

Chapter 3. The principles of scaffolding

Having introduced the concept of scaffolding in the previous chapters, we will now discuss it in more detail. This chapter covers the idea of process success criteria (introduced in Chapter 2) that are key for identifying the things you might need to scaffold. Finally, ahead of more detailed coverage in Chapter 4, we introduce our framework for interaction to support you when scaffolding pupils' learning.

What is scaffolding?

'Scaffolding' is a term which is regularly used in educational discussions and in books, but is not often explained by those who use it. It gets used in different ways by different people, so as a result its meaning can lose clarity.

Reflection activity

Have you heard the term scaffolding? If so, how would you define it?

Ask a few teachers how they would define scaffolding.

Ask your SENCO how he or she would define scaffolding.

What are the similarities and differences between the definitions?

Look at the answers to the questions in the activity above. The following words are likely to appear in the definitions you collected: help; support; differentiation; steps; breaking down; chunking down; structure; independence; contingent; talk; interaction. We would use some of these words when defining scaffolding, but we would avoid others.

Many of our discussions with teachers, SENCOs and TAs have suggested that scaffolding has become merged with ‘help’, ‘differentiation’ and ‘support’. We do not think this is helpful, so we avoid using these words when describing scaffolding. To see why, we need to explain each of these in turn.

‘Help’ is a very general term that could mean anything from doing the task for a pupil, to providing a very small piece of information at the right time to assist their progression with the task. Help is not a specific enough term to describe what a TA needs to be doing when working with a pupil.

‘Support’ is often used interchangeably with help and is also a fairly non-specific term. We talk about adults working with children and young people to provide emotional support or behavioural support, as we did in our descriptions of the different types of TA roles at the start of this book. In terms of learning, we take support to mean anything that enables the pupil to access the task; so, we rule out the kinds of help whereby the task is done for the child. Support might also take the form of resources, such as a writing frame or multilink blocks. These things can form part of a scaffolding approach but are not, in themselves, scaffolding.

‘Differentiation’ is the process of designing tasks appropriate for the learner. We looked at task design ideas in Chapter 2, where we discussed the importance of ensuring that the task is within the pupil’s zone of proximal development. The key point here is that differentiation is done *before* scaffolding can take place.

So, if none of these terms describe scaffolding, what is it? In fact, it has a very specific meaning. Scaffolding was first used by Wood, Bruner and Ross (1976) to describe the way an adult can provide tuition to a pupil who is learning a new skill or concept. Scaffolding describes the ways adults provide *structured help*, so the pupil can reach a specific goal. As a TA, you are the adult providing structured help to individuals and groups. Until now, the educational world has not paid enough attention to the way we might apply the principles and practices of ‘proper scaffolding’ to the work of TAs.

The starting point is the task or activity, which should have been differentiated appropriately by the teacher. It is important that you do not change the task. Scaffolding is not about modifying it, but simplifying what the pupil has to do in order to carry it out. So the adult *allows* the pupil to attempt each part of the task by herself, but provides structured help for the parts that she finds difficult. As the pupil becomes more skilled, she should be given more parts of the task to perform, until she can eventually perform all aspects independently.

The scaffolding process

Figure 3.1 shows the process of scaffolding:

[Insert Figure 3.1 here]

Let’s take an example of a common classroom task, handwriting. Lorelei is learning to form the lower case letter ‘t’. Alfie, the TA, provides a clear model of how to write the letter ‘t’ correctly for Lorelei. He provides a tracing sheet with guide lines for her to follow and shows her how to use it. Alfie provides a verbal commentary which describes what Lorelei is doing as she writes, and this helps her to remember the finer stages of the process should she forget where she is. All of these things would be in stage 1. At stage 2, Lorelei improves. She uses the tracing sheet without Alfie showing her how. He provides less verbal commentary as she takes on more responsibility for remembering each step of

the process. Instead, Alfie asks Lorelei questions to prompt her to remember what to do next. The amount of support that Alfie gives will fade significantly during stages 1 and 2. Fading is the gradual withdrawal of support given to the pupil when it is no longer needed. At stage 3, Lorelei can write a lower case 't' independently, competently and with confidence.

It is really important that you monitor how much the pupil is able to do, or is confident to try for themselves, and step back to allow them to attempt tasks independently. This can be difficult to do, particularly if you are assigned to work with a pupil on a one-to-one basis, or if the pupils you work with have become used to high levels of support. It is very important to withdraw, because if TAs provide too much support or do too much of the task for the pupil, the likelihood of them becoming dependent on adult support increases. As pupils routinely outsource their learning to the readily available TA, the chances of them developing independence greatly reduce. They will become stuck at stage 1, never trying the parts of the task that they find more difficult.

Some pupils require a lot of support initially, but you need to consciously withhold support to see if they are able to do more by themselves. Stepping back really helps to move them into stage 2. You can always offer an additional scaffolding strategy if they struggle. To use the handwriting example from earlier, if Alfie noticed that Lorelei was having difficulty forming the letter 't' at stage 2, he might prompt her with a question, such as: 'What could you use to help you make your t's?' This places the responsibility on Lorelei to think of what might help her: a tracing sheet, thinking back to Alfie's commentary, or talking herself through the action of writing a 't'.

This means that there will be times when you are not actively 'helping' pupils. But this does not mean that you are not doing your job! In fact, an effective TA is one who is *not* constantly interacting with pupils. Instead, they are allowing them to try things for themselves, observing their progress, and only intervening for a specific reason. Giving pupils space to try things and praising their efforts, whatever the outcome, supports them to develop the growth mindset that they need to succeed in the long-term.

If stages 1 to 3 are completed successfully, then the pupil will have assumed responsibility for the whole task and be able to carry it out confidently and to a sound level of mastery. Once the pupil has taken responsibility for completing the activity, they will be able to self-scaffold when adults are not at hand; for example, by asking themselves: 'I'm not sure what to do next. How can I find out?' These are actions that, with repetition, develop even greater levels of independence, of course with the option of 'checking' with the adult if really needed.

We are often asked how long it takes for a child to progress through the stages, but this depends on the task and the pupil. The gap between stage 1 and stage 3 might be five minutes, half a lesson or several lessons (depending on the needs of the learner). The important thing is that you are clear that the pupil can and will take responsibility for all parts of the task, and you are constantly encouraging and nudging them towards this.

Contingency

Accepting that pupil responsibility is the basis for effective scaffolding, we can now add another important ingredient. 'Contingency' is the act of responding moment-by-moment to what the pupil has just done or said. This involves asking diagnostic questions so that you can judge what the child knows and can do. If we take our handwriting example once more, the open questions that the TA could ask include:

‘Where do you put your pencil first?’

‘Which direction will you move it in?’

‘What are you going to do next?’

Questions like these can be helpful in finding out what the pupil knows and can do. The feedback that you get from the pupil (the answers they give you) can help you to decide how much support you need to give for different parts of the task. At all times, you need to be thinking: ‘What is the least amount of help that I can give?’ You can always give more help if it is needed, but you must start with the least possible amount. So, if the child does not know how to describe the direction they need to move the pencil in, you might say: ‘You start to move it and then tell me’. If the child is still having difficulty, you might then say: ‘You move your pencil and I will describe what you are doing’.

Contingency highlights how fine-grained the process of good scaffolding is. Every move matters. We will be exploring particular scaffolding strategies later, and looking at them in more detail in Chapter 4. What is really important is that you ask well-timed and appropriate diagnostic questions and observe the progress of the pupil during the task. These are your cues for calibrating the amount and type of support you give. This is what contingency means.

Observing and listening to children’s responses carefully and applying appropriate talk strategies in response are learnable skills. The better we become at these things, the more likely it is the answers from pupils, on which we build our responses, will grow in quality. Eventually, pupils will be able to ask and answer these questions for themselves, and have developed the internal monologue that defines self-scaffolding.

So scaffolding can *only* be provided through interaction. This is why it is not the same as differentiation or loosely qualified terms like ‘help’ and ‘support’, which do not necessarily involve adult-pupil interaction.

Reflection activity

Review the definitions of scaffolding that you gathered. How far do they match our definition?

Process success criteria

Before you can scaffold pupils’ learning, you need to know what you are aiming for and how you will know that the task is being carried out successfully. Success criteria are the key to this. Shirley Clarke (2014) has written a great deal about success criteria and we have used her concept of process success criteria (or mini-goals) to underpin our framework.

The success criteria that are often used in classrooms relate to the *product*: the thing – usually tangible, like a piece of writing – that must be produced. These will often be provided (or developed with the pupils) as a list at the beginning of the lesson. For example, if the task was to describe the properties of 2D shapes, the success criteria might be that pupils need to:

- Name the shape.
- Say how many sides the shape has.

- Say how many vertices the shape has.
- Say how many right angles the shape has.

This list will be used at the end of the lesson for pupils to self assess against. Product success criteria tend to get used because the teacher usually only has the product to consider when marking. In other words, because when it comes to doing the marking, the teacher has to have something ‘on paper’ to have any sense of whether the learning was achieved this drives the selection of success criteria.

However, when you are working with a small group or an individual you can observe the *process*; that is, **how** the child is doing the task. As we have said before, TAs get to do this more than teachers, so it is essential that: a) TAs know how to interact with pupils in these situations and b) how to provide teachers with information about how pupils are doing (more of which later).

Process success criteria are more useful as they provide a greater understanding of exactly what a pupil can do in relation to an activity. As process success criteria might not be seen in the finished product, the teacher may not see it in the work she is marking. However, these criteria can help to demonstrate that a pupil has made progress, even if it is not detectable in the finished task. Put another way, setting and working towards product success criteria means that we can fail to record and respond to important steps of the learning journey.

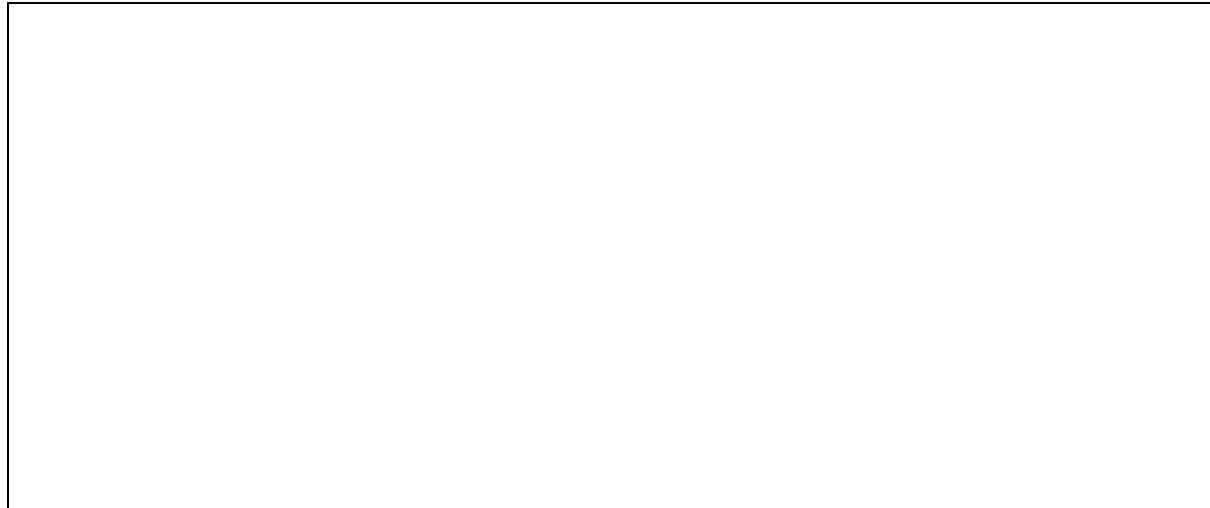
Let’s think about the success criteria in the example above. In response to the question, ‘How many sides does a square have?’ Raneer has written in her book, the answer ‘5’. Later that day, when marking her work against the product success criteria, Raneer’s teacher sees that she does not know that a square has four sides. Having not spent any time with Raneer during the lesson, he has little idea of *why* she had written ‘5’. There are several possibilities: has Raneer misnamed the shape; has she miscounted when counting up the sides?; or does she not know what a ‘side’ is, so had a guess? All the teacher would know from marking her book is that this product is incorrect. He has no feedback in relation to what he needs to do next to help Raneer, if indeed she needs help, because her answer may be the result of an honest mistake.

Process success criteria take the overall task goal (the product) and split it into the different steps needed to achieve that goal. Process success criteria are all the steps or elements required in order to complete the task successfully. Each step is a ‘mini-goal’. In order to scaffold effectively you need to be clear about each mini-goal (exactly what they are), so that you can assess how much the pupil is able to do in relation to each one. Think again about the protractor task in Chapter 2. Learners need to know and understand what these mini-goals are and have feedback **as they work** about their progress towards each one in turn.

Reflection activity

Let’s take an everyday example from outside the classroom. You are, no doubt, an expert at making sandwiches and have made hundreds over the years. So, imagine going into your kitchen to make a cheese sandwich: this is your overall task goal.

Write down every step that you would take to make your cheese sandwich. Define each step as a mini-goal; these are your process success criteria.



We are also experts at making cheese sandwiches! Below are our steps to making one, written as mini-goals:

- 1) Wash your hands.
- 2) Take two slices of bread.
- 3) Butter one side of each slice with a knife.
- 4) Slice the cheese with a sharp knife.
- 5) Place the slices of cheese on one of the buttered sides.
- 6) Place the other slice of bread, buttered side down, on top of the cheese.
- 7) Slice the sandwich in half with a knife.

You may have written more than seven steps, or fewer. The precise number of steps is not what is important here; look at the language that we used. You will notice that each of our process success criteria starts with a verb. This is very important as it makes the action the step mini-goal describes *observable*. This means you can watch or listen to the pupil demonstrating that they can do that mini-goal. This is why *process* success criteria are very different from *product* success criteria.

To use the sandwich example, a teacher looking at a cheese sandwich produced by a child some time after the event would be unable to judge whether some of the processes involved had been met. For example, did the pupil wash their hands; is it possible to tell just by looking at the finished sandwich? The teacher would also be unable to tell how much support the child had with each mini-goal. For example, did the child slice the cheese or did someone else do it for them? The teacher would still be unsure to what extent the child has developed cheese-cutting skills. A TA working with the pupil would have been able to observe whether the child had carried out each mini-goal independently, and record it on behalf of the teacher.

The cheese sandwich example is quite straightforward because it is a practical task. We have found that it is easier to produce mini-goals for practical tasks, where the overall process can be broken down into a clear set of sequenced steps. Also, with such fine-grained steps, there is little or no room for confusion or variation in how the task can be approached; there are only so many ways one can butter a slice of bread! It is much harder to think through a more abstract task goal or one that does

not have a linear set of steps. Try the task below because it is an example that we are more likely to see in the classroom: writing an account of a school trip.

Reflection activity

Write down all the process success criteria required to write about a school trip. Define each mini-goal that a pupil would need to do in order to produce an account of a school trip.

You will probably have found this more difficult to think about, compared with the cheese sandwich exercise. Having some subject knowledge is important here, as you need to know the features of a recount text. Your response to the school trip activity is likely to have covered key skills such as: state the key events; put the events in chronological order; and write using the past tense. You would have picked up this information by tuning into the teacher's talk, though for a relatively straightforward task like writing about a school trip, it is likely you will know what the key skills are anyway. However, there are tasks for which you will find the processes more complex to identify, depending on your own subject knowledge. This is why we argue that it is important for TAs to have the opportunity to discuss their role in lessons with teachers beforehand. At the very least, TAs need to be present for the teacher input part of the lesson, as this is when the teacher will explain the process that the pupils will need to follow, and give the key skills to be developed or practised.

It is really important that you are clear about each different part of the task (the mini-goals). The teacher you are working with should provide you with the process success criteria before the lesson, but we know that – and our research confirms – that even with the best intentions, this is not always possible. So in such circumstances, you should use the time when the teacher is giving the whole class input and explanation of the task to draft a list of process success criteria. You can check these with the teacher at a suitable break in the lesson, when the teacher has finished their input and the children are settling at their tables.

Reflection activity

Think of two recent lessons and the tasks you were asked to support pupils with. List the process success criteria for these two tasks.

Task 1

Task 2

Discuss the lists with the teacher(s) who set the tasks. What are their thoughts on your lists?

Your role when working with pupils, individually or in groups, is to determine which process success criteria each pupil can complete independently, and which require adult intervention; later, we will look at the different levels this intervention can take. Let's take a very straightforward example. One of the first things pupils need to be able to do when they start school is to hang up their coat in the correct place. This task can be split into the following process success criteria, which we have couched in terms of the steps the pupil might say aloud to themselves:

What do I need to do when I come inside? Hang my coat up. So I have to:

1. Find the coat rack.
2. Find the correct peg.
3. Hang my coat up on the peg.

Initially the pupil might have each step *modelled* by a TA, who will tell them that they need to hang their coat up, take them to where the coats are, and show them how to hang up their coat. The next day the adult might ask the pupil what they need to do when they come in. If they remember that they need to hang up their coat, but cannot remember where, then the adult might:

- Ask them if they can point to where the coats are.
- Ask them to look at what the other children are doing.
- Ask them if there is someone they could ask to help them (the preferred answer here is another child).

You will have noticed that the TA has avoided simply telling or showing the child what to do. Instead, the TA uses scaffolding strategies that offer a partial clue or hint to help the child think for themselves. You can probably think of other scaffolding strategies that might be used. The key thing is that the adult must try to avoid taking them to the coat area again unless it is clear that the child really cannot find it independently, or with help from a peer. The same principle applies when using any process success criteria. The role of the TA, remember is:

- To let the pupil attempt to complete each mini-goal independently.
- To provide the least amount of support first, when intervening.
- To withdraw support as soon as possible to allow independent work.

Reflection activity

Look back at the previous exercise in which you developed process success criteria.

Which of the processes did the pupil(s) take responsibility for initially?

Which of the processes did the pupil(s) take least responsibility for initially? (You may have ended up completing this step)

Which processes did the pupil(s) take more responsibility for as the task progressed?

Remember: each process success criterion is a mini-goal. The pupil will need to know what the goal is and to have specific feedback on their progress towards this goal **as they work**. This is an essential part of the contingency working we have described; the feedback you give is contingent on what the pupil has just done or said.

As children become more skilled and confident, they will need less feedback and less frequently. In order to do this, and to move to stage 3 – full independence – pupils need the skills of being able to judge their own progress towards goals. We will cover this aspect of scaffolding in chapter 5.

A summary of scaffolding

Before we conclude this chapter, a brief summary of the key features of scaffolding is helpful. So, scaffolding:

- Happens only through interaction.
- Relates to the specific mini-goal (process success criteria) that the pupil is working on.
- Happens in the moment, in response to what the child has just said or done.
- Is informed by careful observation, diagnostic questioning and asking the child to ‘talk aloud’ as they work.
- Can be more accurate and precise as more detailed information about the strategies the child is using becomes available.
- Relies on encouraging pupils to ask and answer the question ‘what do I do next?’ effectively and routinely.

- Is defined by giving the least amount of support and consistently ensuring that the pupil takes as much responsibility for the task as they can.

Reflection activity

Think about your own practice and interactions with pupils. Given what we have discussed so far, is there anything you might change about what you do?

How can the teachers and TAs you work with help you to achieve these changes? Discuss these with your colleagues.

A scaffolding framework for TA-pupil interaction

The majority of the early work on scaffolding was done in relation to adults interacting with individual children in a ‘parent’ role in informal contexts, or in a more formalised ‘tutor’ role, like a schoolteacher. In everyday classrooms, however, the opportunities for sustained one-to-one teacher-pupil interaction are often very limited. Research on classroom interactions from 2012 suggests only 3% of pupils’ interactions are of this kind; less than two minutes for every hour in the classroom (Webster, in press).

It would not be possible for a teacher working with a class of 30 pupils to effectively scaffold learning for each of them, bearing in mind that the starting point and potential for independence for any one learner will be different and will vary with every activity. However, when TAs are deployed effectively, they are in a prime position, working with groups and individuals, to scaffold learning in the way we have discussed. So what strategies can you use to do this?

Figure 3.2 shows our scaffolding framework which we have used to structure our guidance on how TAs can interact with pupils.

[Insert Figure 3.2 here]

At the top of the framework is self-scaffolding, which offers the highest level of pupil independence. At the bottom of the framework is correcting. Correcting offers no pupil independence, because the adult is doing all the work. Below, we introduce each layer of the framework, and to provide some

illustration, we will use the example of a task of writing an argument for or against school uniform. This will help to show what each of these levels of scaffolding looks like in practice.

Self-scaffolding

A pupil who is able to self-scaffold is an independent learner. This is our aim for *all* pupils. Pupils able to self-scaffold can:

- Plan how to approach a task.
- Problem-solve during the task.
- Review the success of the task and how they approached it.

Self-scaffolders who are writing their arguments about school uniform are able to:

- Write a list of the advantages and disadvantages of having a school uniform (as a planning tool).
- Write whether they agree or disagree with having school uniform.
- Provide reasons for their argument, with relevant examples.
- Give counter argument, for balance.
- Write why they do not agree with the counter arguments.

Prompting

Prompting represents the first level of adult intervention, when a pupil is unable to self-scaffold their way to the accomplishment of a mini-goal. Providing a prompt means saying or doing something to encourage the pupil to draw on their own knowledge of what to do when they do not know what to do. Saying nothing is a useful prompt, as extra thinking time is sometimes all that is needed. If this doesn't work then you need to say something which encourages the pupil but doesn't give any idea of the strategy that the pupil needs to use, so that they need to think of an appropriate strategy from ones they know. In our example, the TA might say something like:

- 'What do you need to do first?'
- 'What's your plan for structuring your writing?'

Clueing

Sometimes pupils have the strategies or knowledge they need to solve the problem locked in their minds, but find it difficult to access them. A clue gives the pupil a hint in the right direction and puts them back on the road to independence. As we have described it, clueing sounds a bit like prompting; so what is the difference? Think of it this way: a prompt means to get a pupil to think of an appropriate strategy; a clue is a means to get a pupil to think of a *particular* strategy that you know they know. So, in our example, a clue would sound like:

- 'What did the teacher do before she started her writing?' *The answer is write a list of advantages and disadvantages.*
- 'Do you agree or disagree with school uniform? Why?' *The answer will provide the structure for the first section of writing.*

- ‘You have said that not wearing school uniform is more expensive. How much more expensive are normal clothes?’ *The answer provides an example.*

Modelling/instructing

When a skill or strategy is completely new to a pupil, it is helpful to have it modelled by someone who is independent and confident in this area. Depending on the task, pupils might be given step-by-step instructions to support them in practising a skill or strategy, thereby reducing the need for adult help.

In our example, the TA might say:

- ‘Have a look back at the board. What has the teacher written on there?’ *There is a model of an advantages/disadvantages list on the board.*
- ‘Look at the list of instructions. You have done number 1. What does number 2 say?’ *This models how to follow a list of instructions to complete a task.*

Correcting

Correcting is simply providing the right answer or completing the task for the child. This requires no independent thinking on the part of the child, and is to be strenuously avoided. TAs operating within this layer of the framework can (as it were) ‘put words into the pupil’s mouth’, and so give the pupil the next sentence they could write. So in our example, the TA might say:

- ‘So, you have said you don’t like having school uniform. Is that because it isn’t very fashionable?’

Sometimes a TA response might sound like a correction but is actually working as a model. For example:

TA: You have said that you don’t like having school uniform. Why not?

Pupil: Not very fashion.

TA: It is not very fashionable? Ok, so you can give that reason can’t you.

The TA’s response ‘It is not very fashionable’ might be considered as correcting the pupil’s response, but is actually working as a language model. Models such as this are very important. For example, pupils learning English as an Additional Language, or with speech and language needs, will need to have language modelled a great deal. The key is in knowing whether the pupil would be able to self-correct if prompted or if they need a correct model to be given.

Summary

In this chapter we have discussed the concept of scaffolding in some detail, providing the precise definition that we have used as the basis for this book. It should now be clear why we see the term ‘scaffolding’ as a more useful way of explaining the way TAs should interact with pupils, compared with harder to pin down terms such as ‘help’ and ‘support’. We have looked at contingency as a trigger for interactions, and given much thought to how we phrase and sequence *process* success

criteria, and why teachers need to choose these over product success criteria. We have also introduced a framework to support your scaffolding interactions with pupils. We will explore the layers of this framework in much more detail in Chapter 4.

References

Clarke, S. (2014) *Outstanding formative assessment: Culture and practice*. Abingdon: Hodder Education.

Webster, R. (in press) 'The classroom experiences of pupils with special educational needs in mainstream primary schools – 1976 to 2012. What do data from systematic observation studies reveal about pupils' educational experiences over time?' *British Educational Research Journal*.