

WHAT IS CREATIVITY: TEACHERS' BELIEFS ABOUT CREATIVITY IN STUDENTS' WRITTEN STORIES

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Abstract. The purpose of this study was to explore teachers' conceptual beliefs about creativity. Using the Consensual Assessment Technique (CAT), 17 elementary school teachers rated students' creativity in two separate studies. In the first study, 11 teachers analyzed the stories of 67 male and 70 female students from kindergarten, first, and second grades. In the second study, 6 teachers rated the stories of 67 male and 72 female students from third, fourth, and fifth grades. In both studies, teachers were required to use a list of clearly established guidelines in which the final step was to report the criteria used to evaluate students' creativity. Teachers' reports, which comprised 51 documents, were organized and analyzed. After coding and analyzing the data using NVivo software, the authors identified 8 major themes: (a) fluency, (b) voice, (c) originality, (d) imagination, (e) elaboration, (f) complexity, (g) making connections, and (h) writing clarity. Future researchers are encouraged to challenge the identified themes by replicating the current study in many places and in a variety of domains to enrich the theory of Creativity as a Social Construct (CSC).

Keywords: Creativity as a Social Construct (CSC), teachers' beliefs and creativity, creativity in students' writing, and rating creativity.

When visiting an interesting museum or art exhibition, people have almost always reacted to or otherwise shown appreciation for works that were of particular interest to them. Most people move beyond initial observation and engage an artwork or artifact even further. For instance, a person might gaze

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upon a painting for hours trying to imagine what message its creator meant to deliver or what emotion the painting was intended to evoke. The viewer usually enjoys engaging with a piece of art in this way – that is, in the open-ended task of ascertaining what the work of art was ‘about’ and what motives or inspiration were below its surface. Some viewers have even conjured ideas, explanations, or connections that the artist himself was not imagining when he created his work. In general, similar behaviors have been observed in persons presented with any product – music, novels, movies, and even food. However, in daily life most audiences have seen themselves passively, as consumers, and thus have not often recognized the value of their judgments!

Many researchers have approached creativity in the same manner (i.e., creator or product), with few exceptions. For instance, creativity has often been conceptualized around the creator as a person (Barron, 1988; Guilford, 1967; Taylor, 1988; Torrance, 1962; Weisberg, 1986), motivating researchers to make great efforts in testing or identifying cognitive abilities, personality traits, or behavioral characteristics that have influenced creative individuals in engaging in the complex behaviors that accompany creativity. Other researchers have focused on studying the environments in which creativity might have been developed (Elam & Mead, 1987; Mouchiroud & Lubart, 2002; Torrance, 1990; Sailer, 2011; Williams, 2001), focusing on whether creativity could be enhanced and reinforced by external factors. Studying creativity as a product has also played a part in this field, whether as a tool for measurement (Amabile, 1983, 1996; Hennessey & Amabile, 2010), or as an innovation that might vary from one culture to another or across genders (Alhusaini & Maker, 2010, 2011; Goldenberg *et al.*, 2001; Kaufman, 2006; Rob & Jan, 1992).

Theoretical Framework

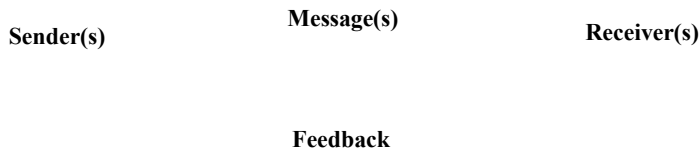
The authors of the current study believed it could be limiting to study creativity strictly within one of the traditional micro levels of the concept. We believed focusing solely on either the creator or product of creative works might not sufficiently expand the understanding of creativity, and that doing so could potentially drive researchers to conduct superficial investigations or even mislead the interpretations of their findings. We believed that shifting the focus to a macro-level perspective would be beneficial in seeing the holistic picture of Creativity as a Social Construct (CSC), in which receivers (i.e., audiences) were recognized as active and essential components of creativity, and in which creativity was conceptualized as a communication process between creator and receiver. Therefore, the concept of CSC included three essential components: creator, product, and receiver.

Social Communication

Discussing the original framework from which the concept of CSC was developed has aided us in understanding the concept. Schramm (1954), whose work was in the field of communication, presented a model explaining the essential components of social communication and the communication processes. Schramm included three essential components in his model (i.e., sender, message, and receiver). In Schramm's model, all three components were equally important, and the removal of any of them would end the process of communication. Also, Schramm's model allowed that the 'message' component could be any type of human behavior, such as verbal or written communication or body language. Therefore, when someone read one of Shakespeare's novels or looked at a da Vinci painting—according to Schramm's model—that person was actually communicating with the author or artist. Schramm's model thus allowed for communication to occur across time and place.

The receiver in Schramm's model was emphasized as an important component of the creative process because he or she considered, recognized, and understood the message of whatever was created, particularly when judging the object's value and then responding (see Figure 1). Thinking critically about both the sender and receiver in Schramm's model poses the question of whether the message would still be delivered clearly if sender and receiver did not share the same or at least a common background (e.g., language). The answer to this question would likely be no, underscoring that similarity in senders' and receivers' backgrounds has been an important part of completing the process of communication.

Figure 1: The components of Social Communication



Note. Adapted from "Social Communication" by Schramm, W. (1954). How communication works. In W. Schramm (Ed.), *The Process and Effects of Mass Communication* (pp. 3–26). Urbana, IL: University of Illinois Press.

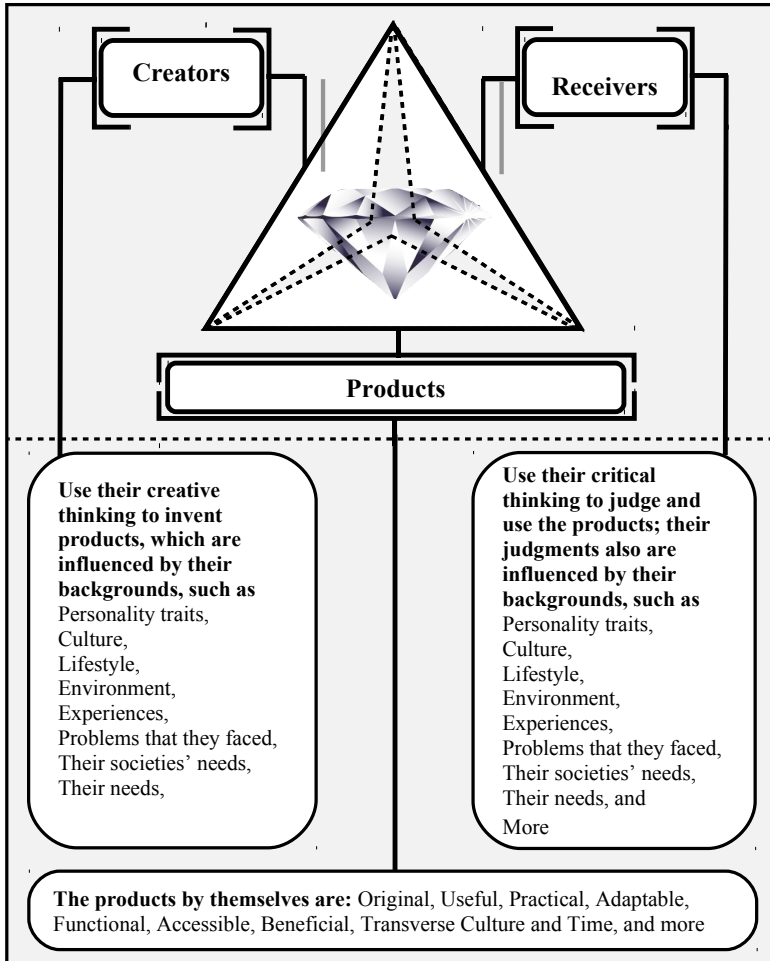
Schramm's Model and Creativity

Adapting Schramm's model (1954) to the field of creativity was useful because we could see creativity as a social communication between two parties (i.e., creator and receiver). Hennessey and Amabile (2010) defined creativity as a product, idea, or solution to a problem that was of value to a person or society. Emphasizing the recognition of the product's value in Hennessey and Amabile's definition raised the arguments of whether the receiver had to be considered as an essential component of creativity as a social construction, and whether the product's value would still be judged effectively if creator and receiver did not share the same (or at least a common) background. Most of these questions would be answered by moving from a micro to macroscopic level of approaching creativity and viewing it more holistically. Therefore, the concept of CSC was developed to explain creativity as a complex communication between creator and receiver across place and time.

The "product" in CSC has been interpreted as any type of actual product, idea, or solution of value to a person or to a society. The creator might be one person or a group of people (e.g., a company), and the receiver might also be a person or a group (e.g., a community). In the same way as in social communication (i.e., Schramm's model), if any components of creativity as a social construct (i.e., creator, product, or receiver) were absent, this also meant an end to creativity. For example, lack of a receiver would make the value of a product unknown. Also, sharing the same or at least a common background between creator and receiver has been important for recognizing the product's value.

A final idea is that both creators and receivers of valued products have used creative and critical thinking to both invent and judge products. These thought processes inevitably have been influenced by individuals' backgrounds (e.g., personality traits, cultures, lifestyles, environments, experiences, and the needs of their societies), which illustrates how important a shared background between creator and receiver has been in recognizing creativity. Nonetheless, some products (e.g., the iPhone) have spread throughout global society over the course of a few months. These products have been considered original, useful, practical, adaptable, functional, accessible, and beneficial across culture, place, and time (see Figure 2).

Figure 2: Creativity as a Social Construction



The products by themselves are: Original, Useful, Practical, Adaptable, Functional, Accessible, Beneficial, Transverse Culture and Time, and more

Westmeyer (1998) compared the assumptions of the social construction and psychological assessment approaches to creativity, and argued that the assumptions made by the social construction approach seemed more appropriate than those made in psychological assessment. Also, Runco (2007) argued that the concept of creativity as a social construct could be inferred in any definition or theory, because the concept of CSC meant the interpersonal

judgment of any creative work—so the assumption of a dialogue between creator and viewer has always been considered. For instance, when a specialist developed a traditional tool to measure students' creativity, he or she would judge students based on his or her interpretation of creativity within some socio-cultural context, whether the tool was a checklist of behavioral characteristics or a traditional test of ability.

Review of the Literature

Researchers in the field of creativity have recognized the value of studying teachers' beliefs regarding their students' creativity by investigating many different variables. For example, Diakidoy and Kanari (1999) explored the conceptualization of creativity for 49 student teachers using teaching experiences as a variable. The researchers found that student teachers tended to perceive creativity as a general ability manifested primarily in the context of artistic endeavors. On the other hand, Scott (1999) performed a comparison between 144 teachers and 133 student teachers who had been asked to judge four profiles of students: a high-creative boy and high-creative girl, and a low-creative boy and low-creative girl. The researcher found that teachers were significantly more likely than student teachers to rate accurately and thus produce creative children.

Within the variable of differences among cultures, Runco and Johnson (2002) conducted a study in which they included 150 adults (parents and teachers) from both the United States and India, and asked them to rate 68 adjectives for creativity and desirability. The researchers found that all groups distinguished between adjectives for creativity and desirability, and no differences were found between parents and teachers. However, significant differences were found between the participants in the United States and those in India, which could be interpreted as influences of culture, tradition, and expectations. In Hong Kong, Chan and Chan (1999) evaluated 204 primary and secondary school teachers' beliefs by asking participants to list the characteristics of either creative or uncreative students. The most frequently mentioned creative attributes were 'imaginative,' 'always questioning,' and 'quick in responding.' The most frequently mentioned uncreative attributes were 'conventional,' 'timid,' 'lack of confidence,' and 'conforming.'

In Korea, Seo, Lee, and Kim (2005) examined the beliefs of 60 teachers of gifted students to determine their understanding of the components of creativity (i.e., cognitive, personal, and environmental) as mentioned by Urban (1995). By asking teachers to respond to an open-ended question of 'what is creativity?' and then classifying their answers into the three components, the researchers found that the cognitive component was mentioned more often than the other components. In a follow-up study, Lee and Seo (2006) also studied the beliefs of 42 teachers of gifted students to examine these teachers' understandings of the components of creativity. The researchers found

that the cognitive components—originality, problem solving, and thinking ability—were mentioned frequently. When defining the environmental component, teachers mentioned only social value. When defining the personal component, only one teacher mentioned task commitment and two teachers mentioned personal characteristics. Researchers concluded that the frequency of the components of creativity as listed by the teachers was cognitive, environmental, and then personal.

Purpose

In two quantitative studies (Alhusaini & Maker, 2010, 2011), the researchers used the Consensual Assessment Technique (CAT) to measure students' creativity when writing open-ended stories. As a part of these studies, teachers were asked to list the criteria by which they judged students' creativity after they finished their judgment processes. The purpose of this study was to identify the criteria that were reported by the teachers after they had completed their assessments. The following research questions were answered: What were the teachers' criteria for judging creativity in students' original written stories?

METHOD

Research Design

The authors used a qualitative method to answer the research question. Fraenkel and Wallen (2010) stated that the most complex aspect of qualitative research was that a variety of approaches could be used in an attempt to obtain a holistic picture. Using content analysis (i.e., document analysis) has been an effective method in qualitative research to study human activities in an indirect way.

Participants. Seventeen elementary school teachers from an urban area of the Southwestern United States were chosen as judges to rate students' stories using the CAT in two separate studies. In the first study (Alhusaini & Maker, 2010), eleven teachers participated: (a) seven females and four males; (b) seven native English speakers and four non-native English speakers; and (c) seven Caucasians, three Mexican Americans, and one African American. In the second study (Alhusaini & Maker, 2011), six teachers participated: (a) four females and two males, (b) six native English speakers and three bilinguals, and (c) five Caucasians and one Mexican American (see Table 1). Therefore, the total number of responses in both studies was 51, as teachers in each study judged each grade level separately.

Table 1: Characteristics of Teachers (Judges)

Teacher	Ethnicity	Major	Degree	Gender		Years of Experience				Language			
				M	F	≈5	≈10	≈15	≥20	Eng	EsL	Bil	
1.	Caucasian	Ed. Early Chi	MA		✓			✓			✓		✓
2.	Mex-Am	Ed. Early Chi	MA		✓		✓					✓	✓
3.	Africa. A	Ed. Early Chi	PhD. S		✓			✓			✓		✓
4.	Caucasian	Ed. Early Chi	MA		✓			✓			✓		✓
5.	Caucasian	Education	MA	✓				✓			✓		✓
6.	Caucasian	Elem. Gifted	M.A. S		✓		✓					✓	✓
7.	Caucasian	Ed. of Gifted	MA	✓							✓		
8.	Mex-Am	Education	PhD. S		✓		✓					✓	✓
9.	Mex-Am	Education	MA	✓				✓			✓		✓
10.	Caucasian	Elem. Gifted	M.A. S	✓			✓					✓	✓
11.	Caucasian	Education	MA		✓			✓			✓		✓
12.	Caucasian	Education	MA	✓						✓		✓	✓
13.	Caucasian	Element. Ed.	MA		✓			✓			✓		✓
14.	Caucasian	Education	MA		✓			✓			✓		✓
15.	Caucasian	Element. Ed.	MA		✓					✓		✓	✓
16.	Mex-Am	Education	MA	✓				✓			✓		✓
17.	Caucasian	Education	MA		✓					✓		✓	✓
Total Teachers' Distribution				6	11	2	5	6	4	4	13	4	10

Note. Teachers were numbered from 1 to 17 (i.e., numbers 1 to 11 were the judges in the first study [i.e., Alhusami & Maker, 2010], and numbers 12 to 17 were the judges in the second study [i.e., Alhusami & Maker, 2011]); Mex-Am = Mexican-American; Africa. A = African-American; Ed. Early Chi = Education of Early Childhood; Elem. Gifted = Elementary Education for Gifted Children; Ed. of Gifted = Education of Gifted Children; Element. Ed. = Elementary Education; MA = Masters Degree; PhD. S = Doctoral student; M.A. S = Masters student; M = Male; F = Female; Eng = Native English Speakers; EsL = English as a Second Language speakers; Bil = People who speak two languages or more.

Data Collection

The DISCOVER Written Linguistic Assessment. The students' stories were responses to the DISCOVER Written Linguistic Assessment. This writing was part of an assessment to determine the students' strengths and capabilities in specific domains, and from that, to identify giftedness within culturally diverse groups. The total number of students whose stories were selected and judged by the teachers was 276, from kindergarten to fifth grades. Students represented different ethnicities in urban and rural areas of the Southwestern United States. The characteristics of the students were: (a) 142 girls and 134 boys; (b) 45 kindergarteners, 45 first graders, 47 second graders, 45 third graders, 46 fourth graders, and 48 fifth graders; and (c) 90 Caucasian, 93 Mexican American, and 93 American Indian children. The distribution of students is shown in Table 2.

The Consensual Assessment Technique (CAT). Students' open-ended stories were rated using the CAT, which was developed by Amabile (1982) to assess creativity. The CAT has been used to assess the creativity of tangible products for nearly 30 years (Hennessey & Amabile, 2010). The CAT was developed as an explicit tool for measuring creativity as a product with a scientific perception as well as a socio-cultural view. The students' stories, which were written in response to open-ended writing prompts, fit Amabile's (1996) requirements for using this technique.

Teachers' responses. Alhusaini and Maker (2010, 2011) developed a clear list of guidelines, which included 12 steps based on Amabile's (1996) requirements and recommendations, to assist the teachers in completing their assessments. In the final step, the teachers were instructed to write what differentiated the stories that were given the highest and the lowest ratings. In other words, they were asked to write the criteria by which they had judged the stories. These particular responses of the teachers were the data analyzed in the current study. During the judgment processes of both studies, Alhusaini and Maker (2010, 2011) divided students' stories into three groups based on grade level to avoid the influence of students' writing abilities on teachers' decisions during their assessments. They also asked the teachers to judge students' work in each group (i.e., grade level) together and compare students' work with other students in the same grade level.

Table 2: Distribution of Students

Students	Caucasian					Mexican-American					American Indian					
	K 1st	2nd	3rd	4th	5th	K 1st	2nd	3rd	4th	5th	K 1st	2nd	3rd	4th	5th	
Males	8	7	7	7	7	8	8	7	7	8	7	6	8	7	8	9
Females	7	7	7	7	9	7	9	8	9	7	8	8	7	8	9	8
Total	15	14	14	14	16	15	17	15	16	15	15	14	15	15	17	17
Grades	5	4	4	4	6	5	7	6	5	5	5	4	5	5	7	7
Total Ethnicities	90					93					93					
Total Students	276															

Note. K = kindergarten; 1st = first grade; 2nd = second grade; 3rd = third grade; 4th = fourth grade; 5th = fifth grade.

Methodological Approach to Analyzing the Data

Creswell (2009) emphasized that the procedure of data analysis used in qualitative research involved making sense out of the transcribed data. In-depth analyses of teachers' responses were conducted to determine the major themes that most frequently emerged when they were expressing their beliefs about students' creativity. The following steps were applied: (a) typing the handwritten responses, (b) considering each response as an independent case, (c) developing a coding system to organize the data, (d) entering the data into the NVivo software, (e) composing memos, (f) generating some general themes, (g) challenging the overall identified themes by using deductive and inductive reasoning strategies to organize the data into key themes, (h) analyzing the data for concepts as well as for context, (i) using comparative analysis as the main strategy to expose similarities and differences among the responses, and (j) asking 4 out of the 17 teachers (i.e., 6, 7, 10, and 11) to read and evaluate the current study's findings.

Findings

When analyzing teachers' responses, we found approximately 40 categories that were conceptually grouped into eight major themes: (a) fluency, (b) voice, (c) originality, (d) imagination, (e) elaboration, (f) complexity, (g) making connections, and (h) writing clarity. The authors challenged the categories and the identified themes by three levels of analyses that were teacher-based, document-based, and grade-level based.

Fluency. Among the 17 teachers, 12 individuals (70%) in 22 out of 51 documents (43%) indicated that fluency was considered during their judgment. For instance, teacher 1 reported, "*I also looked at the sentence fluency and consistency in their thought process;*" teacher 11 wrote, "*giving evidence of greater fluency [and] generation of more ideas;*" the teacher later on said, "*excellent voice or word choice or sentence fluency;*" teacher 2 indicated fluency was shown in a "*story that was complete and easy to understand;*" and teacher 4 said, "*there were more readable papers.*"

Voice. Among the 17 teachers, 11 individuals (64%) in 21 out of 51 documents (41%) described some creativity criteria that could be organized into the theme of voice. For instance, teacher 12 wrote, "*Voice is clearly present [,] a sense of audience [, and] imagery is engaging;*" teacher 10 said, "*the stories [that got the highest score] are all about students themselves, they either wrote their goals, and the future or the past about themselves;*" she also wrote, "*[students] expressed their feelings;*" teacher 12 wrote, "*strong voice, humor or some sarcasm or emotional tie or tone;*" he also said, "*purpose and good sense of audience [,] imagery clear and exciting [,] mood lends itself to strong possible humor [,] and/or sense of macabre.*"

Originality. Among the 17 teachers, 11 individuals (64%) in 20 out of 51 documents (39%) listed originality as one of the essential criteria that they considered when rating students' creativity. For instance, teacher number 13 elaborated, "*stories [that were rated with the highest score] were interesting to read and original, creative ideas with a lot of detail[s];*" teacher 4 said, "*I moved a few papers for detailed drawings or originality in the dictation;*" she also stated, "*I was looking more for voice, vocabulary and originality of thought;*" teacher 9 wrote, "*they included unique elements;*" and teacher 15 said, "*my focus was word choice and unique ideas.*"

Imagination. Among the 17 teachers, 10 individuals (58%) in 18 out of 51 documents (35%) reported that imagination was one of the important factors in their judgments. For instance, teacher 5 wrote, "*stories with details [and] imaginations;*" teacher 6 reported that stories were arranged "...*according to these criteria: daily life, imagination, feeling, drawing, and extraordinary words and actions;*" he also said that, "*more imagination, and more feeling, better drawing skill, and extraordinary words and actions got more points;*" and teacher 8 stated, "*writer expresses hypothetical [and] imaginary situations [to] awareness of the future [and] life possibilities;*" teacher 8 said, "*writer presents characters in imaginary situations, with goals.*"

Elaboration. Among the 17 teachers, 10 individuals (58%) in 11 out of 51 documents (21%) considered the elaboration of interesting details as one of their criteria for judging creativity. For teacher 3, this was demonstrated in "*attention to interesting details, getting story told about unusual or creative experiences;*" while teacher 5 wrote, "*events framed into a story [, and] some details provided;*" teacher 13 added, "*stories with interesting ideas, originality [and] details received [the highest score]*".

Complexity. Among the 17 teachers, eight individuals (47%) in 13 out of 51 documents (25%) stated that complexity was one of their criteria for assessing students' creativity. For instance, teacher 11 said, "*the highest scores went to works that seemed original and complex with excellent voice;*" teacher 3 preferred, "*complex retelling of events outside of every day experiences or retold in an unusual way;*" and teacher 11 reiterated, "*creativity can be shown in many ways. Some stories stood out because of their complexity and sophisticated use of language.*"

Making connections. Among the 17 teachers, eight individuals (47%) in 10 out of 51 documents (19%) emphasized the ability to make connections as one of the criteria for judging creativity. For instance, teacher 1 said, "*I looked at the drawing's details to see if it made connections to the story.*" Teacher 8 wrote, "*story has characters with goals [It] may be fantasy or impossible. [Also,] story is related to pictures.*"

Writing clarity. Among the 17 teachers, seven individuals (41%) in 14 out of 51 documents (27%) indicated writing clarity as one of the criteria they used during their judging. For example, teacher 14 wrote, “*stories [that were scored high] gave evidence of creative fictional writing that did not seem to be based on pre-existing stories, movies, or TV shows;*” teacher 16 stated, “*writing is clear with intact conventions;*” and teacher 17 said, “*very good adjectives and adverbs make the story more interesting.*”

Discussion

The purpose of this study was to identify the criteria that teachers used to assess students’ creativity in open-ended story writing. We conducted multiple analyses. From the data obtained, the authors first classified the writing styles teachers used in their assessments of students’ creativity. Second, we completed three levels of analysis, including teacher-based, document-based, and grade-level based. Among the three levels of analysis, we identified at least 40 possible criteria (i.e., original coding categories) used by teachers during their assessments. These criteria were then grouped into eight major conceptual themes. We found that the same major themes emerged from among the three levels of analysis, with some slight differences in frequency. In the teacher-based analysis, we focused on answering the question of how many out of the 17 teachers listed each major theme. Our main focus in the document-based analysis was answering the question of how many of the 51 documents included each major theme. Finally, we also included a grade-level based analysis to answer the question of which grade levels had criteria from each major theme most often (see Table 3).

Table 3: Overall Summary of the Analyses

Major Themes	Teacher -Based	Document -Based	Grade-Level Based					
			K	1 st	2 nd	3 rd	4 th	5 th
	%	%	%	%	%	%	%	%
Fluency	70	43	1	54	36	50	83	33
Voice	64	41	3	36	36	50	50	50
Originality	64	39	1	36	36	50	66	50
Imagination	58	35	2	18	36	66	33	50
Elaboration	58	21	1	27	27	16	16	16
Complexity	47	25	1	18	36	16	33	33
Making	47	19	2	27	27	16	0	0
Writing Clarity	41	27	9	9	18	66	66	33

Note. Teacher-Based = how many teachers mentioned each major theme? Percentages were calculated out of 17 teachers; Document-Based = in how many documents was each major theme mentioned? Percentages were calculated out of 51 documents; Grade-Level Based=from which grade levels was each major theme reported? From grade K to 2nd, percentages were calculated out of 11 teachers, and from 3rd to 5th, percentages were calculated out of 6 teachers; % = percentages; K = kindergarten; 1st = first grade; 2nd = second grade; 3rd = third grade; 4th = fourth grade; 5th = fifth grade.

In the literature on creativity, an inconsistent recognition among scholars has been found, especially when writing about components of creativity, such as fluency, flexibility, and originality. For instance, Guilford (1967) and Torrance (1974) referred to those components as cognitive abilities of divergent thinking, and Adams (2005) recognized those components as thinking skills. On the other hand, David (1971) described some of the components as criteria for evaluating creativity. In fact, we believe that all three recognitions are correct, and describing the components of creativity is dependent on which perspective the scholars are adapting. For instance, the components of creativity could be cognitive abilities of divergent thinking if an author is writing from a psychology oriented theoretical perspective; they could be thinking skills if an author is writing from an educational and creativity-development perspective, and they could be criteria for creativity when an author is writing about judging and evaluating people's products or ideas.

In the current study, we identified the criteria used by 17 teachers as responses to actual students' products and adapted the concept of the CSC. Based on the sample data, older theories of creativity—which were mostly developed based on theoretical views—were challenged. For example, when defining or testing creativity as divergent thinking, researchers such as Guilford (1967), Wallach and Kogan (1965), and Torrance (1974) identified four essential components: originality, which is the statistical infrequency of a response; fluency, which is the number of responses; flexibility, which is the degree of difference in the responses; and elaboration, which is the amount of detail in the response. Three out of four criteria (*vis.*, originality, fluency, and elaboration) emerged in the current study's findings, along with five new criteria (*vis.*, voice, imagination, complexity, making connections, and writing clarity).

Eberle (1997) stated that imagination is the basic ability of creativity, and it can be seen as the non-visible power behind any creative work. Also, Torrance and Torrance (1978) when developing the Future Problem Solving (FPS) program, documented the importance of training and encouraging students to use their imaginations so they will be able to find solutions for future problems. Eberle also stated that dealing with complexity is one of the main behavioral characteristics that have been found in creative persons. Among eight major themes, imagination and complexity were listed by expert teachers as essential criteria for creativity. Urban (1995), Urban and Jellen (1989), and Urban and Jellen (1996) described creativity as having three major components: cognitive, personal, and environmental. In this context, voice can be considered a personal factor, which is an important aspect of creativity. In the TCT-DP, which was developed by Urban and Jellen (1996), connections made with a line and connections made to produce a theme were included as aspects of creativity; we also found that making connections was a criterion for judging creativity in written stories.

Among the eight major themes that were identified in the current study, the criterion of writing clarity has not been discussed in previous research. However, writing clarity may be equally important because in most written creativity tests, such as the Torrance Test of Creative Thinking (TTCT) developed by Torrance (1974), the Paragraph Completion Test (PCT) developed by Jones and Davidson (2007), and other similar tests, researchers ask students to solve a problem in writing. Researchers then interpret students' writings to score the different components of creativity. However, interpreting students' writing can be problematic if a creative student does not write clearly, or if the examiners cannot understand what a student is trying to say. In fact, the criterion of writing clarity can be seen as the most important but least emphasized criterion in most written creativity tests, even if the developers of the tests made no mention of it. In this context, Sternberg (2007) stated that, "creative ideas do not sell themselves" (p. 10). Therefore, creative individuals are in charge of making their ideas clear and marketable.

When comparing the findings of the current study with those of other studies, we found them to be consistent with the results of Scott (1999) (i.e., teachers can rate accurately and thus produce creative children). Also, during our analysis, we found that teachers most frequently used specific themes to describe students' creativity. In this context, Runco and Johnson (2010) found that 150 adults (i.e., parents and teachers) were able to distinguish between 68 adjectives for creativity and desirability. In the study of Chan and Chan (2010), researchers found that the most frequently mentioned creative attributes were 'imaginative,' 'always questioning,' and 'quick in responding.' The first result of Chan and Chan's study was consistent with the current study's findings, in which imagination was one of the important themes. Also, the findings of the current study support what Seo, Lee, and Kim (2005) have found, especially when teachers pay much attention to the cognitive component. In the current study, teachers reported six criteria (i.e., fluency, originality, imagination, elaboration, complexity, and making connections) that can be categorized as cognitive components.

References

- Adams, K. (2005). Sources of Innovation and Creativity: A Summary of the Research. *National Center on Education and the Economy*. Retrieved March 20, 2012 from World Wide Web <http://skillscommission.org/commissioned.htm>
- Alhusaini, A. & Maker, C. J. (2010). *Creativity in Students' Writing of Open-ended Stories across Ethnic, Gender, and Grade Groups: from Kindergarten to Second Grades* (unpublished manuscript). Tucson, AZ: University of Arizona.
- Alhusaini, A. & Maker, C. J. (2011). *Creativity in Students' Writing of Open-ended Stories across Ethnic, Gender, and Grade Groups: From Third to Fifth Grades* (unpublished manuscript). Tucson, AZ: University of Arizona.
- Amabile, M. (1983). *The Social Psychology of Creativity*. New York, NY: Springer Verlag.
- Amabile, M. (1996). *Creativity in Context*. Boulder, CO: West-View.

- Barron, F. (1988). Putting Creativity to Work. In R. J. Sternberg (Ed.), *The Nature of Creativity*. Cambridge, England: Cambridge University Press.
- Chan, D. & Chan, L. (1999). Implicit Theories of Creativity: Teachers' Perception of Student Characteristics in Hong Kong. *Creativity Research Journal*, Vol. 12, No. 3, 185–195.
- Creswell, J. (2009). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. Los Angeles: Sage.
- David, H. (1971). Unusualness, Appropriateness, Transformation and Condensation as Criteria for Creativity. *The Annual Meeting of the American Educational Research Association*. Retrieved May 5, 2014 from <http://www.eric.ed.gov/PDFS/ED050166.pdf>
- Diakidoy, I. & Kanari, E. (1999). Student Teachers' Beliefs about Creativity. *British Educational Research Journal*, Vol. 25, No. 2, 225–243.
- Eberle, B. (1997). *Scamper: Creative Games and Activities for Imagination Development*. Waco, TX: Prufrock Press.
- Elam, J. & Mead, M. (1987). Designing for Creativity: Considerations for DSS Development. *Information and Management*, Vol. 13, No. 2, 215–222.
- Fraenkel, J. & Wallen, N. (2010). *How to Design and Evaluate Research in Education* (7th ed.). New York, NY: McGraw-Hill.
- Goldenberg, J., Mazursky, D. & Solomon, S. (2001). Structures of the Mind and Universal Music. *Science*, Vol. 292(5526), 2433–2433.
- Guilford, J. P. (1967). *The Nature of Human Intelligence*. New York: McGraw-Hill.
- Hennessey, A. & Amabile, M. (2010). Creativity. In S. T. Fiske (Ed.), *Annual Review of Psychology*. Vol. 61, (pp. 569–598). Palo Alto, CA: Annual Reviews.
- Jones, S. & Davidson, R. (2007). Measuring the Problem-Solving Abilities of Accounting and other Business Students: A Comparison and Evaluation of Three Methods. *Accounting Education*, Vol. 16, No. 1, 65–79.
- Kaufman, J. (2006). Self-reported Differences in Creativity by Ethnicity and Gender. *Applied Cognitive Psychology*, Vol. 20, No. 8, 1065–1082.
- Lee, E. & Seo, H. (2006). Understanding of Creativity by Korean Elementary Teachers in Gifted Education. *Creativity Research Journal*, Vol. 18, No. 2, 237–242.
- Mouchiroud, C. & Lubart, I. (2002). Social Creativity: A Cross-sectional Study of 6- to 11 year-old Children. *International Journal of Behavioral Development*, Vol. 26, No. 1, 60–69.
- Rob, L. & Jan, R. (1992). Ethnic Background, Social Class or Status? Developments in School Attainment of the Children of Immigrants in the Netherlands. *Ethnic and Racial Studies*, Vol. 15, No. 2, 284–303.
- Runco, M. (2007). *Creativity: Theories and Themes: Research, Development, and Practice*. Burlington, MA: Elsevier.
- Runco, M. & Johnson, D. (2002). Parents' and Teachers' Implicit Theories of Children's Creativity: A Cross-cultural Perspective. *Creativity Research Journal*, Vol. 14, No. 3–4, 427–438.
- Sailer, K. (2011). Creativity as Social and Spatial Process. *Facilities*, Vol. 29, No. 1–2, 6–18.
- Schramm, W. (1954). How Communication Works. In W. Schramm (Ed.), *The Process and Effects of Mass Communication* (pp. 3–26). Urbana, IL: University of Illinois Press.
- Scott, C. (1999). Teachers' Biases toward Creative Children. *Creativity Research Journal*, Vol. 12, No. 4, 321–328.
- Seo, H., Lee, E. & Kim, K. (2005). Korean Science Teachers' Understanding of Creativity in Gifted Education. *Journal of Advanced Academics*, Vol. 16, No. 2–3, 98–105.
- Sternberg, R. (2007). Creativity as a Habit. In T. Ai-Girl (Ed.), *Creativity: A Handbook for Teachers* (pp. 3–26). Hackensack, NJ: World Scientific Publishing Co.
- Taylor, W. (1988). Various Approaches to and Definitions of Creativity. In R. J. Sternberg (Ed.), *The Nature of Creativity* (pp. 99–121). Cambridge, England: Cambridge University Press.

- Torrance, E. P. (1974). *The Torrance Tests of Creative Thinking-Norms-Technical Manual Research Edition-Verbal Tests, Forms A and B- Figural Tests, Forms A and B*. Princeton, NJ: Personnel Press.
- Torrance, E. P. & Torrance, J. P. (1978). Future Problem Solving: National Interscholastic Competition and Curriculum Project. *Journal of Creative Behavior*, Vol. 12, No. 2, 87–89.
- Torrance, P. (1962). *Guiding Creative Talent*. Englewood Cliffs, NJ: Prentice-Hall.
- Torrance, P. (1990). *The Torrance Tests of Creative Thinking: Norms-technical Manual*. Bensenville, IL: Scholastic Testing Service.
- Urban, K. (1995). *Creativity: A Component Approach Model*. Paper presented at the World Conference on the Education for the Gifted and Talented, Hong Kong.
- Urban, K. & Jellen, H. (1989). Assessing Creative Potential World-wide: The First Cross-Cultural Application of the Test for Creative Thinking-drawing Product (TCT-DP). *Gifted Education International*, Vol. 6, 78–86.
- Urban, K. & Jellen, G. (1996). *Test for Creative Thinking-Drawing Production (TCT-DP)*. Lisse, Netherlands: Swets & Zeitlinger.
- Wallach, M. A. & Kogan, N. (1965). *Modes of Thinking in Young Children: A Study of the Creativity-intelligence Distinction*. New York: Holt.
- Weisberg, R. W. (1986). *Creativity: Genius and other Myths*. New York, NY: Freeman.
- Westmeyer, H. (1998). The Social Construction and Psychological Assessment of Creativity. *High Ability Studies*, Vol. 9, No. 1, 11–21.
- Williams, S. (2001). Increasing Employees' Creativity by Training their Managers. *Industrial and Commercial Training*, Vol. 33, No. 2, 63–68.

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ШТА ЈЕ КРЕАТИВНОСТ: СТАВОВИ НАСТАВНИКА
ПРЕМА КРЕАТИВНОСТИ У ПРИЧАМА УЧЕНИКА

Анстракт

Циљ овог истраживања јесте да се стекне увид у ставове наставника према креативности. Помоћу технике консензуалног оцењивања (САТ), седамнаест основношколских наставника процењивало је креативност ученика у две одвојене студије. У првој студији, једанаест наставника анализирано је приче 67 дечака и 70 девојчица који похађају предшколску установу, први и други разред. У другој студији, шест наставника оцењивало је приче 67 ученика и 72 ученице трећег, четвртог и петог разреда. У оба истраживања од наставника се захтевало да користе листу јасно дефинисаних смерница, а завршни корак представљало је образлагање критеријума који су коришћени у евалуацији ученичке креативности. Анализирани су извештаји наставника који се састоје од педесет једног документа. Након кодирања и анализе података помоћу Nvivo софтверског пакета, аутори су издвојили осам главних тема: (а) флуентност, (б) глас, (в) оригиналност, (г) машта, (д) разрада, (ђ) сложеност, (е) прављење спона и (ж) јасноћа у писању. У будућим истраживањима требало би преиспитати идентификоване теме понављањем ове студије у различитим контекстима и у различитим доменима како би се обогатила теорија креативности као друштвени конструкт.

Кључне речи: креативност као друштвени конструкт, ставови наставника и креативност, креативност у причама ученика, оцењивање креативности.

Абдулнасер А. Алхусаини, Джун Си Мейкер и Реджина Дель-Амен
ЧТО ТАКОЕ ТВОРЧЕСКАЯ СПОСОБНОСТЬ: МНЕНИЯ УЧИТЕЛЕЙ
О ТВОРЧЕСТВЕ В СОЧИНЕНИЯХ УЧАЩИХСЯ

Резюме

Настоящее исследование было проведено с целью выявления мнений учителей о творчестве учащихся. При помощи техники консензуальной оценки (САТ), семнадцать учителей основных школ в двух отдельных исследованиях оценивали творческие способности учащихся. В первом исследовании одиннадцать учителей анализировали сочинения 67 мальчиков и 72 девочек из детских садов, первого и второго класса, Во втором исследовании шесть преподавателей оценивали сочинения 67 мальчиков и 72 девочек из третьего, четвертого и пятого классов. В обоих исследованиях от учителей требовалось, чтобы они использовали перечень четко определенных инструкций, а заключительным шагом являлось обоснование критериев, использованных в оценке творческих способностей учащихся. Отчеты учителей, состоявшие из 51 документа, были сгруппированы, а потом подвергнуты анализу. После кодирования и анализа данных при помощи Nvivo программного пакета, авторами выделены восемь главных тем: (а) легкость в нахождении слов, (б) голос, (в) оригинальность, (г) мечтательность, (д) разработка, (е) сложность, (ж) нахождение соединительных звеньев, и (з) четкость в письменном выражении. В заключение даются стимулы для дальнейших исследований, которые должны быть проведены в разных местах и в разных областях в целях повторной оценки важности выявленных тем и обогащения теории творчества как общественного конструкта (CSC).

Ключевые слова: творчество как общественный конструкт, мнения учителей и творчество, творчество в рассказах учащихся, оценка творческих способностей.