

Table A.4 Techniques to enhance divergent thinking

Blue sky thinking	Imagine (dream) the perfect solution without regard for barriers or opposition.
Distortion and negation	Select part of a problem, and brainstorm on ways in which it can be distorted (made bigger, smaller, reversed). An alternative is negation in which key elements of the problem are denied, followed by the question (amongst others), 'What would happen if this did not exist?'
Assumption-busting	Discover the underlying assumptions of a proposed solution and try to bust them.
Word association	Come to intuitive associations (immediate response, making connections without logical thought) between key words related to the problem.
Analogies or metaphors	<ul style="list-style-type: none"> • Direct Analogy: what are similarities and differences between, for example, the problem and a tree? • Superhero Analogy: what would Spider-Man or Nelson Mandela do about my problem? • Personal Analogy: can I identify myself with the problematic situation or person?
Mind mapping	Draw the problem in the centre of a sheet of paper; draw trunks around this problem that represent connected ideas (main and subsidiary ideas) and try to draw connections between these ideas.
Visualisation	In addition to mind mapping there are a large number of other visualisation techniques such as: concept visualisation; data visualisation; compound visualisation; and strategy visualisation. [🌐 www.skillsheets.com for more links]
Brainwriting	Write all your ideas on a specific problem on Post-its; post them on the table or a board; brainwriting is found to be more effective in creating ideas than brainstorming because it evades negative group interactions (Paulus and Yang, 2000).
Bisociation	Combine two ideas or thoughts to develop something new (follows often after brainwriting or mind mapping).
Six thinking hats	Force yourself to switch from one thinking approach to another using the following six thinking hats: neutral (white), emotional (red), logical (black), happy (yellow), creative (green), and synthesis (blue) (cf. De Bono, 1992).
Write a storyline	What would the 'story' of your research project look like?
Invent a title	Can you come up with a catchy (working) title that not only will attract the attention of the audience when you finish the research, but will also keep you motivated (because you have not yet started the research).
Find alternative images on the problem	<ul style="list-style-type: none"> • Advertisement text and images • Cartoons • Pictures
Get subjective statements	<ul style="list-style-type: none"> • Read biographies of some of the key players (How did they perceive the problem?). • Look at the website of the players to see how they portray the issue (both in pictures and in text). • Ask for transcripts of speeches at the PA department.
Organise an exploratory seminar or a lecture	Invite the person(s) with whom you were unable to get a personal interview; preferably ask for some 'out of the box' thinking.