

*‘What is the usefulness of your
schoolwork?’*

The differential effects of intrinsic and
extrinsic goal framing on optimal learning

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ABSTRACT

Various motivational frameworks converge to suggest that highlighting the relevance of a learning activity yields benefits for students' learning and performance. Herein, we review a set of studies grounded in self-determination theory's distinction between intrinsic and extrinsic goals, which show that the beneficial effect of a learning activity's utility value should be nuanced. Specifically, this effect depends on the particular goal that activity is thought to serve, such that intrinsic goal framing enhances learning and performance, whereas extrinsic goal framing does not. Such effects emerge regardless of students' personal goal preferences. Overall, this research suggests that teachers might do well to consider the content of the promoted goal when highlighting the utility value of a learning activity.

KEYWORDS *intrinsic and extrinsic goals, learning, self-determination theory, utility value*

TEACHERS OFTEN ENCOURAGE THEIR STUDENTS by highlighting the relevance of a learning activity (Assor et al., 2002). If students understand the goals a learning activity serves, they might devote more effort to it because the task is instrumental to attaining valued goals (e.g. Lens, 2006; Simons et al., 2004).

Theory and Research in Education

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VOL 7(2) 155–163 ISSN 1477-8785 DOI: 10.1177/1477878509104320

Self-determination theory (SDT; Ryan and Deci, 2000; Vansteenkiste et al., 2008a) posits that not all goals are equally motivating because the content of the goals matters. SDT makes a distinction between intrinsic goals (e.g. community contribution, self-development, affiliation, health) and extrinsic goals (e.g. wealth, status, image) (Kasser and Ryan, 1996). Several experiments have examined the differential effects of intrinsic and extrinsic goal framing on children's learning. To provide a context for those studies, we briefly discuss the research on intrinsic and extrinsic goals.

INTRINSIC AND EXTRINSIC GOAL PURSUIT

Kasser and Ryan (1993) were the first to examine the association between intrinsic, relative to extrinsic, goal pursuit and well-being. The distinction between those two types of goal originated partly from the observation that prescriptions offered by mass media for living a happy life typically center around extrinsic aspirations and attainments; if people buy the advertised products and live according to the suggestions of mass media, they are more likely to feel satisfied with their lives. Kasser and Ryan (1993, 1996) examined whether this 'American Dream' held truth by contrasting the pursuit of intrinsic and extrinsic goals and found that those who value extrinsic goals higher than intrinsic goals experience lower well-being and higher ill-being. Essentially, they showed that, in contrast to its promise, living a life according to the 'American Dream' does not promote well-being.

Kasser and Ryan (1996) drew from SDT's concept of the basic psychological needs to help explain their results, arguing that the two types of goals are differentially related to well-being because of their differential associations with basic psychological need satisfaction, which is considered essential to well-being and psychological growth (Ryan and Deci, 2000). To illustrate, if people focus on wealth, they might use and/or abuse their colleagues to realize this ambition, suggesting that the pursuit of materialism is unlikely to promote relatedness.

Notably, other theories have also examined the well-being implications of extrinsic goal pursuit. For example, Fromm (1955) introduced the concept of the 'marketing character', suggesting that many individuals in capitalistic societies define themselves according to their material possessions, rather than who they truly are. Further, the goals of material success and thin-ideal have attracted attention within consumer psychology (Richins and Dawson, 1992) and the body-dissatisfaction literature (Stice and Shaw, 1994), respectively.

Unlike most other approaches on goals, the SDT approach is grounded in a strong meta-theory, which maintains that individuals are inherently active and growth oriented and that basic psychological need satisfaction energizes people's movement toward intrinsic, and away from extrinsic, goals (Sheldon

et al., 2003). This meta-theoretical foundation yields a number of implications. First, SDT researchers typically have no strong interest in mapping out all possible goals but rather focus on those goals that are theoretically linked to the basic psychological needs. Second, rather than taking a descriptive goal approach, which primarily involves examining the structure of people's goals across cultures (Schwartz, 1992), SDT uses a prescriptive approach, which asserts that some goals (i.e. intrinsic) are better to pursue than others (i.e. extrinsic). This does not imply that SDT researchers would force others to pursue intrinsic goals and to move away from extrinsic goals. Instead, SDT researchers would present the implications of pursuing different goals in an autonomy-supportive and non-judgmental manner, thereby attempting to understand why the person pursues extrinsic goals, presenting the implications of different goals in an empathic way, and allowing the person to choose his/her own direction. The idea is to enhance the person's awareness with respect to his goal options, such that he/she ultimately makes a more informed choice.

The assumption that intrinsic and extrinsic goals are differentially associated with basic need satisfaction implies that those goals would have implications beyond psychological health. Accordingly, intrinsic, relative to extrinsic, goal pursuit has been found to relate to better physical health and relational functioning, as well as to relevant societal outcomes, including a smaller ecological footprint and less prejudice (see Kasser, 2002; Vansteenkiste et al., 2008b, for overviews). More recently, the effect of intrinsic and extrinsic goal framing on learning has been examined.

INTRINSIC AND EXTRINSIC GOAL FRAMING

Teachers often highlight the relevance of a learning activity by referring to short- or long-term goals. Expectancy-valence theories (Eccles and Wigfield, 2002) suggest that referring to the utility value of a learning activity is motivating because it enhances students' effort for the task (Husman and Lens, 1999). However, because such theories make no distinction between qualitatively different types of goals there is no theoretical reason to expect particular goals to be more motivating than others. In contrast, SDT predicts that, compared with intrinsic goals, extrinsic goals will undermine learning and performance, as they are less likely to promote basic need satisfaction (Vansteenkiste et al., 2006).

Vansteenkiste et al. (2004a) tested this hypothesis. Business students were asked to read a text about communication styles that varied in the particular utility value that was highlighted. Specifically, half the students were told that the learning activity might help them achieve future financial success, whereas the others were told that the learning activity might help them achieve

personal growth at work. After reading the text, students completed questionnaires assessing conceptual understanding of the text. The authors also noted whether students took home a supplementary text on communication styles and engaged in an optional role-playing communication exercise. Results demonstrated that intrinsic goal framing enhanced students' enjoyment of learning, graded performance, and engagement in the voluntary activities compared with extrinsic goal framing. Similar findings emerged using different intrinsic and extrinsic goal manipulations and different learning activities. To account for their findings, the authors suggested that, compared with intrinsic goal framing, extrinsic goal framing shifted students' attention away from the learning activity and toward external indicators of worth, thereby undermining learning.

Notably, Vansteenkiste et al. (2004a) also varied the presentation of the goals, using either an autonomy-supportive or controlling communication style. Results demonstrated that the beneficial effect of intrinsic goal framing was enhanced when those goals were presented using an autonomy-supportive style. Presumably, the motivating impact of intrinsic goals is enhanced when people feel free to pursue those goals.

INTRINSIC AND EXTRINSIC, DOUBLE, AND NO GOAL FRAMING

Although this initial study showed that intrinsic goal framing yielded superior learning effects compared with extrinsic goal framing, the reason for such findings still needed to be investigated. Based on SDT, intrinsic goal framing is thought to focus learners' attention on the task, whereas extrinsic goal framing is thought to distract and perhaps ego-involve the learner because those goals make reference to external indicators of worth. As a result, extrinsic goals would prompt people to focus on their performance relative to others, rather than learning for its own sake (Vansteenkiste et al., 2007). A different explanation can, however, be derived from the expectancy-valence theories. Because most individuals value intrinsic goals more strongly than extrinsic goals (Kasser, 2002), intrinsic goal framing might simply enhance students' quantity, rather than quality, of motivation.

To test this alternative account, two additional studies were conducted in which the expectancy-valence and SDT-based explanations were directly contrasted. In the first study (Vansteenkiste et al., 2004b), two groups of students were assigned to a single goal (either intrinsic or extrinsic) condition, whereas a third group was told that the learning activity served the attainment of both intrinsic and extrinsic goals. If students' learning and performance depend on the amount of motivation for the activity, then double-goal, relative to

single-goal, framing should yield superior effects because the utility value and motivation for the activity is higher in the double-goal framing condition. According to SDT, however, the addition of an extrinsic goal to the presentation of an intrinsic goal should undermine learning and performance because of the distracting effect of the extrinsic goal.

In the second study (Vansteenkiste et al., 2004c), the effects of intrinsic and extrinsic goal framing were compared with a no-goal condition. If highlighting the relevance of a learning activity is sufficient to promote learning, regardless of the type of goal, then both intrinsic and extrinsic goal framing should enhance learning and performance, relative to the no-goal condition. This is because the perceived utility value of the single-goal conditions is higher than the no-goal condition. In contrast, according to SDT, extrinsic goal framing should undermine learning and performance, whereas intrinsic goal framing should enhance those outcomes. Results from both studies supported SDT predictions, as intrinsic goal framing enhanced learning and performance, relative to the double-goal and no-goal conditions, whereas extrinsic goal framing undermined those outcomes, relative to the no-goal condition. Thus, the type of goal provided to highlight the utility value of an activity matters, such that providing fewer goals yields better learning outcomes in some cases.

WHEN PROMOTED GOALS MATCH ONE'S GOAL ORIENTATION

If a student attaches higher importance to extrinsic, relative to intrinsic, goals, then some teachers might be inclined to frame a learning activity using extrinsic goals because that goal better fits the personal goal orientation of the student. A match perspective, which proposes that people thrive most when the goals promoted by the social environment – regardless of their content – fit with their personal ambitions (Sagiv and Schwartz, 2000), would predict that certain goals are differentially motivating for different individuals (i.e. intrinsically versus extrinsically oriented students). Such a relativistic perspective on goals is justified given the assertion that humans are not characterized by an inborn psychological make-up. Rather, they are born as blank slates and, depending on their socialization history, come to value different goals; thus, only socially acquired goals should be motivating. In contrast, SDT suggests that extrinsic goal framing should undermine learning even among extrinsically oriented students because such goals are not conducive to basic need satisfaction, which is universally essential.

Vansteenkiste et al. (2008c) tested these conflicting hypotheses. Children's intrinsic and extrinsic goal orientations were assessed one week before being

placed in either an intrinsic or an extrinsic goal-framing condition. While they read a text, half the extrinsically oriented children were assigned to the intrinsic goal-framing condition, thus creating a mismatch between promoted goals and goal orientations, whereas the others were placed in the extrinsic goal-framing condition, thus creating a match. The intrinsically oriented children were randomly assigned to conditions in a similar manner. Results demonstrated that, compared with intrinsic goal framing, extrinsic goal framing undermined children's pleasure, performance, and persistence, regardless of children's goal orientation. Thus, even extrinsically oriented children do not benefit from being told that the learning activity serves a goal they value highly.

DOES EXTRINSIC GOAL FRAMING YIELD ANY BENEFITS?

Clearly, extrinsic goal framing undermined deep learning and voluntary persistence, which contrasts with the observation that extrinsic goals are often used as motivators for behavior in daily life. Does this imply that extrinsic goals have no motivating power at all? No, they do motivate behavior, although such goals are likely to instantiate a rigid and narrow-minded approach to learning. Underscoring this argument, Vansteenkiste et al. (2005), in a study among fifth- and sixth-grade children, differentiated between rote learning, which requires superficial memorization of material, and deep learning, which requires meaningful integration of material. They reasoned that, although extrinsic goal framing might enhance effort, children would only superficially memorize the material, rather than deeply process and understand it, because they would approach the material in a rigid manner. Results confirmed these hypotheses, as extrinsic and intrinsic goal framing yielded equal benefits for rote learning, but extrinsic goal framing undermined deep learning. The effects occurred because extrinsic goal framing undermined students' task-oriented approach to the learning activity.

In the study by Vansteenkiste et al. (2004c), extrinsic goal framing, relative to a no-goal condition, was found to yield some benefits for students' short-term persistence. Specifically, relative to the no-goal condition, students in the extrinsic goal condition were more likely to voluntarily persist after one month, although their persistence decreased at four months post-experiment. In contrast, intrinsic goal framing, relative to both the no-goal and extrinsic goal conditions, enhanced students' persistence at one week, one month, and four months post-experiment. Moreover, follow-up analyses indicated that the enjoyment of participants in the extrinsic goal condition who persisted was not in accord with their persistence, whereas the persistence of those in the intrinsic goal condition was based on their interest in, and personal value

of, the learning activity. Again, these findings suggested that extrinsic goals do motivate behavior, although the motivation appears to be rigid. Thus, people fail to subsequently persist at the activities, presumably because their persistence only functions to attain external indicators of worth.

PRACTICAL IMPLICATIONS

We now provide a number of practical recommendations based on the observation that intrinsic goal framing promotes learning. First, we suggest teachers refer to the intrinsic, rather than extrinsic, goal benefits of an activity. In doing so, it is important to provide a specific, rather than vague, goal and to realistically and meaningfully connect the referenced intrinsic goal to the learning activity so that learners accept the promoted goal. Of course, this will require creativity and critical reflection, but those studies reviewed above suggest that adequate goal framing can be accomplished relatively easily through provision of brief, written instructions. Second, we suggest teachers need not adjust the goals they promote according to the goals their students pursue, as all students benefit from intrinsic goal framing regardless of individual goal profiles. Third, we suggest teachers employ an autonomy-supportive, rather than controlling, communication style to promote intrinsic goals, as students benefit even more when they feel free to pursue those goals. Finally, we suggest teachers refrain from extrinsic goal framing because it undermines both learning and the beneficial effects of intrinsic goal framing. This final recommendation is somewhat paradoxical because extrinsic goals are often used to motivate students; however, extrinsic goals forestall the learning process, rather than contributing to optimal learning.

CONCLUSION

Highlighting the utility of a learning task is an important strategy to enhance students' motivation. Several experimental studies show that teachers' promotion of intrinsic, rather than extrinsic, goals is beneficial to students' learning, presumably because intrinsic goals provide satisfaction of students' basic psychological needs for autonomy, competence, and relatedness.

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BIOGRAPHICAL NOTES

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Theory and Research in Education 2009; 7; 155

DOI: 10.1177/1477878509104320

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