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## Two Types of Perceived Control over Learning

### *Perceived Efficacy and Perceived Autonomy*

NIR MADJAR AND AVI ASSOR  
Ben-Gurion University of the Negev

#### Introduction

Control over learning can have important effects on students' achievements, conceptual learning, and depth of processing. This entry refers to two aspects of control over learning: perceived *efficacy in attaining learning outcomes* and perceived *autonomy in learning*. Research on outcomes and contextual determinants is presented in relation to each type of control, with clear practical implications for educators interested in promoting these types of control.

#### Research Evidence

**Control as Perceived Efficacy in Attaining Specific Outcomes.** Consider the following questions: Do you think you will be able to complete a crossword puzzle? Will you be able to comprehend scientific articles in quantum physics? How well will you succeed in learning a new language? Our confidence to engage and succeed reflects our self-efficacy in specific domains, and a vast number of studies have established high relationships between self-efficacy and academic achievements (Liem, Lau, & Nie, 2008). For example, students who perceive themselves as good in math are more likely to succeed in solving difficult problems they had never learned before, and more likely to persist longer when facing difficulty or failure (Bandura, 2002; Zimmerman & Campillo, 2003).

They are at least four sources that affect students' belief in their efficacy in specific tasks or domains (Bandura, 2002). The first and most influential source of self-efficacy is the actual outcome of past experiences. When we participate in a task our performance can inform us about our ability to handle that task, and this, in turn, shapes future expectations regarding our ability to succeed in similar tasks. The second is vicarious experiences, and this is obtained by observing similar others perform the task. The performance of others similar to us can inform us as to the likelihood of our success on a task. The third is verbal

input or persuasion from significant other people. Others' opinion about our ability or chances of success can enhance or weaken our self-efficacy, especially if we highly respect their view (e.g., students may be influenced by the judgment of a teacher whom they look up to). The fourth source is one's affective state while facing a challenge. Feelings of excitement and anticipation may indicate the potential to perform well. However, people tend to appreciate high emotional arousal (particularly anxiety and hypervigilance) as debilitating; consequently, strong emotional arousal may be interpreted as indicating lack of competence.

#### **Teacher and Classroom Attributes Promoting Self-Efficacy.**

It appears that there are at least three educational practices which can help students' feel efficacious in learning tasks. The first is frequent optimal challenges. Students are likely to feel more efficacious if they face frequent optimal challenges that lead to continuing success (Schunk & Pajares, 2002). Tasks are experienced as optimally challenging when they allow students to succeed following investment of some effort (i.e., they are not too easy or too difficult), or when they involve concrete and short term goals (e.g., solving two specific algebra problems) rather than vague and distant goals (e.g., doing well in algebra this year). Another factor is when the standard for success is set in comparison to self or a criterion rather than compared to others. Determining success by comparing our performance to others' performance may undermine our perception that the challenge is optimal because we have considerably less control over factors affecting others' performance than our own. Thus, we may have no control over contextual factors that may help other people outperform us (e.g., others' getting extra help before the test).

The second practice is constructive feedback. While frequent success is essential for efficacy development, it is also important to have constructive feedback from valued others (teachers, parents) following one's performance, and in particular following failure. Constructive feedback has several

features. Following failure it provides specific information on skills or concepts that are missing and ways of mastering these missing components (Butler, 1987). Feedback also can support thought processes that help students identify controllable sources of success and failure, and avoid the tendency to overattribute one's performance to uncontrollable factors. After we experience success or failure in a task, we usually make causal attributions (analyses of the causes of one's success or failure) that in turn shape our perceived efficacy for similar future tasks (Zimmerman & Campillo, 2003). Research by Dweck (1999) has shown that when we attribute our performance to uncontrollable factors such as luck or inborn fixed ability this is more likely to support the belief that we cannot change our poor efficacy, which in turn leads to a helpless response following failure. In contrast, attributing our failure mainly to lack of effort, prior knowledge, or appropriate skills fosters the perception that one can increase efficacy, which in turn leads to mastery oriented coping.

The third practice is nurturing coping resources. Stressful arousal often undermines perceived efficacy and performance (Bandura, 2002). To be able to deal with such stressful emotions, teachers would do well to help students develop various ways of coping with achievement related stress. Such coping could include observing successful coping and performance of similar others (Schunk & Zimmerman, 2007), developing various social cognitive coping strategies for reducing stress and anxiety, or training students in effective help seeking (Hayes, Luoma, Bond, Masuda, & Lisslis, 2006).

**Control as Perceived Autonomy in Learning.** While perceived efficacy refers to the extent to which we believe that we can attain certain learning *outcomes* (such as mastering various mathematical procedures), perceived autonomy refers to the degree to which we perceive that the learning outcomes are *valuable and the mode of learning is useful*. Accordingly, students are likely to feel autonomous while learning a certain subject if they perceive the subject as worth learning and the mode of learning builds on the strategies for learning that they already use. It is important to note that according to this view, the experience of autonomy emerges mainly from the feeling and the perception that one is engaged in actions that feel volitional because they make sense and are *coherent with one's goals and values*. This view of autonomy is based on self-determination theory (Assor, 2012; Ryan & Deci, 2000) which shows that perceived autonomy in learning predicts a wide variety of positive learning outcomes, including effort investment, grades, use of effective learning strategies, and positive emotions while learning (Assor, Kaplan, & Roth, 2002; Reeve, 2006).

**Teacher and Classroom Attributes Promoting Sense of Autonomy.** We can define autonomy as involving two major strivings: (a) the striving to be free from coercion and have optional choice, and (b) the striving for an inner

compass: direction giving, authentic, values, goals, and interests (Assor, 2012). The formation and existence of values, goals, and interests is very important because these entities provide inner criteria for making important decisions and for evaluating oneself and others. Direction giving goals, values, and interests also provide a basis for feeling that one's actions are coherent and meaningful. Indeed, when people do not have clear values, goals, and interests, the availability of choices might be a threat or a burden.

## Summary and Recommendations

The focus of this entry is on teacher and classroom attributes that promote two aspects of control over learning: perceived efficacy and perceived autonomy. While perceived efficacy refers to the perception that one can attain specific learning outcomes, perceived autonomy refers to the perception that the outcome is inherently valuable and worth pursuing. The claim is that a sense of control in learning emerges only if students feel that they really want to study something because it is valuable (autonomy) and that they can also succeed in studying it (efficacy). There are at least seven types of teacher behaviors and classroom attributes which can directly undermine or support the need for autonomy as defined above.

1. *Minimizing controls.* This attribute refers to minimizing teachers' behaviors or features of the educational context which cause students to feel controlled from outside; such as, behaviors that pressure one to behave in a specific way in order to avoid unpleasant experiences; loss of material benefits and privileges; and pressure to behave in a specific way in order to feel worthy of love and esteem (Assor, Roth, & Deci, 2004).
2. *Perspective taking, openness to criticism, and respect when children do not behave in line with expectations or disagree.* This refers to teachers' inclination and ability to try to understand and to respect students perspective especially when students' positions are inconsistent with their views (even when they seem unreasonable or wrong). For example, when children do not want to engage in studying a certain topic, the teacher can first ask them why they do not wish to invest in this topic. If the students say that they are bored or that they do not believe that it is really important to know the information being studied, the perspective-taking teacher acknowledges those feelings, respects them, and then relies on additional autonomy supportive practices such as offering rationale and some choice.
3. *Providing rationale.* This refers to teachers' inclination and ability to provide a coherent, age appropriate, rationale for their expectations (and particularly the intention of the lesson). When students are provided with a clear and convincing rationale for actions they do not find particularly interesting or valuable, they feel less coerced. Moreover, when students understand and identify with the rationale for their school related

activities, they feel that the act of studying supports their need for autonomy because studying allows them to express and promote their values and goals.

4. *Supporting choice and initiation.* This attribute directly supports the striving for optional choice. Providing the choice is meaningful as this allows students to realize their goals and values and therefore their experience of perceived autonomy (Katz & Assor, 2007).
5. *Modeling engagement in learning.* Such modeling by teachers shows that learning is highly valuable, and increases the credibility of the educators' arguments that learning is valuable since they engage in it personally.
6. *Supporting value/goal/interest exploration.* This attribute is particularly relevant in high school. Adolescents are concerned with forming values, goals, and interests which can serve as guides for important decisions, future plans, and commitments. When students feel that being in their school helps them to form personal goals and values, this promotes a sense of autonomy and volition regarding school attendance and academic engagement, which in turn lead to increased investment in studying according to both teacher and students reports, as well as to increased students' vitality and well-being (Assor, 2012).
7. *Fostering inner-directed valuing processes (FIV).* This construct refers to a cluster of educators' behaviors which help students to pay attention to their *personal* values and needs more than attending to social pressure, so that they can make decisions based on these values and needs (Madjar, Assor, & Dotan, 2010). Thus, FIV can be viewed as training in decision making, which includes three components: Enhancing students' ability to withstand confusion and take their time before they make serious decisions; encouraging the examination of one's values and goals when faced with a difficult decision or social pressures; and encouraging the consideration of alternatives and relevant information before making a decision. FIV differs from general support for value exploration in that it is a socializing practice that is used when the child faces difficult decisions and social pressures and it provides "training" in decision making under stress. Further, adolescents' perceptions of their parents as high on FIV were found to predict identity exploration and the formation of commitments that are experienced as autonomous (Assor, 2012). FIV was also found to predict adolescents' capacity to experience anger and anxiety without losing control or immediately

suppressing these feelings, as well as their tendency to try to understand the sources of these feelings and their implications for one's life and relationships.

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