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Normative Characteristics of Perceived Self-Efficacy

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Abstract: Globalization leads to an extension of the performance content demanded of employees. Consequently, the latter are confronted with an increase of requirements to fulfil, of obstacles to overcome, and, in this context, it seems that to consider oneself capable to respond to such demands is as important as one's objectively possessed abilities. Numerous research has shown the beneficial aspects of a high perceived self-efficacy. These beneficial aspects and the variable distribution of the level of this feeling among populations led us to hypothesize the normative nature of this perceived self-efficacy. Three populations (line managers, non-managerial employees and students) have responded to a questionnaire on perceived self-efficacy. The executives were asked to indicate, for each item, whether they would appreciate (or not) an employee adopting the behaviour listed in the item; the non-executives were required to indicate the degree to which each proposal corresponded to their usual behaviour, and the students were asked to select the items that an employee should tick off in order to be well seen (vs. badly seen) by their supervisor. Our results confirm our hypothesis: managers significantly appreciate employees who show a high level of perceived self-efficacy (SEP). We also note that adopting such behaviours is effective among non-executives, meaning that, if we take into consideration the fact that self-presentation with neutral instructions often produces socially desirable responses, the employees are aware of this valorisation. Finally, we see that such awareness is directly confirmed by our third population, i.e., by the fact that the future employees, in this case the students, are indeed aware of this valorisation.

Keywords: perceived self-efficacy; social norms

1. Introduction

Perceived self-efficacy (or SEP) makes reference “to the judgments people make regarding their ability to organise and carry out sets of actions required in order to achieve expected types of performances” (Bandura 1986, p. 391). It is (Bandura 2003, p. 12) “the belief of the individual in his ability to organise and carry out the course of action required in order to generate the desired results”. SEP thus relates to the individuals' beliefs regarding their abilities to mobilise the motivational, cognitive and behavioural resources needed in order to respond to the demands of a given situation (Wood and Bandura 1989b, p. 408). In fact, the attainment of objectives requires not only the possession of certain aptitudes, but also an awareness of this possession. In other words, if the level of competency influences the performance obtained, its impact is nevertheless mediated by the beliefs regarding personal efficacy. This explains why people can fail to achieve optimal performances when they doubt their abilities to attain them, even though they possess the required abilities. Beliefs in themselves can negatively affect the performance of talented individuals by limiting or even nullifying personal abilities due to self-doubt (Lecomte 2004) or, on the contrary, can positively influence performance if the individuals are confident in their competencies (Galand and Vandele 2004). Thus, learners with

above-average cognitive skills may have weak beliefs in academic achievement, as shown by the studies on the illusion of incompetence (Marcotte and Bouffard 2003; Phillips 1984). Conversely, a learner with low initial learning skills, but who believes in his abilities to use them effectively, can greatly develop his skills. People with identical aptitudes may thus achieve completely different performances, depending on their level of belief in their personal efficacy.

Bandura (1977b) states that SEP is not a personological trait: it refers to beliefs regarding specific abilities in relation to specific situations and varies according to task and context. Taking into account an example of perceived self-efficacy in sports (which can be strong in football and weak in tennis), Lecomte (2004) specifies that there is no general perceived self-efficacy, but rather a perceived self-efficacy specific to a particular activity.

Similarly, in terms of learning, Galand and Vandele (2004) indicate that the beliefs of efficacy are largely subject-specific (for example, perceived self-efficacy in mathematics and perceived self-efficacy in one's mother tongue constitute independent factors). If this contextualisation leads to the need for a partial reconstruction of SEP in the face of a new task, it also means that SEP is more accessible to educational interventions than global beliefs (Galand and Vandele 2004, p. 97). It also appears that, while differentiated, beliefs of efficacy within various domains contribute to a general perceived self-efficacy (Bong 2001; Marsh 1990; Talley et al. 2011; Kulviwat et al. 2014). Bandura (Bandura 1977a, 1977b, 1982a, 1982b) emphasizes that SEP can be examined in terms of three dimensions: amplitude (which corresponds to the level of difficulty of the tasks one feels capable of facing), force (which refers to the degree of conviction regarding the probability of success), but also generability (i.e., the scope of the tasks at which one feels efficient).

Finally, we mention that Bandura (Bandura 1977b; 2003, pp. 39–40) distinguishes SEP (belief in one's ability to adopt certain behaviours, which refers to an expectation of efficacy) from the belief in the fact that such behaviours will lead to a certain result (this refers to an expectation of result). SEP is "a judgement regarding the aptitude of an individual to organise and execute performances, while the expectation of a result is a judgment regarding the probable consequence of such performances" (Bandura 2003, p. 39). In other words, SEP refers to the beliefs of an individual regarding his abilities to adopt the behaviours he thinks are required in order to achieve the desired results. It is a judgement of an individual regarding his capacities to carry out certain actions (also called performances: *acc. to François 2009*), whereas the expectation of a result is a judgment regarding the probable consequences of those actions; it corresponds to the beliefs of an individual that certain behaviours can enable him to achieve the results desired, be they material results (for example, remuneration), social results (recognition, prestige...) or self-evaluative results (satisfaction, pride...). These are the beliefs related to agency; that is to say, to the personal power of action of the individual, to the fact that the human being is an active agent of its own life, and that this intentionally influences the course of its life and actions, which are targeted by SEP, and not those related to the consequences arising from these actions.

1.1. Sources of SEP

In Bandura's view (Bandura 1991; 1997; 2003, p. 124), the level of SEP is dependent on four sources of information: the active mastery of experiences (previous successes and failures), vicarious experiences (social learning or modelling), verbal persuasion (evaluative feedback, encouragement...) and physiological and affective states. Galand and Vandele (2004) underline the fact that these four sources may have a different influence according to the field concerned. For example, Gist, Schoewerer and Rosen (Gist et al. 1989) observe that computer training relying on active control is more efficient than a training relying on modelling (demonstration by someone with more experience), cognitive simulations or verbal instruction. In a questionnaire survey, Lent, Lopez and Bieschke (Lent et al. 1991) find that previous performances and, to a lesser extent, social persuasion, favour SEP in mathematics, compared to vicarious experiences or to emotional activation. Nevertheless, studies by Pajares and Zeldin (1999) suggest that verbal persuasion (for e.g., encouragements) and vicarious experiences constitute important elements in building perceived self-efficacy in mathematics among

women pursuing scientific careers. More recent studies have emphasized the importance of mental skill training in order to improve self-efficacy (Buck et al. 2016). Modelling and imagery can serve as vicarious experiences and provide information that affects self-efficacy (SooHoo et al. 2004).

1.1.1. Experiences of Mastery

Past performance is considered the most influential source of information regarding perceived self-efficacy (Bandura et al. 1977). Success results in an increase of SEP, whereas repeated failures can act in reverse. The effects of SEP have a circular nature, which means that an individual whose failure undermines his confidence in his skills will become less likely to produce high performance, which in turn may further undermine his perceived self-efficacy. Conversely, however, a successful individual will see his confidence strengthened, and will therefore be susceptible to new successes. François and Botteman (2000) consider that the experiences which we master and succeed at are the best way to develop perceived self-efficacy.

Therefore, we notice that, in the educational field, doubling has a lasting negative impact on the students' perceived competence (Crahay 1996). Conversely, working with pupils with learning disabilities has led to a development of SEP, better performance and a greater interest shown by pupils, by structuring the subjects in easily manageable sub-skills, with proximal objectives set in partnership with the pupil—that is to say, precise objectives presenting a moderate challenge, not too difficult to achieve over a short period of time, rather than distal objectives, formulated in a general manner and distant in time, or rather than no objectives at all (Bandura and Cervone 1983; Bandura and Schunk 1981; Morgan 1985; Schunk 1985; Schunk 1989). At a more global level, it is observed that previous academic performances, the path of training, and the academic history of individuals will have a determinant influence on their beliefs of efficacy regarding learning (Galand and Vandele 2004; Skaalvik and Valås 1999; Chapman and Tunmer 1997). Similarly, in terms of functional rehabilitation, asking patients to set their own objectives within a particular area of interest, to make sure that such objectives are realistic and achievable with an appropriate level of effort and to provide feedback on their performance are all factors that lead to an increase in perceived self-efficacy (Barlow 2010).

Nevertheless, we mention that the influence of previous experiences will depend on the interpretation of such experiences: in order to fulfil these functions, those experiences must be attributable to the individual (the individual must assume responsibility, in terms of effort and not of stable personal skills). Also, previous successes must not have required excessive efforts (in which case SEP would be little affected: Strecher et al. 1986) or too weak efforts (Wood and Bandura 1989a). Bandura (1984) notes, however, that individuals with high SEP will attribute temporary failure to bad luck and will therefore not be affected, and that certain individuals will forget their failures and only remember their successes (this selective memory may lead to a risk of overestimation of abilities), while others will function in reverse.

1.1.2. The Vicarious Experience

In order to evaluate one's abilities, the individual can also draw conclusions by observing the actions carried out by other people, this observation being particularly effective in situations in which the person has no previous personal experience. The observation of similarities in case of a failure or of a success is thus a second determinant (Bandura et al. 1980), provided that those models are both similar and possible for the observer in terms of age, sex, health condition, school level (Peterson and Stunkard 1992; Schunk and Hanson 1985) and, more globally, in terms of competences and abilities (therefore, children improve their SEP if they observe other talented children rather than by seeing adults display the same cognitive aptitudes, or if they observe the success of others judged as being superior, in which case discouragement may ensue). Similarly, knowing that other learners have successfully accomplished a task by employing self-learned cognitive strategies reinforces perceived personal efficacy (Schunk and Gunn 1985). However, it is important that these models be

confronted with a situation requiring effort rather than an easy task (Strecher et al. 1986). Under these conditions, the observation of the success of others increases SEP, while the failure of others diminishes it. The number and variety of models are also equally involved (Maddux and Stanley 1986).

1.1.3. Verbal Persuasion

Verbal persuasion (support, criticism, encouragement, advice, expectations, etc.) also influences the perception of abilities, with an increase in SEP in case of encouragement, and, on the contrary, a decrease in it in case of negative prognoses (Cole et al. 1997; Phillips 1987). These perceptions are communicated verbally, but also non-verbally. Galand and Vandeley (2004) report several studies showing that trainers manifest, oftentimes without being aware of it, their expectations regarding learners through the attention they pay to them, through the manner in which they look at them and speak to them, through the manner in which they bring them together, the difficulty of tasks they attribute to them, or the degree of autonomy they grant them (Brophy and Good 1986; Weinstein et al. 1982). This persuasion varies according to factors such as the degree of competence perception, reliability or attractiveness of the persuasive source (Maddux and Stanley 1986). As Lecomte (2004) points out, this persuasive effect is especially effective if the person already has good reasons to believe they can act efficiently.

One of the forms of verbal influence most studied in the field of training is evaluative feedback, which informs the learner on the state of his performances. Perceived self-efficacy, for example, has been manipulated through feedback announcing the participant that, by comparison with the performance of other subjects with the same level of training, their own performance has been superior or inferior (for e.g., Boggiano et al. 1993; Bouffard-Bouchard and Pinard 1988; Bouffard-Bouchard et al. 1990; Pittman et al. 1983). It is, however, also necessary to take into account the form of this feedback (Galand and Vandeley 2004). Thus, McColskey and Leary (1985) show that a self-referenced feedback (performance in relation to other individual measures of competence) is preferable to a normative feedback (individual performance compared to those of others). Baron (1988) finds that general negative feedback, which is not very respectful and attributes poor performance to internal factors and contains threats, leads to a decrease in the perceived efficacy and the objects established by the learner, contrary to a negative, but specific, respectful and non-attributive feedback which is accompanied by recommendations.

1.1.4. Physiological and Emotional States

When evaluating its abilities, a person is also based in part on the somatic information transmitted by its physiological and emotional state. According to Bandura (2003, pp. 163–64) “people often interpret their physiological activation during stressful or demanding situations as signs of vulnerability or dysfunction. [...] By evoking unpleasant thoughts about their inability and their stress reactions, people can self-activate up to high levels of stress that produce precisely the dysfunctions they dread”. Therefore, the neurovegetative activation caused by fear, anxiety or stress may decrease SEP; if a person becomes aware of an unpleasant emotional activation, they may start to doubt their competence in performing behavioural tasks and develop a low SEP; feeling nervous, trembling in the face of a task also decreases SEP. Conversely, excitement and challenge favour SEP.

In the rehabilitation field, Barlow (2010) reports, for example, that the breathing difficulties and anxiety experienced by a patient with COPD (chronic obstructive pulmonary disease) during an exercise on a stationary bike may weaken his perception of SEP and may lead him to slow down his pace or stop exercising.

1.2. Inter-Individual and Cultural Differences

Jacobs et al. (2002) have observed differences in the level of SEP among girls and boys in what regards the majority of the school subjects investigated. Schunk and Pajares (2002) report that in the fields of science, mathematics and technology, which are perceived as male domains, boys show

a higher level of perceived self-efficacy, while girls have a higher perceived self-efficacy in literary subjects. Bong (1999) has found that boys present more similar levels of self-efficacy across school domains, while girls show a greater difference between science subjects and more literary subjects. As for differences according to age, studies report contradictory results, with higher SEP being present amongst the younger (for e.g., Jacobs et al. 2002), but sometimes also the opposite (for e.g., Schunk and Pajares 2002). As for Vonthron, Becker and Pouchard (Vonthron et al. 2006), they find that the strength of SEP increases somewhat with age, but that those over 50 have the lowest level. These authors also observe the influence of socio-professional categories: managers and people in assisted jobs having a level of SEP significantly lower than the other categories of employees.

For Bandura (2003, p. 55), the positive effects of SEP are transcultural, but Bandura also notes that the concretisation of SEP may vary from one culture to another (Bandura 2002, p. 273), which is particularly confirmed by the works of Manto Jonte (2014) in comparing France and Cameroon. In a study conducted on college students from three European countries (Italy, Hungary and Poland), Pastorelli et al. (2001) also find that children have a similar estimation of their mastery of academic subjects, but that children from countries with an authoritarian educational system (Hungary) have less confidence in their ability to take charge of their own learning. François (2004) considers that the predictive value of SEP is more pronounced in the North-American culture. This author thus recalls the study conducted by Liou and Contento (2001), which suggests the modulation, according to culture, of the processes in which SEP intervenes: it is in the group with the most Americanized way of life that SEP would be the most predictive. Markus and Kitayama (2003) report results indicating that not only do the processes of behaviour regulation vary according to cultures, but also according to social categories, within the same society.

1.3. The Effects of SEP

The central idea of SEP is that an individual's confidence in his ability regarding a given task determines in part the manner in which he will cope with the task and the level of performance he will achieve, provided that the latter depends at least in part on the individual's actions (Barone et al. 1997, pp. 290–91; Galand and Vandele 2004). More generally, SEP helps the individual choose and control their actions (effort expenditure, persistence), but also their thoughts (positive or negative), their feelings (emotional reactions to obstacles), their motivation, etc. Self-efficacy is useful for motivating individuals toward continued improvement (Elstad and Christophersen 2017). People with high SEP thus approach difficult tasks as challenges to take on rather than threats to avoid. They set stimulating objectives and retain a strong involvement in them; they invest a lot of effort and, attributing their potential lack of success to a lack of effort, persevere in case of failure. They approach potential threats or stressors with positive, constructive ways of thinking, being persuaded that they are able to and indeed do exercise a certain control. This confidence improves performances, reduces stress and decreases vulnerability to depression, thus fuelling one's well-being. Conversely, people with a low SEP avoid the tasks for which they doubt their abilities. They have reduced aspirations, difficulties in motivating themselves and rapidly give up in the face of an obstacle. Confronted with failure, which they attribute to a lack of skills, they are subjected to self-destructive and ruminating ways of thinking, overestimating their inadequacies and having difficulties in finding perceived self-efficacy. They are easily vulnerable to stress and depression (Bandura 1977a; Maddux and Meier 1995).

The fact that SEP influences the choice of the activities in which the individual plans to engage (by deciding to only get involved in the situations in which he expects to have success and by avoiding to adventure himself in those at which he believes he will fail) reinforces the loop functioning already mentioned in relation to the experiential source of SEP; by engaging in situations where he believes he will succeed, the individual increases his skills and SEP relating to the situations in question. Conversely, by avoiding the situation in which he expects to fail, he deprives himself of experiences of potential successes that could increase the SEP related to those situations (Blanchard 2008, p. 10).

It is thus observed that the higher an individual's SEP, the more he sets high objectives (Bandura and Cervone 1986; Taylor et al. 1984). In the same way, we find that the more ambitious the objectives, the more the individual is motivated to accomplish those objectives and make efforts in order to achieve them (Locke et al. 1984), which results in high levels of performance (Latham and Lee 1986; Locke et al. 1981; Mento et al. 1987).

Lecomte (2004) points out that perceived self-efficacy has applications in multiple fields: in physical and mental health, in sports, in activism and collective action, in the cognitive and educational field, in organizations, etc.

1.3.1. In Health

Barlow (2010) notes that SEP constitutes an important determinant of the success of patients in the rehabilitation process by influencing the intensity of the efforts they invest in their rehabilitation, their perseverance despite the difficulties they encounter, their capacity to maintain a positive attitude in the face of their rehabilitation objectives and the level of stress they experience during their rehabilitation. This author also points out that SEP acts favourably on the functional psychological, cognitive and physical abilities of the people undergoing rehabilitation; high levels of SEP are associated with low levels of psychological distress (less anxiety and depression), greater tolerance to pain and other symptoms, greater ease of recovery, better usage of the activities related to self-management and improved physical functional ability. See also the more general revue of Malleh (2014).

Numerous studies also underline that high SEP is associated with improved health conditions in the case of numerous rehabilitative conditions. In the case of multiple sclerosis, a high SEP leads to lower rates of depression and positive physical repercussions (Motl et al. 2009). A two-year longitudinal study on people with rheumatoid polyarthritis has showed that a high SEP has been associated with lower levels of pain and fatigue (Brekke et al. 2001), lower risk of depression (Beckham et al. 1994; Wright et al. 1996), and good tolerance to pain (Keefe et al. 1997). Empirical tests also confirm the role of SEP in the rehabilitation of patients with arthritis (Barlow et al. 1993; Rejeski et al. 1998). Among a sample of patients with heart failure, it was found that SEP influenced the behaviours related to self-management (such as taking medication and complying with dietary restrictions) and led to less frequent admissions to the hospital (Barlow 2010).

On the psychological level, Bandura (Bandura 1977a, 1977b, 1982a, 1982b) indicates that SEP influences disinhibition in terms of re-adopting old behaviours (for e.g., resuming sports activities without fear following a cardiac event), acquiring new behaviours (for e.g., using condoms), and the inhibition of addictive behaviours (for e.g., reducing or quitting smoking). Examining various predictors of drug quitting, Gossop et al. (1990) have found that one of the predictive factors was perceived self-efficacy in abstaining from drugs. Lecomte (2004) reports that several studies led to comparable results for anti-alcohol therapy. Strecher et al. (1986) have carried out a review of the works on the effects of SEP in terms of behaviours to be adopted or to be ceased and have also shown the beneficial effect on the short and long term (quitting smoking or drinking, using contraception, research on weight loss in case of obesity . . .). More generally, SEP plays a role in the motivations and decisions involved in the change-making process when the expected results are positive, but the actions are difficult to implement, such as when quitting smoking (on the contrary, when the consequences are uncertain, for example, when it comes to modifying eating habits in order to prevent cancer, then the expectations of results also play a role). In the field of phobias, the sociocognitive theory of Bandura (1986) indicates that it is especially the perceived inefficacy to face potential threats that explains the limitations that phobic subjects impose on themselves, rather than the fear of becoming anxious, of being overwhelmed by panic and catastrophic consequences likely to occur: individuals avoid situations and activities that may be unpleasant because they feel they are unable to manage them. Williams and Zane (1989) thus show that the beliefs of efficacy are highly predictive of agoraphobic behaviour, when neither anticipated anxiety, nor perceived danger is predictive.

1.3.2. In the Field of Learning

The learner's beliefs in his abilities to succeed play a crucial role in his commitment and performances. In terms of engagement, numerous studies indicate that the learners rarely engage in an activity which they do not consider themselves capable of achieving (see [Bandura 1997](#), for a review). More generally, SEP notably predicts school results, the choice of their study programme and their professional choices ([Lent et al. 1991](#); [Marsh and Yeung 1997](#); [Pajares and Miller 1994](#)). People with high self-efficacy choose challenging activities, set hard-to-reach goals, better control their efforts to achieve goals, manage stress and anxiety, and achieve better results ([Galand and Vandele 2004](#); [Bandura 1988](#); [Bong and Skaalvik 2003](#); [Marsh 1990](#)).

[Collins \(1982\)](#) has found that children with the same level of competence perform differently according to the intensity of their perceived efficacy: the children with the strongest belief in their efficacy have solved the most mathematical problems, have chosen to analyse more thoroughly those where they have failed, and have abandoned erroneous strategies more rapidly; the beliefs of efficacy also predicted interest and positive attitudes towards mathematics. Similarly, at the university, students who have a high perceived self-efficacy are better able to regulate their learning and succeed better than those who doubt their intellectual capacities ([Wood and Locke 1987](#)). The meta-analysis of [Multon, Bron and Lent \(Multon et al. 1991\)](#) of academic achievement, conducted on children and adults, also shows that efficacy beliefs contribute significantly to academic performance. Similarly, still in the educational field, but focused on profession, [Bandura \(2003\)](#) indicates that the new recruits within an organization who have a strong SEP learn and succeed better during their training period than their counterparts with a weak perceived self-efficacy. [Vonthron \(2008, p. 79\)](#) also recalls that "in the context of learning a profession, several studies have shown the importance of SEP" ([Betz 1992](#); [Betz and Hackett 1981](#); [Lent et al. 1994](#); [Matsui et al. 1989](#)).

1.3.3. In the Professional Field

Perceived efficacy is a major contributor to career orientation, since individuals quickly eliminate entire occupational categories based on their perceived efficacy. SEP thus predicts the range of professional options taken into consideration, the interest in and preference for a certain profession, the attending of a school that prepares for that career, and perseverance and success in the field chosen ([Lent and Hackett 1987](#)). [Bandura \(2003\)](#) adds that people with a high SEP who enter an organization respond better to situational demands, are significantly more involved, are more satisfied, in stressful situations resort to more functional coping strategies, and assume more pertinently the technical, interpersonal and professional aspects of their jobs. [Vonthron \(2008\)](#), regarding employees undergoing training or already appointed to a job, highlights the favourable influence of SEP on the satisfaction within their job expressed by managers in the public and private sector, or even the explanatory role of SEP on keeping (or dropping) the trainees engaged in long-term qualifying vocational trainings, just as they continue to have women as employees in atypical jobs (usually held by men) despite the particular difficulties of such employment. [Skaalvik and Skaalvik \(2010\)](#) find that teachers' SEP is correlated with their job satisfaction and negatively correlated with the two dimensions of burnout (emotional exhaustion and depersonalization).

In a survey conducted on 2649 people who had completed a qualifying vocational training for one to two years and who have returned to the labour world, [Vonthron, Becker and Pouchard \(Vonthron et al. 2006\)](#) also observe that the employees who wish to leave their current workplace and search for another present a level of professional SEP weaker than the others, with a positive correlation between perceived professional efficacy and the feeling of security at work. Several studies also show that perceived efficacy predicts re-employment after dismissal. [Kanfer and Hulin \(1985\)](#) have tested employees for their perceived efficacy when executing various aspects of job searching. Compared to other factors (age, performance at work, depression and obstacles perceived upon re-employment), perceived efficacy seems to be the single predictive factor of re-employment: the higher the perceived efficacy, the more important the job-seeking behaviour and the higher the rehire rate. [Clifford \(1988\)](#)

has also found that unemployed people who were convinced of their efficacy in finding a job had more probabilities of being reemployed, when neither the cause of unemployment, nor the personality characteristics exerted any influence. [Manto Jonte \(2014\)](#) also observes a positive effect of SEP on the mastery of job searching techniques.

[Stajkovic and Luthans \(1998\)](#) meta-analysis, which focuses on professional performances, shows the existence of a direct link between SEP and performance. [Bandura and Locke \(2003\)](#) also report nine meta-analyses that indicate that SEP influences, directly or indirectly, the motivation and performance at work (see also [Bandura 1997, 2004](#); [Ivancevich et al. 2011](#); [Luthans et al. 2007](#); [Sadri and Robertson 1993](#); [Oude Groote Beverborg et al. 2015](#)). [Bandura \(1982a\)](#) also states that SEP influences the motivation and performance of an employee in three manners: by determining the level of objectives that the individual sets for himself (a high SEP leads to high objectives), by characterizing the intensity of the efforts deployed (high SEP due to the fact that the individual is confident of his success possibility) and by relying on perseverance. [Wood and Bandura \(1989a, 1989b\)](#) thus observe the beneficial effects of SEP in managerial decision-making. [Krueger and Dickson \(1993\)](#) show that managers with high perceived efficacy focus on opportunities to be grasped, while those with low perceived efficacy focus on the risks to be avoided. [Baum \(1994\)](#) followed, over four years, entrepreneurs who had founded their business or transformed the one they had bought. Entrepreneurial success was measured by growth in sales, employment and profits. It was then observed that entrepreneurs had obtained a strong growth by having a strong belief in their efficacy, by setting especially stimulating growth objectives and by implementing innovating production and marketing strategies. By submitting managers to feedback containing an erroneous social comparison (which overestimates or underestimates the performance of the participant compared to that of others), [Bandura and Jourden \(1991\)](#) found that those who received feedback underlining the insufficiency of their managerial performance showed a decrease in their SEP and a progressive deterioration of their managerial functioning. They were overwhelmed with doubts regarding their managerial efficacy when they encountered problems, their reasoning had become increasingly disorderly, and they reduced their organizational aspirations and were getting less and less positive. On the contrary, the executives receiving feedback overestimating their performance showed a lasting perceived efficacy even when they were assigned productivity standards which were very difficult to achieve. They set for themselves increasingly ambitious organizational objectives and this orientation of self-efficacy translated into high organizational productivity. The impact of perceived self-efficacy on the professional life has also been studied on the productivity of research within the university environment. Therefore, after controlling the effects of years of experience, of academic standing and of discipline, [Vasil \(1992\)](#) observes that strong confidence in the efficiency of research accounts for high research productivity.

2. Hypotheses

We formulate the following hypotheses:

- H1.** *Employees with high self-efficacy are more valued by their manager compared to those with low-efficacy.*
- H2.** *Non-executive personnel are aware of their bosses valuating personnel with high SEP, and they usually perceive themselves as having a high SEP.*
- H3.** *Non-executives are aware of this valuation and they provide more responses in the direction of a high SEP, in order to be appreciated, than providing a bad image of themselves.*

3. Materials and Methods

We asked three French populations (128 executive male employees, 307 non-executive male employees, and 176 students out of which 134 female and 42 male) to respond, voluntarily, to the questionnaire of [Sherer et al. \(1982\)](#). Our employee participants, selected solely for being employed in

the private sector, have been contacted in various public locations (when getting off work, on public transportation means...) and they answered the questionnaire in a face-to-face situation. The students, who began a course in psychology, have responded to it during one of their first lessons.

Numerous SEP measurements are targeted to specific activities (for example, the *Self-Efficacy Scale for Social Workers*—SESSW) (Pedrazza et al. 2013). However, more general tools have also been developed, as indicated by Chen, Gully and Eden (Chen et al. 2001). Therefore, individuals with a high perceived self-efficacy expect to succeed through a variety of tasks related to various areas. Sherer et al. (1982) also explain that general efficacy overflows in specific situations. As for Schwarzer and Hallum (2008), they underline that if self-efficacy is used as a predictor of general aspects, such as quality of life, wellbeing, adaptation and overall health, it is then pertinent to use a measure for general self-efficacy. The three main measuring instruments for general self-efficacy are the *Self-Efficacy Scale* (Sherer et al. 1982), the *General Self-Efficacy Scale* (Schwarzer and Jerusalem 1995) and the *New General Self-Efficacy Scale* (Chen et al. 2001). All three have good psychometric qualities (Scherbaum et al. 2006).

The Sherer et al. (1982) questionnaire consists of 23 items organised around two subscales: a subscale pertaining to perceptions of self-efficacy in general, with 17 items (for example: “When I decide to do something, I immediately devote myself to it”), and the second to perceptions of self-efficacy in a social context, with six items (for example: “It is difficult for me to make new friends”). We have included here 13 out of the 17 items of the first subscale (see Appendix A). We have removed the following four items: “I avoid trying to learn new things when they seem too difficult for me” (item which, as far as our objective is concerned, seemed too focused on learning to us); “failure just makes me try harder” (item that may be perceived as referring to finished activities, contrary to item 3); “I feel insecure about my ability to do things” (item more personological than behavioural), and “I am a self-reliant person” (although related to SEP, this item refers rather to a feeling of autonomy).

The population of managers has been subjected to a legislator’s paradigm (Gangloff 2008). These managers were thus instructed to indicate, for each item, whether they would appreciate (or not) if an employee adopted the behaviour presented in the item. The respondents ticked off each item according to a dichotomous principle: an appreciated answer *versus* a rejected answer. As for non-managerial employees, they were confronted with the paradigm of self-presentation with neutral instructions, meaning that they had to indicate, in all sincerity, on a four-point scale, (true, rather true, rather false, false), the degree to which each sentence corresponded to a conduct they would habitually adopt. Finally, the students were confronted with a new paradigm, created for this specific occasion: the paradigm of “courtesan self-presentation”. The participants were given the following instructions: “You are asked to answer the following questionnaire by imagining the answers that an employee should give in order to be appreciated by his supervisor, and which he should give if, on the contrary, he wants to be disliked by his supervisor”. The respondents then ticked off each item according to a dichotomous principle: to be ticked off in order to be well regarded *versus* to be ticked off in order to be poorly looked upon.

The self-presentation paradigm is usually divided into three modalities (*acc.to* Jellison and Green 1981): (1) Self-presentation with neutral instructions, also called standard instructions (answer as sincerely as possible); (2) self-presentation with instructions of self-valuation (answer the questionnaire by trying to render the best self-image possible); (3) self-presentation with instructions of self-devaluation (answer the questionnaire by trying to render the worst self-image possible). In many cases, the instructions of self-valuation and self-devaluation are used together; the difference between the answers obtained between the two types of instructions is considered to highlight the perception of the respondents in what regards the difference in social value granted to one or another type of such answers. However, this joint usage seemed methodologically problematic to us, since it is carried out at an intra-subject level (each respondent answers to both instructions successively, which leads to a potential halo effect which can only be compensated by controlling the effect of the order), or at an inter-subject

level (in which case, the inter-subject differences may bias the results). The modality we have chosen (the paradigm of self-presentation of employability) allows us to avoid each of the two pitfalls.

4. Results

4.1. For Executives (N = 128)

The gross results and percentages of positive and negative responses given by executives regarding the supposed behaviours of their employees are shown in Table 1.

Table 1. Distribution of the answers given by executive employees in raw data (and % between brackets).

Type of Answer	Raw Data and Percentages
Positive answers	1612 (89.96%)
Negative answers	180 (10.04%)
Total	1792 (100%)

We notice that the positive answers are significantly more frequent than the negative ones ($\chi^2 = 1144.32$; $p \approx 0.00$), which means that the appreciation of the employees' behaviour by executives was done more in positive than in negative terms.

4.2. For Non-Executives (N = 307)

Regarding the non-executives employees, faced with the paradigm of self-presentation in a neutral consign, the results presented in Table 2 show that the positive answers are again significantly more frequent than the negative ones ($\chi^2 = 1077.50$; $p \approx 0.00$).

Table 2. Distribution of the answers given by non-executive employees in raw data (and % between brackets).

Type of Answer	Raw Data and Percentages
Positive answers	3225 (75.03%)
Negative answers	1073 (24.97%)
Total	4298 (100%)

Nevertheless, we also observe that executives provide more positive answers than the non-executives ($\chi^2 = 177.29$; $p \approx 0.00$) which means that managers appreciate the alleged behaviours of their employees in more positive terms than their employees themselves.

4.3. For Students (N =176: 134 Female and 42 Male)

For students who have been confronted with the paradigm of "courtesan self-presentation," the results are as follows (Tables 3–5): overall, that is, men and women combined, the positive answers are significantly more frequent than the negative ones ($\chi^2 = 2080.76$; $p \approx 0.00$), which is also found separately for both women ($\chi^2 = 1597.94$; $p \approx 0.00$) and men ($\chi^2 = 482.98$; $p \approx 0.00$).

Table 3. Distribution of the answers given by male and female students combined, in raw data (and % between brackets). NB: due to 18 non-answers, the total global is below 2464 (176 participants \times 14 items).

Type of Answer	Raw Data and Percentages
Positive answers	2351 (96.12%)
Negative answers	95 (3.88%)
Total	2446 (100%)

Table 4. Distribution of the answers given by female students in raw data (and % between brackets). NB: due to 16 non-answers, the total global is below 1876 (134 participants \times 14 items).

Type of Answer	Raw Data and Percentages
Positive answers	1792 (96.34%)
Negative answers	68 (3.66%)
Total	1860 (100%)

Table 5. Distribution of the answers given by male students in raw data (and % between brackets). NB: due to 2 non-answers, the total global is below 588 (42 participants \times 14 items).

Type of Answer	Raw Data and Percentages
Positive answers	559 (95.39%)
Negative answers	27 (4.61%)
Total	586 (100%)

We also notice that, for both men and women, the students provide more positive answers than the executives ($\chi^2 = 64.69$; $p \approx 0.00$), which is also observed for women alone ($\chi^2 = 58.85$; $p \approx 0.00$), and for men alone ($\chi^2 = 16.43$; $p \approx 0.00$).

And the students combined also provide more positive answers than the non-executive employees ($\chi^2 = 483.80$; $p \approx 0.00$), which is also observed for women alone ($\chi^2 = 390.50$; $p \approx 0.00$), and for men alone ($\chi^2 = 122.47$; $p \approx 0.00$).

5. Discussion

In this article, we have been interested in identifying a professional valuation of employees who have a high perceived self-efficacy. Taking into consideration that assigning a norm status to an object means that said object has value (Dubois 1994), this article questions the value assigned to the personnel with high perceived self-efficacy.

We hypothesized that perceived self-efficacy would meet the main criteria for a social norm. Our results indicate that this is indeed the case:

- Executives claim to significantly value the employees with high perceived self-efficacy (Hypothesis 1).
- Moreover, we note that the declaration of such a high feeling is effective among non-executives (Hypothesis 2), which could mean, if we consider that the paradigm of self-presentation with neutral instructions frequently produces answers impregnated with social desirability, a clairvoyance of the employees as to this valuation.
- This clairvoyance is finally more directly confirmed on our third population, even though they are students and, moreover, their experience (psychology) is not the most favourable for the dissemination of organizational norms: these future employees are actually aware of this valuation and report a high SEP in order to showcase themselves, whereas *a contrario* they display a low SEP in order to offer a poor image of themselves (Hypothesis 3).

We also note that executives value SEP with a significantly higher intensity as compared to the intensity with which the non-executives adopt the conducts associated with it, and that students grant a higher importance to that manifested by non-executive employees than by executives.

However, we should indicate a certain number of limitations to these results.

One of the limitations of this study is obviously the operationalization of our variable: we measured SEP using the questionnaire of Sherer et al. (1982) while other choices would have been possible. However, in support of our choice, we mention that the metric qualities of this instrument are perfectly appropriate (in particular, in terms of adequate reliability and a Cronbach's alpha of 0.86 on the general SEP scale we used).

The results we obtained with a French population cannot be generalized to other cultures. Taking into account the fact that SEP can vary across cultures (Bandura 2002), further studies are needed in order to verify the status of social norm of SEP in other cultures.

Another limitation of our study is related to our male population. If, in terms of students, we distinguished between men and women (and found that they answered identically), we were not able (due to absence of female employees) to control the “gender” variable for the employees (with solely male samples), which evidently forbids any immediate generalization of our results for the female population.

Finally, let us recall that the results obtained, far from being inconsistent, correspond well with the hypotheses formulated. The changes faced by organizations, especially as a result of globalization and the resulting competition, lead them to seek more performance and flexibility, and therefore to extend their requirements in terms of performance and individual flexibility. In fact, the skills researched increasingly relate to adaptability. The studies of Pulakos (Pulakos et al. 2000; Pulakos et al. 2002) on adaptive performance (which would reflect the individuals’ ability to adapt to new work conditions and requirements) underline that this performance would be supported by an adaptive skill consisting of eight factors (showing interpersonal adaptability—being capable of working with new teams, new colleagues, customers, providers; showing cultural adaptability—being capable of working efficiently within different cultural contexts; showing physical adaptability—being capable of working within varied and difficult environments; solving uncertain and unpredictable work situations; etc.). Confronted with these new requirements, employees must evidently feel that they can respond to them, and it is logical that managers, renewing their criteria for evaluating the personnel by integrating the new economic situation (Charles-Pauvers et al. 2006) value those subordinates who indeed experience such a feeling. Lunenburg (2011) thus proposes to select and promote individuals with a high level of SEP. Our results highlight the normativity of such a proposal.

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Appendix A : the Items Employed

1. When I make plans, I am certain I can implement them.
2. One of my problems is that I cannot get to work when I should.
3. If I don’t manage to do something the first time, I keep trying until I get there.
4. When I set objectives that are important to me, I rarely reach them.
5. I abandon things before finishing them.
6. I avoid coping with difficulties.
7. If something seems too complicated, I don’t even bother trying.
8. When I have to do something unpleasant, I put myself to it until I’ve completely finished it.
9. When I decide to do something, I immediately dedicate myself to it.
10. When I try to undertake something new, I give up quickly if I don’t get there right away.
11. When unexpected problems arise, I am well able to deal with them.
12. I give up easily.
13. I feel able to deal with most of the problems that occur in my life.

References

- Bandura, Albert. 1977a. Self-efficacy: Toward a unifying theory of behavioral change. *Psychology Review* 84: 191–215. [CrossRef]
- Bandura, Albert. 1977b. *Social Learning Theory*. Upper Saddle River: Prentice Hall.
- Bandura, Albert. 1982a. Self-efficacy mechanisms in human agency. *American Psychologist* 37: 122–47. [CrossRef]

- Bandura, Albert. 1982b. The self and mechanisms of agency. In *Psychological Perspectives on the Self*. Edited by Jerry Suls. Hillsdale: Erlbaum, vol. 1, pp. 3–39.
- Bandura, Albert. 1984. Recycling misconceptions of self-efficacy. *Cognitive Therapy and Research* 8: 231–55. [CrossRef]
- Bandura, Albert. 1986. *Social Foundations of Thought and Action: A Social Cognitive Theory*. Englewood Cliffs: Prentice-Hall. [CrossRef]
- Bandura, Albert. 1988. Self-regulation of motivation and action through goal systems. In *Cognitive Perspectives on Emotion and Motivation*. Edited by Vernon Hamilton, Gordon H. Bower and Nico M. Frijda. Dordrecht: Kluwer Academic Publishers, pp. 37–61.
- Bandura, Albert. 1991. Self-efficacy mechanism in physiological activation and health-promoting behavior. In *Neurobiology of Learning, Emotion and Affect*. Edited by John Madden. New York: Raven, pp. 229–70.
- Bandura, Albert. 1997. *Self-Efficacy: The Exercise of Control*. Translated by Albert Bandura. New York: W.H. Freeman.
- Bandura, Albert. 2002. Social cognitive theory in cultural context. *Applied Psychology: An International Review* 51: 269–90. [CrossRef]
- Bandura, Albert. 2003. *Auto-Efficacité: Le Sentiment D'efficacité Personnelle*. Translated by Albert Bandura. Bruxelles: De Boeck.
- Bandura, Albert. 2004. Cultivate self-efficacy for personal and organizational effectiveness. In *Handbook of Principles of Organizational Behaviour*. Edited by Edwin A. Locke. Malden: Blackwell, pp. 120–36.
- Bandura, Albert, and Daniel Cervone. 1983. Self-evaluative and self-efficacy mechanisms governing the motivational effects of goal systems. *Journal of Personality and Social Psychology* 45: 1017–28. [CrossRef]
- Bandura, Albert, and Daniel Cervone. 1986. Differential engagement of self-reactive influences in cognitive motivation. *Organizational Behavior and Human Decision Processes* 3: 92–113. [CrossRef]
- Bandura, Albert, and Forest J. Jourden. 1991. Self-regulatory mechanisms governing the impact of social comparison on complex decision making. *Journal of Personality and Social Psychology* 60: 941–51. [CrossRef]
- Bandura, Albert, and Edwin A. Locke. 2003. Negative self-efficacy and goal effects revisited. *Journal of Applied Psychology* 88: 87–89. [CrossRef] [PubMed]
- Bandura, Albert, and Dale H. Schunk. 1981. Cultivating competence, self-efficacy and intrinsic interest through proximal self-motivation. *Journal of Personality and Social Psychology* 41: 586–98. [CrossRef]
- Bandura, Albert, Nancy E. Adams, and Janice Beyer. 1977. Cognitive processes mediating behavioral change. *Journal of Personality and Social Psychology* 35: 125–39. [CrossRef] [PubMed]
- Bandura, Albert, Nancy E. Adams, Arthur B. Hardy, and Gary N. Howells. 1980. Tests of the generality of self-efficacy theory. *Cognitive Therapy and Research* 4: 39–66. [CrossRef]
- Barlow, Julie. 2010. Le sentiment d'efficacité personnelle dans le contexte de la réadaptation. In *International Encyclopedia of Rehabilitation*. Edited by John H. Stone and Maurice Blouin. Available online: <http://cirrie.buffalo.edu/encyclopedia/fr/article/35/> (accessed on 24 August 2017).
- Barlow, Julie, Stephen J. Macey, and George R. Struthers. 1993. Control-related cognitions, chronic disease and gender. In *Health Psychology: Potential in Diversity*. Edited by Schroeder Harry, Reshke Kirsten, Johnston Marie and Maes Stan. Regensburg: Roderer, pp. 272–78.
- Baron, Rebecca A. 1988. Negative effects of destructive criticism: Impact on conflict, self-efficacy, and task performance. *Journal of Applied Psychology* 73: 199–207. [CrossRef] [PubMed]
- Barone, David F., James E. Maddux, and C. Richard Snyder. 1997. *Social Cognitive Psychology. History and Current Domains*. New York: Plenum Press.
- Baum, Robert J. 1994. The Relation of Traits, Competencies, Vision, Motivation, and Strategy to Venture Growth. Ph.D. dissertation, University of Maryland, College Park, MD, USA.
- Beckham, Jean C., John R. Rice, Shannon L. Talton, Michael J. Helms, and Larry D. Young. 1994. Relationship of cognitive constructs to adjustment in rheumatoid arthritis patients. *Cognitive Theory and Research* 18: 479–97. [CrossRef]
- Betz, Nancy E. 1992. Counseling uses of career self-efficacy theory. *The Career Development Quarterly* 41: 22–36. [CrossRef]
- Betz, Nancy E., and Gail Hackett. 1981. The relationship of career-related self-efficacy expectations to persived career options in college men and women. *Journal of Counseling Psychology* 28: 399–410. [CrossRef]

- Blanchard, Serge. 2008. Introduction: Sentiments d'efficacité personnelle et orientation scolaire et professionnelle. *L'orientation Scolaire et Professionnelle* 37: 5–27. [CrossRef]
- Boggiano, Ann K., Marty Barrett, and Teddy Kellam. 1993. Competing theoretical analysis of helplessness: A social-developmental analysis. *Journal of Experimental Child Psychology* 55: 194–207. [CrossRef]
- Bong, Mimi. 1999. Personal factors affecting the generality of academic self-efficacy judgments: Gender, ethnicity, and relative expertise. *The Journal of Experimental Education* 67: 315–31. [CrossRef]
- Bong, Mimi. 2001. Between- and within-domain relations of academic motivation among middle and high school students: Self-efficacy, task-value, and achievement goals. *Journal of Educational Psychology* 93: 23–34. [CrossRef]
- Bong, Mimi, and Einar M. Skaalvik. 2003. Academic self-concept and self-efficacy: How different are they really? *Educational Psychology Review* 15: 1–40. [CrossRef]
- Bouffard-Bouchard, Therese, and Adrien Pinard. 1988. Sentiment d'auto-efficacité et exercice des processus d'autorégulation chez des étudiants de niveau collégial. *International Journal of Psychology* 23: 409–31. [CrossRef]
- Bouffard-Bouchard, Therese, Sophie Parent, and Serge Larivée. 1990. Capacité cognitive, sentiment d'auto-efficacité et autorégulation. *European Journal of Psychology of Education* 5: 355–64. [CrossRef]
- Brekke, Mette, Per Hjortdahl, and Tore K. Kvien. 2001. Involvement and satisfaction: A Norwegian study of health care among 1024 patients with rheumatoid arthritis and 1509 patients with chronic noninflammatory musculoskeletal pain. *Arthritis Care and Research* 45: 8–15. [CrossRef]
- Brophy, Jere, and Thomas L. Good. 1986. Teacher behavior and student achievement. In *Handbook of Research on Teaching*. Edited by Merlin Carl Wittrock. New York: MacMillan, pp. 328–75.
- Buck, Daniel J.M., Jasmin C. Hutchinson, Christa R. Winter, and Brian A. Thompson. 2016. The Effects of Mental Imagery with Video-Modeling on Self-Efficacy and Maximal Front Squat Ability. *Sports* 4: 23. [CrossRef]
- Chapman, Jason W., and William. E. Tunmer. 1997. A longitudinal study of beginning reading achievement and reading self-concept. *British Journal of Educational Psychology* 67: 279–91. [CrossRef] [PubMed]
- Charles-Pauvers, Brigitte, Nathalie Commereiras, Dominique Peyrat-Guillard, and Patrice Roussel. 2006. *Les Déterminants Psychologiques de la Performance au Travail: Un Bilan des Connaissances et Proposition de Voies de Recherche*. Note du Laboratoire Interdisciplinaire de Recherche sur les Ressources Humaines et l'Emploi, n. 436 (06-9); p. 56. Available online: https://hal.inria.fr/file/index/docid/96949/filename/note_436.pdf (accessed on 10 November 2017).
- Chen, Gilad, Stanley M. Gully, and Dov Eden. 2001. Validation of a new general self-efficacy scale. *Organizational Research Methods* 4: 62–83. [CrossRef]
- Clifford, Sharon A. 1988. Cause of Termination and Self-Efficacy Expectations as Related to Reemployment Status. Ph.D. dissertation, University of Toledo, Toledo, OH, USA.
- Cole, David A., Scott E. Maxwell, and Joan M. Martin. 1997. Reflected self-appraisals: Strength and structure of the relation of teacher, peer, and parent ratings to children's self-perceived competencies. *Journal of Educational Psychology* 89: 55–70. [CrossRef]
- Collins, James L. 1982. Self-efficacy and ability in achievement behavior. Paper Presented at the Annual Meeting of the American Educational Research Association, New York, NY, USA, March 19–23.
- Crahay, Marcel. 1996. *Peut-on Lutter Contre L'échec Scolaire?* Bruxelles: De Boeck.
- Dubois, Nicole. 1994. *La Norme D'intériorité et le Liberalism*. Grenoble: PUG.
- Elstad, Eyvint, and Knut-Andreas Christophersen. 2017. Perceptions of Digital Competency among Student Teachers: Contributing to the Development of Student Teachers' Instructional Self-Efficacy in Technology-Rich Classrooms. *Education Science* 7: 27. [CrossRef]
- François, Pierre-Henri. 2004. Fondements sociaux de la pensée et de l'action chez Bandura. *Savoirs, De L'apprentissage Social au Sentiment D'efficacité Personnelle* 5: 51–58.
- François, Pierre-Henri. 2009. Sentiment d'efficacité personnelle et attente de résultat: Perspectives pour le conseil en orientation. *L'orientation Scolaire et Professionnelle* 38: 475–98.
- François, Pierre-Henri, and André E. Botteman. 2000. Théorie sociale cognitive de Bandura et Bilan de compétences: Applications, recherches et perspectives critiques. *Carriérologie, Revue Francophone Internationale* 8: 519–43.
- Galand, Benoit, and Marie Vandele. 2004. Le sentiment d'efficacité personnelle dans l'apprentissage et la formation: Quel rôle joue-t-il ? D'où vient-il ? Comment intervenir ? *Savoirs* 5: 91–116. [CrossRef]

- Gangloff, Bernard. 2008. Normativity of the Acceptance of Professional Injustices via the Legislator's Paradigm: A Study on Recruiters. Paper present at the 5th International Conference of Applied Psychology, Timisoara, Roumania; Timisoara: Editura Eurobit, pp. 219–28.
- Gist, Marilyn E., Catherine Schoewerer, and Benson Rosen. 1989. Effects of alternative training methods on self-efficacy and performance in computer software training. *Journal of Applied Psychology* 74: 884–91. [[CrossRef](#)]
- Gossop, Michael, Lyn Green, Grania Phillips, and Brendan Bradley. 1990. Factors predicting outcome among opiate addicts after treatment. *British Journal of Clinical Psychology* 29: 209–16. [[CrossRef](#)] [[PubMed](#)]
- Ivancevich, John M., Robert Konopaske, and Michael T. Matteson. 2011. *Organizational Behavior and Management*. New York: Mc Graw Hill.
- Jacobs, Janis E., Stephanie Lanza, D. Wayne Osgood, Jacquelynne S. Eccles, and Allan Wigfield. 2002. Changes in children's self-competence and values: Gender and domain differences across grades one through twelve. *Child Development* 73: 509–27. [[CrossRef](#)] [[PubMed](#)]
- Jellison, Jerald M., and Jane Green. 1981. A self-presentation approach to the fundamental attribution error: The norm of internality. *Journal of Personality and Social Psychology* 40: 643–49. [[CrossRef](#)]
- Kanfer, Ruth, and Charles L. Hulin. 1985. Individual differences in successful job searches following lay-off. *Journal of Vocational Behavior* 38: 835–47. [[CrossRef](#)]
- Keefe, Francis J., John C. Lefebvre, William Maixner, Alfred N. Salley Jr, and David S. Caldwell. 1997. Self-efficacy for arthritis pain: Relationship to perception of thermal laboratory pain stimuli. *Arthritis Care and Research* 10: 177–84. [[CrossRef](#)] [[PubMed](#)]
- Krueger, Noris F., Jr., and Peter R. Dickson. 1993. Perceived self-efficacy and perceptions of opportunities and threats. *Psychological Reports* 72: 1235–40. [[CrossRef](#)] [[PubMed](#)]
- Kulviwat, Songpol, Gordon C. Bruner II, and James P. Neelankavil. 2014. Self-efficacy as an antecedent of cognition and affect in technology acceptance. *Journal of Consumer Marketing* 31: 190–99. [[CrossRef](#)]
- Latham, Gary P., and Thomas W. Lee. 1986. Goal setting. In *Generalizing from Laboratory to Field Setting*. Edited by Edwin A. Locke. Lexington: Heath, pp. 101–17.
- Lecomte, Jacques. 2004. Les applications du sentiment d'efficacité personnelle. *Savoirs* 5: 59–90. [[CrossRef](#)]
- Lent, Robert W., and Gail Hackett. 1987. Career self-efficacy: Empirical status and future directions. *Journal of Vocational Behavior* 30: 347–82. [[CrossRef](#)]
- Lent, Robert W., Frederick G. Lopez, and Kathleen J. Bieschke. 1991. Mathematics self-efficacy: Sources and relation to science-based career choice. *Journal of Counseling Psychology* 38: 424–30. [[CrossRef](#)]
- Lent, Robert W., Steven D. Brown, and Gail Hackett. 1994. Toward a unifying social cognitive theory of career and academic interest, choice and performance. *Journal of Vocational Behavior* 45: 79–122. [[CrossRef](#)]
- Liou, Douglas, and Isobel R. Contento. 2001. Usefulness of psychosocial theory variables in explaining fat-related dietary behavior in Chinese Americans: Association with degree of acculturation. *Journal of Nutrition Education* 33: 322–31. [[CrossRef](#)]
- Locke, Edwin A., Karyll N. Shaw, Lise M. Saari, and Gary P. Latham. 1981. Goal-setting and task performance: 1969–1980. *Psychological Bulletin* 90: 125–52. [[CrossRef](#)]
- Locke, Edwin A., Elizabeth Frederick, Cynthia Lee, and Philip Bobko. 1984. Effect of self-efficacy, goals, and task strategies on task performance. *Journal of Applied Psychology* 69: 241–51. [[CrossRef](#)]
- Lunenburg, Fred C. 2011. Self-efficacy in the workplace: Implications for motivation and performance. *International Journal of Management, Business and Administration* 14: 1–6.
- Luthans, Fred, Carolyn M. Yusef, and Bruce J. Avolio. 2007. *Psychological Capital*. New York: Oxford University Press.
- Maddux, James E., and Lisa J. Meier. 1995. Self-efficacy and depression. In *Self-Efficacy, Adaptation, and Adjustment: Theory, Research and Application*. Edited by James E. Maddux. New York: Plenum Press, pp. 143–69.
- James E. Maddux, and Melinda A. Stanley, eds. 1986. Self-efficacy theory in contemporary psychology [Special issue]. *Journal of Social and Clinical Psychology* 4: 245–55.
- Malleh, Neïla. 2014. Causalité et Contrôle Perçu de la Maladie Cancéreuse et Leurs Effets Sur le Coping du Malade. Ph.D. Thesis, Université de Tunis et Université Paris 10, Paris, France.
- Manto Jonte, Justine Juliette. 2014. Déterminants Sociocognitifs des Comportements de Recherche D'emploi Chez les Diplômés de L'enseignement Supérieur: Comparaison France-Cameroun. Ph.D. Thesis, Université de Grenoble et Université de Yaoundé 1, Grenoble, France.

- Marcotte, Geneviève, and Thérèse Bouffard. 2003. Correlates of Negative Bias in Self-Evaluation of Cognitive Competence among Children. Paper present at the 10th Biennial Conference of the European Association for Research on Learning and Instruction, Padova, Italy, August 26–30.
- Markus, Hazel Rose, and Shinobu Kitayama. 2003. Models of agency: Sociocultural diversity in the construction of Action. *Nebraska Symposium on Motivation* 49: 1–57. [[PubMed](#)]
- Marsh, Herbert W. 1990. *Self-Description Questionnaire-II: Manual and Research Monograph*. San Antonio: The Psychological Corporation.
- Marsh, Herbert W., and Alexander S. Yeung. 1997. Coursework selection: Relations to academic self-concept and achievement. *American Educational Research Journal* 34: 691–720. [[CrossRef](#)]
- Matsui, Tamao, Hiroshi Ikeda, and Ritsuko Ohnishi. 1989. Relations off sex-typed socialisations to career self-efficacy expectations of college students. *Journal of Vocational Behavior* 35: 1–16. [[CrossRef](#)]
- McColskey, Wendy, and Mark R. Leary. 1985. Differential effects of norm-referenced and self-referenced feed-back on performance expectancies, attributions and motivation. *Contemporary Educational Psychology* 10: 275–84. [[CrossRef](#)]
- Mento, Anthony J., Robert P. Steel, and Ronald J. Karren. 1987. A meta-analytic study on effects of goal setting on task performance 1966–1984. *Organizational Behavior and Human Decision Processes* 39: 52–83. [[CrossRef](#)]
- Morgan, Mark. 1985. Self-monitoring of attained subgoals in private study. *Journal of Educational Psychology* 77: 623–30. [[CrossRef](#)]
- Motl, Robert W., Edward M. McAuley, Erin M. Snook, and Rachael C. Gliottoni. 2009. Physical activity and quality of life in multiple sclerosis: Intermediary roles of disability, fatigue, mood, pain, self-efficacy and social support. *Psychology. Health and Medicine* 14: 11–24. [[CrossRef](#)] [[PubMed](#)]
- Multon, Karen D., Steven D. Brown, and Robert W. Lent. 1991. Relation of self-efficacy beliefs to academic outcomes: A meta-analytic investigation. *Journal of Counseling Psychology* 38: 30–38. [[CrossRef](#)]
- Oude Groote Beverborg, Arnoud, Peter J. C. Slegers, Maaikje D. Endedijk, and Klaas van Veen. 2015. Towards Sustaining Levels of Reflective Learning: How Do Transformational Leadership, Task Interdependence, and Self-Efficacy Shape Teacher Learning in Schools? *Societies* 5: 187–219. [[CrossRef](#)]
- Pajares, Frank, and M. David Miller. 1994. Role of self-efficacy and self-concept beliefs in mathematical problem solving: A path analysis. *Journal of Educational Psychology* 86: 193–203. [[CrossRef](#)]
- Pajares, Frank, and Amy Lapin Zeldin. 1999. Inviting self-efficacy revisited: The role of invitations in the lives of women with mathematics-related careers. *Journal of Invitational Theory and Practice* 6: 48–68.
- Pastorelli, Concetta, Gian Vittorio Caprara, Claudio Barbaranelli, Jarek Rola, Sandor Rozsa, and Albert Bandura. 2001. The Structure of Children's Perceived Self-Efficacy: A Cross-National Study. *European Journal of Psychological Assessment* 17: 87–97. [[CrossRef](#)]
- Pedrazza, Monica, Elena Trifiletti, Sabrina Berlanda, and Gian Antonio Di Bernardo. 2013. Self-efficacy in social work: Development and initial validation of the self-efficacy scale for social workers. *Social Sciences* 2: 191–207. [[CrossRef](#)]
- Peterson, Christopher, and Albert J. Stunkard. 1992. Cognates of personal control: Locus of control, self-efficacy, and explanatory style. *Applied and Preventive Psychology* 1: 111–17. [[CrossRef](#)]
- Phillips, Deborah. 1984. The illusion of incompetence among academically competent children. *Child Development* 55: 2000–16. [[CrossRef](#)] [[PubMed](#)]
- Phillips, Deborah. 1987. Socialization of perceived academic competence among highly competent children. *Child Development* 58: 1308–20. [[CrossRef](#)] [[PubMed](#)]
- Pittman, Thane S., Ann K. Boggiano, and Diane N. Ruble. 1983. Intrinsic and extrinsic motivational orientations: Limiting conditions on the undermining and enhancing effects of rewards on intrinsic motivation. In *Teacher and Student Perceptions: Implications for Learning*. Edited by Joel M. Levine and Margaret C. Wang. Hillsdale: Lawrence Erlbaum Associates.
- Pulakos, Elaine D., Sharon Arad, Michelle A. Donovan, and Kevin E. Plamondon. 2000. Adaptability in the work place: Development of a taxonomy of adaptive performance. *Journal of Applied Psychology* 85: 612–24. [[CrossRef](#)] [[PubMed](#)]
- Pulakos, Elaine D., Neal Schmitt, David W. Dorsey, Sharon Arad, Walter C. Borman, and Jerry W. Hedge. 2002. Predicting adaptive performance: Further tests of a model of adaptability. *Human Performance* 15: 299–323. [[CrossRef](#)]

- Rejeski, W. Jack, Kathleen Martin Jr., Walter H. Ettinger, and Timothy Morgan. 1998. Treating disability in knee osteoarthritis with exercise therapy: A central role for self-efficacy and pain. *Arthritis Care and Research* 11: 94–101. [\[CrossRef\]](#) [\[PubMed\]](#)
- Sadri, Golnaz, and Ivan T. Robertson. 1993. Self-Efficacy and work-related behaviour: A review and meta-analysis. *Applied Psychology: An International Review* 42: 139–52. [\[CrossRef\]](#)
- Scherbaum, Charles A., Yochi Cohen-Charash, and Michael J. Kern. 2006. Measuring general self-efficacy: A comparison of three measures using item response theory. *Educational and Measurement* 66: 1047–63. [\[CrossRef\]](#)
- Schunk, Dale H. 1985. Participation in goal setting: Effects on self-efficacy and skills of learning-disabled children. *Journal of Special Education* 19: 307–17. [\[CrossRef\]](#)
- Schunk, Dale H. 1989. Self-efficacy and achievement behaviors. *Educational Psychology Review* 1: 173–208. [\[CrossRef\]](#)
- Schunk, Dale H., and Trisha Phelps Gunn. 1985. Modeled importance of task strategies and achievement beliefs: Effect on self-efficacy and skill development. *Journal of Early Adolescence* 5: 247–58. [\[CrossRef\]](#)
- Schunk, Dale H., and Antoinette R. Hanson. 1985. Peer models: Influence on children's self-efficacy and achievement. *Journal of Educational Psychology* 77: 313–22. [\[CrossRef\]](#)
- Schunk, Dale H., and Frank Pajares. 2002. The development of academic self-efficacy. In *Development of Achievement Motivation*. Edited by Allan Wigfield and Jacquelynne S. Eccles. San Diego: Academic Press, pp. 15–31.
- Schwarzer, Ralf, and Suhair Hallum. 2008. Perceived teacher self-efficacy as a predictor of job stress and burnout: Mediations analyses. *Applied Psychology* 57: 152–71. [\[CrossRef\]](#)
- Schwarzer, Ralf, and Matthias Jerusalem. 1995. General Self-Efficacy Scale. In *Measures in Health Psychology. A User's Portfolio. Causal and Control Beliefs*. Edited by John Weinman, Stephen Wright and Marie Johnston. Windsor: NFER-Nelson.
- Sherer, Mark, James E. Maddux, Blaise Mercandante, Steven Prentice-Dunn, Beth Jacobs, and Ronald W. Rogers. 1982. The Self-efficacy Scale: Construction and Validation. *Psychological Reports* 51: 663–71. [\[CrossRef\]](#)
- Skaalvik, Einar M., and Sidsel Skaalvik. 2010. Teacher self-efficacy and teacher burnout: A study of relations. *Teaching and Teacher Education* 26: 1059–69. [\[CrossRef\]](#)
- Skaalvik, Einar M., and Harald Valås. 1999. Relations among achievement, self-concept, and motivation in Mathematics and Language arts: A longitudinal study. *The Journal of Experimental Education* 67: 135–49. [\[CrossRef\]](#)
- SooHoo, Sonia, Kimberly Y. Takemoto, and Penny McCullagh. 2004. A comparison of modeling and imagery on the performance of a motor skill. *Journal of Sport Behaviour* 27: 349–66.
- Stajkovic, Alexander D., and Fred Luthans. 1998. Self-efficacy and work-related performance: A meta-analysis. *Psychological Bulletin* 124: 240–61. [\[CrossRef\]](#)
- Strecher, Victor J., Brenda Mcevoy-DeVellis, Marshall H. Becker, and Irwin M. Rosenstock. 1986. The role of self-efficacy in achieving health behavior change. *Health Education Quarterly* 13: 73–91. [\[CrossRef\]](#) [\[PubMed\]](#)
- Talley, Drew, Lindsay Goodwin, Roxanne Ruzic, and Shara Fisler. 2011. Marine ecology as a framework for preparing the next generation of scientific leaders. *Marine Ecology* 32: 268–77. [\[CrossRef\]](#)
- Taylor, M. Susan, Edwin A. Locke, Cynthia Lee, and Marilyn E. Gist. 1984. Type of behavior and faculty research productivity: What are the mechanisms? *Organizational Behavior and Human Performance* 34: 402–18. [\[CrossRef\]](#)
- Vasil, Latika. 1992. Self-efficacy expectations and causal attributions for achievement among male and female university faculty. *Journal of Vocational Behavior* 41: 259–69. [\[CrossRef\]](#)
- Vonthron, Anne-Marie. 2008. *Attribution D'efficacité Individuelle Dans L'emploi et Insertion en Milieu Socio-Organisationnel Dans le Travail*. Document de synthèse d'HDR en Psychologie; Université Bordeaux 2, 131p.
- Vonthron, Anne-Marie, Maja Becker, and Dominique Pouchard. 2006. The Beliefs of Efficacy in the Profession and of Employment Security Evolve in the Step with the Professional Itinerary. Communication in the 26th International Congress of Applied Psychology, Athènes, Greece.
- Weinstein, Rhona S., Hermine H. Marshall, Karen A. Brattesani, and Susan E. Middlestadt. 1982. Student perceptions of differential teacher treatment in open and traditional classrooms. *Journal of Educational Psychology* 74: 678–92. [\[CrossRef\]](#)
- Williams, S. Lloyd, and Gwendolyn Zane. 1989. Guided mastery and stimulus exposure treatments for severe performance anxiety in agoraphobics. *Behaviour Research Therapy* 27: 238–45. [\[CrossRef\]](#)

- Wood, Robert, and Albert Bandura. 1989a. Social cognitive theory of organizational management. *Academy of Management Review* 14: 361–84.
- Wood, Robert, and Albert Bandura. 1989b. Impact of conceptions of ability on self-regulatory mechanism and complex decision making. *Journal of Personality and Social Psychology* 56: 407–15. [[CrossRef](#)]
- Wood, Robert E., and Edwin A. Locke. 1987. The relation of self-efficacy and grade goals to academic performance. *Educational and Psychological Measurement* 47: 1013–24. [[CrossRef](#)]
- Wright, Gail E., Jerry C. Parker, Karen L. Smarr, Karen Schoenfeld-Smith, Susan P. Buckelew, James R. Slaughter, Jane C. Johnson, and John E. Hewett. 1996. Risk factors for depression in rheumatoid arthritis. *Arthritis Care and Research* 9: 264–72. [[CrossRef](#)]



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