Transforming Teaching and Learning with LogoVisual Thinking

by **Dan Varney and Brin Best**

This article outlines an approach to teaching and learning called LogoVisual Thinking (LVT), which was first introduced into schools in 2000. Although the methods and tools are relatively new to teachers, they are already having a profound influence on those who have been introduced to them. We believe that the approach represents an important advance in the teaching of thinking skills and has broader potential for designing effective learning experiences.

Improving essay writing skills

Sarah Hillier, Excellence in Cities co-ordinator at Egglescliffe School, Teesside, used LVT with her year 12 students preparing for their AS Geography exam. They were addressing a question that required them to discuss the effects of globalisation. The students brainstormed all the effects they could think of, then categorized them as social, political and economic. They then wrote on a new MagNote of a different colour the evidence to which they would refer to substantiate each category. Subsequently they went on to explore how they regarded the effects – positive and negative. Using LVT enabled the students to learn from each other and made explicit to them more of what they knew. *"Their essays were markedly better after the essay planning lesson – more structured, less woolly"*, says Sarah.

LogoVisual Thinking provides a generic model of learning applicable across subjects and ability ranges. It resonates with many aspects of current educational reform, supporting more collaborative and inclusive types of activity. It reflects the principles of accelerated learning and caters for the spectrum of learning styles. Because many characteristics of the method are familiar to teachers, they are quick to pick up its potential.

What is LogoVisual Thinking?

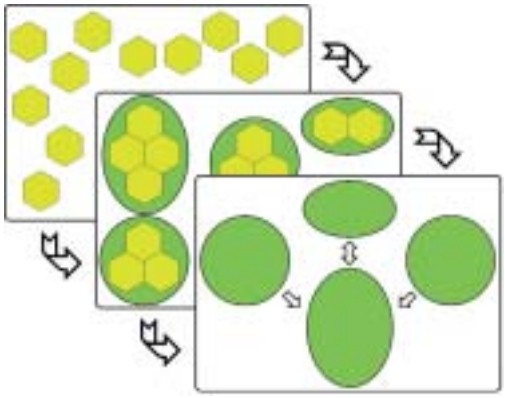
LogoVisual Thinking (LVT) is the name given to a methodology and associated tools that permit thinking to be made visible. The three elements of LVT can be explained as follows:

Logo – articulating discrete units of meaning in words and icons
Visual – revealing and manipulating patterns and connections
Thinking – attaining new levels of understanding or perception

The power of LVT lies in its simplicity. LVT tools enable ideas to be articulated visually on a surface that itself can be used as an aid in the meaning-making process. Everything remains editable and movable. Although other resources are available, this functionality is most popularly achieved by using drywipe magnetic objects called MagNotes, on drywipe magnetic boards.

The processes in which these resources can be applied are diverse, and we have found that training enables a broad mix of teachers to connect the potential to their given context and adapt their teaching styles accordingly. For some teachers the potential fit with their current practice has been self-evident, as exemplified by the accompanying examples (see boxes).

LVT will feel like familiar territory to many teachers. What is new is the way in which the methodology is articulated to offer teachers an explicit way to improve thinking and learning for all.



Mind Mapping and LVT

Mind Mapping, popularised by Tony Buzan and others, is a powerful way of visually representing ideas. It is excellent for representing what is already known, as an aid to memory and recall. When Mind Mapping, one starts with a central theme, which 'radiates' out to show associations and their connections.

LVT can be used as a medium for Mind Mapping, and the mobility of the elements can be useful in changing the associations and their connections, but LVT holds a subtly more powerful key to unlocking learning. Instead of starting with a central theme, one can start with a random display and let the theme (or themes) emerge by clustering associated ideas together. In this way, one can explore new topics and construct new meaning.

LVT in context

LVT has its roots in an approach called Structural Communication (Egan 1976), which was pioneered in the late 1960s by a team led by John Bennett and based at a research institute in Kingston, Surrey. Their objective was to develop more effective ways of learning, especially through remote tutoring. A significant facet of their developments was a visual learning interface based on electro-mechanical technologies that, by today's standards, were archaic.

Their subsequent development of a simple physical interface was exploited throughout the 1970s and 1980s in the organisational arena, to facilitate management groups thinking through problems and developing visions, strategies and plans. In the 1990s such processes were adapted to help larger, more diverse groups to think collaboratively, uncovering new value by supporting inclusion in community initiatives.

In the late 1990s teachers began to see the potential value of LVT in their classrooms and, with the development of 'LVT Thinking Skills kits' and training courses, the approach began to be introduced into schools across the UK. This was aided by the publication of the first two articles on the technique in educational periodicals (Best 2002; Varney et al. 2003).

Specific benefits of LVT

Many teachers are very excited about LVT's potential to transform teaching and learning. We are in the process of trying to document, through detailed educational research studies, how and why LVT helps learning and thinking. Until the results of this work are forthcoming we must rely on the observations and comments of teachers and educationalists to shed light on how LVT helps people learn. During training sessions, and after teachers have used the methods in their classrooms, the following comments are emerging particularly frequently:

- It appeals to different types of learners –

Linking history and literacy at KS2

Diana Cave, gifted and talented co-ordinator at The National School in Grantham, Lincolnshire, has extensive experience of thinking skills development and a range of methods and approaches. Lincolnshire LEA have been working with Belle Wallace and the TASC problem-solving framework for some years. Diana has been instrumental in her school's adoption of this framework and sees LVT as an engaging medium for applying and extending this work. She likes the fact that students can 'polish' their work as their thinking develops. Year 4 spent last term looking at non-fiction texts, linking QCA history with their literacy curriculum. She highlights two activities where LVT resources were especially effective. The first was where the children researched the discovery of Tutankhamen's tomb and used the MagNotes to make notes of key words and ideas and then ordered them chronologically. The second activity required the children to collect ideas from a variety of sources, map their information and then use their notes to write a piece of connected prose.

Teachers as learners

Maggie Isom, foundation subjects consultant with Bexley LEA, uses LVT as a facilitation tool in her work supporting teachers in the Borough. The example she gave was part of a core training day for teachers in special educational needs, who have had some additional materials produced to complement foundation subject materials from the KS3 strategy. The teachers were from pupil referral units and schools for students with profound and multiple learning difficulties.

"We had the boroughs of Greenwich, Lewisham and Bexley together to allow teachers from similar types of school to network. To stimulate their thoughts about practice in the classroom, we gave the key question: What makes an effective lesson? Having gathered their ideas, the clustering phase stimulated a high quality discussion that they all found relevant for their schools."

auditory, kinaesthetic and visual; wholists, partists – and so represents a very inclusive way of teaching.

- It provides a way of seeing what students are thinking, enabling teachers to make appropriate interventions.
- It allows students rich opportunities to reflect on their thinking, thereby engaging in metacognition.
- It represents a practical, hands-on tool, which students can use to develop specific thinking skills and move towards higher level thinking.
- It allows high quality dialogue to take place among students, which helps them explore and clarify their ideas, as well as exploring others' understanding.
- It readily motivates students and engages them as they create their own meaning out of the subject matter, rather than having a meaning imposed on them by others.

LVT is also proving a powerful professional support to advisors, consultants and education managers throughout the education system.

LogoVisual Thinking makes accessible a profound yet simple methodology that is pertinent in many learning contexts.

References

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Best, B.J. (2002) Logo Visual Technology. *Teaching Thinking*. Autumn 2002: 14-19.

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Using LogoVisual Thinking in maths at KS3

Jacinta McGowan, maths teacher and thinking skills leader at Broughton Hall High School (Liverpool) used LVT to revise statistics with her Year 7 class.

Students were given one hexagon each and asked to write a statement relating to statistics and to place the hexagons randomly on the board. Each statement was read aloud and when a consensus had been reached the hexagons were clustered around recurring statements or themes. Statements that did not make sense or were not relevant to statistics were placed on a separate board, and these ideas were then altered so they could be included.

Use of LVT in this lesson provided opportunities for each VAK learning style, allowing pupils to work both individually and collaboratively. It enabled pupils to assess how much they knew and understood about the topic.

Dan Varney is LVT education project manager for the Centre for Management Creativity. Dan has 10 years experience in developing both software and hardware tools and processes for supporting creative learning in the corporate sector. For the past three years Dan has been working with teachers to develop LVT Thinking Skills resources and their applications across the curriculum.

Brin Best has worked in a consulting capacity with the Centre for Management Creativity over the past three years, helping to develop LVT training courses and classroom tools for teachers. He is the director of Innovation *for* Education Ltd, an education training, publishing and consultancy company based in Yorkshire, and writes and speaks widely on a variety of education topics. He is carrying out doctoral research at Leeds University into the effectiveness of LVT in the classroom.

Developing arguments in critical thinking

Jacquie Thwaites teaches critical thinking at the North Devon College, and is the OCR principal examiner for 'Critical Thinking' AS Level Paper 2 and the advanced extension award. She also works as a consultant in critical thinking with Excellence in Cities. She uses LVT extensively both in her own teaching and in INSET programmes that introduce teachers to effective methods of delivering this relatively new subject.

In one lesson, AS level students used LVT to structure their response to a question that required them to argue for or against a statement about whether the government should promote GM foods and crops, responding to arguments and data from a variety of sources. They used different shapes and colours of MagNotes to represent:

- The central issues
- The arguments that arose from each
- The statements in source materials that supported each argument
- Evaluation of the reasoning, data and documents
- Further arguments in response to the reasons

A complex model emerged that enabled these elements to be worked, through their dialogue, into a coherently reasoned case. Concentration was high and the students felt a 'buzz' from seeing their case emerge on the board. It brought an element of fun to a complex synthesis of ideas. In the words of Jacquie's students at North Devon, *"Using the different coloured shapes makes it clearer to see all the elements of the reasoned case. Having to put down your ideas in a confined space on the shapes makes you think more about creating a focused sentence. You can then map the points together in a framework that makes sense".*

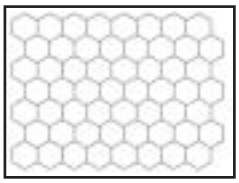
Further information

Further articles in subsequent issues of Teaching Expertise will explore LVT in greater depth in the context of emerging teaching themes and issues. For more information about LVT and LVT resources, visit **www.logovisual.com** or contact Dan tel: 01729 830322, e-mail: dan@changeandinnovation.com.

A major forthcoming book, *Making Meaning: learning through logovisual thinking*, by Anthony Blake, Brin Best and John Varney, outlines the potential of LVT to transform teaching and learning. It includes a broad range of examples of LVT in use, contributed by teachers and educational consultants. The book will be published by award winning thinking skills publishers Chris Kington Publishing in autumn 2004 (ISBN 1 899857 48 3). TEX

Try It Yourself Exercise Using LVT
What makes learning effective?

This is a simple question you can try posing yourself, or try with colleagues or your class. Unfortunately you are less likely to have the opportunity to try it with parents, who sometimes think the effectiveness of learning is proportionate to volumes of written work!



It is posed here as a trigger question for you to use to trial LVT as a means of building an inclusive appreciation of the topic, but you could equally well choose a question more pertinent to your field of interest, such as:

- *What makes an effective citizen?*
- *How can we reduce the environmental impact of humans?*
- *How can we ensure every student in our department reaches their potential?*
- *How can we promote higher order thinking skills in the classroom?*

Here are some simple guidelines for you to follow, assuming you are working with a class:

1) Materials

A whiteboard or sheet of flipchart paper for every 3-5 students. About 30 MagNotes, index cards and blu-tac, or a Post-it pad for every 3-5 students (ideally hexagon shape as these 'cluster' without forming rows and columns). Marker pen for each student (bold clear notes make it easier to 'see the whole')

2) Activity Plan

- 10 minute introduction
- 10 minute gathering phase
- 10 minute clustering phase
- 5 minute titling phase
- 10 minute sharing phase
- 5 minute capture phase
- Extension

a) Pre-lesson

Set up classroom for working in table groups, distribute whiteboards, materials etc. and photocopy the hexagon template sheet.*

b) Introduction

1) Write the question *What makes learning effective?* on the board and ask for some definitions of learning, or words they associate with learning.
2) Ask for some examples of things the students have been learning in the past week or so – could be anything eg TV, sports, hobbies etc.
3) Ask for some ideas about what makes learning effective – for individuals, for groups, for students, for people at work etc.
4) Explain to the class what they will be doing and introduce the following guidelines:

For gathering

- Suspend judgement
- Don't try to agree
- Associate freely to stimulate the flow
- Make a random display, visible to all

For writing ideas down

- Print clearly – so others can read!
- One idea to a MagNote/card/Post-it
- Phrase your idea as a response to the question
- Make full statements (use a verb)
- Be specific, not comparative

c) Gathering

This phase is about getting as many ideas out in shared space as possible.

Encourage students to do their own thinking at this stage, and to display their ideas at random on the board as they write them down – they can talk later! You will need to coax and encourage 'what about...?' When ideas dry up, ask them for 2 more!

d) Clustering

This phase is about organizing the ideas into meaningful groupings. They can keep duplicates on the board – it means that no-one's idea gets thrown away. Encourage them to discuss and explain their thinking within their groups. If they disagree about where something fits, let them write the same idea again and use it twice. Limit the number of ideas per cluster to a maximum of 6 or 7.

e) Titling

This phase is about articulating what each cluster is saying in response to the question.

Ask them to use the same rigour as they used for the ideas – a complete phrase that brings out the meaning of the ideas in the cluster as a response to the question.

f) Sharing

This phase is about expressing understanding and benefiting from the variety of different groups.

One member of each group talks the whole class through their cluster titles and some of the constituent ideas.

g) Capturing

This phase is about embedding learning and recording it for future reference.

Each student copies their own group's model onto a hexagon template sheet.*

Extension

If you have longer in the lesson, or for homework, you could ask students to think about how their clusters inter-relate – are there any that need to happen in order for others to happen? Is there a sequence or a pattern to how they relate? Essentially, you would be asking them to look for the systemic pattern of what has emerged for them about the question or topic. This would be more readily achieved by using new MagNotes, cards or post-its to represent each cluster title.

*This is avaliable as a pdf in the resources area of the **TEX** website