JUST-IN-TIME TEACHING: Planning and facilitating workplace teaching

SCOPE: this guide is for you if you want to know how to teach students in the workplace when you have had time to plan your teaching. 'Workplace' is defined broadly; out-patient clinic, hospital ward, surgical theatre, biomedical lab, home visit, etc. If you have not had any time to plan teaching, see the 'Teaching ad hoc in the workplace' guide in this series. Note that the tips in both guides complement one another and you can combine them.

TOP TIPS:

Top tip 1: Plan teaching to align with students' needs.

Top tip 2: Select, or create, SMART learning objectives.

Top tip 3: Create a session plan using a 'set-body-close' structure.

Top tip 4: During the set - think 'MMUCKO' (Mood, Motivation, Utility, Content, Knowledge base, Objectives).

Top tip 5: During the body - think 'chunk and check, active learning, key points'.

Top tip 6: During the close – recap, summarise, check learning, revisit objectives, signpost.

Top tip 7: Prepare your patients and involve them where possible.

Top Tip 1: Plan teaching to align with students' needs.

It is important to plan teaching to align with your students' needs. A good way to do this is to have learning objectives. Learning 'objectives' are a fine-grained version of learning 'outcomes', but we will use these terms interchangeably. Ask the students for their personal objectives and their curriculum learning outcomes. Students can tell you what these outcomes are, but it is helpful to find them yourself so you can plan your teaching.

MBChB learning outcomes are in the students' virtual learning environment, (VLE), **Learn**. University of Edinburgh (UoE) employees can access this. Clinicians without UoE status should use the Medical Licensing Assessment (MLA) content map to guide the writing of learning objectives. NHS Lothian's Medical Education Directorate (MED) are creating Undergraduate Educator Guides for medical school placements which will summarise learning objectives: email loth.meducators@nhs.scot to join the MEDucator network and access these guides as they become available.

Top Tip 2: Select, or create, SMART learning objectives.

A learning objective is an outcome statement that captures the knowledge, skills or attitudes a learner should be able to exhibit following instruction. For example: *"By the end of this session, you should be able to …"*. Learning outcomes are broader than learning objectives and they usually apply to the end of a course, rather than a specific learning event, (eg taking a history from a patient). The principles involved in constructing objectives and outcomes are the same.

Learning objectives should ideally be SMART: specific, measurable, achievable, realistic and time-bound. They will help you decide what to teach and how to teach it and will give your learners a clear picture of what to expect. For example: "By the end of this session, you should be able to: 1. **take** a history of …, 2. **explain** the importance of …".

It helps to choose a good verb! This table gives some examples:

Level of learning (Bloom et al 1956)	**Example verbs**	**Example learning objective**
Remembering	identify, name, list, recognise	"list the differential diagnoses of …"
Understanding	describe, explain, summarise	"describe the reasons for …"
Applying	apply, choose, carry out	"examine a patient with …"
Analysing	compare, analyse, categorise	"analyse a set of results for …"
Evaluating	appraise, choose, interpret	"judge when it is appropriate to …"
Creating	plan, build, predict, compose	"formulate a management plan for…"

Top Tip 3: Create a session plan using a 'set-body-close' structure.

A session plan with a 'set-body-close' framework can help structure any teaching you do. Below is an example. Top Tips 4-6 describe the components of the set, body and close.

	What will I do?	How long?	What do I need?
Set			
Body			
Close			

Top Tip 4: During the set – think 'MMUCKO'.

The set is the beginning of your session and it is very important. The purposes of the set are to create an environment conducive to learning, to capture your students' attention, to motivate them, to get a sense of their learning needs and to orientate them to what they will learn. In a clinical environment, the set is likely to take place away from patients.

Think **'MMUCKO'** for the set: mood/motivation, utility, content, knowledge base, objectives. **Mood/motivation**: how will you motivate your students and get them in the mood to learn? Simply being friendly and learning their names can really help. **Utility:** how will they know that your teaching is useful? Explaining the relevance of your session is important, because sometimes it is not as obvious to them as you would think. **Objectives:** what will they be able to do, (or do better), by the end of the session? Ask them for their objectives and then refine these together. **Content:** what will you do to meet these objectives? Tell them how you will use the time and everyone's roles: give them ground rules for the clinical area and working with patients, (eg how you will form around the bedspace, how to respect patients' dignity and privacy, how to adhere to relevant policies, how any feedback will be given). **Knowledge base:** what do they already know about the subject? Ask them directly, or find out by giving them a short activity, (eg 'Think of patients you have seen who have (condition X). In pairs, take a minute to tell each other what you understood about it and what puzzled you, and then I'll ask you to share that with the group').

Top Tip 5: For the 'body' - think 'chunk and check, active learning, generalisable points'.

The body of the session simply refers to the main component of it. In a clinical environment, the body will probably be spent in a clinic room, or on a ward, with patients.

Think about how to divide the session into chunks, how to check understanding, how to support active (as opposed to passive) learning, and how to highlight the key points, especially the ones that can be generalised to other situations.

Dividing teaching sessions into chunks can help sustain students' attention. After each chunk, check they have understood things before moving on. It can be helpful if each chunk of the session asks the students to do slightly different things because when people have a variety of experiences this can enhance learning, (Kolb, 1984). For example, you could incorporate an opportunity for them to do something, then a reflective task and then an activity where they generate some ideas of their own.

'Active' learning is usually better than passive experiences. So, if you have a group of students and one of them is interacting with a patient, it is best if the other students are not just standing watching. Give them specific things to look for, or to think about, while they are observing. The work that the observers do could then contribute to a feedback discussion that you have as a group later.

Highlight the key points as they crop up. You may think they are obvious, but your students probably don't. Tell them how any specific learning can generalise to other situations.

Top Tip 6: For the 'close' – recap, summarise, check learning, revisit objectives, signpost.

The close is the ending of your session and it is very important. The purposes of the close are to ensure that the students are absolutely clear on the key points and to suggest how they can consolidate their learning. In a clinical environment, the close is likely to take place away from patients.

A good closure recaps what has happened during the body of the session and summarises the key points again. It can also be helpful to revisit the session's learning objectives because this allows you to check whether the students feel they have met these and it should also give them a sense of achievement. It is important to check their understanding at the end of a session. You can do this in several ways, such as by asking direct questions, eg 'Please tell me two things that you have learned and one thing that is unclear'. Students should then be directed to opportunities for further learning.

Obtaining written feedback on your teaching helps you to improve and allows you to gather evidence that you are teaching. Make sure you ask questions to ascertain what your students have learned, (such as the questions in the previous paragraph). The MeFB online platform is a helpful tool for gathering feedback.

Top Tip 7: Prepare your patients and involve them where possible.

Some patients may not wish to be part of teaching, and this must be respected. The majority are receptive to being involved, enjoy it and learn from it, (Peters and ten Cate, 2014). Consider a range of ways in which they may like to be involved: some might want an active role, such as giving a student feedback themselves. Ask for their consent and explain exactly what will happen. In some situations, it may feel appropriate to have discussions with the students in the presence of the patient, so if this is the case be clear about it. With ward-based teaching, try to find out your patients' agendas for the day so your teaching does not conflict with planned investigations or treatments (eg trips to X-ray). Do not worry if patients' signs or symptoms are ambiguous: real life is what medicine is all about!

SUMMARY: When you have advance notice of teaching it is important to plan it. Try to establish the students' learning needs: refer to their VLE, (**Learn**), or the Medical Licensing Assessment (MLA) content map as a guide. Once you know what your students need to achieve, you can plan your teaching accordingly. Choose an appropriate outcome, or write 1-3 achievable learning objectives yourself. Decide how you will help students meet these objectives using a session plan with a 'set-body-close' structure. Get into the habit of seeking feedback: the MeFB online platform works well. Prepare your patients well and invite them to take an active role in the session if they would like to do so.

WHERE NEXT? This resource has been developed by the Clinical Educator Programme (CEP) in collaboration with NHS Lothian's Medical Education Directorate (MED). The CEP is a free CPD programme for clinical educators in SE Scotland. For more on the themes discussed in

this guide, you may like to register for the CEP Planning and Evaluating Your Teaching course.

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