Logo Visual Thinking

Brin Best explores what teachers say about the value of LogoVisual Thinking, and links their enthusiasm to some major theories from the world of education psychology

It will soon be five years since LogoVisual Thinking (LVT) was first introduced into schools, and it therefore seems timely to review how far teachers have progressed in their use of this innovative teaching pedagogy. It is estimated that there are now over 1,000 teachers in primary and secondary schools across the country who are using LVT to aid the learning process. While some practitioners are still quite new to LVT, and are using it in a fairly basic – yet still highly relevant – way in their classrooms, there is a group of more advanced practitioners who are beginning to probe some more far-reaching questions about the potential for LVT to enhance learning. The quest is now shifting from the need to understand *how* the approach can be used to aid thinking and learning in the school context, to exploring *why* it appears to be so beneficial.

In this article I shall explore this theme by drawing upon the written and spoken comments of teachers, based on lessons they have taught using LVT. I shall then outline how many of the teachers' comments resonate with some of the key theories and paradigms from the world of education psychology and from the results of education research carried out in schools. I conclude by considering the implications for teachers who wish to use LVT more effectively, and the questions that might be helpful for them to ask themselves as they explore its potential to aid learning.

What is LogoVisual Thinking?

LogoVisual Thinking elaborates its methodology from several premises. Firstly that we make meaning by exploring connections and revealing patterns – looking for similarities and differences, establishing causes and effects and so on. Secondly, that if the constituent parts – information, problems or ideas are made visible and movable, we increase our capacity to make sense from them. Thirdly, that visibly expressing our understanding helps us to review and refine it through discussion with others. The 'five stages' of LogoVisual Thinking, stimulate the process:

- Focus: Selecting an area of study or a guiding question.
- Gather: Generating the raw material and making it visible.
- Organise: Experimenting with, and forming, the sense that can be made from the material.
- Understand: Articulating the insights revealed.
- Apply: Transferring the sense derived to the intended outcome, whether it be through writing a text, organising an event or making a decision.

The process of gathering, organising and re-organising ideas can be achieved in a variety of ways. Sticky notes can be used on a tabletop or on a large sheet of paper. On the other hand a more attractive, tactile and re-usable system called 'MagNotes' is available for sale. This includes sets of magnetic dry-wipeable notes (MagNotes) and portable magnetic whiteboards (Magboards). The hexagon-shaped notes facilitate the clustering of ideas and the whiteboards allow for titles, arrows and notes to be written and refined, and for small groups to cross-present their thinking.

For further information see www.logovisual.com

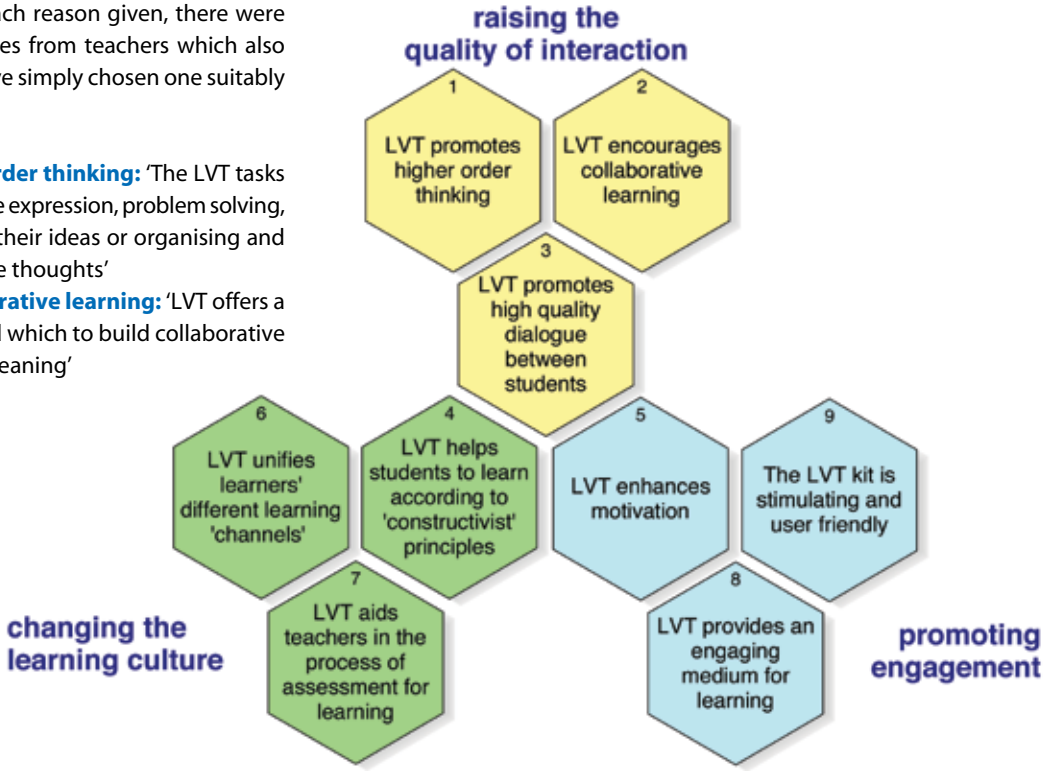
What teachers say about LVT

As part of my doctoral studies into the role of LVT as a pedagogical tool, I have been drawing together and analysing the views of teachers from both the primary and secondary sectors. The aim has been to discover whether there are any emerging trends as to the ways in which LVT has been deemed beneficial to learning.

I'd like to start by saying that it soon became clear, as I worked through the testimonies of teachers, that LVT has clearly created quite a stir among the profession. The wealth of highly positive comments emanating from practitioners has begun to suggest to me that, in LVT, a genuinely powerful new pedagogy has been discovered. What is especially striking is the overwhelming confidence teachers have in what they see as the *value* of LVT to enhance learning in their classrooms. Teachers of all ages and backgrounds, working with students of all abilities in the whole suite of school contexts, are united by their enthusiasm for what they see happen when LVT is used with learners.

My analysis has led me to conclude that there are at least nine main reasons given by teachers for the value that LVT can add to the learning process. I outline these below, together with a typical teacher comment for each one, which helps to illustrate it. The first three are presented in order of how frequently comments were made by teachers in support of the particular reason given (the first reason given was the most popular, with the rest represented more or less equally by the teachers' comments. Note that for each reason given, there were many other similar responses from teachers which also supported their point – I have simply chosen one suitably illustrative comment).

1. **LVT promotes higher-order thinking:** 'The LVT tasks stretched pupils to creative expression, problem solving, forming and articulating their ideas or organising and structuring their collective thoughts'
2. **LVT encourages collaborative learning:** 'LVT offers a process and a tool around which to build collaborative thinking about making meaning'
3. **LVT promotes high-quality dialogue between students:** 'At all stages in the process I felt the pupils gained support from each other through meaningful dialogue'
4. **LVT helps students to learn according to 'constructivist' principles:** (i.e. it allows them to actively construct meanings which respect their individual starting points rather than imposing a pre-determined meaning on them) 'LVT allows pupils to refine their connections'
5. **LVT enhances motivation.** 'The pupils responded positively to the thinking opportunity'
6. **LVT unifies learners' different learning 'channels':** (i.e. it supports learning in visual, auditory and kinaesthetic ways) 'As pupils organise information using LVT, this is where creativity and thinking takes place as the pupils have the opportunity to work at making relationships in a kinaesthetic as well as a visual way'
7. **LVT aids teachers in the process of assessment for learning:** 'Here is a tool that facilitates an effective thinking process while allowing for light- touch teacher intervention in support of the pupils'
8. **LVT provides an engaging medium for learning:** 'The first impression the teacher gets when using LVT kit is how quickly the pupils become engaged with the task'
9. **The LVT kit is stimulating and user friendly:** 'The boards themselves are appealing and pupils need only the lightest of touch in terms of guidance as to how to get the most out of the kit'



Additionally, teachers have repeatedly gone on record as saying how they feel the verbal and written outcomes of a lesson have been enhanced by LVT, and my view is that it is the *combination* of the above factors which makes the approach successful and allows these improved outcomes. The following comments are typical of the remarks made by teachers on the student outcomes which result from the use of LVT:

- **Generally:** *'LVT can generate remarkable results, even with reluctant learners'*
- **And more specifically:** *'The pupils' writing was coherent and quite elaborate … there was a feeling that having seen their thoughts on the board they were able to write elaborately, more confidently and in a more organised way'*

From the realms of psychology

In evaluating the educational effectiveness of any teaching method, sooner or later we need to turn to the world of education psychology in order to discover paradigms and research insights that help to explain what is happening. As such, I turn now to consider how the above teacher comments resonate with that world, and the implications for the classroom.

As discussed above, teachers have identified at least nine distinct reasons for the potential value of LVT in the learning process. It is actually striking how many parallels can be found within education psychology to illuminate these views, and below I discuss what I consider three of the most significant.

The importance of language

One of the giants of twentieth-century psychology was the Russian genius Lev Vygotsky. He wrote extensively on a wide range of topics of key relevance to teachers in the early part of the century, though his work was only discovered by the Western world after the fall of Communism in the 1980s. One of the most influential areas of his work focused on the important of language in learning.

Vygotsky postulated that learning involves the passage from social contexts, where an individual is exposed to the ideas of others, to individual understanding. We first meet ideas which are new to us in social situations, where these ideas are rehearsed between people, drawing on a variety of different modes of communication, such as talk, gesture, writing, visual images and action. These words, gestures and images used during social exchanges can be seen as the tools needed for individual thinking. Vygotsky considered that these interactions exist on what he called the social plane, which can be constituted by a teacher working with a class. He also maintained that, during learning, there is a transition from the social to the individual plane, during which the social tools for communication become internalised and provide the means for individual thinking.

There are clearly important links here between Vygotsky's ideas and what teachers are saying about the value of LVT for learning. One of the most popular reasons given centres on the ability of LVT to promote discussion and dialogue. As such, there may be many opportunities for students to be exposed to the ideas of others on the social plane in LVT lessons, helping to provide the conditions for individual meaning-making.

LVT can also help to build bridges with other work going in schools to promote the use of structured dialogue. One of the most significant is the Philosophy for Children movement (see *www.sapere.org.uk*), which is making great strides forward in helping young people to engage in extended discussion and ask meaningful and far-reaching questions that enhance thinking and learning.

The role of social constructivism

Vygotsky's ideas were so important and far-reaching that they gave rise to a new school of thought within psychology – the *social constructivist* perspective. This stressed the need for individual meaning-making within a social context (i.e. learning from others to make personal sense), taking account of the learners' prior knowledge.

Vygotsky placed considerable emphasis on the role of individuals and their acts of deliberate sense-making in the process of learning. It is clear that individual learners must make sense of the talk which surrounds them in lessons, and relate that talk to their existing ideas and ways of thinking. As such, learners cannot be seen as simply passive recipients of knowledge.

In recent years there has been a growing interest from the education community in methods of learning which put the learner at the heart of the process, and this is key

to the process of social constructivism. Although the ideas underpinning social constructivism are not new, it seems to have taken many years in the UK before support from teachers and the government has provided the impetus for such methods to begin to be embedded in schools. Such approaches as *active learning*, *accelerated learning* and *enquiry-based learning* have all, in their own way, attempted to emphasise the value of the student-centred approaches that are the hallmark of constructivism.

Recent work by Kinchin (2004) and Fielding (2001) has suggested that children of both sexes prefer a constructivist to an objectivist learning environment. The latter is typified by an instructional technique where students are told what to do, with little opportunity for interaction, whereas the former involves students playing a greater part in the learning process. In Fielding's study, students argued for a move away from curriculum as delivery to curriculum as the joint making of meaning. Kinchin, on the other hand, used concept-cartoons to help children to understand the difference between these two types of learning environment and state their preference. This added gravity to teachers' efforts to transform their classrooms into places where learners take a more active role.

Thinking levels

The ability of LVT to promote 'higher-order thinking' has frequently been mentioned by teachers. The idea of thinking levels has taken root in schools thanks to the important work of US educational professor Benjamin Bloom, who in the 1950s pioneered the classification of thinking types (Bloom 1956). 'Bloom's Taxonomy' (more correctly his Taxonomy of Educational Objectives in the cognitive domain), as it has become known, still exerts a powerful force in many schools today. The work of Bloom had a particularly important influence on the design of examinations. He helped to drive forward the shift from examinations focusing on factual recall to those which required students to solve problems, and reason. His Taxonomy also continues to aid teachers in asking questions that elicit different types of student thinking and suggests that there may a structured path to higher order thinking.

The research carried out by the various 'cognitive acceleration' teams have built on the work of Bloom to show the benefits of focusing on thinking in a classroom context. Best known – and most comprehensively documented – among these studies is the CASE (Cognitive Acceleration Through Science Education) project led by Michael Shayer and Philip Adey from King's College, London. Here we have a very powerful example of what is possible when the emphasis is on extending students' thinking, rather than covering the curriculum. The gains documented by the research team in science, but also in maths and English, are startling, and can be read in full in the now seminal work *Really Raising Standards* (Adey and Shayer 1994).

Teachers are increasingly eager to develop the full range of thinking among their students, but are especially keen to encourage the higher-level cognitive skills of analysis, synthesis and evaluation. LVT's role in facilitating incisive questioning, deep reflection and metacognition may just mean that it is perhaps the best placed of the recent educational innovations to diversify students' thinking.

Conclusions

So far in this article I have discussed what teachers have to say about LVT and what insights we can draw from the world of education psychology to help understand what happens when LVT is used in the classroom. But what can teachers do if they are interested in getting the most from LVT – and indeed exploring its boundaries?

Although we are some way from having conclusive answers to these questions – my own research, for example, will not bear fruit for a few years yet – there are a number of factors to be born in mind by those wishing to develop their use of LVT. As a means of supporting teachers as they move forward, I suggest a series of questions – both at the personal and professional level – that may help to focus on some of key issues to be considered.

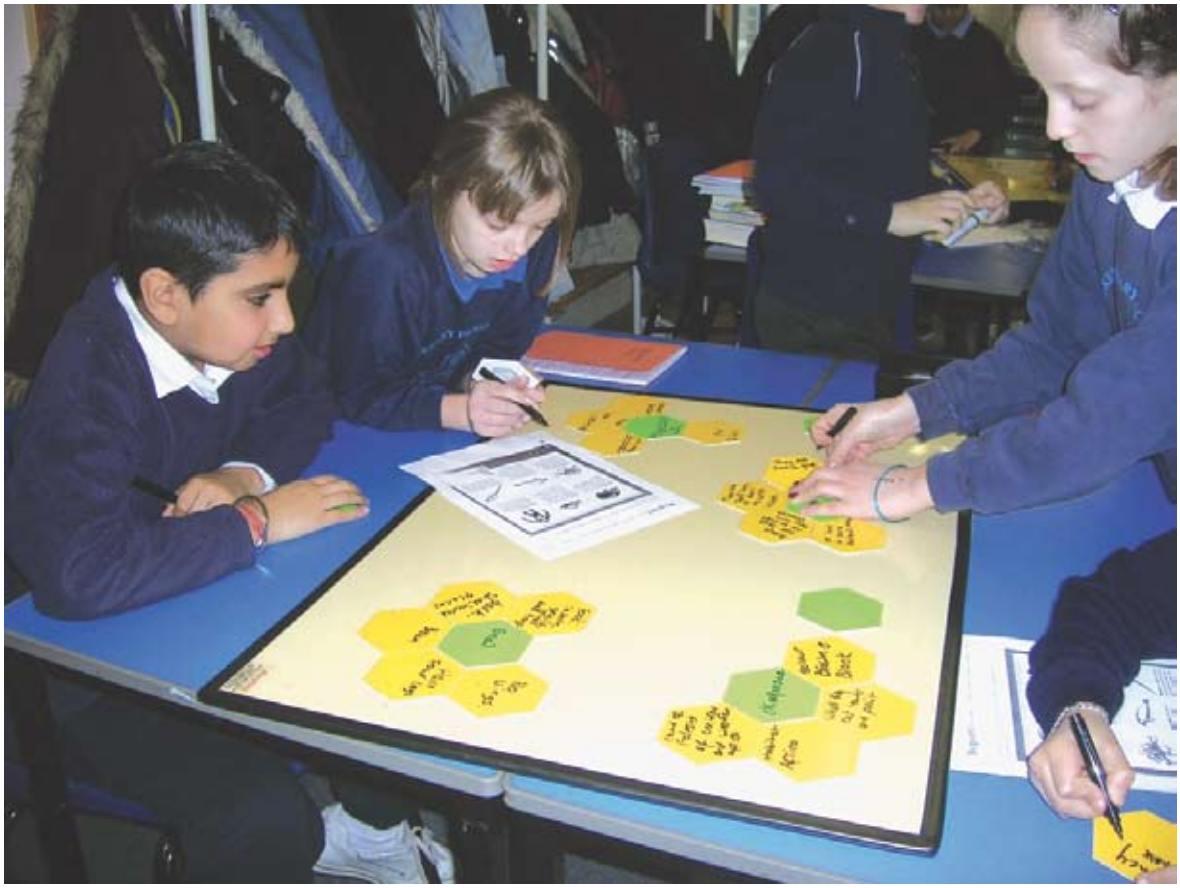
Questions about your teaching values

- To what extent are the principles of social constructivism already embedded into your lessons?
- What kinds of dialogue typify the teacher-student and student-student interactions in your lessons?
- What levels of thinking are you currently aware of in your classroom and what specific types of thinking do you value most?

Questions about your your lessons

- What learning outcomes are you seeking in the lesson(s) where you will use LVT?
- In what ways are you going to use LVT to help seek these outcomes?
- Bearing in mind what has been said elsewhere in this article, how are you going to set up your classroom to provide the maximum potential benefit of LVT?
- How will you review the effects of LVT?

It should be stated here that detailed school-based studies into LVT are still ongoing. As such, the comments made here are based on what teachers have said about LVT, rather than on scientifically testable research. Nevertheless, the body of opinion now available points to the conclusion



that LVT clearly has much to offer teachers. I draw this article to a close by encouraging you to experiment and explore its possibilities in your own classroom, while making time to place on record what you did, and your views on the educational effectiveness of LVT.

References and further reading

Best, B.J., Blake, A. and Varney, J. (2004), *Making Meaning: learning through logovisual thinking,*. Chris Kington Publishing.

Vygotsky, L.S. (1987), The collected works of L.S.Vygotsky (Volume 1), R.W.Reiber and A.S.Carton (eds), N. Minick (trans.), Plenum.

Adey. P, and Shayer, M. (1994), *Really Raising Standards*, Routledge.

Bloom, B.S. (1956), Taxonomy of educational objectives. Handbook 1: Cognitive domain, London.

Fielding, M. (2001), 'Students as radical agents of change', Journal of Educational Change 2: 97-122.

Kinchin, I. M. (2004), 'Investigating students' beliefs about their preferred role as learners', *Educational Research* 46: 301-312.

Brin Best is an education consultant and award-winning author based in Yorkshire. His doctoral thesis will be the first to assess the educational benefits of LogoVisual Thinking in schools, and will be informed by teacher and learner questionnaires and interviews, and classroom intervention studies. He can be contacted at brin@innovation4education.co.uk.