

VALUES OF SELF-EFFICACY IN ACADEMIC SETTINGS

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Abstract:

The current paper reviews the literature central to self-efficacy. The first section considers the concept of self-efficacy, sources of self-efficacy, and its domains. The present chapter also concerns itself with the value of self-efficacy. The paper ends with a review of gender difference in self-efficacy.

Keywords: *self-efficacy, belief, gender difference, value*

1. Self-efficacy

1.1. Definition

The term self-efficacy has its root in the socio-cognitive theory and was first proposed by Bandura in 1977 (cited in Bandura 1986). Self-efficacy or self-efficacy belief (Maddux, 2005) is defined and measured as beliefs about an individual's judgments of his or her capabilities to perform given actions in particular domains and circumstances (Bandura, 1986, 1977; Maddux, 2005; Schunk, 1991). Self-efficacy is hypothesized to influence an individual's choice of activities, effort, and persistence (Bandura, 1997; Schunk, 1985). People who have a low sense of efficacy for accomplishing a task may avoid it; those who believe they are capable should participate readily. Individuals who feel efficacious are hypothesized to work harder and persist longer when they encounter difficulties than those who doubt their capabilities.

1.2. Sources of self-efficacy

Self-efficacy beliefs are formulated mainly from four sources of information - master experiences, vicarious experiences, verbal persuasion, and physiological states (Bandura, 1997). The four sources are listed according to their order of significance (Maddux, 2005).

Master experiences known also as "performance accomplishments" (Schunk, 1991) refer to the learners' previous success at a given task. If students successfully complete a desired behavior, such as giving a short conversation in second language with foreigners, then they experience a sense of mastery for that behavior. Students whose past academic results were successful often develop a high sense of confidence about their abilities while those who view their

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academic outcomes as unsuccessful are usually experience feelings of doubts and uncertainty about their own success. In other word, if students interpret the outcome of their actions to be fine, then self-efficacy is increased. In contrast, when students believe they did poorly on a task, self-efficacy is decreased (Bandura A., 1986; Smith & West, 2006).

Vicarious experiences, the second factor affecting self-efficacy beliefs, are based on learners' observations of the experiences of other people (Smith & West, 2006). If learners, for example, see others giving a short conversation in second language with foreigners, then they make judgments about their own ability to give the same conversation, depending on similarities between themselves and the observed others. Observing others' success can convey to learners that they are capable to do the task and can motivate them to attempt it. Conversely, observed failures may lower students' sense of efficacy and discourage them from working on the task (Schunk, 1989a; Zimmerman and Ringle, 1981). However, information acquired from observation normally has a weaker effect on self-efficacy than information from performance because self-efficacy increased by a vicarious can be ineffective by subsequent failures (Schunk, 1991). It is best to use vicarious experiences for those students who have very limited mastery experiences (Smith & West, 2006).

Verbal persuasion is the third source of self-efficacy beliefs. Self-efficacy of learners can be enhanced when they receive persuasive information that they have the capabilities to perform a task (e.g., "You can do this"). Students whose self-efficacy increases from verbal persuasion are likely to put forth greater effort, especially if they have initial self-doubts or if they face difficulties (Bandura, 1997; Pajares, 2002). Learners making self-efficacy judgments from verbal persuasions also are likely to set higher and more realistic goals for themselves. Verbal persuasion used to enhance self-efficacy is the most commonly used of the four sources (van de Laar & van der Bijl, 2001).

The fourth source of information for appraising

self-efficacy is physiological states. Individuals often judge their capabilities to succeed or fail at an academic task by observing their own physiological and emotional reactions (Bandura, 1997; Smith & West, 2006). Individuals expect successful skilled performance to be associated with positive emotions. Positive emotional states are correlated with higher self-efficacy appraisals. Conversely, self-efficacy judgments lower when anxiety or nervousness is high or when the individual is in a poor mood. Negative physical symptoms such as pain, tension, or stress are often interpreted as a result of inadequate performance and serve to lower self-efficacy (Bandura, 1997). This source of self efficacy is the most unstable of the four because a person's mood or feelings can change by minutes, hour,s or days (Wikiversity, 2013).

According to Smith & West (2006), the influence of each source of information can differ for each learner and for each behavior being learned. Self-efficacy judgments made from only one source of information are not the most effective in enhancing self-efficacy. Bandura (1997) suggests that a combination of sources is recommended for enhancing self-efficacy, especially when mastery and vicarious experience are combined. Maddux and Lewis (1995) also emphasize that a combination of all four sources is the most effective way to increase self-efficacy.

1.3. Self-efficacy domains

Self-efficacy beliefs influence the development of cognitive competencies is shown in previous studies (Bandura, 1993; Zimmerman, 1995). In particular, these studies showed that children's beliefs in regulating their own learning and in mastering different academic subjects affect their level of motivation and academic achievement. Moreover, efficacy beliefs to form and maintain social relationships as well as to resist peer pressure affect behaviors that benefit or cause damage to the society and reduce the involvement substance abuse (Bandura, 1993; Bandura, Barbaranelli, Caprara & Pastorelli, 1996).

Following this logic, Bandura (1990) developed scales, titled Children Perceived Self-

Efficacy (CPSE), to measure different domains (or sub-constructs) relevant to children's life. The CPSE is a set of multidimensional scales composed of 37 items representing seven domains of functioning (Pastorelli, Caprara, Barbaranelli, Rola, Rozsa, & Bandura, 2001). These include: (1) Self-efficacy for *academic achievement* measures children beliefs in their capabilities to master different subject matters. (2) Self-efficacy for *self-regulated learning* assesses children's efficacy to structure environments conducive to learning and to plan and organize academic activities. (3) Self-efficacy for *leisure and extracurricular activities* evaluates children's beliefs that they can carry out recreational and student group activities. (4) Self-regulatory efficacy assesses children beliefs to *resist peer pressure* to engage in high-risk activities involving alcohol, drugs, and misbehave manners. (5) Perceived *social self-efficacy* evaluates children beliefs in their capability to initiate and maintain social relationships and to manage interpersonal conflicts. (6) *Self-assertive efficacy* measures children's perceived capability to voice their opinions, to stand up to mistreatment, and to refuse unreasonable request. (7) Perceived self-efficacy to *meet others' expectations* measures children's beliefs in their capability to fulfill what their parents, teachers, and peers expect of them, and to live up to what they expect of themselves.

2. Values of self-efficacy in academic settings

In academic settings, beliefs about self-efficacy have a significant impact on an individual's choices of activities, effort, persistence, goal setting, and effectiveness of problem-solving and decision-making (Bandura, 1997; Maddux, 2005; Schunk, 1991).

In Bandura's research, he states that people who have a low sense of efficacy for accomplishing a task may avoid it; those who believe they are capable should participate readily in a task. Efficacious individuals work harder and persist longer when they encounter difficulties than those who doubt their capabilities (Bandura, 1986; Locke & Latham, 1990).

Moreover, self-efficacy influences the goal setting. The stronger sense of self-efficacy the

learners have in a specific achievement domain, the higher the goals they set for themselves in that domain (Maddux, 2005).

In addition, self-efficacy influences the effectiveness of problem-solving and decision-making (Heppner, 1988). When having to make complex decisions, people who have confidence in their ability to solve problems use their cognitive resources more effectively than those people who doubt their cognitive skills do (Bandura, 1997). Such efficacy usually leads to better solutions and greater achievement. If students have high self-efficacy, they are likely to remain task-diagnostic and continue to search for solutions to problems. If their self-efficacy is low, however, students are more expected to become self-diagnostic and reflect on their inadequacies, which decreases their efforts to assess and solve the problem (Bandura, 1997; Maddux, 2005).

3. Gender differences in self-efficacy

The relationship between gender and self-efficacy has been examined in several studies. In general, boys were often found to have higher efficacy beliefs than girls (Pajares & Miller, 1994; Schunk & Pajares, 2002). In terms of particular academic area, researchers reported that boys and men tend to be more confident than girls and women in academic areas related to mathematics, science, and technology (Lennon, 2010; Meece, 1991; Pajares & Miller, 1994; Wigfield, Eccles, & Pintrich, 1996), despite the fact that achievement differences in these areas have disappeared (Eisenberg, Martin, & Fabes, 1996). Conversely, in areas related to language arts, male and female students exhibit similar confidence although the achievement of girls typically is higher (Pajares, in press). Researchers have observed that students typically view such areas as mathematics, science, and technology as male domains while writing is viewed by most students as a female domains (Eisenberg et al., 1996).

For gender differences in terms of six self-efficacy domains, Bandura et al. (1999) carried out a study on 148 male and 134 female children with a mean age of 11.5 years. Participants completed scales related to beliefs in their efficacy representing

seven domains such as self-efficacy for academic achievement, self-regulation of learning, self-efficacy for leisure and extracurricular activities, self-regulation in resisting peer pressure, self-efficacy to meet others' expectations, self-assertive efficacy, and perceived social self-efficacy. Results indicated that girls showed a higher sense of academic efficacy although had lower reports of perceived social efficacy than that of boys.

Gender differences are also related to developmental level (Pajares & Schunk, 2001). Researchers proposed that there is little evidence for differences in self-efficacy among elementary-aged children (Pajares, Miller, & Johnson, 1999) and gender differences exist from secondary to high school (Pajares, 2002; Pajares, Johnson, &

Usher, 2007; Pajares & Valiante, 1999; Schunk and Lilly, 1984; Wigfield et al., 1996). However, there is little research reported the differences in self-efficacy among college students.

4. Summary

This chapter has reviewed relevant framework about students' self-efficacy. In general, researchers have identified that self-efficacy beliefs have a significant impact on an individual's choices of activities, effort, persistence, goal setting, and effectiveness of problem-solving and decision-making. Additionally, in academic settings, gender difference in self-efficacy is found. It is expected that the findings from this study can contribute to the growing body of literature on self-efficacy.

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