Title	Creative teaching: How it works and how to do it
Author(s)	Tan Ai-Girl
Source	*ERAS Conference, Singapore, 29-31 May 2006*
Organised by	Educational Research Association of Singapore (ERAS)

Creative Teaching: How it works and how to do it

ABSTRACT

In this paper I offer a research-based framework and practical model of creative teaching that enables teaching/training professionals in any field or educational sector to develop their creative teaching competence. The model has been derived from established research in cognitive psychology and neuroscience, and through collaborative research with a wide range of teaching professionals who were observed, video-recorded and interviewed to uncover their underpinning beliefs and strategies regarding teaching and learning.

Creative teachers develop their creative competence over time, just like any other form of competence is developed. Those that are most effective develop what can be termed an 'unconscious creative competence'. In most cases the underpinning methodology or syntax of this competence is tacit and practitioners typically have difficulty making it explicit.

However, through the use of certain neuro-linguistic programming techniques, the underpinning syntax of creative teaching was successfully modeled through the research. It can, therefore, be understood and developed by any teaching professional who seeks to attain this competence irrespective of personal teaching style.

INTRODUCTION

This paper summarizes an ongoing research project that seeks to uncover the underlying syntax of creative teaching. It is driven by the question: what do creative teachers do and how do they do it?

The paper firstly addresses the problem of defining creative teaching and suggests a way in which it might be authentically approached. Secondly, it makes explicit the methodology employed in the research and what it seeks to achieve. Thirdly, drawing from the research findings and subsequent application of the model in a wide range of educational contexts, a creative teaching framework is offered that enables teaching professionals to accelerate the development of their creative teaching competence.

WHAT IS CREATIVE TEACHING?

Invariably, notions of what constitutes 'creative teaching' involve valuations, but this applies to conceptions of teaching quality in general. For example, Tuckman (1995) pointed out, "…defining or describing the "competent" teacher is neither an easy nor an obvious task" (p.57). Similarly Ornstein (1995), from reviewing the literature, argues, "…few facts concerning teacher effectiveness have been established" (p.77).

From the standpoint of this paper, creative teaching is analogous to *creativity* in any domain as it inevitably involves, combining existing knowledge in some new form to get a useful result. As Amabile (1996) suggests:

> A product or response will be judged creative to the extent to that (a) it is both a novel and appropriate, useful, correct or valuable response to the task at hand, and (b) the task is heuristic rather than algorithmic. (p.35)

Teaching is certainly heuristic and such 'products' or 'responses', in the context of teaching, are anything that contributes to student learning in a positive way. I therefore offer a simple (though hopefully not simplistic) operational definition of creative teaching:

> Creative teaching occurs when a teacher combines existing knowledge in some novel form to get useful results in terms of facilitating student learning. This may be either planned before the act of teaching, or invented as a response to the demands of the learning situation

METHODOLOGY

The methodology involves the collaborative participation of teachers who seek to make meaning of their creative practices through peer observation, video-recording and critical dialogue employing the principles of heuristic research (Moustakas, 1990). The teachers (using the term generically) who took part in the research were "co-participants" (a term borrowed from Lincoln, 1990, p.78) in that they are professionally interested in the research and what it might produce.

The use of concepts and techniques from the field of neurolinguistic programming (NLP) were an essential part of the research design as NLP is concerned with modelling effective abilities and transferring these abilities to others. O'Connor and Seymour (1995) refer to NLP

as, "… a way of studying how people excel in any field and teaching these patterns to others" (p.1). Bodenhamer and Hall (1999) point out that:

> Teachers who want to improve model the best teachers. NLP offers a model for learning how to recognize excellence and to emulate it. NLP focuses on recognizing excellence and how to specifically chunk it down into the component elements and the syntax (or order) for installing it in others. (p.xii)

Similarly Dilts (1990) illustrates NLP in this context:

> Effective thinking strategies can be modelled and utilized by any individual who wishes to do so. (p.193)

Also, NPL places a strong emphasis on being able to understand the syntax of individuals' communication strategies through careful observation, listening and questioning – 'sensory acuity' in NLP terminology. Of interest, from a different arena, the importance of sustained and immersed observation has been identified by Spear (2004) as a critical aspect of Toyota's approach to learning and attributed it to their ability to maintain consistent competitive advantage in the car industry. As Spear argues:

> … direct observation is essential, and no combination of indirect methods, however clever, can possibly take its place. (p.84)

The methodology focused on identifying and making meaning of the 'results', 'resources' and 'strategies' (RRS) used by co-participants in their everyday teaching activities. Results refer to the desired outcomes sought in any situation (e.g., what do creative teachers seek to achieve in their interactions with students). Resources refer to the things that can be utilized in any learning situation, which helps achieve the desired results. Strategies refer to the orchestrated use of the resources to get the desired results. It is through understanding the RRS of co-participants that the syntax of creative teaching was unpacked.

The specifically methodological techniques involved are:

- Observing and video-recording co-participants in typical lessons.

- Exploring lesson structures with co-participants, identifying the specific behaviours displayed, underpinning belief systems and thinking strategies
- Unpacking strategies through structured questioning, using A NLP communications framework (Dilts et al 1980; Bandler and Grinder, 1990) and the application of grounded theory concepts (e.g., 'theoretical sensitivity and 'theoretical saturation', Glaser and Strauss, 1967)
- Indwelling on the emerging realities over time to make meaning. Moustakas (1990) refers to the process of indwelling as:

> …conscious and deliberate, yet it is not linear or logical. It follows clues whenever they appear; one dwells inside them and expands their meanings and associations until a fundamental insight is achieved. (p.24)

The initial sample comprised 24 lecturing staff at Singapore Polytechnic, identified on the basis of their consistently high student feedback scores from students (scoring above 4.5 average on a five-point rating scale for at least two consecutive semesters). This benchmark average score is somewhat arbitrary, but suggests favourable perceptions in the eyes of students. In order not to rely solely on this index of performance, other valid sources of supporting data were sought for purposes of triangulation, such as school/department recommendation. The final sample of 17 had all achieved an 'Excellence in Teaching Award', which involves recommendations from supervising officers and peers. The research is ongoing and is being extended to other educational sectors in Singapore and elsewhere.

It is, of course, recognized that the selection of teachers based on the above criteria may not be correlated to creative teaching. However, as it was necessary to start somewhere in terms of identifying a cohort of teachers from which to commence the research, and lacking a sampling frame of 'creative teachers' (however derived), this seemed a useful starting point. Subsequent co-participants have been selected on other criteria, including volunteers, peer and student recommendations. The essential model has been further validated

RESULTS, RESOURCES, STRATEGIES

From observations and interviews, it was clearly apparent that, while the form and content of what they did varied, there were certain results that were actively sought by all co-

participants. There is essential agreement on the use of the following conceptual categories to capture the elements of their desired results:

- Getting attention when desired
- Creating good rapport
- Imbuing positive beliefs and psychological states
- Making learning relevant and meaningful

In seeking these results, teachers draw upon a range of resources and combine them to form strategies. These resources and strategies derive from their personal stocks of professional knowledge and skills. The resources used by teachers are exponential in nature, but can be usefully categorized in terms of five broad categories, which can be captured in the following acronym - SHAPE:

- **S**tories (e.g., to provide context, understanding, create emotional anchors)
- **H**umour (e.g., to build rapport, provide novelty, improve psychological state)
- **A**ctivities (e.g., to integrate, apply and consolidate learning)
- **P**resentation style (e.g., to provide clarity, meaning and influence student attention, beliefs and psychological states - through words, tone, body language, observation and listening
- **E**xamples (e.g., to illustrate facts, concepts, principles, procedures)

It appears that creative teaching emerges in two main, though often related ways. Firstly, it may originate in the actual lesson planning process. The teacher in preparing a lesson combines resource possibilities and derives a learning design with a creative strategy. For example, working with a teacher on how to teach Newton's Second Law of Motion in a more creative way, we used a scenario of David Beckham, the famous footballer, taking a free kick in which students were presented with two situations (one where the ball to be kicked was heavier than the typical ball; the second where David Beckham had done extra training and increased his kicking capability). In the scenario students had to infer the effect of the balls movement in terms of acceleration in each situation and derive a principle. The strategy was to get students attention and make the learning meaningful (by combining an interactive *presentation style* – including an AVA stimulus – an *activity* with *humou*r). From observation,

it seemed to work well – most students learned the principle quickly. This was creative teaching as it was novel (at least for that teacher at the time in this context) and produced useful results in terms of student learning.

It is also the case that creative teaching results from what I call *situated invention*. As teaching is a dynamic human encounter in which much of the student response cannot be predicted in advanced, teachers have to think on their feet, reframe what they are doing and deal with the perceived emerging reality. Inevitably, in this situation, teachers draw upon their existing professional knowledge, but in doing so often improvise to the demands of the situation and do something different. Sometimes (but not always) this produces a desirable result. At that point in time, individual teachers have been creative. That is *situated invention*, which is in many ways analogous to Schon's (1987) notion of "artistry", which he defines as:

> ...the kinds of competence practitioners sometimes display in unique, uncertain and conflicted situations of practice. (p.22)

Furthermore, the new learning, resulting from the creative act, is now a *resource* for the teacher to use at some future time – it becomes part of his/her personal stock of professional knowledge. This iterative process enhances the teachers creative teaching competence and moves him/her towards the elusive goal of expertise or what Eisner (1985) refers to as 'connoisseurship'.

CREATIVE SHAPE: DEVELOPING CREATIVE TEACHING COMPETENCE

Initially SHAPE seemed a useful mnemonic for 'resources' and 'strategies', but it also provided a challenging metaphor for exploring how creative competence can be developed and accelerated. In metaphorical terms, how can teachers get in great SHAPE as quickly as possible?

Firstly, it is interesting to note, though hardly surprising, that creative teachers, in seeking to get the results identified earlier, are consciously or tacitly building their resource capabilities, making connections between knowledge bases and trying out new strategies. Such teachers are frequently on the lookout for new resource possibilities and are able to reframe quickly. From this, as in any area of professional activity, there develops a fluidity and consistency in

the desired behaviour (in this case, creative teaching). This represents the underpinning dispositional component of *creative teaching competence*.

Secondly, through using applied knowledge from cognitive and experimental psychology, it has been possible to design creative applications of SHAPE in any teaching/learning context. For example, there are 3 well documented psychological effects that influence attention and information processing, including recall. These are

- Primacy Effect (the tendency for the first items presented in a series to be remembered better or more easily)
- Recency Effect (the tendency for the most recently presented items or experiences to be remembered best)
- Von Restorff Effect (the tendency to remember distinct or novel items and experiences)

In applying these 3 effects to the SHAPE model, it is very apparent that teachers who are able to design learning by using appropriate SHAPE in relation to these effects can offer a wide range of engaging and creative learning experiences for students. Invariably, the learning designs must be tailored to the characteristics and competence of learning groups – but that applies for any well designed pedagogy. For example, given the importance of primacy effects on attention, the creative teacher can maximize their SHAPE to provide a Von Restorff Effect at the beginning of a session or at some strategic new starting point.

Similarly, by chunking sessions into smaller units and creating breaks – either actual or through a significant change in SHAPE (e.g., moving into an activity or telling a story, etc), it is possible to both work effectively within human attention and working memory spans, which we know are quite limited. Furthermore, as student's psychological states may vary at different times of the day, creative teachers are able to adapt and re-design their SHAPE in situ. Teachers, leveraging on these effects, can create almost infinite combinations of SHAPE to make learning more interesting and personalized for students.

This research and subsequent application in practice sheds some interesting light on differing conceptions of teaching as 'science' 'craft' or 'art', in the research literature (e.g., Eisner, 1995). The findings are certainly consistent with Eisner's (1995) position that:

> …no science of teaching exists, or can exist, that will be so prescriptive as to make teaching routine. The best that we can hope for – and it is substantial – is to have better tools from science with which teachers can use their heads. (p.96)

> …artistry in teaching represents the apotheosis of educational performance and rather than try to diminish or replace it with rule-governed prescriptions, we ought to offer it a seat of honour. (p.96)

Creative teaching from the standpoint of this paper is science, craft and art combined and mirrors most other forms of complex practice. Creative teachers are leveraging (consciously or tacitly) on certain key principles of human learning, have developed a broad and practical competence in teaching methods and are able to make creative combinations to produce new learning designs. In this way, over time, they develop their creative teaching competence and progressively move from a position in which many of their practices move from a state of conscious competence to unconscious competence.

Hopefully, the framing of creative teaching in this way helps to demystifying creative teaching competence. It is clearly the case that some teachers are more creative than others and it appears that we can model the essential syntax underpinning the performance in practice. Of interest, in this context, we have long recognized that expertise in any field, and teaching is no exception, involves experience. However, we often fail to ask the question of what constitutes experience and what is its impact on learning and performance? Similarly, why is it that some people, who have many years of experience, still display limited competence, whereas relative newcomers achieve good competence in a comparatively short time? The conclusion of Berliner (1987) offers insight into such questions:

> …experience will probably only instruct those who have the motivation to excel in what they do and the metacognitive skills to learn from their experience…we believe that individuals with that kind of motivation to learn and in possession of a set of strategies for learning from experience are literally transformed by their experience. (p.61)

The motivation to be creative and, therefore, to develop creative teaching competence, is within the control of individual teachers as they make sense of their personal identities and

manage their professional practices. Indeed, it is an essential component of the nature of competence itself and, while certain traits may be dispositional, much is volitional. Ultimately, teachers choose their professional orientation, based on their values and beliefs. I am optimistic that the framework offered provides useful insight for motivated teaching professionals who seek to develop their creative teaching competence and become more creative teachers.

REFERENCES

Amabile T. A. M. (1996) *Creativity in Context*. Colorado: Westview Press.

Bandler, R & Grinder, J. (1990) *Frogs into Princes: the introduction to Neuro-Linguistic Programming*. Middlesex: Eden Grove Editions.

Berliner, D. C. (1987) In J. Calderhead (eds.) *Exploring Teachers' Thinking.* London: Cassell.

Bodenhamer, B. G. & Hall, L. M. (1999) *The User's Manual for the Brain*. Carmarthen, Wales: Crown House Publishing.

.

Dilts, R. (1990) *Beliefs: Pathways to health and well being*. Portland, Oregon: Metamorphous Press.

Dilts, R. et al. (1980) *Neurolinguistic programming Vol. 1: The Study of the Structure of Subjective Experience*. California: Meta Publications.

Eisner, E . W (1985*)* *The Art of Educational Evaluation: A Personal View*. Basingstoke: The Falmer Press.

Eisner, E. W. (1995) 'The Art and Craft of Teaching'. In A. C. Ornstein & L. S. Behar *Contemporary issues in curriculum*. Massachusetts: Allyn & Bacon.

Glaser, B. and Strauss, A. (1967) *The Discovery of Grounded Theory*. Chicago: Aldine.

Lincoln, Y. S. (1990) 'The Making of a Constructivist: A Remembrance of Transformations Past'. In E. G. Guba (ed.) *The Paradigm Dialog*. London: Sage.

Moustakas, C. *(1990)* *Heuristic Research*. London: Sage.

O'Connor, J. & Seymour, J. (1995) *Introducing Neuro-Linguistic Programming*. San Francisco: Thorsons.

Ornstein, A. C. (1995) *Teaching: Theory into Practice*. Needham Heights, Mass: Allyn & Bacon.

Schon, D. A. (1987) *Educating the reflective practitioner*. San Fransisco: Jossey Bass.

Spear, S. J. (2004) Learning to Lead at Toyota. *Harvard Business Review*, May, (pp 78 – 86).

Tuckman, B. (1995) The Competent Teacher. In Ornstein, A. C. (1995) *Teaching: Theory into Practice* (pp. 57-72). Needham Heights, Mass: Allyn & Bacon.