Yes, you can measure students’ creativity: An Introduction to the Line Completion Creativity Task

Why would teachers and schools want to measure creativity?

As educational researchers, we believe there are many benefits for measuring creativity in the classroom. In our research, we have found that schools around the globe talk about the importance of fostering creativity in their students, but rarely have tools or measures that address creativity. In this post, we share an easy-to-use creativity assessment that teachers and schools can self-administer to help better articulate and assess creativity in their students.

This simple assessment task can provide teachers with a more objective understanding of creativity and how it manifests in their students. Like using traditional academic tests, measuring creativity offers an opportunity to validate your impressions of students strengths and abilities and provides empirical feedback for tailoring teaching and learning in the future.

What is creativity and how can it be measured?

Most academic tests measure a set of skills or students’ content knowledge where there is typically a single correct answer to each question. By contrast, problems that engage students’ creativity often have many possible answers and not a single, clear-cut solution. As researchers, we know many educators and schools value creativity, but it can be more challenging to understand and measure.

Because creativity is such a complex phenomenon and can be expressed in so many different ways, researchers have categorized different attributes of creativity. So, what we tend to think of as “creativity” rather generically has been further explored and defined by researchers into more specific attributes of creative thinking:
Researchers usually focus on examining one specific type of creativity such as Lateral Thinking or Mental Flexibility. For example, when assessing Mental Flexibility we seek to address if students can generate and identify different possible solutions to a problem. The Line Completion Creativity Task measures students’ Adaptability, or how successfully students can adapt their thinking to incorporate new content or to avoid obstacles.

Administering the Line Completion Creativity Task

Building on over 50 years of creativity research, provided here is one simple assessment task for measuring creativity in students: the Line Completion Creativity Task. Using the templates and resources provided below, this assessment activity is designed for grade 4-12 students and can be scored by classroom teachers. In this activity, students are provided 6 minutes to “create the most creative picture you can” and “describe what they drew in 2-3 sentences.”

Blank Line Completion Creativity Template:
To introduce the Line Completion Creativity Task, provide each student with a blank template student form. Teachers can officiate the activity by reading the directions aloud to their class and may encourage students to create their own unique creative image, but should otherwise try to remain neutral. In the six-minute assessment period, students should be encouraged to work independently and to describe their drawing in accompanying text box. At the completion of the six-minute assessment period, student work is collected for scoring by the teachers.
Scoring the Line Completion Creativity Task

Using the templates and rubrics provided here, each student’s work can be scored by their teacher on four criteria: Overall Creativity, Originality, Incorporation, and Elaboration.

Step 1: Teachers should first perform an initial review of all students’ work from their class by quickly examining each student’s completed assessment.

Step 2: Following this quick review, each student’s assessment is individually scored for Overall Creativity based on teacher’s general impression of drawing and text. Using a 0-10 point scale, each student’s drawing and accompanying text receives a single score representing the teacher’s overall impression of its creativity:

<table>
<thead>
<tr>
<th>Score:</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Creativity</td>
<td>Drawings/text with less creative responses</td>
<td>Drawings/text depicting more creative responses</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Step 3: Next, teachers will again examine each student’s work individually a second time to provide a score on Originality, Incorporation, and Elaboration:

- **Originality**: When comparing the drawing/text to those made by your other students, how relatively different or original is this student’s drawing? Student work is scored using a 3-point scale (0, 1, 2) where smaller scores indicate more common depictions and larger scores indicate more unique depictions (3-point scale: 0, 1, 2). Unlike the other scores, each student’s Originality score is relative to the drawings collected from the rest of your class.

- **Incorporation**: To what extent did the student incorporate the line into drawing and text? Student work is scored using a 3-point scale (0, 1, 2) where smaller scores indicate little to no incorporation of the line in the students drawing/text and larger scores indicate the line plays a pivotal role in the student’s depiction.

- **Elaboration**: To what degree do students convey detail in their drawing and text? Student work is scored using a 3-point scale (0, 1, 2) where smaller scores indicate less detail and larger scores infer greater detail.
### Originality

<table>
<thead>
<tr>
<th>Score</th>
<th>Description</th>
<th>Incorporation</th>
<th>Elaboration</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Drawing and/or text depicts the most common image/idea compared to the rest of class</td>
<td>Template line is not used into student depiction</td>
<td>Drawing and text exhibit little to no detail</td>
</tr>
<tr>
<td>1</td>
<td>Drawing and/or text depicts a fairly common image/idea compared to the rest of class</td>
<td>Template line is used in student's drawing but has a minimal impact on overall depiction</td>
<td>Drawing and/or text exhibit only rudimentary details (i.e. basic stick figure)</td>
</tr>
<tr>
<td>2</td>
<td>Drawing and/or text depicts a somewhat unique image/idea compared to the rest of class</td>
<td>Template line is effectively incorporated in student depiction and plays a role in the overall picture</td>
<td>Supporting details are depicted in drawing and/or text</td>
</tr>
<tr>
<td>3</td>
<td>Drawing and/or text depicts an entirely unique image/idea compared to the rest of class</td>
<td>Template line plays a pivotal role in the students depiction</td>
<td>Extensive detail is depicted in both drawing and supporting text</td>
</tr>
</tbody>
</table>

Teachers can record each student’s scores using a simple [(make a template downloadable)](#) spreadsheet:

<table>
<thead>
<tr>
<th>Student Name</th>
<th>Overall Creativity</th>
<th>Originality</th>
<th>Incorporation</th>
<th>Elaboration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bart Simpson</td>
<td>6</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Greg Brady</td>
<td>4</td>
<td>1</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Marcie Van Houten</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Sally Brown</td>
<td>8</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

Scored examples of scored Completion Creativity Tasks:
“I drew a road and the other half of a road and a house.”

“Emu Foods Factory
Food Cooking
Flour Starch
Bot”

“I drew a slime making machine.”

“I tried to make a crooked looking lake.”

“I drew some kind of cave. In the top you can see the entrance. I also drew the stalagmites.”

“I drew a ballerina with a bow on with glistening strings hanging off the stick. She is dancing around waving it in the circus.”

“This is a drawing of a man’s face. The face is a mustache. I added strings at the end to make it more creative.”

Overall | Original | Elaboration | Incorporation
---|---|---|---
5/10 | 0/2 | 2/2 | 1/2

Overall | Original | Elaboration | Incorporation
---|---|---|---
7.5/10 | 2/2 | 2/2 | 2/2

Overall | Original | Elaboration | Incorporation
---|---|---|---
8/10 | 2/2 | 2/2 | 2/2

Overall | Original | Elaboration | Incorporation
---|---|---|---
4/10 | 0/2 | 2/2 | 1/2

Overall | Original | Elaboration | Incorporation
---|---|---|---
7/10 | 2/2 | 1/2 | 2/2
How teachers and schools can use the Line Completion Creativity Task results:

Like any student assessment, the results from the Line Completion Creativity can be used formally or informally to provide an enhanced perspective of creativity across your students*. Specifically, the Line Completion Creativity Task provides:

- A richer understanding of the different components of creativity,
- A better understanding of individual students and their potential skills,
- A voice reflecting more of the “whole” student and more tangible evidence of the kinds of skills and abilities you value most as an educator,
- Provides students a chance to express themselves in a structured activity,
- Increase opportunities to show growth in student creativity over time, and
- Provide a common metric and ideology for thinking about creativity across teachers and classrooms in your school community.

- Using these assessments over time may provide a more empirical measure of potential changes in student creativity over time

*Please note that this assessment is not intended for grading purposes or making critical decisions. We welcome feedback and suggestions and hope these resources provide teachers and school with better resources for measuring what they care most deeply about. More info and additional creativity assessment tools are available in the free iBook Measuring Creativity in the Classroom.