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Keeping kids creative

We've all heard the buzzwords of the knowledge-based economy—creative, innovative, resourceful. We are told that our students will need these abilities, not just facts and figures, to thrive in the workplace of the future. And we, their teachers, need to equip them through creative teaching. In this issue of *SingTeach*, we try to unravel the nuts and bolts behind these ideas, to find out what creative teaching is all about and how it can be implemented in the classroom.

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Inspire

Finally! Creative Teaching Without the Fluff

Researcher and educator Dennis Sale tells us why creative teaching is not as complicated as it's made out to be.

Over the last two decades, Dennis Sale has observed over 4,000 teaching professionals and analysed countless student feedback responses to try to understand the behavioural patterns of high- and low-scoring teachers.

Through this process, he has developed a better understanding of the things that teachers do that can result in a student feeling bored and frustrated or interested and engaged. This has led to the development of the *creative teaching framework*, a practical, research-based approach which demonstrates what creative teaching looks, sounds and "feels" like.

Too much fluff, too much stuff

The idea and desire for creative teaching is nothing new. There is, however, a limited consensus on what "creative teaching" means and a lack of practical models that can help teachers develop such competence.

This has lead to two major problems: too much "fluff" obscuring the definition of what creative teaching is and too much "stuff" being written about how to put it into practice. As a result, teachers are so bombarded with everything from learning styles to habits of mind that it is easy to forget what creative teaching really is about.

For Dennis, becoming a creative teacher is not simply about abandoning traditional methods such as lectures and worksheets and replacing these with more active projects or problem-based learning approaches. "Methods don't make creative teachers," he says. "For example, teachers can choose to use 'creative thinking tools' in the classroom but actually be very uncreative in the way they make use of them."

According to Dennis, creative teachers are able to weave together effective and engaging strategies—using a range of methods, activities and resources as building blocks. To do this well, teachers must understand "good pedagogy" and be able to apply core principles of learning in their lesson design.

"Many teachers, however, still violate core principles of learning by overstretching attention spans and creating cognitive overload—a psychologist term for too much information too quickly. Also, they fail to recognise that motivational strategies are just as important as content selection," he says.

Creative teachers, by their very nature, are not limited to any paradigm of psychology or education. "I disagree with the idea that teachers have moved from the 'sage-on-the-stage' to the 'guide-on-the-side'. This is dangerous nonsense!" he exclaims. "Creative teachers are whatever the learning situation requires."

At the same time, teaching students to be creative need not be a very complicated process involving overhauling the curriculum or one's teaching style. In fact, Dennis believes that a lot can be achieved through personal modelling, "If you are a creative teacher, the very nature of being creative allows people to experience you as someone interesting and lively. If you get their attention, students will copy aspects of your behaviour–either explicitly or latently."

Keeping it simple: Getting into SHAPE

So how can teachers develop their creative teaching competence? Dennis believes that teachers can improve their creative teaching by building on five important resources, summarised by the acronym SHAPE:

Stories told to provide context, understanding and emotional anchors
Humour used to achieve rapport and provide novelty
Activities provided to integrate, apply and consolidate learning
Presentation style to provide clarity and influence student attention and beliefs
Examples used to illustrate facts, concepts, principles and procedures

Based on classroom observations, interviews with teachers and student feedback

responses, Dennis found that teachers who students perceive as creative were those who were able to effectively combine different aspects of SHAPE in their teaching.

"What creative teachers do, in a nutshell, is the ability to simplify and motivate. They are able to take difficult concepts and principles and weave them into a classroom experience that connects in the most simple and meaningful form to students. This is creative teaching in its most advanced form," he explains.

At the same time, the framework also "demystifies" creativity and demonstrates creative teaching as something that can be developed and improved. "All of this is empirical and can be demonstrated," says Dennis. "It's not a load of fluffy words about being passionate or promoting independent learning. It's totally behavioural and you can learn to do it."

Yet, while the creative teaching framework offers a practical way to teach creatively, Dennis reminds us that the first step towards teaching creatively still depends on one important factor: the teacher's motivation to want to be effective and creative. "There is no such thing as a creative switch that you just switch on. Being creative is just like everything else. You need to know how to do it and then put in the massive effort."

Dennis believes that those who choose to teach creatively will see the results of their hard work, "I know that if I'd taught creatively, it will have a powerful impact on my students–well on most of them, most of the time."

Interested in learning more about the creative teaching framework?

> Download Dennis Sale's paper, "Developing a Creative Teaching Framework Based on a 'Science of Learning'" at http://conference.nie.edu.sg/2007/ paper/html/ INO098.html

Dennis Sale is the Senior Education Advisor at Singapore Polytechnic. His areas of research include "creative teaching" and "promoting thinking in the curriculum". He has developed original and practical frameworks for developing creative teaching and promoting thinking. These frameworks are increasingly being adopted by educational institutions in Singapore and other Asian countries.

Ideas

In Search of Creativity

What is creativity? And where is creativity to be found? Researchers around the world have been asking these questions for more than half a century. For Associate Professor Tan Ai-Girl, this search has taken her across continents for over 20 years. SingTeach *catches up with her to find out how teachers can be more creative.*

"Creativity is at the age of renaissance!" enthuses Ai-Girl, currently Visiting Professor at the Department of Psychology, University of Munich, Germany.

Ai-Girl's interest in the study of creativity started when she was a research associate in Tokyo, Japan, in the late 1980s. Her desire to better understand creativity brought her to the University of Munich, where she graduated with a PhD in Psychology in 1995.

Today, as Associate Professor in National Institute of Education's psychological studies academic group, Ai-Girl continues to study creativity. In particular, she is interested in exploring teachers' and children's conceptions of creativity within their learning context.

While creativity is a complex concept with multiple meanings, it is something that Ai-Girl believes is within each of us. However, it "is something that has to be cultivated," she says.

In the classroom, "creativity is essential for teachers" and can be fostered through the interplay of several factors:

- *Knowledge*
  Teachers need to know their subject area well. Just by imparting knowledge, teachers are providing their students with the raw materials for creative thought.

- *Skills*
  They need to be skilled in teaching and learning. The mastery of a sound and substantive repertoire of pedagogical strategies helps in the effective communication of knowledge.

- *Passion*
  Teachers need to be passionate about their chosen area. This passion provides the motivation for imparting knowledge and skills and for integrating creative strategies and techniques into their teaching.

- *Open mind*
  It is important, for teachers, to be open to new experiences, cultures and contexts. Such a mindset translates into a supportive and open learning environment where students are encouraged to inquire, interact and reflect.

- *Belief*
  Teachers need to believe in the importance of nurturing creativity. It really boils down to a belief in developing each student to his or her fullest potential.

But while there are many techniques for teaching more creatively, we must not miss the forest for the trees. After years of research, Ai-Girl is convinced that the aim of cultivating creativity in the classroom is really about uncovering our students' creative potentials.

"To me, creativity in education is the search for growth of every child's potential to its fullest, prosperity in all human societies, and peace among nations and people of different backgrounds," explains Ai-Girl.

She uses the term "constructive creativity" to describe the kind of education we want to give our students. Constructive creativity is "the development of creative cognition and behaviour beneficial to individuals as well as to the communities in which they are members" (Tan & Law, 2004, p. 14).

Creativity in education, then, is about developing our students into better persons who know how to care for themselves and for others. In this vein, education becomes a process of transformation, where each experience becomes an opportunity for continued growth as a person.

Pointing to the key role teachers play in this process, Mark Runco says that because our children spend so many years in formal education, teachers are responsible for many of the experiences that can dramatically influence the creative expression.

"If creative potentials are fulfilled," he adds, "the world will be a dramatically different, and better, place." (in Tan, 2007, p. vii)

It is this aspect of creativity that stands out most to Ai-Girl because it lends tremendous meaning to the task of an educator. The students we groom today can contribute to the overall well-being of our society tomorrow.

"To encourage creativity, we need to let [our students] experience the creative process in which possibilities are made into reality," says Uichol Kim (in Tan, 2007, p. xi).

So, do not be afraid to put your seemingly bizarre ideas into action! You never know how that lesson of yours can fire up the imaginations and hearts of your students in envisioning creative possibilities for their future.

Feeling Swell, Learning Well

Of late, Ai-Girl has been researching the effect of positive emotions on creative problem solving. This project uses experimental and quasi-experimental designs to study how positive moods or emotions—like love, joy, and contentment—can help secondary school students become good creative problem-solvers.

"Such positive emotions broaden the children's thought-action repertoire, promoting the expansion of attention or interest in the environment, and encouraging play and exploration," explains Ai-Girl.

What is fascinating is how this process of altering students' emotions can actually influence their behaviour. Says Ai-Girl, "Positive moods or emotions can build lasting resources, such as social relationships, resilience and physical agility."

So how can teachers induce positive emotions in the classroom? Ai-Girl recommends a few simple techniques that you use in your classroom:

- Play a short, humorous video-clip before introducing challenging concepts, tasks or problems.

- Give your students a gift or a nice surprise if you notice that they are anxious or stressed.

- Engage them in collectively recalling a happy event to lighten the mood.

Try these out and you will be surprised by how easy it is to cultivate creativity in the classroom.

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Ai-Girl (http://eduweb.nie.edu.sg/soe/Divisions/PS/people_ more_info_TAG.html) has published many book chapters and journal papers on the subject of creativity. For more insights on creativity in teaching, do check out her latest publication, *Creativity: A Handbook for Teachers*.

Voices

Drawing Inspiration from *CSI*

Who says watching the TV deaden the mind and kill the imagination? Inspired by their favourite TV series, teachers at River Valley High School got creative and transformed their Science class into a CSI lab.

When Chow Ban Hoe, Leong Woon Foong and Choy Ban Heng of River Valley High School were thinking of how to design a programme that would allow their lower secondary students to integrate their learning across subjects, they turned to hit TV series—*CSI: Crime Scene Investigation*.

CSI is a weekly drama series where a team of forensic investigators unveils the circumstances behind baffling crimes by examining the evidence. Since coming on air, the popular series has stimulated much interest in forensic science among millions of viewers.

Although the school was already using CSI-related activities in its Science research class, the inspiration to latch onto the CSI idea for their Create, Integrate and Differentiate (CID) programme[1] came about in 2005.

Ban Hoe and Woon Foong decided to focus on forensic science as they felt it was a creative way of integrating several subjects into one lesson. It also has "high interest value and it applies to everybody," says Woon Foong. "It's science for all."

For the new CID Forensic Science module, Ban Hoe picked out some "tried and tested activities" from their Science research class, reformulated some to infuse the skills they wanted their students to learn, and added in mock-up crime cases.

Then, they turned to the next hurdle: making the lessons as realistic as possible for the students.

For the teachers, this required even more creative thinking. Woon Foong recounts how they had to learn to make casts of footprints. "We didn't know how to do it. So in the end, we did it in mud because it happened to rain that day. One year later, we changed. The lab technicians used plaster of paris and they [the casts] turned out beautiful."

Even as the module got on track, Ban Hoe and Woon Foong did not stop there. Ban Hoe wrote to various authorities and forensic science experts to ask if they could share their expertise with the teachers and students. Most of his correspondences were unanswered.

His persistence paid off, however, when the officers at Clementi Police Divisional Headquarters saw that a visit to one of their forensic units would be a good experience for the students. They agreed to the school's request, but not before "they interrogated me to find out my objectives!" laughs Ban Hoe.

To make sure that the students stayed engaged throughout the visit, the officers staged three mock crime scenes for them to solve.

According to Ban Hoe, the students were very excited because they got to "be like detectives [and] crime scene investigators" and "hear from the horses' mouths" what it was like to work on actual crime scenes.

While all these may sound more like play than study, Ban Hoe, Woon Foong and Ban Heng were convinced that the students had learned something from this experience.

At the end of the module, the students were required to hand in a group project, which was a culmination of what they had learnt. The high quality of the work submitted reaffirmed that the module had fulfilled its learning objectives.

The teachers were so pleased with the results that they are already planning to extend the module. But to do that, they need help from forensic science specialists. "We are teachers and cannot claim to be experts of forensic science," says Ban Hoe.

However, they remain unfazed by this challenge. If there's anything this experience has taught them, it is that "every contact leaves a trace"[2]—every encounter can be transformed, with a little creativity, into engaging lesson plans.

Pop culture in the classroom

Ban Hoe, Woon Foong and Ban Heng strongly recommend that teachers adopt appropriate pop culture elements in their classroom because "it's a healthy way of reaching out to the kids". They share tips on how to bring your favourite TV shows into your classroom.

1. "It's good to start with your passion," says Ban Heng. "Start from where you are comfortable at and develop the curriculum from there. Woon Foong and Ban Hoe are interested in CSI, so from there, they can connect with their subject matter."

2. Teachers must be patient and give time for the module to mature. These teachers started small in 2001 by using CSI-related activities to get students interested in research work. When the school introduced CID in 2005, and motivated by the positive feedback from their students, they saw how they could translate these activities into a full-fledged CID Forensic Science module.

Notes

1. CID started out as an experiment. The teachers wanted the students to have a chance to construct their knowledge and integrate their lessons across disciplines, and differentiate their talents. The programme was renamed Construct, Integrate and Differentiate in 2007. For more information, go to http://www.rvhs.moe.edu.sg/Programmes/ip_eng/cid.htm
2. This is a basic forensic science principle formulated by well-known criminologist Edmond Locard.

About the Teachers

Chow Ban Hoe, Subject Head of Biology, developed and taught the module on forensic science with Leong Woon Foong, HOD of Science at River Valley High School. Choy Ban Heng is HOD of Learning Hub; he is in charge of the school's efforts in moving towards innovation in teaching.

Share

Art Outreach

In this age of video games and television, one organisation is making sure that students continue to find inspiration in everyday works of art.

Creativity has always been associated with art and artists. But what most people don't realise is that it doesn't take an artist to appreciate a creative piece of work. In fact, one organisation has been working on making art accessible and interesting to everyone–including your own primary and secondary school students.

Established in 2003, Art Outreach (see http://www.artoutreachprogram.org/) has brought art appreciation to more than 2,000 students in schools across Singapore. Through its network of volunteers, the organisation offers free art education on a range of topics (see http://www.artoutreachprogram.org/our_services/art_edu.html) such as fundamental design, photojournalism and environmental art.

All schools have to do is sign up. An Art Outreach volunteer, who's trained to engage students and promote interaction with the topics presented, will then be assigned to provide monthly art presentations.

By getting students to think about the contexts and experiences behind works of art, Art Outreach believes they will learn to think critically about works of art and maybe even be inspired to produce their own.

However, the best part of Art Outreach is that it brings art beyond the museum by encouraging students to see art as something they can encounter in their everyday lives. For example, the lesson "Public Sculpture" can have students talking about Fernando Botero's "Bird" sculpture in Boat Quay while "Art in Transit" can have them discussing Tan Swie Hian's calligraphy in Chinatown MRT station. Art Outreach reminds young people to notice, think and talk about the art that surrounds them. In age of video games and television, things like these are very easy to forget.

> Interested in signing up with Art Outreach? Contact them by going to http://www.artoutreachprogram.org

Relax

A Story with Idioms

Artwork by Yasmin Ortiga