Does Assessment Kill Student Creativity?

by Ronald A. Beghetto

Abstract

Does assessment kill creativity? In this article, creativity is defined and discussed and an overview of creativity and motivational research is provided to describe how assessment practices can influence students' creativity. Recommendations for protecting creativity when assessing students also are provided.

Given the benefits of creativity in solving complex individual, social, and global problems (Plucker, Beghetto, and Dow 2004; Sternberg and Lubart 1999), it would seem that promoting student creativity would be the celebrated centerpiece of all educational efforts. Unfortunately, efforts aimed at promoting student creativity are often marginalized and overshadowed by a myriad of other demands placed on teachers' instructional time. One such demand, largely propelled by the No Child Left Behind Act of 2001, is the increased assessment of student learning.

Assessments of student learning, particularly those which are externally mandated, have taken center stage in America's classrooms. Teachers are required to devote increasingly large portions of their instructional time preparing students for assessments, proctoring those assessments, and communicating the results to students, parents, and related stakeholders. Though most educators would agree that assessments—even statewide standardized assessments—are necessary for monitoring the success of educational efforts, the large footprint of assessment may be stamping out student creativity along the way.

Does assessment kill creativity? The answer to this question can be found by examining research on the relationship among assessment, motivation, and creativity. The general consensus from this research is that assessment, in and of itself, is not necessarily a negative force, but can be depending on how it is used to motivate stu-

dents (Collins and Amabile 1999; Fasko 2001; Nickerson 1999; Runco 2003; Sternberg and Lubart 1991; Tighe, Picariello, and Amabile 2003). It seems that the best answer to the question of "does assessment kill creativity" is: *it depends.* Creativity and motivational researchers have found that certain assessment practices have a strong influence on motivational beliefs that can, in turn, undermine students' expression of creativity. If this is the case, which assessment practices diminish creativity? What can teachers do to help ensure that their use of assessment supports student creativity?

What Is Creativity?

Before the question of does assessment kill creativity" can be answered, it is important to define what is meant by creativity. Creativity is a term that often is used in education, but rarely defined. For example, a teacher might ask students to use their "creativity" in designing a science fair project. Or, a teacher might refer to a student's unusual response by saying "that's very creative." However, without taking the time to define creativity, it is difficult to know what exactly is meant by the term. As Plucker, Beghetto, and Dow (2004) explained, an unclear definition can lead to erroneous assumptions, misconceptions, and misguided beliefs (e.g., only certain people are creative, creativity is something that cannot be enhanced, and so on).

Creativity researchers generally agree that creativity involves a combination of uniqueness and usefulness (Amabile 1996; Feist 1998; Sternberg and Lubart 1999). Plucker and his colleagues (2004, 90) analyzed creativity literature and derived the following definition:

> Creativity is the interaction among aptitude, process, and environment by which an individual or group produces a perceptible product that is both novel and useful as defined within a social context.

Importance of the Social Context

Just because an individual's creativity is not recognized on a broad social level, it does not mean that he or she is not creative. Everyone has creative potential. An eighth-grader's poem, though not demonstrating the same level of creativity as Emily Dickinson's poems, certainly can be considered creative, i.e., novel and appropriate within the context of her language arts class, her school, state, and even beyond. The judgment of creativity depends on the context (e.g., a language arts classroom, an after-school poetry club, an international poetry contest) and the stakeholders in that context (e.g., the classroom teacher, a group of fellow poets, a panel of international poetry experts).

There always will be individuals who have greater aptitude, experience greater environmental supports, and employ more effective strategies thereby leading to longer-lasting and more influential creative contributions. However, just because someone's creative contribution is not revolutionary doesn't mean it is not creative. Indeed, the novel and useful efforts of normal, everyday people are still, by definition, creative. This level of creativity, called "pedestrian or everyday creativity" (Plucker and Beghetto 2004, 158), is important and representative of what often is hoped for in school settings. We want our students to be able and willing to solve problems, create products, and contribute ideas that are novel and useful in any given situation.

The Combination of Novel and Useful

Creativity requires novelty and usefulness. Recognizing that creativity requires both attributes cannot be understated. Creativity often is viewed as simply that which is unique, out of the ordinary, bizarre, or deviant. Without the additional criterion of usefulness, creativity quickly can become a euphemism for negative, undesirable traits. For example, someone who contributes nonsensical ideas to a conversation may be referred to as creative, with a wink and a nudge, and then quickly dismissed. In turn, many myths and misconceptions surrounding creativity are fueled. Focusing only on the unique, novel, and deviant aspects of creativity supports the myth that creativity is intertwined with negative, maladaptive aspects of personality and behavior, e.g., drug use, mental illness, and other nonconformist behaviors (see Plucker, Beghetto, and Dow 2004). Feist (1998, 290) explained, "It is easy to see why originality per se is not sufficient—there would be no way to distinguish eccentric or schizophrenic thought from creative thought." Plucker and Beghetto (2004, 157) put it simply, "That which is novel but has no use, merit, or significance is simply novel, not creative. Likewise, that which is useful but is not novel, unique, or original is simply useful, not creative."

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The Creative Process

The requisite combination of novelty and usefulness provides insights into creative process activities. The creative process often is thought of as having two stages: the *divergent stage* and the *convergent stage.* The divergent or brainstorming stage focuses on generating novel ideas, problems, or solutions to problems. For example, when determining the topic for a science fair project, students should generate freely as many ideas as possible. Generating ideas without much concern for the merit of those ideas is one of the most ubiquitous activities of creativity enhancement efforts. Collins and Amabile (1999) explained that during this stage, individuals must have the interest, enjoyment, and commitment necessary to identify problems, generate multiple ideas, and not be distracted by extrinsic concerns (e.g., comparisons to others, concerns about how they might be evaluated by the teacher, or whether they have found the best solution to a problem).

The second stage, or the convergent stage, of the creative process focuses on evaluating and choosing ideas, completing the task, and communicating results. In the science fair project example, the student eventually must select one idea, put forth

the sustained effort to complete the project, and report the outcome. Students must use their evaluative thinking skills, check the appropriateness and social validity of their efforts, persevere in the face of difficulty, and follow through by completing their project and publishing their work. A different set of motivators is important during this stage. Collins and Amabile (1999) explained that information from the external environment (e.g., teachers providing goals, deadlines, criteria for success, or informative feedback on what students did well and how they can continue to improve) may help to keep students engaged in the process and to evaluate their creative effort accurately within a given context.

Assessment practices in classrooms with a mastery goal structure are used to provide students with useful information and feedback on how they are progressing relative to their own prior achievement.

Assessment Practices That Diminish Creativity

Given that all students have the potential to be creative, why do many never fully express their potential? Do some classroom assessment practices actually thwart student creativity? The motivational sciences (Pintrich 2003) have made much progress in addressing questions regarding the motivational forces underlying creative expression. By turning to the motivational sciences, educators can develop a better understanding of how assessment practices can influence student creativity.

Classroom Goal Structures

Teachers' classroom assessment practices are laden with goal-related messages that influence the motivational beliefs and subsequent achievement behavior of their students (Ames 1992; Midgley 2002; Pintrich and Schunk 2002; Stipek 1998).

Teachers may try to motivate students by displaying only the best work or by charting student progress on a highly visible chart. By displaying only the best work or by using charts to make social comparisons, teachers communicate to students that outperforming others, rather than self-improvement, is the reason for engaging in achievement-directed behavior. This goal message is quite different from the message sent by assessment practices that stress understanding and self-improvement.

Motivational researchers (see Midgley 2002) have categorized environments created by teachers' goal-related messages into types: *performance goal structures* and *mastery goal structures.* A performance goal structure is represented by goal-related messages that stress the importance of avoiding mistakes, besting others, getting the

highest grades, and demonstrating one's ability in relation to others. Assessments in classrooms with a performance goal structure primarily make comparisons among students (e.g., rank students by ability and emphasize who's best, smartest, or most capable). Empirical evidence suggests that students within such classrooms have an increased likelihood of adopting maladaptive motivational beliefs and engaging in performance avoidant behaviors. These students are more likely to view errors as an indication of a lack of ability, experience high levels of anxiety, exert less effort, place less value on tasks, give up in the face of difficulty, and engage in self-sabotaging behaviors, such as cheating or not seeking help when needed (see Kumar, Gheen, and Kaplan 2002; Pintrich and Schunk 2002; Urdan et al. 2002).

Conversely, a mastery goal structure is represented by goal-related messages that focus on self-improvement, skill development, creativity, and understanding. Assessment practices in classrooms with a mastery goal structure are used to provide students with useful information and feedback on how they are progressing relative to their own prior achievement. Empirical evidence suggests that students in mastery goal structured classrooms are more likely to adopt healthy motivational beliefs and mastery-oriented achievement behaviors, including enhanced interest in learning, more positive attitudes toward learning, attribution of failure to lack of effort (rather than to lack of ability), high levels of academic engagement, perseverance in the face of challenges, more risk-taking, and asking for assistance when needed (Pintrich and Schunk 2002).

Assessments do not necessarily diminish or undermine student creativity; rather, how students perceive the goal messages sent by their teachers' assessment practices is what matters.

Though the empirical evidence associated with these two goal structures is compelling, keep in mind that not all students experience the classroom environment in the same way. Researchers have found that some students can thrive in classrooms with a performance goal structure (Harackiewicz et al. 2002). Classrooms with a mastery goal structure, however, seem to foster creative expression better than those that represent a performance goal structure (Amabile 1996; Collins and Amabile 1999; Tighe et al. 2003).

Collins and Amabile's (1999) review of the research on motivation and creativity suggested that creativity is associated with high levels of interest, enjoyment, and curiosity—outcomes typically associated with mastery environments. They found

that creative individuals commit themselves to the task at hand, take risks, and engage in challenging tasks—again, behaviors that are typically linked with mastery goal environments.

Recommendations for Protecting Creativity

Assessments do not necessarily diminish or undermine student creativity; rather, how students perceive the goal messages sent by their teachers' assessment practices is what matters. Such information actually will support creative expression only to the extent that students view assessments as providing useful feedback on how to improve. Teachers must monitor how students perceive the assessment environment in the classroom. The following recommendations, based on summaries of motivational and creativity research, are intended to serve as general principles for ensuring that student creativity is protected when using assessments in the classroom.

Given the benefits of creativity in solving complex individual, social, and global problems, it would seem that promoting student creativity would be the celebrated centerpiece of all educational efforts.

Minimize Social Comparisons

Student creativity is fostered when teachers minimize the use of assessments in making social comparisons. When students focus on self-improvement, they are more likely to take risks, seek out challenges, and persevere in the face of difficulty (Nickerson 1999; Pintrich and Schunk 2002; Stipek 1998). Conversely, when assessments are used to pit students against one another, there is a greater chance that some students will attribute their performance to factors over which they have little control, e.g., natural ability or luck (Stipek 1998). As a result, students are more likely to give up or, worse yet, not even see the point in trying because they feel they can never be as talented or lucky as those to whom they are being compared.

Taking risks, accepting challenges, believing in one's ability to be successful, and sustaining effort in the face of difficulties are important skills. These will help ensure that students strive to generate novel ideas and to complete and communicate the results of their creative endeavors. When assessments are viewed as sources of self-improvement information, students can focus on "competing against themselves" (Nickerson 1999) rather than concentrating on the performance of others. The result: students will be more likely to develop and contribute ideas that are both novel and useful.

This is not to say that competition and social comparisons are, in every case and for every child, damaging. Some students can and will be motivated by creative competitions. Amabile (1996) explained that though win-lose competitions seem to undermine creativity, evidence has shown that competition can have a positive effect for some individuals and work teams. More research is needed, however, to determine for whom and under what conditions competition and social comparison can foster creativity. In most cases, the research has suggested that competing for prizes and contracting for rewards contingent on performance undermine creativity (Collins and Amabile 1999).

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Teachers should use assessments to provide students with information on how they are doing compared to their own past performance and where they are in relation to their current learning goals. To the extent possible, this type of performance information should be provided discretely to individual students (Pintrich and Schunk 2002). No matter how well-intentioned, posting student progress for all to see likely will undermine student creativity and achievement, and potentially will reinforce faulty self-judgments.

Minimize the Pressure of Assessment

If students feel pressured by evaluative surveillance, monitoring, and other salient features of assessment, their willingness to express creativity will suffer. Runco (2003) explained that pressure caused from evaluations can cause anxiety that distracts from the creative task. Teachers are advised to reduce the stress and anxiety that may accompany assessment, particularly during the divergent phases of the creative process when students need freedom and comfort to generate novel ideas. Runco (2003, 30) noted, "None of this intimates that children should never experience challenges. What children need is comfort and security for confidence and ease of associations, with occasional and personally meaningful challenges."

Teachers also must recognize that student creativity can be hindered by the expectation of being evaluated (Amabile 1996; Tighe et al. 2003). When teachers emphasize that students' work will be evaluated, students are less likely to express the same level of creativity as they would if they didn't have such a salient evaluation expectation. Stipek (1998, 172) explained, "Stressing evaluation . . . focuses attention on performance goals, engenders a feeling of being controlled, and destroys whatever intrinsic interest students might have had in the task."

Teachers are advised to consider carefully the messages they send about the reasons for engaging in tasks and projects. Rather than trying to motivate students by suggesting they work hard because their efforts will be graded, teachers instead should point out features of the task that are interesting to students, help students set challenging but realistic goals, and help students find personal meaning in the task (e.g., provide some level of choice in how students complete the task).

Focus on Informational Aspects of Assessment

Teachers should ensure that assessment results are informative and useful. By simply refocusing the emphasis placed on test scores and letter grades to the information contained within those results, teachers can help students gain useful insights from assessments. Stipek (1998, 173) suggested:

> Rather than congratulate a student for getting an "A" on a test, as though the "A" itself was the goal, comment on the high level of competence the grade signifies. . . . Low grades, similarly, should not be presented as punishment, but as information—an indication that the student needs to exert more effort or needs some assistance.

Because students' creative expression is intrinsically motivated, it can be undermined when teachers place too much emphasis on grades, scores, and other achievement rewards (Fasko 2001). Teachers need to help students focus on learning, understanding, and mastery of tasks rather than on grades, scores, and other external rewards. This is not to say that extrinsic motivators are always counterproductive. Fasko (2001, 323) reported, "When convergent thinking is a teacher's goal, then extrinsic rewards can improve performance on a task." Helping students bring closure and complete a project may be fostered by external motivators that provide information regarding their efforts. Such synergistic motivators (Collins and Amabile 1999) can be useful in helping students solve problems, seek additional resources, develop skills necessary for success, and validate their creations.

Recognize Risk-Taking and Creative Expression

When assessing students, teachers can protect creativity by recognizing and appreciating creative expression. This doesn't mean that teachers should throw out standards or provide empty praise for inappropriate ideas. If responses are not appropriate, teachers should provide suggestions on how students might adapt the idea so that it is useful while still preserving the novelty.

For students to be willing to express their creativity, they must feel that their ideas—especially those that are unconventional—are welcome in the classroom (Nickerson 1999). Teachers play an instrumental role in shaping students' perceptions of whether creativity will be tolerated. Evidence has suggested that students who perceive their teachers as caring, accepting, interested in them, courteous, and professional, are more likely to express their creativity (Tighe et al. 2003). Fasko (2001, 323) explained, "When students understand that their teachers 'value' creativity, then this message has a positive effect on creativity."

Unfortunately, few teachers reward creativity in their classrooms (Fasko 2001). This is somewhat understandable, because students' creative expression can be challenging for teachers and may even be perceived as disruptive (Nickerson 1999). The pressure to cover curriculum, meet standards, and administer assessments may, inadvertently, result in teachers short-circuiting students' creative expression. Even within the constraints of standardized curricula and tests, teachers should make room for creativity. In fact, the most valuable form of creative expression often occurs within the constraints of real-life structures, rules, and standards.

Nickerson (1999) argued that a balanced environment, both demanding and supportive, is necessary for creativity to flourish. Students can be taught how and when to express novel ideas so that they are appropriate and useful within a given context. By recognizing novelty and helping students calibrate that novelty so that it is appropriate and useful, teachers can go a long way in supporting and promoting student creativity. Assessment feedback provides an ideal opportunity for teachers to encourage students in their risk-taking and the novel expressions of ideas, as well as to share information on how students can improve their ideas or adapt them for a different context.

Conclusion

Clearly, teachers play an instrumental role in determining whether or not student creativity will be undermined by the use of assessments in the classroom. By being aware of how differing assessment practices can influence student creativity, teachers can make more purposeful efforts to ensure—at least within their own classroom—that the answer to the question "does assessment kill creativity" is a confident "No."

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