Transit Training and Workshop

Transit is an early-warning tool designed to identify students at risk of failing before they sit summative assessment. The key points of the project are:

- Transit can identify students at risk effectively
- Many invitees still go on to have significant difficulties
- Most interventions like this have only a weak effect on performance, and we should not anticipate substantial improvements
- Students in difficulty cannot accurately self-assess, and experience challenges with metacognitive skills and threshold concepts
- BUT they do not recognise this and tend to focus on test-wise behaviour instead (wanting to know the exam questions/type of exam questions in advance)

  The key goals of the workshop will be to:

- Provide an introduction from near-peer tutors on their experiences of university with an emphasis on identifying how to improve
- Begin developing metacognitive and self-assessment skills to cope with self-learning.
- Examine threshold concepts using PBL as a stimulus

Training notes

The suggested workshop programme is given below. Guidance notes are provided in italics. We have indicated our overall goals and some suggestions. Ideally, we would hope for each point for a discursive or interactive element to be used which can be agreed in training.

Key points to think about as tutors:

How can you make each of these points interactive?

How can you support students in difficulty when they don't realise they are struggling?

How can you best support students when you might not be able to identify those who are doing well from those who are not?

13:30 Introduction and outline from near-peers.

The students may not know each other and may be concerned as to why they have been invited. It is especially important that this section is dealt with sensitively. We have suggested you use an ice-breaker of some sort at the end of this session before doing group work.

Why the students have been invited

The students have been identified based on measures of formative assessment, attendance and completion of administrative tasks. The goal is to support them to maximise their success. Many of them will be fine, but some of the invitees will be experiencing some difficulties. They will be unlikely to volunteer this so you need to be conscientious and appropriate at all times and be open to students volunteering information but not pry or encourage them to disclose it. Try to make it clear to them that this workshop ran last year and seemed to be useful for students then. Emphasise sensitively *that we are good at identifying students who benefit from this type of support.*

Output:

"What we wish we'd known when we started."

A lot of students in years 3-5 describe the transition to year 1 as quite a shock. In this section it would be very helpful to discuss sources of information and advice that would be useful for them to know. Discuss among yourselves what you think would be especially useful to a first year student who might not be sure what they are doing or how to prepare for assessment. Think as well about how some of these students might be experiencing difficulty but not realise it – and may only realise it in January after they fail.

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Coping with unexpected challenges

Following on from the above, it is useful to identify common challenges in year 1 and how to deal with them. Some of this may be how to cope with lower than expected marks, pastoral issues that affect performance, or low staff contact time compared to school. You may want to merge this in with the above, or use case-studies from your own experiences. Many year 1 students are not familiar with struggling until they reach medical school (as they have typically had outstanding grades until this point) so it is often worth addressing this issue.

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Questions from students

Field any questions they might have. It will also be useful to do either an introduction of everyone or an ice-breaker before the group session starts.

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14:15 Metacognitive skills (Optimising performance)

"Metacognitive skills" is a general term for approaches to thinking: How we learn, the tactics we use while studying, how we evaluate information and plan. Extensive interviews with Edinburgh undergraduates have shown that students in difficulty have very poor metacognitive skills and we intend here to provide them with advice on how to learn effectively and prepare for university-level assessment.

For this section you may want to use the formative exam as an exemplar. Copies are provided.

Goal setting – how to plan for assessment.

Students in difficulty commonly report struggling to decide what to study, to what depth, how much and when. By contrast to school where there is a clear syllabus, it can be challenging for them to decide the required level of depth. Advice on how to set goals will be

*useful. Consider also identifying any 'bad' strategies you think can create problems –
examples might include over-learning (some students have reported reading dozens of books
on a topic, thereby failing to cover other topics in enough depth) or very poor time
management due to cramming.*

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How to obtain more information – where to go if you are confused.

*Some students say they aren't sure how to follow up on a lecture or tutorial. Try to provide
them with useful tips that will give extra information without being overwhelming – a
chapter in a textbook (rather than an entire book) or a study group. You may want to discuss
your useful experiences of asking lecturers for information, or other staff members.*

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How to adjust your goals based on experience

*We often find that students who have failed assessment continue to try the same approaches
and often claim they would succeed if they had access to more exam questions, rather than
adjusting their underlying approaches to learning. We want students to be able to monitor
their goals (did I spend as much time in the library as I said I would? Did I make notes on the
chapter?) and thereby think critically about how they can improve and be realistic (I won't
spend 8 hours in the library, but I can manage 2 hours). Setting up a loop whereby they self-
evaluate is important.*

Output:

Individualised learning – how to engage with lectures, tutorials and readings in a way that suits you

Students can struggle with the structure of university education. Some find it hard to draw information from lectures, others do not engage with PBL, and some find digesting course reading to be difficult. Individualised learning is where the student focuses on the tools that help them the most. Here, emphasise the usefulness of trying lots of approaches to learning but being willing to devote the most time to the approach that yields the best results for the individual student. A student who works best with others might find tackling difficult problems in a peer study group to be most effective, whereas another might prefer to do extensive reading in private. Students should always be aware of course requirements, but beyond that they should not feel bound to a particular strategy if there are others that work well for them.

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14:45 Threshold concepts

Some concepts or bits of knowledge act as barriers. Until the student has mastered the concept, they will be entirely unable to proceed to more advanced material. Identifying threshold concepts and learning them is crucial. We often do this without realising it, but for students in difficulty identifying their own threshold concepts is difficult and they need extra help to deal with them. Once the student masters the threshold concept they will be qualitatively better at tackling course material – the transition to understanding it is often described as "transformative."

The paper provided gives an example of PBL as a threshold concept. Understanding why students study in a PBL format, what PBL is supposed to impart, and how PBL helps their

future practice is difficult and many students struggle with it. Consequently, this makes it hard for them to learn in this format which affects their performance elsewhere (PBL performance is strongly correlated with most assessment scores in the medical school). Students who understand the purpose of PBL perform better, and later-year students tend to understand the goals of it (even if they don't find it their preferred method).

In this section we would like you to help them develop a basic understanding of threshold concepts and try to apply them (e.g. to PBL).

Introduction to threshold concepts

The simple explanation above should be enough. Focus on the idea of them as portals or barriers – they need to understand the concept in order to move forward. Be clear they could be anything – important concepts in anatomy, surgery, psychiatry have all been used as examples. It may be useful to ask them explicitly about what they think of PBL here, and why.

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How to identify them

Be clear that this is challenging and requires careful thought. It may be useful for them to discuss it with peers. But generally, there will be a point in a course/module/topic where they feel they become unable to continue, and the course material or teaching ceases to make sense. The tactic should be to go back to the point where they last felt confident and identify the concepts or learning outcomes at the transition – the point where they could no longer follow the material.

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How to engage with threshold concepts

You can link back to the metacognitive skills section here. Be clear that trying to 'go around' the concept by reading ahead or focussing on other material is unlikely to help. Instead, the concept must be understood to engage with later material. Identifying useful reading material, peer support, or staff contacts will all be useful. Trying novel approaches (looking for videos or podcasts explaining the topic, or books/papers outside their usual reference) may be worth trying if usual tactics are not helping.

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Example using PBL

As indicated above, success in PBL is a good measure of future performance and teaches important skills. You can walk them through an example of how it can help later on, and how it is intended to support team based working. It is also ok to be clear that this may not work as well as it ought to in practice, and provide advice on how to negotiate cases where the theory and practice don't match up as well as desired. The key point is to help them apply this to other areas of learning – especially topics they might be confused about. It may be useful to ask them if they can think of any other threshold concepts they have encountered or are struggling with.

Output:

15:30 Review

A discussion of the workshop. Final take-home messages.

Ask them how they think it has gone and give them any final messages you think are important. After they leave we can have a final discussion about it.

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