

## Fully-Featured Teaching and Learning Platforms

Fully-featured teaching and learning platforms are software products providing comprehensive and integrated libraries of maths exercises, lesson plans, teaching resources and / or videos for students. They also provide automated grading and individual or cohort analytics for teachers and maths departments.



### Which challenges does the model address?

- **Teacher capability and confidence** – One of the core challenges for early-career teachers or those teaching maths out-of-field is their limited understanding of maths content and pedagogy. These platforms provide rich content banks of maths exercises, lesson plans and assessment tasks with worked examples to build these teachers' capability and confidence. These resources also provide a strong foundation on which these teachers can rely to deliver high quality maths teaching.
- **Teacher capacity and efficiency** – Two aspects of a teacher's workload that are significantly time consuming are (a) lesson planning and (b) writing and marking assessment tasks. Streamlining these tasks is one of the core claims of these software products.
- **Differentiation** – In a maths classroom, student ability levels can differ by up to 9 years. Understanding what ability level students are at and the best way to teach them is a major challenge for teachers. These platforms provide analytics tools that teachers can use to monitor the progress of different cohorts in their classes and menus of options to address their different learning needs.



### Target Groups

We heard that fully featured maths teaching and learning platforms are typically designed to support maths teachers from upper-primary to year-12 students. We heard these platforms have value for:

- **Out of field teachers or less confident maths teachers** – These platforms can provide supplementary content support as well as exercises for students that are automatically marked.
- **Time poor teachers** – Time poor teachers can use these platforms to replace traditional assessment and marking. Platforms can also provide instant support and guidance when students are struggling, rather than requiring the teacher's intervention.
- **Teachers with classes with a wide range of maths abilities** – Teachers can differentiate work for students as they can access work on their individual devices. Teachers can also easily identify student skill level allowing them to assign or have automatically assigned, level appropriate work.



### How the model works

Software products in this category have different features though offer broadly similar functions such as:

- Online maths lessons
- Teaching resources such as exercises, activities and video explanations
- Assessment and grading
- Differentiation
- Individual and cohort analytics.

These platforms are all cloud-based software and are typically accessed by teachers and students via PC, laptop or tablet device. Teachers can use this category software as a supplementary resource alongside, or replacing, traditional hardcopy textbooks. Most brands allow teachers to add in their own material and customise content to suit class needs. These products typically provide teachers with material for delivery in class and also offer functionality for students to do self-directed learning and exercises.



## Success factors

- **Platforms are best used in conjunction with classroom teaching and in a well-planned fashion** – Careful consideration and planning about how and for how long to use the platforms in each class helps to ensure students are fully engaged when they are using them and the content communicated via direct instruction is amplified and reinforced.
- **Curriculum aligned platforms work best for classes** – This saves teachers time adjusting and augmenting the provided content to align with the relevant curriculum and ensures that students are learning what is assessable in their state or territory.
- **Ensure saved teacher time is redeployed to focus on individual students and differentiation** – Effective use of platforms can allow teachers to increase the amount of time they spend on the most impactful activities in the class time.



## Caution factors

- **Overuse is worse than no use** – Students can easily get bored or become distracted with online platforms. As a general rule, 30% or less of class time should be spent on the platforms on devices.
- **To use data well, teachers need time** – It takes time for teachers to absorb data provided in the platforms' analytics modules, and change their practice to respond to them. Teachers can ignore or be overwhelmed by the available data because of competing demands.
- **There can be significant teething issues involved in implementation of platforms** – Teachers need sufficient training to know how to use the platform well. Teachers need access to quick and reliable IT support from the school or provider.
- **Student motivation affects platform success** – Independent and motivated students use the platforms to their full potential. Less motivated students can 'coast' through the content and not improve their outcomes.
- **Some platforms lack higher order thinking and opportunities to show working out** – In those instances, platforms are better used for homework, rather than classwork. Additionally, some platforms don't require students to show working out.
- **Platforms don't replace face to face teaching** – For all platforms, students need face-to-face teaching including direct feedback and explicit instruction from the classroom teacher. Having platforms available can help augment student and teacher performance, though can never replace traditional teaching.



## Cost

Typically, these platforms are charged on a per student per year basis. Pricing is typically substantially less than the registered retail price (RRP) of hardcopy maths textbook at the same year level. The cost varies by provider, by year level, by school sector and can vary with the mix of features and functionality purchased.