Johnny 15 minutes later. It looks like Johnny is getting the hang of it, so you instruct him to finish the entire story on his own. To begin with Johnny couldn't write a single sentence. By the end he was writing entire paragraphs on his own.

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8. Withholding answers for self-repair

Learning happens when students figure things out for themselves. If you simply give the answer or most of the answer, students don't learn how to use and apply concepts. They also forget the answer pretty much straight away.

As explained in the previous 2 strategies, adults tend to instinctively give the answer when confronted with a question. This is a normal response because toddlers and really young children ask a huge number of questions because they have an innate curiosity about the world around them. Children and adults also use these interactions as a way of improving language skills and vocabulary. Adults are conditioned to eagerly provide answers to children whenever asked. For simple questions such as, 'is that an elephant?', a simple and direct answer is appropriate. The child could never figure out this answer as it's a fact-based question.

Things are hugely different in the classroom setting however. As a general rule, TAs should never provide a direct, immediate answer to a student's question (within reason of course). Giving such answers fails students because they don't get the opportunity to go through the process of figuring them out (self-repair). The process of trying to solve a problem helps students to become more familiar with the concept underpinning a task.

They have to look closely at all the information available and think deeply about the problem. By giving them an answer or partial answer via a hint, there is no deep thinking at all.

This process is a more natural way of students acquiring knowledge and skills that will stay with them well into the future. For example, many children learn to play video games by trying and failing over and over. Yet once a child has mastered the game, he or she could go pick it up 5 years later and almost instantly play to the same level of skill as they did half a decade ago. Now imagine if an adult or older sibling had played most of the game for a child to 'help'– sure he or she would finish the game faster – but 5 years later the child's skills would be nowhere near as good.

Allowing students to figure things out for themselves also helps them to 'learn how to learn' (which is known as 'heuristics' and 'metacognition'). In other words, they develop more independence and self-confidence to figure things out without having to depend on an adult. You can imagine how successful a child can become when he/she has the skills and confidence to learn both at school and at home without having to ask an adult for help every few minutes.

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9. Concept understanding vs. task completion

If you were asked by a teacher to 'help Joshua with his maths worksheet', you would be forgiven for thinking that the teacher is expecting the worksheet to be 100% completed. Most untrained people (e.g., parent helpers) and even many TAs believe that the goal is to finish the worksheet in this situation. However, this is almost always not the case (although some tasks do actually need to be completed).

The real goal is not task completion (finishing the whole worksheet), but concept understanding (Rubie-Davies et al., 2010). 'Concept understanding' refers to the student's understanding of the broad steps required to complete a task, the relationship between each step, and why each step is important overall. In other words, the goal is for the student to develop a *deep understanding* of the task (as opposed to a mere *surface-*

level understanding). The worksheet is simply a tool (a scaffold) used to help the student achieve conceptual understanding.

By understanding the concept, the student can complete similar tasks regardless of the context and also do more advanced tasks. Say a student (Chloe) struggles to convert mm to cm (e.g., 22 mm = 2.2 cm). If the TA gives the answer or provides way too much 'help', she will finish the worksheet easily and quickly. The teacher might even think that Chloe can now do these types of problems.

Important

The focus of TAs on task completion instead of concept understanding is a worldwide problem. A UK study reported that TAs can negatively impact on students' progress for this reason (Slater & Gazeley, 2019). For all tasks, consider whether the purpose is concept understanding or task completion.

However, suppose the teacher sets a more difficult task in the next lesson (e.g., convert 28cm to mm). As Chloe can only convert mm to cm (with help, and not the other way round), she doesn't know what to do and needs to rely on TA support. She is now even more confused and behind the rest of the class. If Chloe understood the concept however (i.e.,10 mm = 1 cm), she would have no problems with this question even if she has never done a conversion in reverse before. In fact, if she understood the concept, Chloe might even be able to convert metres (and even kilometres) with only a little help. In addition, she could then learn about litres and millilitres, feet and inches, and even acres and hectares! From there, she could be given real-world problems to solve. However, without spending the time on day 1 to develop conceptual understanding, she continues to struggle with converting mm to cm.

10. Explicit instruction for TAs

Explicit instruction is not a technique per se, but a style or way of teaching. It is the type of teaching that you often see on TV and in movies where the teacher is at the front of class asking questions, explaining things and having students do activities or exercises to practice. Explicit instruction is very teacher-centred, high-paced and highly structured, which can be intimidating for newcomers.

Explicit teacher is the most common form of teaching and is used by teachers of all grades and subjects. Many teachers only use explicit instruction while others use it most of the time but not always (they may also use other styles which are beyond the scope of this book e.g. constructivist learning or direct instruction).

Because TAs regularly 'teach' mini-lessons or activities ranging from of 10-40 minutes albeit with a small group (sometimes a single student), they need to know how to structure this time. The basic principles of explicit instruction are as follows:

1. Use a traditional lesson structure of explanation, practice, and review (another way to think of it is introduction, practice and summary; or beginning-middle-end)
2. Ask plenty of questions and provide plenty of feedback
3. Use the techniques in this chapter especially chunking and the levels of instruction.
4. Have students practice individually, in pairs, in groups and as a class.
5. Keep activities fast, short and sharp and very controlled/structured e.g. 'you have 4 minutes to do 2 questions'. Explicit activities have high momentum.
6. Set very specific and clear goals and focus only on achieving those goals by the end.
7. Other techniques commonly used (but not required) include think-alouds, worked examples, graphic organisers, metacognitive skills and reflection.

Hint: apply explicit instruction to any group that is struggling to keep on task or who are easily bored. As the activities are so fast paced, students don't have time to be off-task or distracted.

It is important to not confuse Direct Instruction with Explicit Instruction. DI was invented in the 1960 and is a highly scripted way of teaching (the teacher literally reads from a

script which includes questions to ask the class – all students learn the exact same thing). There are various types of DI and often people use the term DI when they are actually talking about explicit instruction.

Here is how a TA might apply EI to a shorter maths lesson with 3 students:

1. Show students what you want them to learn (modelling, set a goal) – 5 minutes
2. Have students practice Question 1 with you (shared learning) – 5 minutes
3. Have students do 'Question 2' on their own – 3 minutes
4. Go through the answer as a group – 3 minutes
5. Have students do Question 3 on their own – 3 minutes
6. Go through the answer as a group – 3 minutes
7. Repeat the above for 3 questions in pairs – 10 minutes
8. Go through the 3 questions as a group – 5 minutes
9. Review – 8 minutes

Total time = 45 minutes for 6 basic maths questions. During each step of the above, the TA would ask questions, provide prompts, use the levels of instruction and chunking, and keep the pace quite fast.

An important but often overlooked aspect of explicit instruction is **reflection** (which is often done at the end with the conclusion). Reflection is simply having students think about how they went in the lesson and it doesn't take very long – a minute of two usually. You can have students think about what they did well, what they need to learn more about, whether they worked hard or could have done better etc. A common question is not about the topic, but about the way in which the student went about the process of learning – for example, "how could you improve the way you tried to {learn about x; become better at x}?" It takes students a few practices to be able to answer these types of reflective questions.

While you could ask students simple questions such as those above, another option is to use a structure to frame their response. You may want to use the same structure every lesson (but not forever as students eventually get bored of doing the same thing every lesson). Here are some ideas:

- Ask What? So what? Now what?
- Do a 1-minute mind map
- 3-2-1 (3 thing I learnt, 2 things I am not sure about, 1 thing I don't know)
- Exit tickets (students answer 2-3 questions at the end and hand to the TA)
- PMI (plus, minus, interesting) – can be applied to a topic or personal performance e.g. plus = positive things about the activity, minus = negative things, interesting = points of interest.