Introduction

There is a wealth of digital learning resources available to students in human anatomy teaching, including in-house teaching material and externally-sourced products. However, access to these is dispersed across different interfaces which can be a barrier to an integrated teaching and learning approach in the dissection lab.

Background

Anatomical dissection is a practical subject but it needs to be guided by careful instruction to enable students to gain the most from this very valuable resource. Medical students at Brighton and Sussex Medical School (BSMS) work in groups of 8 students on one cadaver dissecting the majority of body systems. The students are guided by a dissection worksheet which to date has been a paper laminated colour copy. When not actively dissecting, students work on prosections, pathology pots, models and other resources.

The drive to enhance digital learning in the dissection laboratory came from students asking to use their own iPads to access apps etc. The Head of Anatomy successfully applied for a Technology Enhanced Learning Grant to purchase 10 iPads (one per table). The anatomy team met with student representatives to plan what would be delivered on the iPads.

The students requested:
- Dissecting room notes which they could expand the embedded diagrams
- Access to in house produced blogs, ShowMe’s presentations and other material
- Access to faculty approved apps

In addition to the above the faculty requested:
- A digital resource for the pathology pots
- The ability to take a photo and share via Apple TV anatomical variations or pathology on a particular specimen to the rest of the group (ensuring correct permissions are in place)

Methodology

Using HTML and JavaScript, a kiosk-style menu interface was created for use on a set of laboratory-dedicated iPads.

Through this gateway, students access the diverse collection of learning resources during the dissection exercises, including the PDF dissection workbook, lecture materials on the VLE, video explanations, and full e-books.

Additionally, BSMS has a large collection of pathology specimen pots which are labelled with a QR barcode, when viewed with the iPad camera, provide an instant link to full explanatory notes on the device.

A flat design approach was adopted using simple design elements, typography, and colours in order to provide a clear user interface that aids physical touch navigation.

Bespoke icons and thumbnails were created to give a consistent user interface and convey appropriate meaning to each area of navigation.

Conclusion: Feedback from Students

Access to knowledge
- "easy to navigate"
- "app to see structures"
- "can zoom in on images"
- "interactive"

Unmet expectations
- "would like to be able to make own notes on the iPad"
- "could integrate more"
- "cannot access Google"

Practical problems:
- "cannot use them whilst dissecting"
- "gets messy"
- "can’t look at more than 1 page at a time"

Wider benefits
- "get to revise whilst other members of the group are working"
- "eco-friendly"
- "gets messy"
- "cannot access Google"

In order to comply with Human Tissue Authority legislation, the lab-dedicated iPads are restricted to display only the gateway interface and "whitelisted" websites. All sensitive material is housed behind appropriate firewall security. Student feedback was collected via paper polling which in the future will be digital.