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TransformED NI:
Transforming Teaching and Learning



Checking for understanding:

How to know what they are thinking



CHECKING FOR UNDERSTANDING

By InnerDrive



One of the biggest challenges facing educators is ensuring that students are learning what they are being taught. Alongside helping students acquire the intended knowledge, it is equally important to identify and address misconceptions before they become embedded in long-term memory. Regularly checking for understanding helps teachers monitor learning in real time, reinforce key concepts through retrieval and correct misunderstandings before they become more difficult to change.

WHY CHECKING FOR UNDERSTANDING MATTERS

Working memory has a limited capacity (Miller, 1956), meaning that if students are required to process or summarise too much information at once, they are more likely to experience cognitive overload. When the amount of incoming information exceeds what working memory can manage, it can hinder learning. Therefore, we can't assume that what we have taught them is what they have learnt.

The risk of cognitive overload is particularly high when students have not yet developed a secure understanding of the underlying concepts. Regularly checking for understanding helps ensure that misconceptions are identified and addressed before students rehearse and embed them in long-term memory (Rosenshine, 2012). It also helps teachers gain valuable insight into what might need to be revisited, clarified or retaught before moving on.

THE WORST WAYS TO CHECK FOR UNDERSTANDING

In his book *'What are they thinking?'*, teacher David Goodwin highlights the sort of questions that fail to effectively check for understanding. These include 'Ok?', 'Everyone understand?' and 'Any questions?' (Goodwin, 2026). He highlights how few students are likely to admit that they are not OK or that they don't understand in front of the class and how silence should not be mistaken for understanding.

4 TYPES OF QUESTIONS TO CHECK FOR UNDERSTANDING

Four different types of questions can help check for understanding, each tapping into a different thought process. These are:

1. *Factual questions*

Factual questions require students to recall specific pieces of information and usually have a clear right or wrong answer (Tofade et al., 2013). These are quick to ask, quick to answer and quick to mark. They check for understanding of the foundational building blocks of knowledge.

2. *Convergent questions*

Convergent questions ask students to combine a range of information and apply it to reach a single, evidence-based conclusion. Although they typically have one correct answer, they draw on skills such as comprehension, application and analysis. As such, they can check a broader range of knowledge. Research suggests that convergent questions are particularly effective at uncovering and correcting misconceptions, helping students build a more accurate understanding of a topic (Voss et al., 2021).

3. *Divergent questions*

Divergent questions are similar to hypothetical 'what-if' questions. As such, there is no right or wrong answer. These questions are asked to check for students' thought process and logical thinking. Rather than recalling facts, they promote higher-order thinking by asking students to analyse, evaluate or create. These questions work especially well when facilitating discussion. However, they require more classroom time and can lead conversations in unexpected but valuable directions.

4. *Evaluative questions*

Evaluative questions ask students to weigh evidence, compare ideas and justify their reasoning. For example, asking students to compare and contrast two concepts requires them to retrieve knowledge about both before evaluating the similarities and differences. Because they involve retrieval alongside deeper thinking, evaluative questions provide rich insight into the depth of students' understanding.

TIMING YOUR QUESTIONS

At the start of a lesson, checking for understanding can help you know how much students know about a topic. This is known in the research as a 'pre-question'. Research suggests that this can improve learning, potentially by increasing curiosity and focus on the task (Carpenter & Toftness, 2017). This may be because pre-questions activate prior knowledge, highlight gaps in understanding and encourage students to pay closer attention.

'Hinge questions' are used at key points during a lesson to determine whether students are ready to move on or whether concepts need to be revisited (William, 2015). They provide teachers with immediate feedback and help guide instructional decisions. These often take the form of multiple-choice questions. To ensure every student participates, mini-whiteboards can be particularly useful. Evidence suggests that the use of mini-whiteboards improves learning and on-task behaviour (Marsh et al., 2021).

After teaching the content, 'elaborative interrogation' is a particularly effective way to check for understanding. This involves asking students 'why' questions, such as 'Why is this true?' or 'Why do you think that?'. These questions encourage students to explain ideas in their own words and connect new knowledge to what they already know (Pressley et al., 1987). By requiring students to actively construct meaning, elaborative interrogation deepens understanding and strengthens memory.

FINAL THOUGHTS

Checking for Understanding is about gathering meaningful evidence of learning and using that information to inform what happens next. To ensure checking for understanding is effective it needs to ensure that a range of questions are asked, that these questions are used at strategic times throughout the lesson and that all students participate in answering them. By asking purposeful questions, identifying misconceptions early and encouraging students to retrieve and explain their thinking, teachers can have a better grasp of what they do and don't understand.

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ADDITIONAL RESOURCES: BLOGS & VIDEOS

Why and how to check for understanding - innerdrive.co.uk/blog/check-for-understanding

Rosenshine's sixth Principle of Instruction: Check for Understanding - innerdrive.co.uk/blog/rosenshines-sixth-principle-of-instruction/

Worst ways to check for understanding (and how to do it better) - innerdrive.co.uk/blog/checks-for-understanding/

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