis on selection that is present in most educational systems, teachers often get stuck in the role of gatekeepers, mainly concerned with the normative assessment of their students' performance. We have shown that this role leads teachers to focus on merit, and we have reviewed research that points to the consequences for students of such a focus, namely surface study, short-term learning and the reproduction of existing social inequalities. We have also argued that when educational systems emphasize their educational function, teachers may have the opportunity to take on the role of mentors, mainly concerned with the promotion of learning for all their students. We have shown that this role leads teachers to focus on equality and need, and we have reviewed research that points to the consequences for students of such a focus, namely deep study, knowledge appropriation and long-term learning, and the promotion of equality of treatment (cf. Figure 1).

In this respect, one important message that stems from the reviewed results is that teaching is a form of social influence, and teachers may have a profound impact on students' lives, both in terms of the level of learning they can induce and in terms of the future prospects that what students have learned may offer. We have reviewed some evidence that teachers may not see themselves in such a mentoring role, and we have therefore proposed that the research presented in this article could inspire teacher training, in particular with a view to boosting teachers' self-efficacy and empowering them to become agents of individual and social change. We have also proposed that, as teachers' behavior is influenced by the environment that surrounds them, a systemic change of norms, values, teaching practices, and assessment tools present in the educational system would be needed.

Any major change in how a system functions requires the intervention of the decision makers who have the power to act upon the structure of the system. However, minority influence could be another option (Mugny, 1982; Mugny & Pérez, 1991). Of course, one

isolated teacher would not resist the pressure of the majority (Asch, 1956). But groups of like-minded teachers can work together, create or join associations, and coordinate their action with that of unions (Klandermans & Roggeband, 2007). Research on minority influence has shown that it is possible to change the views of the general public, and those of the decision makers, even when the influence source lacks power, status, recognition or even competence (Quiamzade, Mugny, Falomir-Pichastor, & Butera, 2010). Achieving school reform from bottom up would certainly be more laborious as change would take time (Butera, Falomir-Pichastor, Mugny, & Quiamzade, 2017). However, and perhaps this is the main take-home message for teachers, changing one's professional practice to become an agent of social change for students requires that teachers engage in efforts to promote change at the societal level.

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Table 1

Parallel mechanisms in learning and social influence

	Learning (cf. Biggs, 2003)	Social Influence (cf. Quiamzade et al., 2013)
Quantitative	Surface: Recite, name, describe, do algorithm	Manifest: comply, imitate, adopt
Qualitative	Qualitative: analyze, integrate, generalize, predict	Latent: process, validate, appropriation

Table 2

Mechanisms and consequences involved in teaching as a function of the role of teachers

Teachers as	*Mechanisms*		*Consequences for Learning*		*Consequences for Educational Justice*	
	Student level	*Teacher level*	*Manifest Immediate*	*Latent Delayed*	*Short-term*	*Long-term*
Gatekeepers	• Informational constraint • Controlled motivation • Surface study	• Focus on equity and merit • Focus on selection	• Imitation	• Socio-cognitive disengagement	• Normative-selective assessment • Segregation-tracking	• Reproduction of social inequalities
Mentors	• Informational dependence • Autonomous motivation • Deep study	• Focus on equality and need • Focus on learning	• Imitation	• Knowledge appropriation	• Formative-educational assessment • Education for all	• Equality of treatment

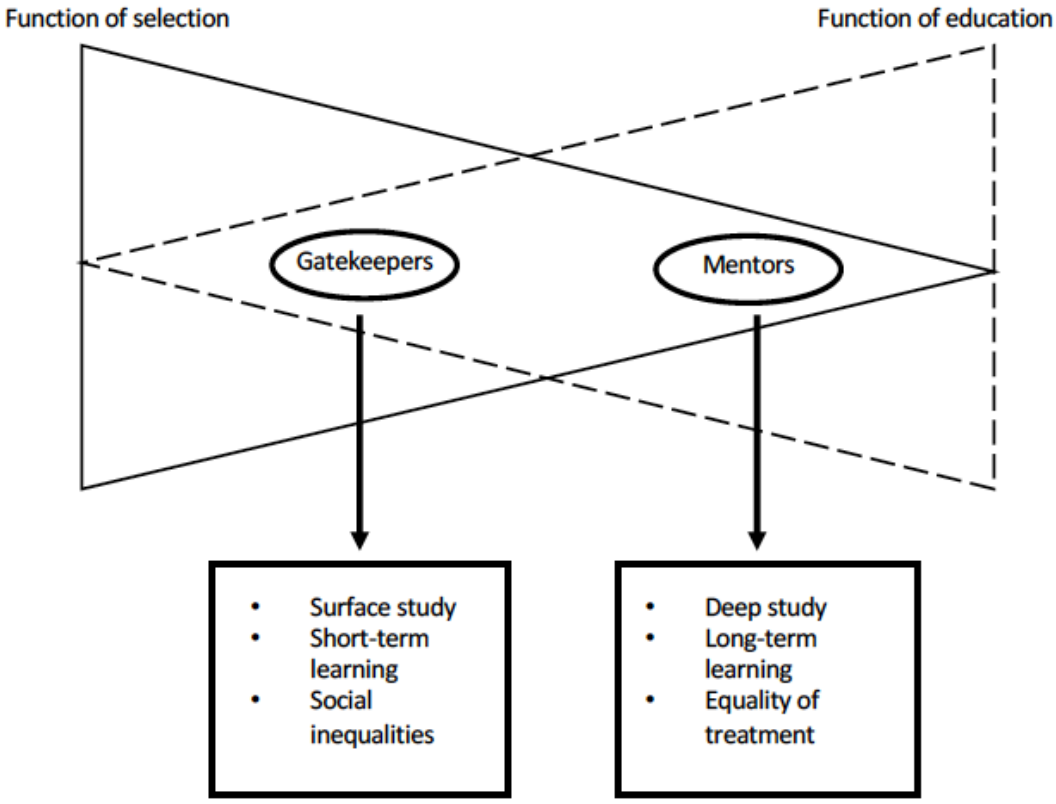

Figure 1. Educational systems are organized around two major functions, selection and education. Depending on the specific educational system, one function or the other may be more pronounced. Teachers endorse the role of gatekeepers in systems more focused on selection, and the role of mentors in systems more focused on education. The figure depicts the consequences in terms of learning and social justice of endorsing one or the other role.