NEW TO TEACHING

Small changes can produce big results!

Megan Shenton, *a final-year trainee teacher, describes using 'The Big Question' in her science teaching in a move away from objectives*

In my final year of a four-year teaching degree at Nottingham Trent University, being introduced to a new concept was not only unexpected but also highly refreshing. Throughout my teaching practices, learning objectives were a fundamental aspect of every lesson I taught. My understanding, through observations of practitioners and university lecturers, was that learning objectives were introduced at the start of a session as a means of indicating to the children what skills or knowledge they should gain by the end. Although significant within lessons, the purpose of using learning objectives was not always clear to me. On my final practice as a trainee, I was lucky enough to be introduced to 'The Big Question' approach, which encouraged me to re-evaluate my own pedagogical choices of using conventional learning objectives.

At first I naively assumed it was simply a rephrased learning objective and its introduction at the start of the lesson seemed like a long process, in which five minutes of valuable teaching time had been lost. However, once I had experienced engaging with the Big Question from a teacher's perspective, I truly understood the positive implications it could have for my practice, my assessment and the children's learning.

What is the Big Question?

The Big Question is an innovative pedagogical choice, where instead of implementing a learning objective, a question is posed at the start of the session to begin the learning journey. The children are encouraged to read and consider all key words within the question. After allowing time to think, children have the opportunity to discuss their thoughts with their peers. Once they have consolidated their ideas, they are asked to share what they think are the important words and what they mean to them. This acts as a quick and easy form of assessment for learning (Assessment Reform Group, 2002), where the teacher can make amendments to the lesson where necessary, addressing any emerging misconceptions. This dissection of the Big Question places responsibility on the children, allowing them to take ownership of their learning (Holligan, 2013). Upon discussing the question, a list of success criteria can be established, creating a personal understanding of what attainment will look like throughout the session. These success criteria act as a means of self-assessment for individual children and of formative assessment for teachers during the session and while evaluating children's work.

How is it different from an objective?

The Big Question allows the children to create their own success criteria; this informs what they do in the lessons and creates a more purposeful and effective set of personalised success criteria for individuals. It supports continuous self-assessment

Key words: Planning Questioning

within lessons, where the children are revisiting their self-generated success criteria. The children can take ownership as they are empowered through being involved in the process. Finally, by creating their own success criteria, children are able to self-differentiate their work, again giving them further responsibility and ownership of their learning.

The Big Question promotes discussion within the classroom more readily than a learning objective. While generating success criteria children get the opportunity to discuss their opinions with their peers. This can often be done through the use of 'talk partners' and is particularly effective when children have opportunities to discuss with those of different abilities. This pedagogy supports a socio-constructivist view of learning, where children can challenge ideas from others to extend their own understanding (Dawes, Mercer and Wegerif, 2004; Crossland, 2015).

Finally, when using a learning objective, teachers must generate their own questions within the lesson to support higher-order questioning. Research suggests that open-ended questions support higher-order thinking skills, but teachers tend to ask closed questions. Use of the Big Question can facilitate teachers' questioning skills, where an open-ended question can be used at the beginning of a lesson to initiate deeper understanding. Teachers can plan ahead using the Big Question, considering what further questions might arise as a result.

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How is it formed and planned for?

There are a number of steps to planning the Big Question:

- **Step 1: Consider the initial learning objective. What should be learned and what is needed for this to happen successfully?**
- **Step 2: Identify knowledge children need to already hold to be successful. An effective Big Question will make it clear to the children what prior knowledge they are drawing upon.**
- **Step 3: Establish what the children will learn and understand, building on the prior knowledge to introduce new concepts or content.**

Once all of these things are considered, a list of key words can be made and these form the structure of your Big Question for that specific session (see Table 1).

An effective Big Question will allow the children to interpret what they will be doing within that session and how they can show progression from one session to another. Therefore, it is essential that the Big Question incorporates all the key concepts and vocabulary that will be used throughout the lesson.

The benefits of using the Big Question

There are extensive benefits of using The Big Question. While supporting a socio-constructivist approach to teaching, it also supports a dialogical teaching approach within the classroom (Alexander, 2008). This produces a positive impact across the entire curriculum, specifically within science where talk is an essential tool for developing and articulating understanding across a range of abilities.

In my last teaching practice, the Big Question proved to be a vital tool, which I used as a form of assessment for learning across the curriculum. I found it most beneficial at the start of a lesson as it enabled me to instantly tell whether the lesson was pitched at the correct level of difficulty for all of my learners, allowing for on-the-spot adaption where necessary. Within each session, observations of the children's dialogue and sharing of ideas as a whole class allowed me to interpret their understanding of any key vocabulary. This analysis of their understanding informed any questioning throughout the session, ensuring that the children were engaging in higher-order thinking.

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Finally, I found that it had a positive impact on the children's learning. Beginning the lesson with a question allowed for rich discussion, promoting higher-order thinking from

Table 1 An example of developing a Big Question on 'everyday materials'

Learning objective	To be able to identify a variety of materials
Step 1: To be able to	use their knowledge of materials to compare properties and identify specific materials
Step 2: To know	what a material is, different properties of materials, different names of materials (wood, plastic, glass, metal, water, rock)
Step 3: To understand	there are similarities and differences between materials, how to compare properties of materials
Key vocabulary	material, identify, properties, variety
The Big Question	How can I identify a variety of materials based on their properties?

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the outset. This instantly engages the children with the lesson, acting as a hook for them to decipher the key words within the question. It means that children are continuously motivated as they strive to answer the Big Question by the session's end.

What does a typical lesson look like in a science context?

Within a scientific context, the Big Question can promote all areas of the curriculum including 'working scientifically'. The statutory guidance for working scientifically continually mentions the ability to answer questions in a variety of ways; the use of a Big Question supports this with some ease. In my final placement I was based in a mixed year 1 and 2 class (ages 5–7), which meant that the attainment level across all the children was vast. Use of the Big Question supported teaching this range by promoting self-differentiation, allowing me to focus on effective teaching strategies, rather than spending all my time adapting resources. Our focused topic was 'everyday materials', and Table 1 shows the structure I used to form my effective Big Question.

This Big Question seemed rather complex, using quite sophisticated vocabulary for 5–7 year-olds. However, after being exposed to this intricacy of vocabulary over time, the children were not fazed by it and used what they already knew to decipher what the question was actually asking. Once introduced, I gave the children time to engage in dialogue with their peers. They were able to support each other in picking out the key words from the question and were able to tell me specifically what we would be doing in the lesson. When discussing the key words, they considered which were the most important, which suggested a deeper understanding. Their prior knowledge meant they already knew names of materials and a variety of properties. To them, this session was about knowing how to compare these materials and that to be successful they had to design a process for identification. After collecting ideas, the children were able to self-differentiate and decide how they were going to identify the materials.

In relation to Bloom's Taxonomy, my initial learning objective only allowed for the children to access the 'knowledge' aspect, where they would be recalling names of materials based on remembered properties. In comparison, my Big Question took the children's thinking to much greater depths. They had to consider how they were going to compare materials, supporting the 'application' aspect of Bloom's Taxonomy. They also had the opportunity to notice trends and make predictions based on their prior understanding. Finally, they accessed the 'evaluation' tier of Bloom's Taxonomy, when considering the effectiveness of their process of identifying materials compared to another child's.

Implications for future practice

The Big Question promotes 'outstanding' teaching and learning in accordance with Ofsted (2015). To name a few criteria suggested by Ofsted, outstanding teachers should use questioning highly effectively, identify common misconceptions, check pupils' understanding and plan lessons very effectively. The Big Question promotes and endorses all of these criteria, allowing for constant questioning that checks for understanding and misconception. This innovative pedagogical choice provides me with confidence that I am giving the children the best learning experience possible and that I am supporting them in developing key skills that they will need throughout the whole curriculum and later on in life.

Beginning the lesson with a question allowed for rich discussion, promoting higher-order thinking from the outset.

Having seen it in practice and having witnessed its impact on both the children and the teachers within school, I feel confident that the Big Question can only impact positively on my practice and on the children's learning. Consequently, going into my first year of teaching, I will definitely be an advocate of the Big Question across all key stages and all curriculum areas. I will be using it at every possible opportunity, allowing me to secure progression throughout my class.

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