



Evaluating Student Creativity: A Modified Electronic Consensual Assessment Tool for Classroom Use

Charles Freeman, Mississippi State University, USA
Sara Marcketti and Elena Karpova, Iowa State University, USA

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Introduction: The importance of creativity in the apparel field is undeniable; yet, there is virtually no quick and reliable assessment available for use in educational setting (Karpova, Marcketti, & Barker, 2011). Amabile's (1983, 1996) Consensual Assessment Technique has been the foundation for numerous research studies and theory development. However, the assessment is not easily adaptable for classroom use. The purpose of this project was to examine the use of a single item CAT by using a sample of faculty and students across two universities.

Assignment: Within design and merchandising classrooms and within their careers, students and emerging professionals are often tasked with creating a trend or inspiration board. These boards use images to convey a theme, mood, and idea, prescribed by instructor, creative director or lead designer/merchandiser. For these boards, creativity of the images is essential in conveying the theme. To enhance creative thinking, students from two universities were instructed to use visual imagery to bring to life an abstract thought. The following instruction was provided: "If someone asks you to take a picture of a flower or a tree that is a pretty straightforward task. But what if we ask you to take a picture of 'sad'? You would have to first personalize the word by giving 'sad' a physical feature, and then find an object that represents that feature. For example, a funeral, or a very grey sky might be the picture you could take to express the abstract meaning of 'sad.' Your task is to take five pictures that characterize one of the following words of your choice: *think, loud, tired, clever, or religious.*" A total of 50 students enrolled in two different courses at two land-grant universities completed the assignment. Categorical themes were represented as follows: think ($n = 5$), loud ($n = 14$), tired ($n = 12$); clever ($n = 3$), and religious ($n = 16$).

Creativity assessment: Images were transferred to an electronic survey. Using a 5-point Likert scale (1 = *not creative* and 5 = *very creative*), raters, which included students and faculty from the two respective universities, were asked to rate the creativity of each collage. Images were randomized for each rater. A total of 88 students from the two universities and ten faculty members from these institutions evaluated all 50 images. Students included those in the two courses, in which the collage was created, as well as students enrolled in apparel design and/or merchandising courses from both institutions. Faculty consisted of apparel and textiles faculty at the two institutions as well as faculty from respective art departments.

Results: Mean rating score of the collages for students was $M = 2.83$, $SD = .32$, and faculty ratings was $M = 3.26$, $SD = .37$. Independent sample t test was used to compare group means. The results indicated that faculty raters evaluated the images as more creative than did the

students, $t(99) = -6.71, p < .001, (95\% \text{ CI} = -.57 - -.29)$. Interrater reliability analysis of faculty raters indicated an insufficient alpha level, $\alpha = .66$ (95% CI = .50 - .79), falling just out of an acceptable cutoff ($\alpha > .70$) (Gliner & Morgan, 2002). Conversely, student interrater reliability results indicated high levels of agreement, typical of large groups using the CAT, $\alpha = .92$ (95% CI = .88 - .95). When adjusted for sample size, results of the Spearman-Brown adjusted coefficient alpha formula indicated a drop in overall interrater reliability. For the faculty raters, coefficient alphas dropped to $\alpha = .49$, well below the threshold for sufficient analysis of reliability. Student ratings also decreased ($\alpha = .86$), however reliability results remained at a sufficient to high level of acceptability.

Discussion: The use of a modified single-item consensual assessment for evaluating creativity yielded sufficient interrater reliability for student raters, and more critical evaluation of creativity by student rather than faculty evaluators. These findings suggest: 1) The ease and facilitation of using an electronic single item measure for creativity may make it ideal for classroom critiques and 2) students may be able to provide more critical assessment when completed anonymously and online than in person in classroom critiques of peer work. Faculty teaching courses, where critiques and/or critical analysis of designs, trend boards, or illustrations is a part of the learning process, can use this method of creativity evaluation to provide rapid anonymous feedback to students, particularly from a peer perspective. While faculty rated creativity levels of the creative products higher than students, there was a moderate inter-rater reliability. Disagreement among faculty may be a result of the diverse faculty areas of expertise: apparel design, merchandising, sculpture, and art history represented by the sample.

Conclusions: There are not many free and reliable methods available for evaluating creativity of student work. The course instructor often does assessment of creative products in education, which might be questionable. The proposed method for evaluation enables a quick and efficient assessment with reliabilities similar to research using more complicated measures that typically associated with time and monetary constraints (e.g., Torrance Test of Creative Thinking). The geographic regions and purposive sampling limit the effects and results from the study. In future studies, expanding the variety and number of raters and their domain-specific knowledge may provide information of the cross-disciplinary application of the modified assessment. The use of this modified CAT provides teaching faculty an assessment tool, which can be administered easily through most online course support systems.

References

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