## TYPES OF SITUATIONS

<table>
<thead>
<tr>
<th>CLEAR SITUATIONS</th>
<th>UNCLEAR SITUATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Level of difficulty:</strong> 1</td>
<td><strong>Level of difficulty:</strong> 2</td>
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<tr>
<td>Example: sending text messages</td>
<td>Example: a printer does not work</td>
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<tr>
<td>- almost no thinking involved</td>
<td>- the problem must be identified</td>
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<td>- no original way to do it</td>
<td>- then an automatic way of handling</td>
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<tr>
<td>- only one way to do it</td>
<td>the problem is applied</td>
</tr>
<tr>
<td><strong>CLEAR SOLUTIONS</strong></td>
<td><strong>UNCLEAR SOLUTIONS</strong></td>
</tr>
<tr>
<td><strong>Level of difficulty:</strong> 3</td>
<td><strong>Level of difficulty:</strong> 4</td>
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<td>Example: 4% increase of students in courses</td>
<td>Example: Tertiary Education Reform</td>
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<td>- we need to provide the same quality of education for more students at university</td>
<td>- such situations are often introduced by “something must be done before it gets too late…”</td>
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<td>- many ways to achieve that goal</td>
<td>- what the situation looks like is not entirely clear (due to lack of information, for instance)</td>
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<tr>
<td><strong>UNCLEAR SOLUTIONS</strong></td>
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**Convergent situation** (where convergent thinking is used) – we aim for a single, correct solution to a problem; usually a well-known algorithm or procedure exists and can be applied

- commonly used at schools and in testing
- hardly ever noticed in real life situations

**Divergent situation** (where divergent thinking is used) – we need to generate one or more answers to a set of problems; usually an unknown algorithm or procedure must be applied to obtain one of a wide range of possible solutions

- noticed in our everyday life situations
- rarely used at schools or in testing
AREAS OF DEVELOPMENT IN CREATIVITY

● FLUENCY
- ability to produce a great number of ideas or problem solutions in a short period of time

● Word fluency
- ability to produce a great number of words, or words containing a given letter or combination of letters
 TASK TYPE: Write as many words as possible that begin with “L” and end with “D”. L………………D

● Associational fluency
- ability to produce a great number of synonyms, antonyms, associations…
 TASK TYPE: Write as many synonyms to the word “example” as possible.

● Expressional fluency
- ability to produce a great number of well formed sentences with a specified content
 TASK TYPE: Write as many different sentences as possible where given words start with the following letters. I…….. S……… A……… R……… .

● Ideational fluency
- ability to produce a great number of ideas that fulfil certain requirements or form categories
 TASK TYPE: Name all things that fly.

● FLEXIBILITY
- ability to simultaneously propose a variety of approaches to a specific problem and easily abandon old ways of thinking and adopt new ones

● Spontaneous flexibility …regardless of the situation
  ● visual: TASK TYPE: optical illusions
  ● semantic: TASK TYPE: Out of the five words below, choose two of them which have most features in common: CAR – CLOTH – SCARF – GUITAR - THIEF

● Adaptive flexibility …in a situation when a solution must be found
  ● visual: TASK TYPE: Look at the maze and find your way from the start to the finish.
  ● symbolic: TASK TYPE: Correct the following equation without changing anything that is written: XI + I = X

● ORIGINALITY
- ability to produce new, original, statistically unusual ideas and remote associations
 TASK TYPE: Listen to the song (lyrics in an unknown language) and say what it is about.

● ELABORATION
- ability to systematize and organize details of a more complex idea or general scheme and carry it out
 TASK TYPE: Finish the five shapes to make some drawing. Each must be separate and different to the others.

Adapted from: http://www.is.wayne.edu/drbowen/crtvyw99/guilford.htm
CREATIVITY BARRIERS

B. of PERCEPTION
● difficulties with problem identification - tendency to limit problems too narrowly
● incapacity to see a problem from different perspectives
● stereotyping (I see only what I expect to see)
● not all senses are used

B. of ENVIRONMENT
● lack of cooperation, of trust among colleagues, students (boss’s / teacher’s autocracy)
● distraction, noise, phone calls, movement of other people in an office
● lack of support for realization of ideas

B. of CULTURE
● fantasy is a waste of time or a form of insanity
● playing is only for children and problem solving is a serious matter
● reason and logic are good / intuition and feelings are bad
● tradition guarantees / changes are unwanted and dangerous
● women cannot have their own opinion

B. of EMOTIONS
● fear of making mistakes or of failing
● intensive need of safety and order
● preferring passivity (watcher) to pro-active approach (creator)
● incapacity to relax and give things their own time
● avoiding challenges
● over enthusiasm and excessive motivation to succeed in the shortest time possible

B. of INTELLECT and EXPRESSION
● problem solving with the use of a wrong language (verbal, mathematics, visual)
● inadequate use of intellectual strategies at problem solving
● wrong information or lack of information
● lack of skills (language, musical, visual) for expressing or recording ideas

Sources:
I. Which of the scripts below could characterise the session best?

A)

B)

C)

D)

E)

Feel free to add any comments:
I. Which formula is closest to your own idea of creativity?

\[ E = mc^2 \]

\[ W = \int \vec{F} \cdot d\vec{s} \]

\[ P = \lim_{\Delta t \to 0} P_{\text{avg}} = \lim_{\Delta t \to 0} \frac{\Delta W}{\Delta t} = \frac{dW}{dt} \]

\[ \Delta E = W + Q + E \]

\[ T_{\text{spring}} = \left( \frac{1}{2\pi} \right) \sqrt{\frac{m}{k}} \]

\[ \nabla \times \vec{E} = -\frac{\partial \vec{B}}{\partial t} \]

\[ \nabla \times \vec{B} = \mu_0 \epsilon_0 \frac{\partial \vec{E}}{\partial t} = \frac{1}{c^2} \frac{\partial \vec{E}}{\partial t} \]

\[ \nabla \cdot \vec{E} = 0 \]

\[ \nabla \cdot \vec{B} = 0 \]

\[ \sum \vec{F} = ma \]

Could you provide your own?
I. How would you characterise the speaker? Feel free to add comments (no words, please).