

Motivation and creativity: The influence of achievement goals on creativity in writing poetry

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The present study considers creativity within the motivational theory of achievement goals. Achievement goals provide a framework for exploring the cognitions, affective responses, and behavior of people in situations concerned with achievement (Dweck, 1988; Maehr, 1984; Nicholls, 1984). Two types of goal in particular have emerged. They have been labeled variously but share similar theoretical distinctions. First, there is a performance goal (Ames & Archer, 1988; Elliott & Dweck, 1988), an ego incentive (Maehr & Braskamp, 1986), or ego involved (Nicholls, 1983, 1984). Those holding a performance goal are concerned primarily with demonstrating their ability, and this is shown to best advantage by outperforming others on a task, particularly if success is achieved with little effort. Second, there is a mastery goal (Ames & Archer, 1988), a task incentive (Maehr & Braskamp, 1986), a learning goal (Elliott & Dweck, 1988), or task involved (Nicholls, 1983, 1984). Those holding this goal want to develop their competence or increase understanding of a subject, and anticipate that this end will be achieved by working hard.

Motivation and creativity

The definition and measurement of creativity poses many problems for researchers. The present study proceeds from the assumption that creativity exists on a continuum from low levels occurring in everyday life to highly significant advances in the arts and the sciences. In addition, it is argued that the best way to date of assessing creativity is to consider products rather than to administer a test of divergent thinking. Amabile (1983a, 1983b) has developed a technique for assessing creativity which uses a set of judges who assess products independently using their own subjective notions of creativity. It appears that people with experience in a field can agree independently on what constitutes creative work without using common criteria defining creativity.

The present study considers creativity from a motivational framework, that of achievement goals. It is argued that the adoption of a mastery goal results in increased creativity. There are a number of aspects of a mastery orientation that support this contention. First, there is the preference for more challenging tasks, for risk taking (Bandura & Dweck, 1981). Creativity by its very nature demands something novel. Second, there is the focus on the

task at hand, the desire to understand more about the subject. Csikszentmihalyi's (1985) "flow state" comes to mind, with its sense of an all-enveloping concentration on the task. This can be contrasted with a performance orientation where there is a concern with the work of others, used as a gauge of one's own performance.

Though effort in itself cannot guarantee creativity, there must be competence in a field before significant advances are possible. A person intent on mastery is more likely to reach that point at which creativity is possible. A mastery-oriented person also is likely to react more positively to failure by attributing it to factors over which he or she has some control, such as inadequate effort or inappropriate preparation. The consequence of failure should be renewed effort rather than loss of confidence or withdrawal from the task because of a perceived lack of ability. In contrast, a performance orientation has consequences that would be expected to block creativity: a tendency to avoid challenging tasks because of the increased possibility of failure and the attendant risk of demonstrating a lack of ability; the belief that success is the result of innate ability rather than hard work; a lack of concentration on the task at hand; and an excessive concern with the reactions of others to one's work.

Effects of evaluation

In the present study subjects wrote two poems in succession for which they expected to receive an evaluation. According to achievement goal theory, mastery-oriented people should view evaluation as a means of obtaining feedback about progress to date. For performance-oriented people, on the other hand, evaluation should be viewed as providing information about achievement relative to that of others, and hence an indication of relative ability.

As subsequent, similar tasks are addressed, mastery-oriented people should display the same approach they applied to the first task, regardless of a positive or negative evaluation of that task. For performance-oriented people, however, one would expect a lower level of productivity from those who received a negative evaluation. If they attributed this poor evaluation to a lack of ability or a hard task, factors over which they have little control, they should anticipate similar negative evaluations on future tasks. They would approach subsequent tasks with little enthusiasm and expend little energy working on them (Elliott & Dweck, 1988). Negative affect also is likely, for example, expressions of dislike, boredom, or wanting to stop the activity (Elliott & Dweck, 1988).

The present study

It was hypothesized that students encouraged to adopt a mastery goal would write poems judged to be more creative than

those of students encouraged to adopt a performance goal. Further, this outcome would occur when both mastery and performance students were expecting to receive an evaluation of their first poem before they wrote a second. It also was hypothesized that the creativity of the second poem by the mastery-oriented students would be greater than that of the performance-oriented students. In addition, the creativity of the mastery students would be unaffected by a positive or negative evaluation of their first poem. For performance students, however, the creativity of those who received a positive evaluation of their first poem would be greater than the creativity of those who received a negative evaluation.

A number of other variables were included in the study. Students reported their reactions to writing both poems: enjoyment of the activity, reported effort expended, liking of the poems they wrote, worry about the poems other students were writing, and interest in the activity. After they wrote their second poem, students also indicated their willingness to write more poetry and their perception of their ability to write poetry. As with creativity, it was anticipated that students encouraged to adopt a mastery goal would react more positively to writing the poems than students encouraged to adopt a performance goal. In addition, the receipt of negative evaluation for the first poem would not impair the positive approach of the mastery students in writing the second poem, but negative evaluation would reduce the enthusiasm of the performance students, and reduce their perception of their ability to write poetry.

Subjects

The sample included 52 Grade Eight students enrolled in an American junior high/high school for academically advanced students. There were 28 males and 24 females.

Procedure

The experimenter met with the subjects in groups of six or seven. Subjects were assigned randomly to these groups. Four groups experienced the mastery manipulation, while the other four experienced the performance manipulation. Each session lasted 45 to 50 minutes. The experimenter explained that she would ask them to write a poem, receive an evaluation of it, and then write a second poem. She was able to give a quick evaluation of their poems because of her extensive work in the area.

The poems were to be in the form of cinquains, five-lined poems with a set structure for each line. After explaining the form of the poems to the subjects, the experimenter told them that there had been a report that the quality of poetry writing among students their age was declining, and that she thought she could account for this decline. Subjects in the mastery condition then were told:

"It's because students aren't wanting to learn how to

write good poetry. They aren't trying out new ideas, working to improve their poems, trying to make each poem better than the one they wrote before. And they aren't enjoying their poetry, having fun with their poems, and feeling good when they see their poems get better and better."

Subjects in the performance condition were told:

"It's because students aren't working to write the best poetry in their class. They aren't trying to get high grades, not trying to win prizes for their poetry or getting their poetry published in school magazines or books of poetry. And they don't feel good inside when they show that they can write better poetry than other students their age."

Subjects then were shown a chart detailing the criteria to be used in evaluating their poems. The chart showed five evaluations each with a number beside it, ranging from "words convey a very clear, very vivid picture of the subject" (5), to "words do not convey any picture of the subject" (1). To enhance the performance manipulation, subjects in this condition were shown a certificate with the words "In recognition of a poem well written by _____" written on it, and told that anyone who received an evaluation of a 4 or a 5 would be awarded a certificate.

Subjects were told they would have ten minutes in which to write their poem and were urged to take their time. Finally, they were reminded of how they were to approach the task.

"Now remember, I want you to concentrate on writing the best poem you can. Try out new ideas, work on making your poetry better and better. And I want you to write a poem you'll enjoy writing." (mastery condition)

"Now remember, I want you concentrate on writing the best poem in this group, one that is good enough for a certificate. And I want you to feel good about showing that you have the ability to write good poetry." (performance condition)

Subjects then wrote a short poem about clothes. The poems were gathered up by the experimenter who then spent five minutes apparently assessing the poems. In fact, evaluation of each poem had been assigned randomly, with half the subjects receiving a 4 (a relatively positive evaluation), and the other half receiving a 2 (a relatively negative evaluation). While they were waiting to receive their evaluation, subjects completed a short questionnaire about their reactions to writing the poem.

Subjects were given back their poem with a number corresponding to the evaluation written beside it (the paper folded so that the number could only be seen by the subject). For subjects in the performance condition, half received a certificate. Subjects then were asked to write a second poem about home. Before they began, they again were encouraged to adopt a mastery or a performance orientation as they wrote

their poem. When the second poem was finished, subjects responded to a second questionnaire. The experimenter explained that she wanted more time to evaluate the second poem and would return with them next week. At that time, she debriefed the subjects.

Measures

Poems The two poems were in the form of cinquains, five-lined poems with a set structure for each line: noun on line 1; two adjectives describing the noun on line 2; three verb forms relating to the noun on line 3; a phrase, sentence, or any group of words pertaining to the noun on line 4; and a repeat of the noun on line 5. Amabile (1983a) has used this type of poem extensively in her work on creativity.

Creativity The creativity of each poem was assessed using Amabile's (1983a, 1983b) consensual assessment technique. Eight judges (graduate students in the Department of English at the University of Illinois) independently rated both sets of poems for creativity on five point Likert scales ranging from a low level of creativity (1) to a high level of creativity (5). Coefficient alphas were computed for the two sets of poems: .89 for the first set, and .88 for the second. That is, the judges were in substantial agreement in their independent assessments of the creativity of the poems. A creativity score for each poem was obtained by summing the ratings of the eight judges.

Reactions to writing the poems Subjects' reactions to writing each poem were assessed by five items rated on 5-point Likert scales. The items were: How much did you enjoy writing this poem? (1=little enjoyment; 5=a lot of enjoyment); How hard did you work to write this poem? (1=not hard at all; 5=very hard); How much do you like the poem you wrote? (1=very little; 5=a lot); How much did you worry about what the other students were writing? (1=little worry; 5=a lot of worry); Was writing this poem an interesting activity to do? (1=not very interesting; 5=very interesting).

Willingness to write another poem After they wrote their second poem, subjects indicated how willing they would be to write another poem in the future on a 5-point Likert scale ranging from not willing (1) to very willing (5).

Perceived ability to write poetry After they wrote their second poem, subjects rated their ability to write poetry on a 5-point Likert scale ranging from little ability (1) to a lot of ability (5).

Results

Results are presented in two major sections: results concerning the first poem and results concerning the second poems. With analysis of variance (ANOVA) statistics, no more than two factors with two levels for each factor were used. With a relatively small sample size, use of more levels or the introduction of more factors would reduce cell size to

unacceptable levels. Means and standard deviations for all variables are shown in Tables 1 to 5 (shown at the end of the paper).

First poem A t-test for independent samples showed a significant difference between subjects in the mastery and performance conditions in the creativity of their poems, $t(df = 50 \text{ for pooled variance}) = 2.81, p < .01$. Inspection of the means showed that the poems of subjects encouraged to adopt a mastery goal ($M = 23.80$) were more creative than poems of subjects encouraged to adopt a performance goal ($M = 18.77$). No significant differences between goal conditions emerged for subjects' reactions to writing the poem. An ANOVA using goal condition and sex as between-subjects factors revealed no main effect or interaction for sex which was removed from subsequent analyses.

Second poem To test the effect of goal condition and outcome of evaluation (positive or negative) of the first poem on the creativity of the second poem, a two by two ANOVA with goal condition and outcome as between-subjects factors was used. No significant main effects or interactions emerged. Similar ANOVA procedures were used to assess the effect of goal condition and outcome on subjects' reactions to writing the second poem. There were no main effects or interactions for goal condition. For how interesting the subjects found the activity, there was a significant main effect for outcome, $F(1,48) = 5.98, p < .05$, with subjects receiving a positive evaluation finding the activity more interesting ($M = 3.77$) than subjects receiving a negative evaluation ($M = 3.12$).

Further ANOVA statistics were conducted on variables subjects responded to after writing their second poem: willingness to write another poem and perceived ability to write good poetry. For perceived ability to write good poetry, there was a significant main effect for outcome, $F(1,48) = 8.11, p < .01$, with subjects with positive evaluations indicating more ability ($M = 3.73$) than subjects with negative evaluations ($M = 2.89$). Similarly, there was a significant main effect for willingness to write another poem, $F(1,48) = 5.98, p < .05$, with subjects with positive evaluations indicating more willingness ($M = 4.08$) than subjects with negative evaluations ($M = 3.35$).

Discussion

The hypothesized effect of goal condition on creativity did emerge for the first poem. Students who were encouraged to adopt a mastery goal wrote poems judged more creative than those of students encouraged to adopt a performance goal. In addition, this difference occurred when all students were expecting to receive an evaluation of their poem. This finding runs counter to Amabile's (1983a) argument that the expectation of evaluation will undermine creativity. It seems that the expectation of evaluation does not exert a negative

effect on creativity if students are encouraged to view evaluation as a source of information about their progress rather than as a means of assessing relative performance on a task. It should be noted, however, that there were no significant differences between the two groups in students' reactions to writing the poems, though in each case the means differed in the anticipated direction.

The hypothesized differences between students in the two conditions did not emerge either in the creativity of the second poem or in students' reactions to writing the poems. There were differences between students who received positive and negative evaluations of their first poem in their reactions to writing the second poem. Students with positive evaluations of their first poem perceived themselves to be better poetry writers, found the activity a more interesting one, and were more willing to write another poem in the future than students who received a negative evaluation.

Obviously, receipt of evaluation of the first poem exerted a marked effect on students' reactions to writing the second. Students with a positive evaluation reacted enthusiastically to writing the second poem while students with a negative evaluation were loath to continue. These results suggest that the experience of receiving evaluation may have acted as a significant performance cue, even for students encouraged to adopt a mastery goal.

It may be that in the students' prior academic experiences, the performance aspects of evaluation have been emphasized to the detriment of its informative aspects (see, for example, Deci & Ryan, 1985). Students may have come to view evaluation primarily as a performance cue. This may not have occurred during the writing of the first poem, when they were expecting evaluation, but may have been triggered when they actually received an evaluation that indicated they were better or worse poetry writers than the other students in the group. Certainly, for older students, evaluation is tied to grades, and grades rarely are awarded on the basis of effort expended. In sum, the attempt to reduce performance cues for students in the mastery condition may have been unsuccessful.

This study has established a link between achievement goals and students' creativity in writing poetry. It is to be hoped that future research will strengthen this link and extend it. Most people would agree that there is a motivational component of creativity, but little has been done to tease the relationship apart. The findings of the study suggest that situational cues can enhance creativity, an encouraging sign for those who want to increase their own creativity or enhance it in others.

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Table 1
Means and standard deviations for the creativity of the first poem by goal condition

Creativity	n	Condition	
		Mastery	Performance

	26		
M		23.80	18.77
SD		7.41	3.33

Table 2
 Means and standard deviations for reactions to writing the first poem by goal condition

Measures	Condition		
	n	Mastery	Performance
Enjoy writing poem	26		
M		3.81	3.58
SD		0.75	0.81
Work hard on poem	26		
M		3.58	3.54
SD		0.81	0.71
Like the poem	26		
M		3.81	3.73
SD		0.85	0.78
Worry about others	26		
M		1.65	1.88
SD		0.85	0.99
Interesting activity	26		
M		4.15	3.92
SD		0.88	0.94

Table 3
 Means and standard deviations for the creativity of the second poem by goal condition and evaluation

Measure	Condition		
	n	Mastery	Performance
	Positive evaluation		
Creativity	13		
M		20.57	23.80
SD		7.27	4.95
	Negative evaluation		
Creativity	13		
M		20.76	20.22
SD		6.85	6.92

Table 4
 Means and standard deviations for reactions to writing the second poem by goal condition and evaluation

Measures	Condition		
	n	Mastery	Performance
Positive evaluation			
Enjoy writing poem	13		
M		3.85	3.54
SD		0.99	0.78
Work hard on poem	13		
M		3.46	3.31
SD		0.66	1.03
Like the poem	13		
M		4.08	3.39
SD		0.95	0.87
Worry about others	13		
M		1.69	1.85
SD		0.86	0.69
Interesting activity	13		
M		3.77	3.77
SD		1.01	0.83
Negative evaluation			
Enjoy writing poem	13		
M		3.31	3.08
SD		1.18	0.95
Work hard on poem	13		
M		3.62	3.08
SD		1.18	0.95
Like the poem	13		
M		3.23	3.23
SD		1.24	1.01
Worry about others	13		
M		1.92	2.46
SD		1.12	1.13
Interesting activity	13		
M		2.92	3.31
SD		1.19	1.03

Table 5
 Means and standard deviations for perceived ability to write poetry and willingness to write another poem by goal condition and evaluation

Measures	Condition		
	n	Mastery	Performance
Positive evaluation			
Perceived ability	13		

M		3.85	3.62
SD		1.07	1.04
Willingness to write another poem	13		
M		4.08	4.08
SD		0.86	0.86

		Negative evaluation	
Perceived ability	13		
M		2.77	3.00
SD		1.17	1.00
Willingness to write another poem	13		
M		3.31	3.39
SD		1.11	1.39
