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Short report

Why face a challenge?: The reason behind intrinsically motivated students' spontaneous choice of challenging tasks

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Abstract

In a task choice situation, why do some students spontaneously choose challenging tasks while others do not? In the study, 114 undergraduate students were first asked of their perceived competence and interest in solving number puzzles at both individual and situational levels, and then asked to choose one puzzle from four difficulty levels. They received no performance feedback throughout the session. Regression analyses indicated that the students with higher individual interest levels chose more challenging puzzles, while the students with higher levels of perceived competence and low levels of individual interest did not necessarily choose difficult puzzles. The students who chose more challenging puzzles attributed their choices to interest rather than perceived competence. The study suggests a limitation of relying on students' self-reported confidence in their ability and the importance of conceptualizing individual interest as the reason behind the choice of challenging tasks in a low-pressure task choice environment.

Keywords: Task choice; Interest; Perceived competence; Intrinsic motivation

It is known that intrinsically motivated students spontaneously choose challenging tasks (Deci & Ryan, 1985; Harter, 1992, 1981). Why do they prefer challenging tasks? To what do they attribute as the basis of their choice? This study investigated this issue in terms of two key motivational constructs, namely the role of perceived competence and the role of interest, that are known to underlie a wide range of intrinsically motivated behaviors.

1. The role of perceived competence

One major construct that is often viewed to underlie students' intrinsically motivated behaviors is the students' perceived competence. Based on this view, if students feel competent, they may not mind working on a difficult task because their confidence would serve as protection against extrinsic pressure to succeed. Teachers with this view would consider students who express high confidence in their ability as those who spontaneously take on challenging task, while with the students expressing lower levels of confidence, teachers would attempt to build their confidence as a

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foundation of their learning motivation. However, if we look into existing motivational research, it is difficult to find convincing evidence supporting this argument since most studies report only correlational evidences that do not necessarily imply causation (see Harter, 1992). For instance, longitudinal studies that conducted path analyses of the developmental trajectory of perceived competence and intrinsic motivation generally support the causal model, but they do not rule out the possibility that the reverse could also be true (Guay, Boggiano, & Valler, 2001; Losier & Vallerand, 2001). Furthermore, the link evidenced between perceived competence and task choice seems to depend on the way task choice is measured. The studies by Boggiano, Main, and Katz (1988) found a significant association between perceived competence and task choice in students' responses to the self-report questionnaire (Study 1). However, in a cognitive experiment where students' spontaneous choices were behaviorally measured (Study 2), students' perceived competence predicted their choice of challenging tasks in the behavioral measure only when controlling feedback was given (e.g., "I'll bet you want to do this well next time — as you should, as you ought to."). Boggiano et al. explain this finding in terms of different degrees of self-determination. While students with a high locus of control retain a higher level of perceived competence and tend to choose challenging tasks in high control situations, students with a low locus of control are susceptible to the external feedback and tend to report a low perceived competence and choose easier tasks. This could explain the results of many experimental studies reporting that manipulating students' sense of competence with positive performance feedback leads to higher levels of intrinsic motivation (e.g., Elliot et al., 2000; Harackiewicz, 1979; Mac Iver, Stipek, & Danniels, 1991; Ryan, Connell, & Deci, 1985). If it is the case, it could be predicted that in a situation where students are given little performance feedback, psychological constructs that are more related to self-determination serve as the more important predictors of the task choice.

2. The role of interest

An alternative motivational construct that is known to underlie task choice is students' interest in the task. Interest is characterized as one of the inherent characteristics of intrinsic motivation in the self-determination theory (Deci, 1992; Deci & Ryan 1985). According to Ryan and Deci (2000), a "feeling of competence will not enhance intrinsic motivation unless accompanied by an internal sense of autonomy" (p.70). Based on this view, what determines the choice of challenging tasks is the degree of self-determination and students' interest in the task. It is also known that learning based on interest entails significantly higher levels of mastery orientation (Hidi & Harackiewicz, 2000), better personal–emotional qualities (Tobias, 1994), deeper understanding of the learned concept (Schiefele, 1998), more elaborated and structured comprehension (Pintrich & Schrauben, 1992), and perceived effort (Sjöberg & Drotts, 1983).

According to Hidi (1990), students' interests in learning situations consist of two different components, *situational interest* that is elicited by the immediate environment, and *individual interest* that is anchored in students' long-term personal preference. Amongst these two sub-constructs of students' interest, individual interest has traditionally been seen as the more important type of interest due to its stability and independence from the immediate learning experience (see Schraw & Lehman, 2001). However, students' individual interest and situational interest may not be independent from each other as Hidi et al. (2000) point out. In some learning situations, situational interest may interact with individual interest and could eventually develop individual interest and intrinsic motivation (Hidi & Anderson, 1992). For instance, Flowerday, Schraw, and Stevens (2004) suggest students' situational interest and having been given a choice in a reading task serves as a significant predictor for their attitude and performance on the essay test. Unfortunately, it is not well understood how these two types of interest interact and influence students' learning behaviors (Ainley, Hidi, & Berndorff, 2002; Rheinberg, 1998; Schiefele, 1998).

In a way, interest is a very different construct from perceived competence. Its focal point is on the specific content (Schiefele, 1998, 1992), and therefore, interest could be seen as less ego-oriented and more task-oriented construct than perceived competence. Intrinsic Motivation Inventory (IMI) includes both interest and perceived competence as the most essential subscales that are reported to be orthogonal to each other in the area of sports (McAuley, Duncan, & Tammen, 1989). However, in high school academic subjects, interest is known to predict perceived ability (Sjöberg & Drotts, 1983). Here, the questions are how these two constructs interact with each other in actual task choice situations as well as to what students attribute as the basis of their task choice after making a task choice.