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Creativity: Asset or Burden in the Classroom?

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ABSTRACT: Two studies were conducted to examine teachers' perceptions of creative students. Study 1 was based on earlier works that identified personality characteristics associated with creativity. The prototypicality of these characteristics as they applied to creative children was rated by college students. Elementary school teachers were then asked to rate their favorite and least favorite students based on these characteristics. There was a significant difference between the teachers' judgments of their favorite and least favorite students on these measures. Judgments for the favorite student were negatively correlated with creativity; judgments for the least favorite student were positively correlated with creativity. Students displaying creative characteristics appear to be unappealing to teachers. Study 2 explored the conflict between the results of Study 1 and teachers' self-reports that they enjoy working with creative children. Teachers' concepts of creativity were different from concepts that have guided previous research. In a reanalysis of data from Study 1 employing the teacher-generated creativity prototype, there was a tendency (though nonsignificant) for the favorite students to be more similar to the creatve prototype than the least favorite students. Areas of divergence in concepts of creativity and the implications for the promotion of creativity in education are discussed.

One of the most consistent findings in educational studies of creativity has been that teachers dislike personality traits associated with creativity. Research has indicated that teachers prefer traits that seem to run counter to creativity, such as conformity and unquestioning acceptance of authority (e.g., Bachtold, 1974; Cropley, 1992; Dettmer, 1981; Getzels & Jackson, 1962; Torrance, 1963). The reason for teachers' preferences is quite clear—creative people tend to have traits that some have referred to as *obnoxious* (Torrance, 1963). Torrance (1963) described creative people as not having the time to be courteous, as refusing to take no for an answer, and as being negativistic and critical of

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others. Other characteristics, although not deserving the label *obnoxious,* nonetheless may not be those most highly valued in the classroom. For example, MacKinnon (1963) had architects at three levels of estimated creativity rate themselves on the Adjective Check List. Among the adjectives associated with the highest levels of creativity were *determined, independent,* and *individualistic.* Similarly, Sternberg (1985) examined implicit theories of creativity by asking individuals to generate characteristics associated with creativity. The characteristics associated with creativity included impulsivity and risk taking. Impulsivity, risk taking, independence, and determination may not be the most positively viewed characteristics of children given the teacher's goals of maintaining order and attending to multiple children. In contrast, the labels found to be associated with the lowest levels of creativity in MacKinnon's (1963) study were *responsible, sincere, reliable, dependable, clear-thinking, tolerant, understanding, peaceable, good-natured, moderate, steady, practical,* and *logical.* These characteristics seem well suited to the traditional classroom.

Despite the long history of research indicating that teachers do not value creative traits in students, teachers report that they value creativity in the classroom. For example, Feldhusen and Treffinger (1975) reported that 96% of teachers surveyed felt that daily classroom time should be devoted to the promotion of creative thinking. How are we to interpret this apparent conflict between teachers' self-reports and previous findings? One interpretation is that teachers, knowing that creativity is generally held to be an important goal of education (e.g., Torrance, 1965), are giving the "right" answer, but not the real answer, when asked about their liking for creative students. Another possibility—explored in the current research—is that teachers' concepts of creativity differ from those that have guided previous research.

Only a few previous studies (Fryer & Collings, 1991; Myers & Torrance, 1961; Runco, 1984, 1989; Runco, Johnson, & Bear, 1993) have examined teachers' concepts of creativity. However, the studies that have been done have sometimes produced surprising results. Myers and Torrance (1961) suggested that some teachers who reported that they were rewarding creative behavior were in fact punishing it. A study of teachers in England and Wales found that only about half viewed divergence as an important aspect of creativity (Fryer & Collings, 1991). This is puzzling given that divergence is fundamental to most definitions of and tests for creativity (e.g., Barron & Harrington, 1981; Hennessey & Amabile, 1988; Taylor, 1988).

It is important to seek clarification of the reasons for the conflict between research findings regarding teachers' preferences and teachers' self-reports. Teachers' expectations of students have a significant impact on students' grades and performance (Brophy & Good, 1970; Kenealy, Frude, & Shaw, 1991; Rosenthal & Jacobson, 1968). If teachers' concepts of creativity are different from those generally accepted, it seems unlikely that they will recognize and nurture those students with creative potential. Research has suggested that traits associated with creativity may not only be neglected, but actively punished (Myers & Torrance, 1961; Stone, 1980). Stone (1980) found that second graders who scored highest on tests of creativity were also those identified by their peers as engaging in the most misbehavior (e.g., "getting in trouble the most"). Given that research and theory (e.g., Harrington, Block, & Block, 1987) suggest that

a supportive environment is important to the fostering of creativity, it is quite possible that teachers are (perhaps unwittingly) extinguishing creative behaviors.

The purpose of the present research was to explore the conflict between findings of teachers' dislike of creative students and teachers' self-reports that they value creativity. Study 1 replicated and extended previous work on teachers' preferences. Whereas previous research (e.g., Bachtold, 1974; Getzels & Jackson, 1962; Torrance, 1963) has asked teachers to rate the characteristics of an ideal student in relation to creativity, the present research asked teachers to rate their favorite and least favorite student, thereby having the teachers envision actual students and not simply an ideal. An ideal student exists only in the abstract, and teachers may not truly believe that any child is capable of meeting these standards; therefore, the teachers may continue to have high regard even for those children who are not ideal. Teachers' judgments regarding real students in their classrooms may provide results that are more applicable to actual classroom situations. In Study 2, teachers were asked to rate characteristics related to creativity. In previous work (e.g., Torrance, 1963), teachers' views of creativity were inferred by their ratings of the ideal (they were not asked to indicate those characteristics that they believed to be associated with creativity). Thus, although these previous studies inform us regarding teachers' preferences, they tell us little about teachers' concepts of creativity (cf. Runco 1984, 1989; Runco et al., 1993).

Study 1

Study 1 examined the similarity between the creative prototype, as defined by previous literature, and teachers' perceptions of children in a classroom. Because children displaying creative characteristics may present more of a management problem for teachers, these children may also be the ones teachers like least. Our hypothesis was that the characteristics associated with creativity are not those valued most highly in the traditional classroom and, consequently, that teachers would prefer children who do not show these characteristics.

Method

Subjects

Subjects were 16 female teachers who ranged in age from 25 to 70 years ($M = 42.9$ years). All were employed by elementary schools in the Albany, NY, area. Only teachers of Grades 1 to 5 were used in the current study. In addition, 35 (25 female, 10 male) Union College students between the ages of 17 and 20 years ($M = 18.5$ years) provided pretest data.

Procedure

Ratings of the creative prototype. In order to examine teachers' perceptions of the characteristics associated with creativity, we obtained ratings for a "creative prototype." This was accomplished by providing college students with a list of the characteristics found to be associated with high and low creativity in previous research (MacKinnon, 1963; Sternberg, 1985). Undergraduate students in psychology were asked to rate each of the 50 adjectives or adjective phrases. They were instructed to provide ratings as to "how characteristic you think each of the

following is of a creative 8-year-old-child." These ratings were made on a 9-point scale ranging from *behavior extremely uncharacteristic* (1) to *behavior extremely characteristic* (9). This pretest was necessary for three reasons. First, it has been suggested that the nature of creativity changes with age (Csikszentmihalyi & Robinson, 1986; Gruber, 1986). Because all characteristics used in the current study were drawn from previous work in which people described creative adults, the possibility existed that creative children would be perceived differently than creative adults. Thus, it was important that these characteristics be reexamined in relation to child targets. Second, the pretest provided us with prototypicality ratings (i.e., how typical each of the characteristics was in relation to a creative child). These ratings were necessary for later analyses. Third, it allowed us to narrow the characteristics to those associated most highly with creativity and those associated least with creativity (based on the mean ratings across the 35 subjects).

Teachers' ratings of students. Teachers were presented with a characteristic check list consisting of the 20 items identified in the pretest as the 10 most and 10 least prototypical of creative children. Subjects were asked to rate their favorite student on these 20 characteristics using a 9-point scale ranging from *least descriptive* (1) to *most descriptive* (9). Teachers also rated their least favorite student in the same manner. Half the teachers rated the favorite student first, and half rated the least favorite student first. Four random orders were used for the characteristic check list, and these were varied over subjects. Subjects completed the check list individually at the school at which they were employed.

Results

Creative Prototype

The ratings that constituted the creative prototype are shown in Table 1, along with their associated means and standard deviations. In order to compare this prototype with data from previous research (MacKinnon, 1963; Sternberg, 1985), these items were categorized as most typical of creativity (those items receiving the highest ratings) and least typical of creativity (those items receiving the lowest ratings). Based on these categorizations, subjects who provided the prototypicality data showed a 95% agreement with past research. The only item that diverged from previous work was "is appreciative." As shown in Table 1, subjects in the current study indicated that this was not typical of a creative person, whereas MacKinnon (1963) indicated that it was associated with creativity.

Similarity of Favorite and Least Favorite Students to Creative Prototype

The degree to which teachers' ratings of their favorite and least favorite students corresponded to the prototype of the creative student was examined. For this analysis, correlations were used as a measure of the similarity between student characteristics and the pattern of characteristics of the creative prototype. Two correlations were obtained for each of the teachers. The first was the correlation between their ratings of their favorite student and the mean ratings provided in the pretest for the prototypical creative child. The second was the parallel analysis carried out for the least favorite student.

Table 1. *Means and Standard Deviations for Characteristics of Creative Prototype (Study 1)*

Characteristic	Rated Typicality	
	M	*SD*
Most Typical of a Creative Child		
Makes Up the Rules as He or She Goes Along	7.30	1.54
Is Impulsive	7.29	1.62
Is a Nonconformist	7.29	1.95
Is Emotional	7.19	1.77
Is Progressive	7.00	1.00
Is Determined	6.91	1.72
Is Individualistic	6.90	2.29
Takes Chances	6.90	1.78
Tends Not to Know Own Limitations and Tries to Do What Others Think Is Impossible	6.77	1.78
Likes to be Alone When Creating Something New	6.77	1.86
Least Typical of a Creative Child		
Is Tolerant	4.52	1.68
Is Practical	4.53	1.74
Is Reliable	4.77	1.59
Is Dependable	4.78	1.60
Is Responsible	4.97	1.64
Is Logical	5.34	1.78
Is Understanding	5.50	1.52
Is Appreciative	5.72	1.76
Is Good-Natured	6.00	1.72
Is Sincere	6.03	1.45

(Data from three subjects were not used due to their failure to complete all the scales.)

After the correlations were converted to z scores using Fisher's transformation, they were analyzed using a t test for paired observations. As expected, teachers' responses to the favorite and least favorite students differed significantly from each other, $t(12) = 15.85$, $p < .001$. There was a significant negative correlation between the favorite student and the creative prototype (mean $r = -.63$, $p < .01$). Conversely, there was a significant positive correlation between the least favorite student and the creative prototype (mean $r = .49$, $p < .05$).

Correlations examined for individual subjects revealed that only one showed a positive correlation between the creative prototype and the favorite student ($r = .53$, $p < .02$); all other subjects showed negative correlations ranging from –.52 to –.77 (median = –.68) and probability levels ranging from .02 to .001. Similarly, only one subject showed a negative correlation (nonsignificant) between the least favorite student and the creative prototype ($r = -.26$); all other subjects showed positive correlations ranging from .39 to .87 (median = .54) and probability levels ranging from .10 to .001. It is important to note that, for all subjects, correlations were higher between the creative prototype and the least favorite student than they were between the creative prototype and the favorite student. For example, the one sub-

ject who showed a positive correlation between the favorite student and the creative prototype showed an even higher positive correlation between the least favorite student and the creative prototype. Thus, teachers' least favorite students showed more similarity to the creative prototype than did their favorite students. In fact, the ratings for the favorite students showed a personality pattern that was opposite that of the creative prototype.

Study 2

Study 2 explored the discrepancy between teachers' intuitive notion that they promote creativity and the results of Study 1. Previous research has indicated that even teachers who appear to be interested in promoting creativity (e.g., those enrolled in gifted education courses) have a negative view of characteristics traditionally associated with creativity (Dettmer, 1981). To further understand this phenomenon, we needed to see (a) which characteristics teachers associated with a creative child and (b) if teachers' concepts of creativity differed from those of MacKinnon (1963), Sternberg (1985), and the college students used in the pretest for Study 1.

Method

Subjects

Subjects were 16 female teachers working in elementary schools in the Albany, NY, area and ranging in age from 24 to 56 years ($M = 42.6$ years). As in Study 1, only teachers of Grades 1 to 5 served as subjects. One additional subject's responses were not included in the analyses due to missing data.

Procedure

On a pencil-and-paper check list, subjects were asked "how characteristic each of the following is of a creative 8-year-old child." These ratings were made on a 9-point scale ranging from *behavior extremely uncharacteristic of a creative child* (1) to *behavior extremely characteristic of a creative child* (9). The subjects were presented the same 20 characteristics that were used in Study 1. Five random orders were used. Subjects completed the check list individually at the school at which they were employed.

Results

As shown in Table 2, the 20 characteristics rated with regard to creativity were divided into those most typical and least typical of a creative child via a median split. Recall that, in the pretest of Study 1, college students agreed with 19 of 20 (95%) of the adjectives associated with creativity in previous research. In Study 2, categorizations based on teachers' ratings agreed with only 9 of 20 (45%) of the adjectives previously associated with creativity. The adjectives included as most typical of creative children by the teachers that differed from those of previous research were *sincere, responsible, good-natured, reliable,* and *logical.* Perhaps even more telling are the characteristics that teachers rated as least typical of the creative child: "makes up the rules as he or she goes along," "is impulsive," "is a nonconformist," "is emotional," "tends not to know own limitations and tries to do what others think is

Table 2. *Means and Standard Deviations for Characteristics of Teacher-Defined Creative Prototype (Study 2)*

Characteristic	Rated Typicality	
	M	*SD*
Most Typical of a Creative Child		
Is Individualistic	8.13	0.74
Takes Chances	7.67	0.90
Is Progressive	7.53	1.36
Is Determined	7.53	1.30
Is Sincere	7.00	1.46
Is Appreciative	7.00	1.56
Is Good-Natured	6.93	1.53
Is Responsible	6.87	1.60
Is Logical	6.80	1.78
Is Reliable	6.80	1.42
Least Typical of a Creative Child		
Is Practical	5.53	1.41
Makes Up the Rules as He or She Goes Along	5.80	1.57
Is Emotional	5.93	1.71
Is Understanding	6.07	1.44
Is Tolerant	6.20	1.37
Is Impulsive	6.20	1.97
Is a Nonconformist	6.33	1.54
Tends Not to Know Own Limitations and Tries to Do What Others Think Is Impossible	6.53	2.30
Likes to Be Alone When Creating Something New	6.60	1.68
Is Dependable	6.70	1.44

impossible," and "likes to be alone when creating something new." It is interesting to note that this list includes the 4 characteristics most highly associated with creativity in Study 1. (The teacher-rated characteristics and their associated means and standard deviations are shown in Table 2.)

As expected given the findings in Table 2, the creative prototype generated by the teachers was not significantly correlated with the creative prototype used in Study 1, $r(18) = .20$. Data supplied by teachers in Study 1 regarding their favorite and least favorite students were reanalyzed using the teachers' creative prototype. Contrary to the results of Study 1, neither the ratings of the favorite students nor the ratings of the least favorite students were significantly correlated with the creative prototype as defined by teachers (mean rs = .20 and .11, respectively). The correlations between the favorite student and the teacher-defined creative prototype ranged from -.05 to .45 (median = .16). The correlations between the least favorite student and the teacher-defined creative prototype ranged from –.43 to .50 (median = .12). There was no significant difference between the favorite and least favorite students in regard to their similarity to the teacher-defined creative prototype as evaluated by a t test for paired observations, $t(12) = 1.12$, $p = .28$. (Scores used in this analysis were converted to z using Fisher's r-to-z transformation.) Although nonsignificant, the correlations were in a direction consistent with teachers' self-reports. That

is, ratings of the favorite students tended to be more highly correlated with teachers' concepts of creativity than were the ratings of least favorite students.

Discussion

As in previous research, the teachers in the present investigation appeared to have a negative view of characteristics associated with creativity. This in turn suggests that schools may provide an inhospitable environment for creative students. In Study 1, children who were the teachers' least favorite students showed a pattern of behavioral characteristics that was quite similar to the pattern for the creative prototype. Conversely, the teachers' favorite students showed a pattern of behavioral characteristics that was the opposite of that for the creative prototype. If the students who display the characteristics associated with creativity are seen as the teachers' least favorite students, the children could be affected in numerous ways.

First, teachers' unwelcoming attitudes may alienate children from formal education. It has also been clearly demonstrated that children's performance is affected by teachers' attitudes toward them (Brophy & Good, 1970; Kenealy et al., 1991; Rosenthal & Jacobson, 1968). A second possible outcome is that teachers' dislike of behaviors associated with creativity leads to the extinction of those behaviors. Thus, potentially creative students might learn to conform so as to improve the teacher–student relationship. This attempt to appease the teacher and do better in the classroom could cause children to suppress the very characteristics that make them creative. A third possibility is that certain students are capable of adjusting to the demands of the teacher while continuing to maintain creativity. The teachers' incorporation of desirable behavioral characteristics within their concept of creativity may well act as a filtering system. This filter may allow only the most behaviorally adaptable creative students to succeed within the traditional educational system. People who fit this pattern may account for a subset of creative people who have sometimes been referred to as displaying the "briefcase syndrome of creativity" (MacKinnon, 1983, p. 123). These individuals simultaneously display the characteristics most often associated with creativity as well as characteristics such as *deliberate, reserved,* and *industrious,* which run counter to a more bohemian notion of creativity (e.g., Becker, 1983).

Thus, the results of Study 1, along with previous research, paint a picture of teachers who appear to devalue creativity. Yet teachers report that they enjoy having creative students in the classroom. Study 2 examined this apparent contradiction by examining teachers' concepts of creativity. The characteristics identified by teachers as indicative of creativity were quite different from those identified in Study 1. The college students in Study 1 showed high levels of agreement with characteristics associated with creativity in previous research, but the teachers agreed on fewer than half. The inclusion of the characteristics *sincere, responsible, good-natured, reliable,* and *logical* in the creative-child category gives the impression that, to be creative and still to be liked by the teacher, children must also display the properties that make them easy to manage in the classroom. Further, teachers' exclusion from the creative prototype of characteristics such as "is a nonconformist" and "tends not to know own limitations and tries to do what others think is impossible" seems difficult to justify given most definitions of creative behavior.

We have suggested in this article that management problems in the classroom could have an effect on teachers' perceptions of creativity (see also Cropley, 1992; Runco, 1993). Designers of programs to enhance creativity will have to consider the practical needs of the teacher. Studies have indicated that student teachers' concepts of the ideal pupil begin to diverge from that of experts only after they have had some experience teaching in the classroom (Noland, English, & vonEschenbach, 1984). One possible reason for this is that the supervising classroom teachers convey these new values to the student teachers. Another possibility is that the changes in concepts are driven by the formidable task of simultaneously managing the needs of numerous children. Although a certain degree of control is necessary, Deci, Nezlek, and Sheinman (1981) concluded that creativity was more likely to be found in students whose teachers emphasized autonomy than it was in students whose teachers emphasized control over the students. As school budgets are cut, teachers may be left with the task of attending to the needs of 30 or even 40 students in a single classroom. Thus, one direction that future research might take is to examine the impact of factors such as class size or availability of teachers' aides on teachers' concepts of creativity.

Our studies have relied on people's concepts of creativity as a definition of the creative prototype. It is clear that there is a high level of agreement among people in assigning particular characteristics to creative people (Sternberg, 1985); however, high agreement among judges does not necessarily imply accuracy in behavioral judgments (e.g., Chapman & Chapman, 1969; Shweder, 1977). Thus, an issue that must be addressed by future research is the actual relation between these characteristics and observed creative behavior. In addition, the current study examined only female teachers of Grades 1 to 5 in one region of the country. The degree to which these findings generalize to other populations is an issue that should be further explored. With these caveats in mind, the current research suggests that potentially creative children may be at risk for being rejected by teachers. Given that research (e.g., Harrington et al., 1987) has suggested that a supportive environment is important in fostering creativity, the consequences of a teacher's rejection may be a decrement in creative performance and an alienation from the school system on the part of the student. Although some creative children are clearly capable of excelling in a traditional classroom, some of the most creative students may remain unrecognized or may even be punished.

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