

Flipping Anatomy & Physiology for Speech Pathology Students



Flinders
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inspiring achievement

Dr Sarahlouse White and Dr Sebastian Doeltgen

Discipline of Speech Pathology, School of Health Sciences, Flinders University

Contact: Sarahlouse.white@flinders.edu.au

Why the need for change?

Little has changed in the teaching of anatomy and physiology – however, our students are becoming increasingly diverse in terms of prior exposure to main concepts, and learning preferences AND there have been some recent technological advances that allow more realistic teaching anatomy and physiology to become more exciting. The challenge was to create a vibrant and relevant Anatomy and Physiology Curriculum that our students found engaging and easily accessible, and which promoted independent learning.

1910



Traditional anatomy class

- Teacher centred
- “chalk & talk” approach
- Little opportunity for differentiation
- Often disengaging



2016



Cool tech can enhance learning when combined with high quality content and sound pedagogies



21st century teaching

- Student centred
- Innovative and creative approaches
- Encourages deep and self-directed learning
- Incorporation of technology as appropriate

What did we do? – back to basics!

- Selected 2 first year topics
- Developed a series of learning modules
- Blend of generic & speech pathology specific resources
- Clear learning objectives, mapped to assessments
- Explicit expectations
- Scaffolded resources – for both meta-cognition as well as for content
- Multimodal content delivery
- Assessment for learning
- Student driven learning opportunities

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| <p>General Information</p> | <p>Week 1 Introduction to Anatomy</p> |
| <p>Week Two Cardiovascular System</p> | <p>Week Three Respiratory System</p> |

Week 1 Introduction to Anatomy and Physiology

Welcome to Week 1

The focus of this week is to introduce you to basic anatomical terms and how to use anatomical language to describe structures/landmarks on the human body. This course focuses on the structure (Anatomy) and function (physiology) of the human body.

Before you come to the lectures

Each week there will be two lectures, video tutorials and assigned readings (usually the relevant chapter of Mariab).

Before this week's lecture, take a look at the Topic Information book and the short video tutorial I recorded for you. The first lecture will be introductory and we will workshop a short quiz together (as there will be one of these each week).

The second lecture (Tuesday) will focus on anatomical terms and language we will be using during the topic. There are resources for you (video tutorial, notes) in this week's folder. The corresponding Mariab chapter is Chapter 1.

This week, we will focus on:

Lecture 1 (L1) the Topic Information Book and Topic expectations and

L2 - Anatomical terms

At the lectures

Bring stuff to make notes - either old school (print out the PowerPoint slides and add your own notes) or add notes to the file on your tablet/laptop. Raise any questions you may have and make notes of anything you need to think about further/review/didn't study the first time!

Learning what you don't know is equally as important as learning new information.

After the lectures

If any questions you had were not addressed in the lecture (or new ones popped up), please post on the Discussion board for class discussion.

Complete the post-class quiz at the end of each week to assess how well you have learned this week's content. It is important to identify where you need to put in further work! We can revisit any concepts that we need to as required 😊

This quiz is short and only open for a short timeframe and it contributes to your topic grade

Introduction to Anatomy and Physiology Resources

Week 1 Example quiz

This is an example quiz that we will work through together to show you what kind of things to expect through this topic.

Due 1 March 2016 30 of 77 Attempted

Week One Quiz Anatomical Terms

This is the REAL quiz for week 1 that counts towards your topic total it is open from 7 am to 7 pm on Friday March 4th.

Due 4 March 2016 82 of 77 Attempted

As well as a backwards by design approach, the TPACK and SAMR frameworks were used to restructure our course redevelopment



(2 mins) – **TPACK**

The importance of integrating technology, pedagogy and content for successful learning.



(2 mins) **SAMR**

Thoughtful use of the TPACK approach can allow enhancement or transformation of tasks - increasing accessibility and authenticity.

Where next – improvements and refinements

The initial investment of time and resources this year has been huge! – however, next year will be easier and allow for some refinements:

- Improved production of video tutorials
- Develop further differentiated resources for students with low levels of previous exposure to relevant scientific concepts

We would also like to collect more formal measurements of learning – especially knowledge retention and transferability of content to different scenarios and other topics.

How did it go? Preliminary findings

So far, so good 😊

Based on Semester 1 student evaluations of teaching, final topic grades, timetable schedules and informal observations of lecturers, our approach resulted in:

- Increased student engagement
- Increased mean grades
- Decrease in face-to-face teaching time