SynAPP: An online web application for exploring creativity

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DESCRIPTION

SynAPP is a web application currently hosted at AGH-UST (http://149.156.205.250:15180) designed to stimulate users’ creative skills through image association tasks and a rating feedback system. In SynAPP, users perform two tasks related to image-image associations:

- Associating two images using a word or short phrase. The two images can be presented simultaneously, left and right, or sequentially with a five seconds delay in between. The user is allowed to make only one association per couple.

- Evaluating associations generated by other users according to two criteria: originality (0, 0.5 or 1 points) and intelligibility (0, 0.5 or 1 points).

The set of image pairs for these two tasks are mutually disjoint, so if a user generates an association for an image pair, then she or he does not evaluate associations generated by other users for the same pair, and vice versa.

All the responses are recorded with their respective time stamps, and the time taken to perform each association is also recorded. A user can see how her or his associations were rated (with respect to their originality and intelligibility) by other users, and also how this evaluation evolved over time. This information is shown in an intuitive way using tables and graphs.

APPLICATION WORKFLOW

WRITE ASSOCIATIONS

(please enter a word or short phrase here)

My concept: UFOs take earth!

CHECK YOUR PROGRESS AND GET FEEDBACK

ASSOCIATIONS’ SCATTER DIAGRAM

Each dot represents the average points (0, 0.5, or 1) of an association made by you. (Please enter the association. Click to see its image and feedback.)

Intelligence

Originality

REARRANGEABLE ASSOCIATIONS’ TABLE

<table>
<thead>
<tr>
<th>ASSOCIATION</th>
<th>WRITE</th>
<th>DRAW</th>
<th>READ</th>
<th>TELL</th>
<th>TOTAL</th>
<th>Average</th>
<th>Originality</th>
<th>Intelligibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>UFOs take earth</td>
<td>Separated</td>
<td>6.6</td>
<td>15.1</td>
<td>6.6</td>
<td>28.3</td>
<td>8.3</td>
<td>8.3</td>
<td></td>
</tr>
<tr>
<td>not ever be the</td>
<td>Separated</td>
<td>3.3</td>
<td>12.5</td>
<td>7.0</td>
<td>22.8</td>
<td>8.5</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

APPLICATION WORKFLOW

Users perform three standard tests of creativity before and after using SynAPP:

- Will Shortz & Morgan Worthy’s word equation (ditloid) puzzles like "24 = H. in O. D." ("24 = Hours in One Day"). Different equations are used for before-SynAPP and after-SynAPP tests.

- Guilford’s alternative uses task: the user is asked to give as many uses as possible of a common item. Different objects are used for before-SynAPP and after-SynAPP tests.

- Wallace & Kogan’s assessment of creativity: A test similar to Guilford’s, but the user is asked to find objects with a common property instead.

The answers given by each user are evaluated by the other users, similar to the image associations, and statistics on these evaluations is also displayed graphically to the user.

We hypothesize that SynAPP helps users to improve their creative, out-of-the-box divergent thinking cognitive abilities, and our goal is to properly evaluate this hypothesis based on the analysis of the data collected from the association tasks and the creativity tests.