Creativity for Students

Brought to you by the Counselling Service

ph: 9925 4365,
email: counselling@rmit.edu.au
Creativity in action

• A definition of creativity is pretty difficult to nail. Here are some examples of creativity:

  – Edwin Land took some pictures of his daughter. She asked why she couldn't see the results right then and there, so he started thinking about overcoming his daughter's dissatisfaction. Within an hour he had developed the concept of instant photography, Polaroid Camera.

  – Like many church choir singers, Art Fry put slips of paper in his hymn book so he could find selections quickly, but the slips sometimes fell out. Taking his dissatisfaction back to his job, he developed 3M's Post-it notes.

  – Teflon wasn't invented, it was an accident. However, its application to myriad products was possible because a curious chemist didn't throw away the accident but rather played with it to learn more about its properties, and discovered it could solve certain problems better than any other substance.
Creativity Mythology

• Myth #1: The creative process is magical and can’t be explained.
  – There is significant research been conducted on creativity, from psychoanalysts, behaviourists to social scientists: perhaps the most famous being Edward De Bono. There is much we can learn about our own creativity, how we ‘trigger’ it, maintain it and utilise it effectively.

• Myth #2: Rules are the enemy of creativity.
  – Rules might provide the ‘tension’ required to harness an otherwise plethora of ideas that can overwhelm us. The ‘blank piece of paper’ syndrome can lead to the dreaded procrastination.
Creativity Mythology

• Myth #3: Creativity is only for dreamers and people who would rather play than work.
  – Creativity is very hard work, and often a process of trial, error, trial!

• Myth #4: Creativity should be tension-free.
  – Creating requires resistance or friction since most creativity comes from a "need", often not being met. Without the friction it can be difficult to ‘access’ creativity: THAT’S WHY A DEADLINE CAN BE USEFUL.
Creativity Mythology

• Myth #5: The key to creativity is thinking outside the box.

—Freedom to come up with *anything* is more likely to translate into fears that lead to coming up with *nothing*. When you are ‘floating in a sea of possibilities’ very often ‘the judge’ comes in, the inner critic, the voices that confuse you about what you really want to do. This leads to procrastination and stifling of the creative urge.
Phases of the Creative Process

Poet T.S. Eliot, "When forced to work within a strict framework, the imagination is taxed to its utmost - and will produce its richest ideas. Given total freedom, the work is likely to sprawl."

1. Identify the problem
2. Forget everything you know. Discover all the ‘elements’ or parts of the problem and how they relate to each other.
3. Remember everything you know. The elements or parts are examined or studied more closely.
4. Rearrange everything you know, you turn no idea away with logic, until it is time to:
5. Verify that the solution satisfies the constraints of the problem and how well it performs relative to the fundamental objectives
Identify the problem

“A problem correctly stated is half solved.” Edward de Bono

• In one of his books on lateral thinking, Edward de Bono talks about an office building where occupants complained about the wait for elevators.

• By viewing the problem as "How can we speed up the elevators?" the landlords felt they were up against a brick wall of prohibitive costs.

• In a triumph of lateral thinking, someone suggested placing mirrors on the walls near the elevators, allowing people to spend the time admiring or fixing themselves and ignoring the wait. It worked.

• However, suppose the problem had originally been stated in terms of the true choice: "How can we eliminate complaints about the elevators?" Then the possible solutions might have included faster elevators, or mounting television sets or mirrors nearby.

• Within the context of Uni work:
  – By asking WHY you can gain clarity on the WHAT that you have to do: who is it for, what will they do with it, how will it be used, what ‘need’ is it meeting, what is the ‘dissatisfaction’
Forget everything you know

"Every act of creation is first of all an act of destruction." Pablo Picasso

– The elements or parts are examined or studied more closely. Answers come from arrangements of information, but virtually all the information in your memory bank is tied together in relationships. Roger von Oech succinctly expressed the problem: "As people grow older, they become prisoners of familiarity" (of relationships).

– The first step in attempting to create ideas is to destroy the familiarity, the relationships, of everything you know about the problem.

– This explains why many breakthrough ideas come from ‘outsiders’ who aren't encumbered by their experience.

• Within the context of Uni work:
  – Look at the pen/pencil you are writing with. Look at it as if you have never seen one before and write down all the things it could be used for, (other than writing)
Remember everything you know

"Discovery consists of looking at the same thing as everyone else and thinking something different." More than likely, the pieces of a problem you're looking at are the same pieces that others are looking at. The pieces are the means to the end, but they are valueless as they stand. Thus the key to a better idea is, "thinking something different," Nobel laureate Albert Szent-Gyorgyi

• This step refers to the relationships between things that you already know and how they can ‘switch’ and change to other things: the spring propulses, how else can that be utilised?

• Within the context of Uni work:
  – Look at the pen again, and this time notice all the different components of the pen and think of all the different things that they could be used for and notice the relationship between them- the casing without the biro inside.
Rearrange everything you know

- Look for new relationships among the pieces, new ways of assembling them. Edwin Land made a new combination of his images of camera and darkroom. Art Fry saw a new connection between an adhesives and his falling slips of paper.

- New answers come from new arrangements of information. With all the possible combinations of information

- When you're trying to solve a problem, to create ideas, develop as many ideas as you can, then pick and choose among them. You need to actively work to stop the ‘logical judger’, there is plenty of time for that later, you come up with as many ideas as you can without criticism or evaluation.

- The inner critic, or anticipation of outside criticism is the major idea dampener. You have to ‘free’ your mind from these.
Verify the solution

• Rather than being negative about an idea ask: “What’s good about it?” Think of all the reasons why it might work. Let the idea grow. Let it suggest other ideas. Keep open to all the possibilities. Withhold judgment.

• Won’t you also come up with a lot of silly ideas that way? Sure. You can always say “no” later. If you try to choke off the “silly” ideas and only receive the “good” ones, the can’t miss ones, you might not get any ideas at all. The essence of an idea might start out ‘silly’ and then evolve into being really useful.

• Once you have these you check your brief again. Which solutions match the clearly defined problem? Does it fit with the other conditions of your brief: time, money, resources etc. Is there an option to combine alternative, modify one with an idea from another?
Your Own Creative Process

“If you can quite the yammering of the conscious, controlling ego, you can begin to hear you deeper voice...of insight and vision.” Marshall Cook (Author: Freeing your creativity)

• Tap into your own process, everyone is unique
  – Think of the times you felt ‘creative’ or ‘in the flow’
  – What ‘happened’? What are the common characteristics of these experiences? Are there triggers? There will be many things, going to a gallery, reading a magazine, taking a shower.

• Creativity isn’t random or magic. It is likely that there are precursors, like eating right, sleeping right, taking care of your mental health. How do you feel in your body when you don’t take care of yourself? Do you feel able to concentrate?
  – Sleep and food nurture your body and soul. Without them you are not going to do great work.

• Exercise: Write down what you know about your creative process now. ‘When’ you feel creative. What you ‘do’ to tap into your own creativity. Anything you have noticed about your body and whether food, sleep, or rest make a difference.
Specific creativity techniques: Anological

There are many different techniques designed to assist creativity, the following slides list just a few:

- **Anological** is a fairly logical approach. You first list all the attributes of your problem: physical, mental, emotional and social. Then, concentrate on one attribute at a time. For example, if your challenge is to design a pen, you could list the attributes as: ink, ink holder, shape, length, colour weight, housing material, finishes, etc. Then make connections with one attribute with a completely different element.
Forced Relationships

• **Forced relationships** can be done rationally, or in a fairly bizarre fashion. An example might be to choose something randomly out of a dictionary, encyclopaedia or something you see in your environment through a quick glance. Then you list everything you know about the thing. You might choose a piece of dried stale bubble gum that you see stuck to the table you’re using. Let’s see: it’s hard, pink, amorphously shaped, has been moulded by a person, once tasted good, can bring joy, is probably filled with germs, can be used to fill a crack and so on. The third step is to list everything you know about your challenge. Again, the pen example. It’s lightweight, 5.5 inches long, plastic and metal, shiny, writes and wears out. In step four you take the traits or characteristics of the chosen object, dried bubble gum, and apply them to the traits of the pen. This generates new possibilities. You might make the pen out of a material that’s easily remoldable. You might make it edible. Think about using the pen to promote bubble gum, or bubble gum to advertise the pen.
Attribute Listing

• **Attribute listing** is a technique that Fred Stryker used to create daily plots and stories for his cowboy radio show, “The Lone Ranger.” He created a chart that consisted of the major parts of the story: good guy, bad guy, other characters, weapon, crime, weather, location, etc. Then he generated long lists of variables for each category and numbered them. At breakfast, he asked his wife for a series of numbers (one per category). After breakfast, he went to his studio, looked up the items corresponding to the numbers chosen by his wife, and began writing a new story based on those items. You can do the same for the pen challenge. Under each category, such as shape, ink, color, etc., list a dozen or so different possibilities. Then randomly combine them and brainstorm on the possibility for a new pen design.
Morphological Synthesis

• **Morphological Synthesis**: is a simple elaboration of attribute listing. After completing the list of attributes, list changes in one attribute (such as “products”) along the horizontal axis, and list changes in a second attribute (such as “markets”) along the vertical axis. Idea combinations, or syntheses, will appear in the intersections, or cells, of the table. Morphological synthesis will force you to look at many surprising combinations.
### Specific creativity techniques

Osborns 73 idea spurring questions

<table>
<thead>
<tr>
<th>Adapt</th>
<th>What else is like this? What other ideas does this suggest? Does the past offer a parallel? What could I copy? What could I emulate?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Modify</td>
<td>New Twist. Change meaning. colour. motion sounds odor. form. shape. other changes?</td>
</tr>
<tr>
<td>Reverse</td>
<td>Transpose positive and negative? How about opposites? Turn it upside down? Turn in Backward? Reverse Roles, Change shoes? Turn tables? Turn other cheek?</td>
</tr>
<tr>
<td>Combine</td>
<td>Combine units? Combine appeals? Combine ideas? How about a blend? An alloy and assortment, an ensemble?</td>
</tr>
</tbody>
</table>
Group exercise

“Ideas which are logical in hindsight might well be invisible in foresight.” Edward de Bono

• Problem: Original Juice Company want a new bottle design for their Water product to differentiate it from the other water products. Individually each write down 4 ideas utilising any of the techniques listed previously e.g. magnify or minimise

• Come together and share your ideas
• Vote the best idea and present.

(10 minutes for exercise, each group present 5 minutes)

• Take out two minutes to write down any of the techniques that you think might help you in your course and enhance your creative process.
Barriers to Creativity

- Not having sufficient ‘boundaries’ around what you are doing can lead to procrastination. Understand and define the problem you are solving.

- “Right answer” syndrome: our education system typically values people who memorise facts and can regurgitate them and get them ‘right’. We may fear ‘failure’.

- Educated Incapacity (Herman Kahn): Although experience is often valuable, it can be a liability if in a search for creative ideas because we limit our thinking based on our experience, which helps explain why many breakthrough ideas come from outsiders who aren’t encumbered by their experience.

- Focussing on too much detail, worrying about the ‘how’ of your ideas, rather than the idea and themes themselves.
Barriers to Creativity

• Fears: fear of risk taking, fear of what others might say or think, fear that we are not as ‘good’ as others might tell us- that we are frauds.

• Taboos: we may edit ourselves based on what we think is ‘proper’ or ‘acceptable’ in a cultural sense. Question whether these taboos exist for any good reason

• Judgement and Criticism: rather than letting the ideas flow freely, some people find fault with any idea as soon as it arises. Making a habit of judging one’s own thoughts inevitably sacrifices some creative potential- its like having an editor looking over your shoulder before you have finished writing the first word. Ideas don’t get to mature and evolve.
Your Own Creative Process

• WHAT ARE THE BARRIERS to YOUR creative process?

• EXERCISE: Take a couple of minutes to write down some of the barriers that you have noticed have affected your ability to access your creative process in the past.

• There are many effective actions that we can take to help ‘manage’ our barriers.

• Exercise: What are you going to do with the inner critic and perfectionist? If these voices are a strong force for you here is an exercise that you can try. (Mindfulness with stranger)
Enhancers to Creativity

• Utilising imagery, being playful, storytelling, examining your emotions can all help with artistically oriented thinking skills.

• Be willing to make mistakes and ‘fail’. Thomas Watson, founder of IBM recommended his staff ‘double your failure rate’, thereby generating so much more knowledge and many more ideas.

• Attraction to the mysterious and tolerance for complexity and ambiguity help the creative process. Becoming frustrated with missing facts, or ‘cloudy’ requirements will detract your mind. Accepting the uncertainty through belief in the process is likely to be more helpful.
Enhancers to Creativity

• **Letting go** is the gateway to the creative self, it takes courage to let go of the judgements and criticisms we have developed to ‘keep us safe’. The degree of fun rises in direct proportion with the letting go!

• **Commitment** to create, to solve problems, to express or make a breakthrough ultimately determine output of any kind.
Your Own Creative Process

• As you read those enhancers. Which ones resonated with you? Which do you think would make a different to YOUR creative process?

• **EXERCISE:** Take a couple of minutes to write down some of the enhancers, and write some specific, practical ways that could utilise these.

• **Exercise:** Write a plan for yourself. Some specific ways that you plan to become more aware of your creative process, the barriers, the enhancers. Write some specific goals that you want to achieve e.g. Have my assignments in one week early. (Write your goals as positives, rather than negatives. E.g. writing ‘procrastinate less’ is not a goal. Your goals should be specific, measurable, achievable, realistic and timely.

• Once you have your goals write the specific actions you are going to take this week to achieve them. Take 10 minutes out to do this.
Creativity is …

• Yours to do with what you will
• Saying YES instead of no to your ideas
• Being MORE of what you are
• Getting the ‘chattering you’ out of the way
• Something you consciously choose to stimulate and foster
Reference List

• Cook M.J., Freeing Your Creativity, 1992.
• Davis G.A., Creativity is Forever, 1992.
• De Bono E., Serious Creativity, Innovative Leader, Volume 4, April 1995.
• Riffe W.J., Can you test for Creativity?, #140 R&D Innovator Volume 4, Number 2, February 1995.