

Oliver Caviglioli argues for the use
of visual tools to focus dialogue

I Hear What You Say *and* I See What You Mean

Let's face it, there's little opposition to the idea of promoting dialogue in schools. It's become the missing ingredient for improving the quality of learning, formative assessment, writing and thinking. Any right-minded teacher is inspired by the list of dispositions associated with it. Rightly so. Just scanning Lipman's range of positive attitudes and habits is uplifting (Lipman 2003). We've only to look at successive articles in this magazine to testify to the very real impact of dialogue in classrooms up and down the country. And yet, I think there are some assumptions behind the prospect of its widespread application that need exploring.

Putting the principles to work

More than that, I'm proposing that this set of assumptions may be limiting both the breadth of its followers and the depth of its impact. The assumption is that simply liberating pupils from pervasive *teacher talk*, and installing a few protocols, will enable dialogue to flourish. Maybe. But since dialogue is based on speaking and listening, it follows that its potential is determined by pupils' capacity for developing these skills. In this respect, Alexander's Dialogic Principles (Alexander 2004), although comprehensive and illuminating, avoid the issue of how to establish them. They don't tell us how to build:

- affinity towards the culture of dialogue
- access to the skills of dialogue
- accomplishment in the social interactions of dialogue

Talk may be both the aim and the problem

In short, we may be working with dialogue on the basis that all our pupils are willing and able to engage with more *talk, talk, talk*, as if talking itself was unproblematic. I am going to argue that there are some unexplored dimensions to social interactions that are problematic. And that they can be innovatively addressed by the use of visual tools.

Our posh, middle-class schools

For a significant number of pupils all three of Alexander's Dialogic Principles—affinity, access and accomplishment—present a real problem. Few commentators seem to recognise that dialogue can seem a very middle-class activity to very many pupils. Former 'super-teacher', and now columnist, Philip Beadle (*EducationGuardian* April 17, 2007) asks whether the school is 'a middle-class institution' and if 'many teachers simply do not understand the culture of the children they teach'. He goes on to quote a headteacher from the predominantly white working class of Lewisham in London who thinks it is, saying that working-class pupils 'encounter the formal, proper, posh atmosphere of the school as if it were a foreign country.' And just how foreign must dialogue seem, with all its polite protocols and philosophising?

What anthropology reveals

Beadle's column was prompted by Gillian Evans' recent study of class and education — *Educational Failure and Working Class White Children in Britain* (Evans 2006). Dr Evans, an anthropologist, based her findings on in-depth ethnographic fieldwork research. She found an enormous cultural divide between street and school culture, and persistently unproductive mutual blaming between schools and so-called 'dysfunctional' families. Her study was designed to generate such hypotheses from its qualitative observations, but there's no handy set of figures to substantiate her claims.

Increasing disadvantage

Robert Marzano's work (Marzano et al, 2001), however, provides data and a pertinent focus for the thinking skills' community. His team assimilated the findings of the most extensive educational research in the States. Their meta-study managed to invent a statistical method that directly compares the relative effectiveness of different strategies. It provoked disquiet by finding that 'an emphasis on critical thinking actually increased the differences in achievement between minority and majority students and between students of high socioeconomic status and students with low socioeconomic status.'

Not so special after all

Furthermore, in the comprehensive *Framework for Thinking*, (Mosely et al 2005), we learn that the research on the effectiveness of philosophical approaches in schools is not encouraging. Many studies adopted to promote such approaches are methodologically flawed, whereas those with validity reveal that these approaches have an effect size reflecting only moderate gains for pupils no more, in fact, than any other average educational intervention (p. 162). So ... an approach that, after all its grand claims, isn't particularly effective and yet manages to disadvantage the working class! Now, there's a good topic for Don Rowe's 'moral thinking' (Rowe 2007).

The problems of dialogue

Let's start to unravel this situation by looking at dialogue, not from a school, but an adult perspective. Why? Because we often learn more from parallel situations in different contexts. William Isaacs has written an illuminating business book called *Dialogue and the Art of Thinking Together* (Isaacs, 1999). In it he outlines the many pitfalls to avoid in order to build 'an ecology of thinking' where participants '... are no longer in opposition, nor can they be said to be interacting; rather they are participating in a pool of meaning' (p. 40).

Reloading old thoughts

Isaacs emphasises that in debates that pass as dialogue, most participants use listening time simply to 'reload' — getting ready for their next talking slot. Not interrupting, for sure, but complying solely with the letter and not the spirit of the protocols of dialogue. Being able to assimilate others' comments and allow them to influence, bit by bit, your thoughts takes maturity. It also takes considerable concentration and working memory. Otherwise, you end up fighting to retain the integrity of the thought you're keen to transmit while trying to hold onto the latest item you've heard. This 'primacy effect' (Asch 1946) distorts the development of 'a pool of shared meaning'. More direct still is the way Isaacs characterises the quality of thinking in these situations. 'Another word for thinking', he asserts, 'is memory' (p. 5). He goes on to explain, 'What we usually call thinking is often merely the reporting or acting out of patterns already in our memory' (p. 59).

Entrenched traps

Worse still, this impulsive and fixed way of behaving is intensified by subjects that easily trigger emotional responses. For insights into this troubling situation, I turn to another non-educational book called *Difficult Conversations* (Stone et al 2000). Written as part of Harvard University's sponsored Negotiation Project, this book examines and proposes solutions to the problems of conflict. The three main traps we fall into are:

- The ladder of inference: an inability to distinguish the available facts from our observations. And from there lies an unfortunately smooth process of conflating observation with interpretation, rapidly ending in conclusion
- The two-column sideshow: a parallel world where on one side we hide what we feel and on the other is what we manage to say
- The contribution system: a process whereby we ignore our part in creating a situation we find unpleasant by attributing all the responsibility to others

Facing up to critique

At the same time we find it difficult to receive critiques. You will notice in the illustration (see Figure 1) that, although we all realise that critiques are directed at our thoughts and contributions, they are still directed *at us*. In fact, they go straight towards our face. It seems as if our very identity is being attacked. Defensiveness becomes inevitable, albeit well disguised.

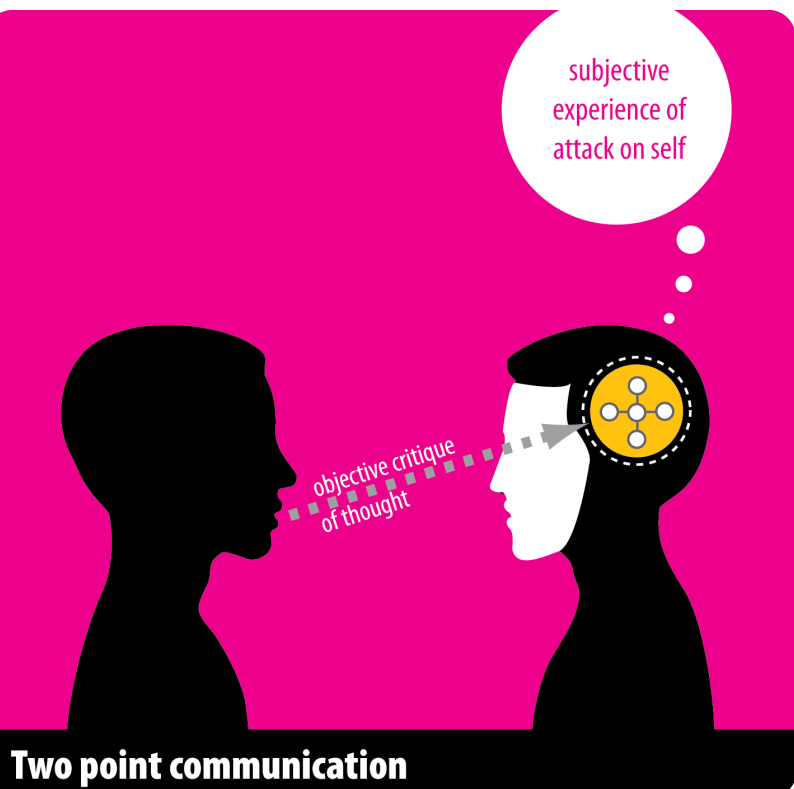


Figure 1

Doubting Vygotsky

And then lastly, we have the issue of Vygotsky. Ubiquitously quoted, the long-deceased Russian psychologist was used by Fiona Maine (2006) to explain the need for social interaction. Vygotsky claims that in the mind 'the whole thought is present at once, but in speech it has to be developed successively'. I wonder if it really works that way? And I wonder just how appealing that is to white working-class boys, or whether, in fact, the thought is not wholly present, and that there might be better ways to develop it other than just in talking. We'll soon meet my proposed solutions to the challenges to dialogue. In the meantime, we need to see what teachers are supposed to be doing to remedy the situation.

Fashion and models

For some time now, we've been hearing how teachers should be modelling learning behaviours, dispositions and their thinking processes, making the implicit explicit by revealing the hidden workings of the effective mind, and also providing models, as tools, that pupils can work with: two different uses of the word 'model' but the same notion of scaffolding development. But what exactly is a model? The Open University defines it as 'a simplified representation of reality' (Open University 2007). The explanation goes on to include linguistic models — 'in

particular the metaphors that we use in thinking and talking about situations.' So, should teachers be deliberately using metaphors to model their thinking? We'll see.

Talking in riddles

Metaphors aren't as complex or literary as you might think. It came as a shock to me when I read the book *The Metaphors We Live By* (Lakoff and Johnson 1983) to discover the unacknowledged and pervasive use of metaphors in everyday communication. More startling still, was just how essential they were to the formation of ideas. Let me explain. The way we construct abstract thoughts is to express them through the structures of the known, physical world. We talk of 'gathering our ideas together' as if we were actually assembling objects. We speak of our heads being 'full up' with information in the same way. We discuss morality in terms of 'high' and 'low' as if particular actions were physically positioned in space. In the same way, we talk about some facts being 'central' while others are only 'peripheral'. We even feel that at times we are 'sidelined' by others.

Bored and frustrated by riddles

This talk of metaphors is interesting, you may be thinking, but what's its significance? Well, if teachers are to model their thinking by talking, then they will be constantly using metaphors. For many pupils this sophisticated and embedded form of explanation is far too subtle. It's not part of their culture. And the more abstract, reasoned and philosophical the discourse, the more essential the metaphors. But where does that leave pupils with a street culture? Disadvantaged, as we found in Marzano's meta-study.

Social and work conversations

Without an explicit and shared focus, work conversations tend to become divergent and unproductive – just like social conversations. The fun of social conversations is in not having a direction, an agenda and firm protocols but, rather, savouring the freedom to meander and joke. Work conversations, by contrast, are designed to be productive. They rely on participants knowing how to focus and speak in specific ways. For this reason, literacy guru, Sue Palmer, has championed speaking frames (Palmer 2004). These structures allow teachers to explain, model, and direct productive speaking. They provide explicit knowledge about work conversations that is usually picked up by middle-class pupils through natural assimilation.

Social co-production

By definition, work conversations are collaborative ventures in productivity. Participants co-construct together. This is

how American thinking skills author Perkins believes knowledge and understanding are developed. He says, 'Learners do not construct knowledge and understanding individually, instead knowledge and understanding are co-constructed in dialogue with others' (Perkins 1999). Dialogue, then, although pleasurable and social in design, is not a social conversation but a work one. As such it needs modelling, frameworks and training before it can be most effective.

So that's the situation

So far, and not so very good. In summary, we've found that:

- Working-class pupils may have problems with the middle-class culture of dialogue
- Research doesn't bear out the claims of the Community of Enquiry approach
- Research shows that a philosophical approach disadvantages lower socio-economic groups
- Our listening is often just a time for reloading our next response
- Our thinking is often just a reporting of patterns already in our memory
- We jump, and don't notice the leap, from observation to conclusion
- We don't manage to say what we truly feel
- We blame others as a way of not acknowledging our contribution to problems
- We find it hard to deal with critiques addressed directly to us
- Our thoughts may not be perfectly formed in our minds, as followers of Vygotsky lead us to believe
- Teachers need to model their thinking but rely on the subtlety of linguistic metaphors

And here are the reasons for it

While I've listed a number of factors that keep dialogue from flourishing, they all revolve around core distinctions. Let's go through these one by one, exploring them fully.

- **Language is abstract.** It's invisible. When spoken, it disappears immediately. It can't be grasped, manipulated or viewed. It's not in itself a *thing*, merely pointing to real things, people or events. The pairing up of word and *thing* happens in the mind. Because of its nature, it requires extensive concentration and memory in order to follow its course and hold it in short-term, working memory. As a result, we tend to hold onto what's just been said (the primacy effect).
- **Language is complex.** Syntax, or grammar, is how meaning is organised with words. The words are

arranged in a linear order, with one word and sentence following after another. This is fine when describing events that do happen in this fashion. But most talking is not so simple. It's far more complex, involving other types of relationships. In order to understand these less obvious relationships, both speaker and listener need to be adept at grammar.

- **Thoughts aren't fully formed in our minds.** Well not for most people, most of the time. They need to *come out* and be subjected to manipulation, experimentation and development. Given the skills needed to exercise command over the abstract and complex nature of language, we shouldn't be surprised that a significant number of pupils find it a frustrating, if not humiliating, experience.
- **We're unaware of the stages of our thought development.** Conflating initial observation and conclusion is an everyday affair. Thought and its articulation comes so rapidly for some, that there's little time to reason or reflect. In fact, quite how ideas come together is a often a mystery to both teacher and pupil. Impulsivity reigns.
- **We identify so strongly with our face.** Dialogue involves people talking to one another and probing each other's thinking. When we do this we address one other's *mental models* – a sort of cognitive halo that shapes an individual's perception and thinking, but without them knowing about it. Mental models so strongly influence what we perceive that they become *self-sealing*, only letting in information that reinforces the model's perspective. So, naturally, when our thinking is questioned, we feel as if we are personally under attack. The more so as human interaction happens face to face. In a technical sense, it's confrontational – coming together (*con*) of two faces (*front*).

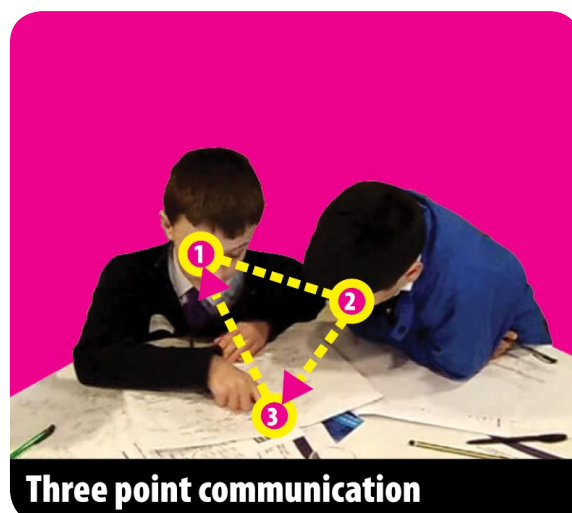


Figure 2

The essentials of a solution

Before we go straight into solution mode, let's list the requirements needed to address the points listed above. An effective solution would need to:

- **By-pass the complexities of syntax.** As language contains *hidden* relationships within its linear format, the solution would need to make these connections explicit, clear and concise.
- **Provide a structure to aid speaking.** As many pupils from particular backgrounds lack the familiarity and competency to speak confidently, fluently and coherently, they need some sort of scaffolding that prompts and cues.
- **Support short-term memory.** As the enduring problem of conversations is holding onto what's been said, the pressure on short-term memory dominates our mental energy. A solution would need to relieve this constant diversion from more productive mental activity.
- **Reduce impulsivity.** As a major component of a thinking learner is the ability to consider, impulsivity remains a direct obstacle. A solution would need to provide a natural process that conquers this rush to speak.
- **Aid concentration.** As the backbone of a rational and considered approach to thinking is the ability to concentrate, a deficit severely restricts development. A solution would need to be physical and sufficiently alluring to capture ongoing attention.
- **Embed ideas into long-term memory.** As long-term memory is built on organised and connected structures, a solution would need to project these qualities clearly and overtly.
- **Support the development of a thought.** As our thoughts, for the most part, are not perfectly formed in our minds, they need to be built up step by step. We need to be aware of these steps to avoid *jumping to conclusions*. Naturally enough, a solution would need to provide a method with which pupils can deliberately and consciously construct their ideas.
- **Display a shared focus for the group.** As a dialogue, or group discussion, is a shared activity, it needs to have a shared focus — one that overcomes the fleeting and abstract nature of language. Consequently, a solution would be one that was constant, physical and available to all participants. See Figure 3)

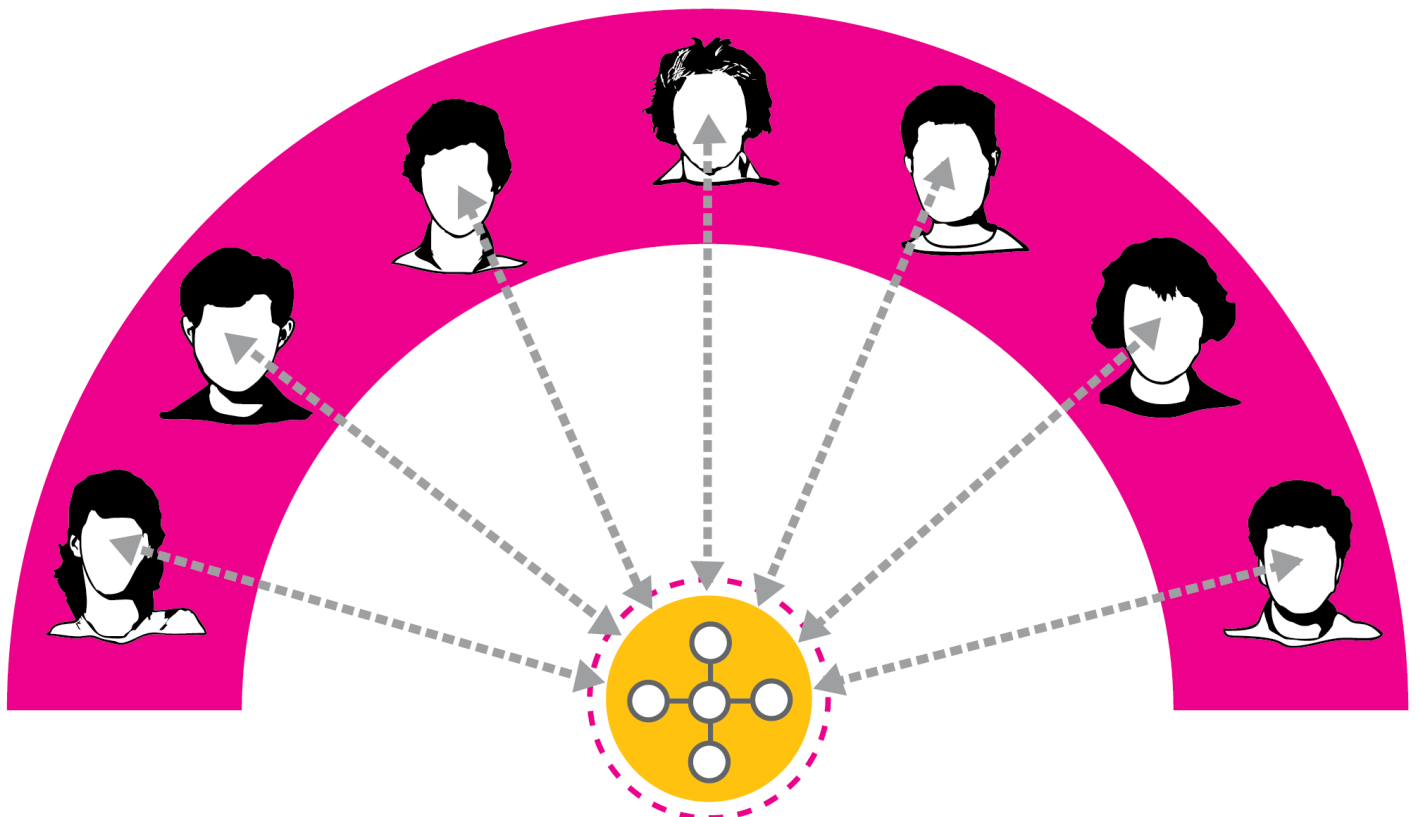


Figure 3

- Enable true co-construction of meaning. As dialogue is the co-operative building of meaning by all participants, a solution needs to make *construction* a real-life activity, not a vague concept. It needs to provide a mechanism whereby all participants can share this meaning-making publicly. This isn't happening when it's in individual minds, privately locked away.
- Resolve the face-to-face sensitivities. As dialogue is about people talking and listening to each other, addressing each other's comments, there will always be face-to-face interactions, with all the sensitivities that that involves. A solution would need to preserve the human interactive features of dialogue while at the same time avoiding the pitfalls of *face sensitivities*.
- Provide a structure to aid speaking. Visual tools, especially when supplemented by associated connectives, provide pupils with something to talk about that is static, organised and understandable.
- Support short-term memory. Visual tools capture the main points of the conversation and avoid the limiting perspective of the primacy effect. This lack of attention on the latest comment gives pupils a stronger grasp of the continuing narrative as its *history* is captured.
- Reduce impulsivity. Visual tools prompt, almost demand, pupils to stop and consider how their comments related to the shared and mutually developed visual tool of the group.
- Aid concentration. Visual tools give pupils an object to focus on. Their eyes can scan every part, building richer connections as they move around the construction.
- Embed ideas into long-term memory. Visual tools are, above all, organised thoughts. And what we do know about memory is that the more organised the information is when it enters, the easier it is to store and retrieve (Eysenck 1994).
- Support the development of a thought. Visual tools are constructed, bit by bit. Their value lies not in the finished product but in the conversations during its development. This build-up reveals, through discussion, the reasoning behind the additions and amendments. Thought is broken down, analysed and justified. Jumping to conclusions is quickly exposed.
- Display a shared focus for the group. Visual tools are central to the discussion, having been developed collaboratively. There's no confusion about what's been said or understood. There's no second-guessing what's in someone's mind or what's really meant in a syntactically complex sentence.
- Enable true co-construction of meaning. Visual tools are a physical embodiment of constructivism. They are literally constructed – not only in an abstract, private way inside individual pupils' minds, but also concretely, visually and publicly. The physical expression of that co-operation in the body of a visual tool is a constant reminder to the group of its shared endeavours.
- Resolve the face-to-face sensitivities. Visual tools offer a *third point* to the conversation. Instead of the *two-point communication* of face-to-face interaction, a visual tool provides an alternative direction for comments. By externalising thoughts in the format of a visual tool, they become, by definition, more objective and less identified with individual personality. As a consequence, pupils can direct a critique of an idea towards the visual tool and not towards the face of a peer. This makes all the difference in avoiding too personal a response. Thinking can become more mature and objective in this new triangulated communication.

The solution

Visual tools have been the victims of acute stereotyping in schools. Strong associations with 1970s' mindmaps have pigeon-holed them solely as creativity tools for idea-generation, whereas, in the words of the Open University, they:

- 'Summarise how ideas or processes are connected much more neatly than in words
- Show multiple relationships between 'things' in a non-linear format
- Help your own understanding of written text
- Capture your own ideas and interpretations of a complex situation
- Represent structures that do not readily exist, except in the mind
- Sharpen your understanding of the ideas and open your eyes to alternative views
- Suggest new and unexpected relationships between ideas
- Allow the relationships between parts of the situation to be seen at the same time as the parts themselves
- Summarise complex situations, allowing you to appreciate the complexity while seeing the individual components and the connections between the components
- Give you new insights into a situation by making you think carefully about the components and connections and by helping you learn more effectively' (Open University 2007).

Applying the solution

When visual tools are applied to dialogue, they can directly address the issues revealed earlier in the following ways:

- By-pass the complexities of syntax. Visual tools show multiple relationships explicitly.

Learning to use the solution

To benefit fully from the, as yet untapped, potential of visual tools, you will need to learn the conventions for their use. And that means going beyond the out-dated, stereotyped thinking about visual tools. In the words of the Open University, 'To convey their [visual tools'] full meaning, they must follow conventions, much as a list of words must follow grammatical conventions to become a meaningful sentence. Understanding and being familiar with the conventions allows you to convey a wealth of meaning' (Open University 2007). Simply allowing pupils to draw an array of words and arrows in haphazard, even creative, fashion isn't tapping into the potential of visual tools to bring the power of dialogue to all.

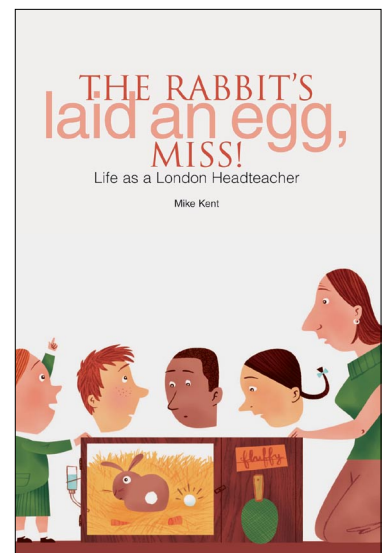
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