

# Contemporary Delivery Model for Mathematics at Harrison - Blended Delivery

## Rationale

In the past we have had a number of students who have had the (possibly unconscious) belief that sitting on the chair in the mathematics scheduled class is equivalent to having learnt the content from that lesson. Only to discover that in a few weeks, or in the next term or following year that they were then unable to recall any presumed knowledge. This meant that the student has not actually "learned", or that they have been involved in only "surface learning".

As teaching professionals we recognised that we need to do something different, students need the opportunity to learn in more individualised ways, at learning times that are more suitable to them and in a way that can foster deeper connections and richer understanding.

This educational approach is not just about teaching mathematics. It is centered on providing our students an opportunity to learn about learning. There is much research (formal and anecdotal) that supports a shift to blended modes including online learning.

Blended learning and Flipped Classroom models are reporting continued success in schools both in Australia and around the world. Emerging research clearly shows that students from these learning models are outperforming standard classroom delivery students, especially in areas of Mathematics and Science.

## How it works

Students in mathematics must complete minimum weekly criteria to meet the needs of the course. These are:

- 6 classes per fortnight in the maths learning space.
- At least 2 PLC lessons per fortnight.
- 2-4 hours home learning per week.

## Learning Brief

Students are provided with a weekly learning brief that they are expected to access and download, paste into their maths books and plan their learning goals for the week. The learning brief is a tool designed to be personalised to the student's ability and students are expected to liaise with their teachers regularly to ensure they are engaging at an adequate level.

- Online components
  - Theoretical component in the form of written lessons supported by video footage on Mathspace
  - Practical component in the form of quizzes in Mathspace
  - Checkpoint quizzes that provide teachers with data to ensure students are on track
  - Share understandings through e-portfolio pieces created in google blogger
  - Contribute to discussion forums
- Offline component
  - Attend scheduled Masterclasses
  - Complete set investigative tasks by due date

Students are accountable for demonstrating their learning and understanding continually throughout the year. They have access to any number of teachers available to them in the space for support, clarification and explanation.

## Quotes from students

*I like that we now have a learning brief. It helps me stay on course of what I'm supposed to do. I like that we can all do it in the one big learning space but we are still allowed to go to separate rooms in the building. I'm not sure what I don't like, I like all of it. It's fun because after asking my friend how do I do this, she helped me and I now love multiplying and dividing fractions. So there is actually nothing that I would change. I love the checklist and learning space! Claudia*

*I think our new way of learning is great it allows people work at their own level by themselves but there is also assistant if needed. Danyon*

*The best part about this method of learning is everyone can go at their own pace. Nobody has the real pressure of catching up to someone else because everyone is able to learn in their own way. Jemma*

*I like it that we can go at our own pace and if you don't know something you have a lot of resources to find it out. I find that it is really working for me, I have a bit of trouble keeping up with the dates though but that's ok because I can always access my work easily. Chris*

## More information

For more information you can check out some of the following references about online, blended and flipped class learning.

<http://www.knewton.com/blended-learning/> - Infographic

Arnold, R. and M. Ryan, (2003). The Transformative Capacity of New Learning. Melbourne: Australian Council of Deans of Education.

Graham, C. R. (2006). Blended learning Systems: Definition, Current Trends, and Future Directions. In C. J. Bonk. & C. R. Graham (Eds.), The Handbook of Blended Learning: Global Perspectives, Local Designs. (pp. 3-21). San Francisco: Pfeiffer.