

Consolidating maths learning – Sophie Chalmers

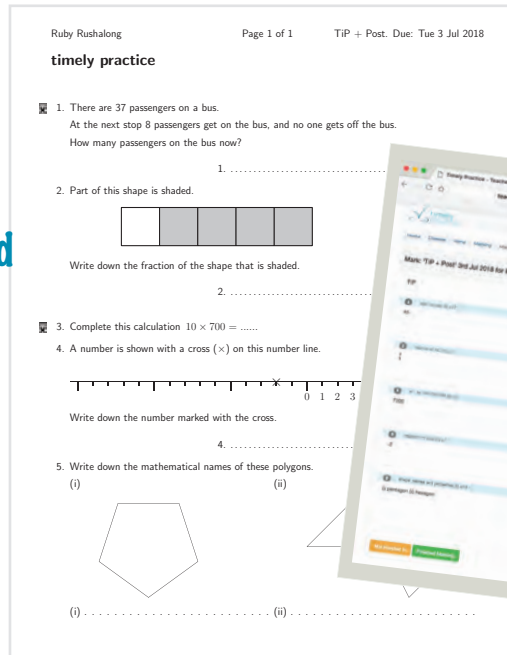
timely practice from SRS Learning is a web-based app that helps students from years 7 to 11 practise foundation maths questions in a methodical way that enables them to consolidate and master the various skills involved.

The best time to revisit something is just before you have forgotten it. The app monitors students' progress through sets of daily, personalised assignments. Teachers set the topics their group is working on in the system, and the app works out the ideal frequency for different types of question for each individual based on their performance in previous assignments. This requires teachers to mark students' work before generating the next assignment, which makes the app better suited to groups of fewer than 20 students.

That said, marking is simple. If a student requires support to answer a question and subsequently gets it right, the teacher can mark it correct on their worksheet, and indicate in the program if a small or larger amount of help was given, so the system knows to keep the interval between those questions short until mastery is achieved, when the revisit interval might stretch to over a year.

'I can mark 12 sets of assignments from students in the Year 7 nurture group in about 15 minutes,' says Jeff Hughes of Parliament Hill School in London. 'The work that would normally take up my time – analysing who needs to practise what, and how much – is done for me by the program, which automatically produces personalised assignments, complete with the student's name at the top. I use these as a 10-minute starter activity alongside my normal teaching, although I can vary how many questions I include. If students have a big stack of questions they need to work on, I might devote more of the lesson to timely practice to ensure smooth consolidation.'

The questions are based on the National Curriculum and are broken down by topic. Each topic is split into between four and 12 bite-size chunks of learning, including word-problem questions, allowing easy differentiation. What the worksheets all have in common, however, is that they practise just one thing at a time. 'It's not about problem solving but about developing knowledge and routine skills,'



A sample worksheet and its associated marking scheme

Mr Hughes comments. 'It makes planning easier because I can see exactly what each child needs to work on.'

Kirsty Behan, another maths teacher at the school, says: 'Last year, all my students took the Entry Level Certificate in maths. When they sat their mock GCSE in April, they could see that many of the one-mark questions were similar to what they had been working on in timely practice. They performed significantly better than the previous year's students, who hadn't used the app. This could be for a number of reasons, but student feedback indicates that timely practice really supported their ability to access the exam and remember things well enough to get the answer right.'

When she started using the program, Ms Behan wasn't convinced of its efficacy because the methodology is so different from her normal practice. 'If I am working on fractions with a middle set, I will spend a whole week on it and cover all four functions. However, the timely practice developer recommends that I focus on just one function for one or two lessons, and then move on to a completely different topic, while the students consolidate their learning with timely practice. I have found that this pedagogical approach suits the lower sets so well, I am redesigning the school's maths schemes of work to incorporate it into lessons for lower ability students all the way through the school.'

Paul Williams at Crofton School near Fareham uses timely practice as an

intervention for two one-hour sessions a week, in addition to students' normal maths lessons, taking them out of other lessons to facilitate this. 'We identify up to a dozen students who are struggling and they

work on timely practice practice-learn worksheets and assignments for half a term. As the weeks go by, these groups get smaller as the students grow in confidence, although there remains a small core group for whom maths continues to be a significant challenge, and they stay on the intervention for a longer period.

'The school has been using timely practice for about a year. Children work on a wide variety of skills in each session, and work is individualised

based on previous learning. As students get more confident with aspects of maths, they repeat the same learning less often and start more challenging questions. This way, they quickly work their way up to quite complex skills.'

'I can see that it will have an impact over the years,' he concludes. 'Even after just a year, we can see children who were struggling in lessons starting to succeed. The system won't let them move on until they have mastered a topic, something that is really difficult to achieve in a whole-class setting. This is where the intervention comes into its own.'

timely practice and its accompanying resources from SRS Learning Limited are free until July 2019. In return, the developers ask for comparative data and access to schools to offer training. www.timelypractice.com



Jeff Hughes is the Key Stage 5 coordinator and a maths teacher at Parliament Hill School in London



Kirsty Behan is a maths teacher at Parliament Hill School in London



Paul Williams is SENCO and director of inclusion at Crofton School in Stubbington, Fareham