

Creative and Effective Teaching Behaviors of University Instructors as Perceived by Students

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The purpose of this study was to explain and predict creative and effective teaching behaviors of university instructors, as perceived by students, in a college of agriculture. Creative teaching behaviors were examined using an instrument developed from creativity theories of divergent thinking. Effective teaching behaviors were evaluated using the principles of effective teaching developed by Rosenshine and Furst (1971). The study utilized two populations: undergraduate students and their instructors. Results indicated that students believe their instructors demonstrated creative teaching behaviors. In addition, the study found a very high, positive, and significant correlation between instructors' creative teaching behaviors and effectiveness of teaching behaviors, as perceived by students. There was also a significant relationship between creative teaching behaviors of experienced and inexperienced instructors when evaluated by students.

Keywords: creativity, effective teaching, student perceptions of teaching

Introduction and Theoretical Background

Guilford's 1950 presidential address to the American Psychological Association (APA) catapulted creativity into the field of psychological research (Bleedorn, 2003, 2005; Cropley, 2001; Fasko, 2000–2001; Mumford, 2003; Runco, 1997). However, educational research of creativity in subject specific areas such as agricultural education appears to be lacking. Limited creativity studies have been conducted in agricultural education, (Aschenbrener, Terry, Torres, & Smith, 2007; Baker, Rudd, & Pomeroy, 2001; Friedel & Rudd, 2005), suggesting a research gap exists. Although creative instructors may positively impact the student–learning environment, little research has focused on teacher creativity. While some may suggest creative teaching is effective teaching (Anderson, 2002; Bain, 2004; Bleedorn, 2003, 2005; Chambers, 1973; Cropley, 1967, 2001; Davidovitch & Milgram, 2006; Esquivel, 1995; Fasko, 2000–01; Milgram,

1979; Newcomb, McCracken, & Warmbrod, 1993; Renzulli, 1992; Torrance, 1981, 1995), concrete measures that define creative teachers appear to be lacking. Additionally, little research appears to focus on identifying creative characteristics and behaviors of teachers.

Creativity has been viewed through many different theoretical frameworks, including behaviorism, constructivism, social constructivism, and systems theories (Starko, 2005). Systems approaches suggest creativity cannot be identified in a vacuum, but rather as an interaction between the environment and the person (Starko, 2005). Although most systems approaches to creativity focus on extraordinary creativity, the concept can be applied in a variety of situations.

Csikszentmihaly (1988) developed a systems model of creativity that included three aspects: the person, the domain, and the field. Thus, creativity is an interaction between product, person, and environment (Starko, 2005). Gardner (1993) built upon

Csikszentmihaly's model and suggested individuals are creative, but they create in a specific field. Can teaching be considered a particular field where creativity can occur?

Although creativity has been applied to numerous theoretical frameworks, defining creativity remains a difficult task (Baker et al., 2001; Friedel & Rudd, 2005; Hocevar, 1981; Sternberg, 1999; Starko, 2005). Perkins (1988) defined creativity in terms of creative results, which are both original and appropriate. Torrance (1995), known as a leader in creative research, defined creativity as "the process of forming ideas or hypotheses, testing hypotheses, and communicating the results" (p. 23). Despite differences in definitions, many researchers agree that creativity is comprised of three factors, including novelty, effective for others, and ethical or beneficial to society (Cropley, 2001; Fox & Fox, 2000; MacKinnon, 1962; Torrance, 1995).

If defining creativity is complex, assessing creativity may be an even greater challenge. Hocevar (1981) stated, "perhaps no psychological concept has proven to be as difficult to measure as creativity" (p. 450). As a result of the numerous and complex models of creativity, many types of creativity assessments have been developed (Feldhusen & Goh, 1995). The variation in creativity models has led some researchers to suggest multiple assessment methods. Feldhusen and Goh stated: "Assessment of such a multidimensional construct as creativity requires multiple channels of measurement such as tests and inventories" (p. 240).

One measure of creativity, the Torrance Tests of Creative Thinking (TTCT), was created within an educational context (Anastasi, 1976). Some researchers have suggested a creative individual should demonstrate attributes of divergent thinking (Bleedorn, 2003, 2005; Guilford, 1950; Starko, 2005; Torrance, 1995). Therefore, tests for divergent thinking have been used to measure creativity (Guilford, 1950; Hocevar, 1981; Torrance 1995). Divergent thinking often includes four creativity measures including fluency, flexibility, originality, and elaboration (Guilford, 1995; Massialas & Zevin, 1983; Plunker, Beghetto, & Dow, 2004; Starko, 2005; Torrance 1995).

Not surprisingly the educational impact of creativity has been championed by many

researchers (Anderson, 2002; Bleedron, 2003, 2005; Cropley, 1967, 2001; Esquivel, 1995; Fox, & Fox, 2000; Hocevar, 1981; Renzulli, 1992; Starko, 2005; Sternberg, 2006; Torrance, 1995). Numerous researchers have suggested the connection between creativity and effective teaching (Anderson; Bain, 2004; Bleedron, 2003, 2005; Cropley, 1967, 2001; Esquivel; Newcomb et al., 1993; Torrance, 1981, 1995). Renzulli's (1992) developmental theory suggested teachers are a key component of developing creativity, both as mentors and role models. Chambers (1973) found college teachers could encourage creativity in students and these teachers were viewed by students as more committed to their field, enthusiastic, intellectually challenging and more accessible to their students. However, can we identify these teachers as creative teachers? If creative teaching is linked to effective teaching, can identifying creative teachers help to define effective teaching?

Effective teaching characteristics have been the topic of considerable research (Buchanan, 1997; Miller, Kahler, & Rheault, 1999; Newcomb et al., 1993; Nicholls, 2002; Reid & Johnstone, 1999; Roberts & Dyer, 2004; Rosenshine & Furst, 1971; Westmeyer, 1988). For example, Reid and Johnstone (1999) identified six components to good teaching, including approachability, clarity, depth of knowledge, interaction, interest and organization. Interestingly, Reid and Johnstone (1999) found differences between the order of these six components when examined from student and instructor perspectives. Feldman (1976) found clarity and stimulating student interest were highly related to good teaching. Feldman also suggested effective instructors were knowledgeable about their content, prepared and organized for class and were enthusiastic. Newcomb et al. (1993) identified thirteen principles of effective teaching. Rosenshine and Furst (1971) outlined many of the same principles of effective teaching. Rosenshine and Furst (1971) studied eleven variables related to effective teaching. Rosenshine and Furst (1971) found the top five variables associated with effective teaching included clarity, variability, enthusiasm, task-oriented and/or businesslike behavior, and student opportunity to learn criterion material. Similar to creativity, effective teaching may be

difficult to define, perhaps due to the multiple perspectives which comprise effective teaching (Young & Shaw, 1999).

Research focused on the creativity of teachers appears to be lacking. In addition, the focus of student perceptions of instructor creativity is also noticeably absent from the literature. Research on creativity in subject-specific areas such as agricultural education is also lacking. While some research suggests genders differ in creativity (Bleedron, 2003, 2005; Starko, 2005), other important distinctions may also exist. For example, does creativity differ between disciplines? Does teaching experience contribute to creative and effective teaching?

Purpose and Objectives

The purpose of this study was to explain and predict students' perceptions of creative and effective teaching of university instructors in a college of agriculture. The following research questions and hypotheses guided this study:

1. What are the demographic characteristics of selected undergraduate instructors, including sex, years of teaching experience, age, and teaching discipline?
2. What is the level of creative teaching behaviors exhibited by selected university instructors, as perceived by their students?
3. What is the level of effective teaching behaviors of instructors, as perceived by their students?
4. What is the relationship between creative teaching behaviors of instructors, as perceived by students, and effective teaching behaviors, as perceived by students?
5. What is the amount of variance in creative teaching behaviors of instructors, as perceived by students, accounted for by their age, sex, teaching experience, and discipline?

Null Hypotheses

- H₀: There is no relationship between instructors' age and their level of creative teaching behaviors, as perceived by students.
- H₀: There is no difference between instructors' age, sex, teaching experience or discipline, and their level of creative teaching behaviors, as perceived by students.

Methodology

This study was descriptive–correlational in nature. Two populations were identified for this non–experimental study to represent both instructors and students. The first population included instructors teaching undergraduate courses in the College of Agriculture at the University of Missouri during the Fall 2007 semester ($N = 44$). Instructors of seminar, research, and special problems courses were excluded from the frame. For instructors teaching multiple courses or multiple sections of the same course, one class was randomly selected to be included in this study. Threats to external validity, including frame error, were addressed. The frame was selected from a list of all faculty and instructors provided by the college dean's office, which was considered reliable for the purpose of constructing the frame. Selection error was addressed by confirming participants met the desired criteria via college administrative personnel. The student population included all students enrolled in the selected courses taught by instructors who were subjects for this study. Selection error for this group was addressed by using official university registration system to identify and eliminate duplicate students.

A time and place sample was used for instructors teaching undergraduate courses in the College of Agriculture at the University of Missouri during the fall semester. The use of a time and place sample, as suggested by Oliver and Hinkle (1982), was justified as the instructor population could be considered representative of future populations in this college. The time and place sample resulted in 44 instructors who met the criteria. Because all members of the population were included in the study, sampling procedures were not imposed. As a result, the threat of sampling error was not a consideration for this study.

Probabilistic sampling was used to accommodate the large student population. Students were considered an intact group, thus cluster sampling was considered an appropriate sampling technique (Ary, Jacobs, & Razavieh, 2002). Courses were selected where the cluster represented a minimum of 25 students and students were assigned to a specific cluster. An effort was made to assign students with multiple classes to the cluster with the lowest student

enrollment preserving as many clusters as possible. Two response rates were used to preserve clusters from low enrollment courses, yet ensure the respondents were representative of the cluster. Specifically, a response rate of 50% or a minimum number of 30 respondents was required for a cluster to be included in the study.

A researcher-developed questionnaire, the Creative and Effective Teaching Assessment (CETA), was used to assess teaching effectiveness and creative teaching behaviors of instructors, as perceived by students. Demographic data were collected directly from the instructor population.

The CETA instrument was comprised of two components. The first component of the instrument contained statements to assess the four constructs of creativity identified by the Torrance Test for Adults (ATTA) (Goff & Torrance, 2002), which are: fluency, originality, elaboration and flexibility. Students identified their level of agreement with 16 statements to assess perceived creative teaching behaviors of their instructors. The second component of the instrument determined students' perceptions of effective teaching behaviors of their instructors. Fifteen statements designed to assess the first five characteristics of effective teachers identified by Rosenshine and Furst (1971) were used on the CETA. These characteristics are: clarity, variability, enthusiasm, task-oriented and business-like behavior, and opportunity to learn criterion material.

The instrument was evaluated for reliability and validity. To address reliability for the CETA, a pilot test was conducted. The questionnaire was administered to a sample of students ($n = 38$) who had characteristics similar to the population, but who were not selected to participate in the study. Validity for the CETA was established by a panel of experts for both content and construct validity.

Cronbach's alpha was computed to determine the reliability estimates of the CETA

for the student pilot test. The pilot test resulted in a Cronbach's alpha level of .97 ($n = 37$) for the entire instrument. Reliability estimates for the teaching effectiveness construct measured by the student pilot was .92 ($n = 38$). The student pilot for the creativity constructs resulted in a Cronbach's alpha of .96 ($n = 38$).

Students selected for the study were contacted through electronic mail in accordance with Dillman's (2007) recommendations following the completion of the Fall 2007 semester. The electronic letter was personalized to increase response rate and included a direct link to the questionnaire. After three follow-up contacts, total students responses ($n = 921$) yielded 40 student clusters. Clusters were used as the unit of analysis for this study. The final response rate was 73.80%. Coding was also used to identify student clusters and to match these clusters with demographic data provided by instructors. The demographic data for teaching experience was dichotomized into five years or teaching or less and more than five years. Five years of teaching experience was chosen to distinguish between novice and veteran teaching experience because the college of agriculture classifies novice instructors as those with five years or less of experience. Therefore, this study followed the college's distinction between novice and veteran instructors. Data were analyzed using SPSS 15.0[®] for Windows. The alpha level was set a priori at .05. Conventions suggested by Davis (1971) were used to evaluate the correlations. The magnitude of the correlation (r) of 1.0 is considered perfect, .70-.99 is considered very high, .50 - .69 is substantial, .30-.49 is moderate, .10-.29 is low and .01-.09 is considered negligible (Davis).

Results and Findings

The first research question addressed the demographic characteristics of instructors in terms of age, years of teaching experience, sex and teaching discipline (see Table 1).

Table 1
Demographic Characteristics of College of Agriculture Instructors (n = 40)

Characteristic	<i>f</i>	%	Mean	<i>SD</i>	Range
Age			47.05	10.48	25 – 77
Years of Teaching			15.95	10.98	1 – 47
Sex					
Male	27	67.50			
Female	13	32.50			
Discipline					
Natural/physical	25	62.50			
Social	15	37.50			

Instructors averaged 47 years of age with a standard deviation of 10.48. Ages of instructors ranged from 25 to 77 years. Instructors averaged slightly less than 16 years of teaching experience and were predominately male (68.00%). Teaching experience ranged from one to forty-seven years (*SD* = 10.98). In addition, roughly two-thirds (62.50%) of instructors taught in the natural/physical science areas rather than social science disciplines.

The purpose of research question two was to determine the level of creative teaching

behaviors exhibited by instructors, as perceived by their students. Student clusters were matched with instructors using coded information (see Table 2).

Summated data found the highest mean score for the creativity construct of elaboration ($M = 5.72$; $SD = .72$). The creativity construct of originality had the lowest mean score ($M = 5.28$; $SD = .84$). The summated mean score for creative teaching behaviors, as perceived by students.

Table 2
Summated Scores for Creative Teaching Behaviors of Instructors, as Perceived by Students (n = 40)

Construct	Mean	<i>SD</i>	Range
Summated Creative Teaching Behaviors	5.43	.75	3.32 – 6.67
Elaboration	5.72	.72	5.00 – 7.00
Frequency	5.41	.73	3.00 – 7.00
Flexibility	5.31	.80	2.75 – 7.00
Originality	5.29	.84	1.00 – 6.74

Note. Scale: 1 = strongly disagree; 2 = disagree, 3 = slightly disagree, 4 = undecided, 5 = slightly agree, 6 = agree, 7 = strongly agree.

The third research question sought to determine the level of effective teaching behaviors, as perceived by students (see Table 3). Students rated enthusiasm to be the most frequently occurring construct of effective teaching ($M = 5.87$; $SD = .71$). Variability had

the lowest mean ($M = 5.23$; $SD = .90$) for effective teaching, as perceived by students. Overall, students reported an average of 5.64 ($SD = .69$) for the teaching effectiveness of their instructors.

Table 3
Summated Scores for Effective Teaching, as Perceived by Students ($n = 40$)

Construct	Mean	SD	Range
Perceived Effective Teaching Characteristics	5.64	.69	3.80 – 6.82
Enthusiasm	5.87	.71	4.27 – 6.90
Task Oriented	5.83	.53	4.47 – 6.79
Opportunity to Learn	5.64	.70	3.53 – 6.88
Clarity	5.58	.85	3.37 – 6.88
Variability	5.23	.90	3.07 – 6.81

Note. Scale: 1 = strongly disagree; 2 = disagree, 3 = slightly disagree, 4 = undecided, 5 = slightly agree, 6 = agree, 7 = strongly agree.

Research question four sought to describe the relationship between creative teaching behaviors of instructors, as perceived by students, and effective teaching behaviors, as perceived by students (see Table 4). A very

high, positive and significant correlation was found between students' perceived effective teaching and students' perception of creative behaviors of instructors ($r = .91$; $p < .05$).

Table 4
Pearson Product Moment Correlations for Creative Teaching Behaviors, as Perceived Students ($n = 40$)

Variable	Student Perceived Creative Teaching Behaviors	p – value
Student Perceived Effective Teaching	.91	.01*

* $p \leq .05$.

Table 5
Intercorrelational Matrix for Instructors' Creativity, as perceived by students ($n = 40$)

Variable	X ₁	X ₂	X ₃	X ₄	Y
Age (X ₁)	1.00	.43	.80*	-.11	.29
Sex (X ₂)		1.00	.46	-.10	.15
Experience (X ₃)			1.00	.16	.26
Discipline (X ₄)				1.00	-.16
Instructors' Perceived Creative Teaching Behaviors (Y)					1.00

Note. ^aSex coded: female = 0, male = 1; ^bdiscipline: 0 = social, 1 = natural/physical.

* $p \leq .05$.

A stepwise linear regression analysis was calculated to address research question five. An intercorrelational matrix was generated prior to conducting the regression analysis to analyze the possibility of multicollinearity (see Table 5). The intercorrelational matrix contained the dependent variables (age, sex, experience, and discipline), and instructors' creative teaching behaviors, as perceived by students. Guidelines offered by Berry and Feldman (1985) to address multicollinearity were used to analyze these data. Bivariate correlations approaching .80

were removed prior to conducting regression analysis. Two variables presented a threat of multicollinearity, as age and teaching experience were highly correlated ($r = .80$). Because age represented a higher correlation with the dependent variable than did teaching experience, teaching experience was removed prior to the regression.

Approximately four percent of the variance in perceived creative teaching behavior can be explained by the linear combination of age, sex,

and discipline (see Table 6). However, the regression model was not significant ($F_{(3, 34)} = 1.12; p > .05$).

Table 6
Stepwise Linear Regression of Creative Teaching Behaviors, as Perceived by Students (n = 40)

Variable	R	R ²	b	t-value	p-value
	.30	.09			
Age			.02	1.53	.14
Sex ^(a)			.01	.04	.97
Discipline ^(b)			-.14	-.56	.58
(constant)			4.56	7.43	.01

Note: Adjusted R² = .04; For Model $F_{(3, 34)} = 1.12; p > .05$.

^aSex coded: female = 0, male = 1; ^bdiscipline: 0 = social, 1 = natural/physical.

The first null hypothesis suggested there was no relationship between instructors' age and their level of creative teaching behaviors, as perceived by students. Relationships were classified using Davis (1971) conventions for

describing magnitude of correlation coefficients. A low and non significant relationship was found between age and creative teaching behaviors, as perceived by students (see Table 7).

Table 7
Pearson Product Moment Correlations for Creative Teaching Behaviors, as Perceived Students (n = 40)

Variable	Student Perceived Creative Teaching Behaviors	p-value
Instructor Age	.29	.08

The second null hypothesis stated that no difference existed between instructors' sex, teaching experience or discipline, and their level of creative teaching behaviors, as perceived by students. A non-directional, independent samples t-test was calculated to test each component of the null hypothesis. Levene's Test

for Equality of Variances was conducted and the variances for student perceptions of creative teaching behaviors ($p = .38$), were calculated. Due to no significant difference in group variances ($p > .05$), equal variances were assumed for each of the variables and evaluated for differences (see Tables 8, 9 & 10).

Table 8
Independent Samples t Test of Differences Between Sex and Creative Teaching Behaviors of Instructors, as Perceived by Students (n = 40)

Sex	n	Mean	SD	t-value	p-value
Male	27	5.51	.76	-.95	.35
Female	13	5.27	.73		

Table 9
Independent Samples t Test of Differences Between Teaching Experience and Creative Teaching Behaviors of Instructors, as Perceived by Students (n = 40)

Experience	n	Mean	SD	t-value	p-value
≥ 5 years	9	5.00	.94	2.03	.18
< 5years	31	5.56	.65		

Table 10
Independent Samples t Test of Differences Between Disciplines and Creative Teaching Behaviors of Instructors, as Perceived by Students (n = 40)

Disciplines	<i>n</i>	Mean	<i>SD</i>	<i>t</i> -value	<i>p</i> -value
Natural/physical	25	6.00	.40	1.88	.07
Social science	15	5.57	.82		

Differences between disciplines (natural/physical or social science) and level of creative teaching behaviors ($p = .07$) were not statistically significant. Therefore, the null hypotheses that no differences existed ($p > .05$) between discipline and level of creative teaching behaviors, as perceived by students, was accepted.

There was a significant relationship between creative teaching behaviors of instructors, as perceived by students and years of teaching experience ($p = .03$). Therefore, the null hypotheses that stated no relationship existed between teaching experience and creative teaching behaviors, as perceived by students, was not accepted.

Creative teaching behaviors of instructors, as perceived by students ($p = .35$), was not statistically different when compared by sex. Therefore, the null hypotheses that no differences existed between sex and level of creative teaching behaviors, as perceived by students, was accepted.

Conclusions, Recommendations, and Implications

Students perceive that instructors demonstrate creative teaching behaviors; however, the range in means indicates that students varied considerably in their perceptions of instructor creativity in the classroom. Considering the range of means associated with student perceptions of instructors' use of creative teaching behaviors, it is apparent that students are capable of evaluating creativity in the classroom. This conclusion is a valuable step in research about creative teaching behaviors demonstrated by teachers. Documentation of students' perceptions of creative teaching does not appear to be available in previous literature.

Students also believe their instructors are effective teachers. Students agreed that their instructors displayed clarity, variability,

opportunity to learn, task oriented, and enthusiasm in their teaching. Enthusiasm was the most frequently reported effective teaching construct demonstrated by college faculty while variability was least observed by students. These findings suggest that students generally believe their teachers demonstrate enthusiasm in the classroom. However, instructors do not vary instructional methods as they teach.

While students agree that instructors demonstrated effective teaching characteristics, the range in scores also suggests students vary in their perceptions of instructors. This indicates students can discern between effective and non-effective instruction. If students can, in fact, differentiate between effective and non-effective instructors, what behaviors do they identify as most important to effective teaching? It is also interesting to note student perceptions of clarity demonstrated in the learning environment. Variability and clarity had the greatest range in scores, which again suggests students are capable of distinguishing when effective teaching behaviors occur. Could high levels of agreement with some constructs, such as enthusiasm, negatively impact other areas, such as clarity? Additional research should be conducted to determine which methods instructors use in the learning environment. Defining and identify teaching methods which improve clarity should also be the focus of future research. Finally, faculty development programs should be designed to address increasing variability and clarity in the learning environment.

Students consider creative instructors to be effective instructors. The strong, positive correlation between these two variables found in this study supports previous findings comparing creative and effective teachers (Anderson, 2002; Bain, 2004; Cropley, 1967, 2001; Davidovitch & Milgram, 2006; Esquivel, 1995; Fasko, 2000–01; Newcomb et al., 1993; Torrance, 1981, 1995).

However, creative teaching behavior constructs should be compared to each characteristic of effective teaching to provide more specific methods to improve effective teaching.

Discipline is not a factor to consider when addressing creativity of college of agriculture instructors. Perhaps due to the research environment found in both natural/physical and social sciences within universities, creativity does not appear to differ. It would appear appropriate to address all instructors, regardless of discipline, in future research. In addition, educational opportunities to enhance creativity may be appropriately targeted to both natural/physical and social science disciplines.

The consistency of creativity across disciplines may also provide new areas for understanding between the vastly different disciplines. In addition, the ability to enhance effective teaching by increasing creative teaching behaviors should be examined. Do differences in effective teaching occur between disciplines? If creativity does not appear to vary between disciplines, would measures to enhance creative teaching behaviors be effective in both disciplines?

There was a significant relationship between students' perceived creative teaching behaviors of instructors and the teaching experience of these instructors. Students suggested more experienced instructors exhibited more creative teaching behaviors. Because students are the ultimate consumer of education offered by instructors, this is an important finding. Further research should address what specific behaviors experienced instructors demonstrated in the classroom which led to the significant differences in student perceptions of creative teaching behaviors. Additionally, would student perceptions of creative teaching be consistent with creative behaviors identified by instructors? Additional qualitative and quantitative research may shed light on these behaviors.

Creative teaching behaviors, as perceived by students, do not appear to differ by the demographic characteristic of sex of the instructor. Sex does not appear to be a significant factor when examining creativity of

college instructors. The apparent absence of a gender gap suggests both groups could be addressed by similar professional development opportunities regarding creativity. However, does effective teaching differ by sex? Would female students differ in their perceptions of effective teaching than their male counterparts? Further research should address the differences between sex and effective teaching.

There was a significant difference between students' perceived creative teaching behaviors of effective and non-effective instructors. This suggests students are capable of identifying effective instructors and supports the previous findings that effective teaching is closely related to creative instruction. If effective teaching is directly related to creative teaching, then creative instructors may be more effective for students. Replication of this research should be conducted to support the findings between student perceptions of creative teaching behaviors demonstrated by instructors and student perceptions of effective teaching.

Creative and effective teaching behaviors appear to be strongly connected for students. However, little is known about the factors which account for the creative teaching behaviors of instructors. Only nine percent of the variance in creative teaching behaviors, as perceived by students, could be accounted for by the linear combination of age, sex, and teaching discipline. What other factors contribute to creative teaching behaviors of instructors? What characteristics of instructors account for additional variance in creative teaching behaviors?

Although considerable research has been conducted on creativity, the influence of creative teaching behaviors offers an opportunity to increase effective teaching practices. Further research, including replication of this study, should be conducted to enhance findings on the impact creative teaching has upon effective teaching. Additional research should include identifying the value students place upon creative teaching behaviors and identifying specific behaviors which student perception of creative and effective teaching.

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