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Medical Student Engagement with Technology-Enhanced Learning Resources

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This session:

Three studies relating to the medical students' engagement with technology enhanced learning resources, including a MOOC

- Study 1: Undergraduate medical students - Bronwen
- Study 2: Medical Student Engagement with TEL – James, via video
- Study 3: UTAUT- Unified Theory of Acceptance and Use of Technology – Bronwen

FLAN 2019

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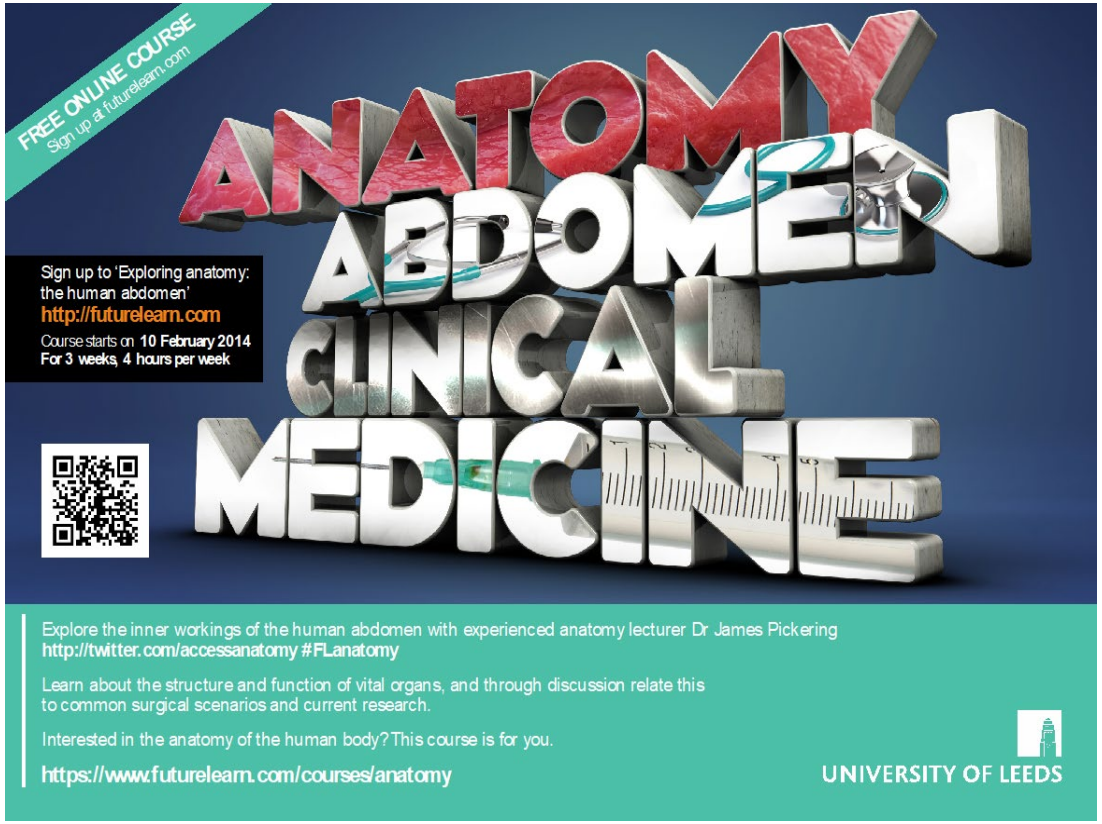
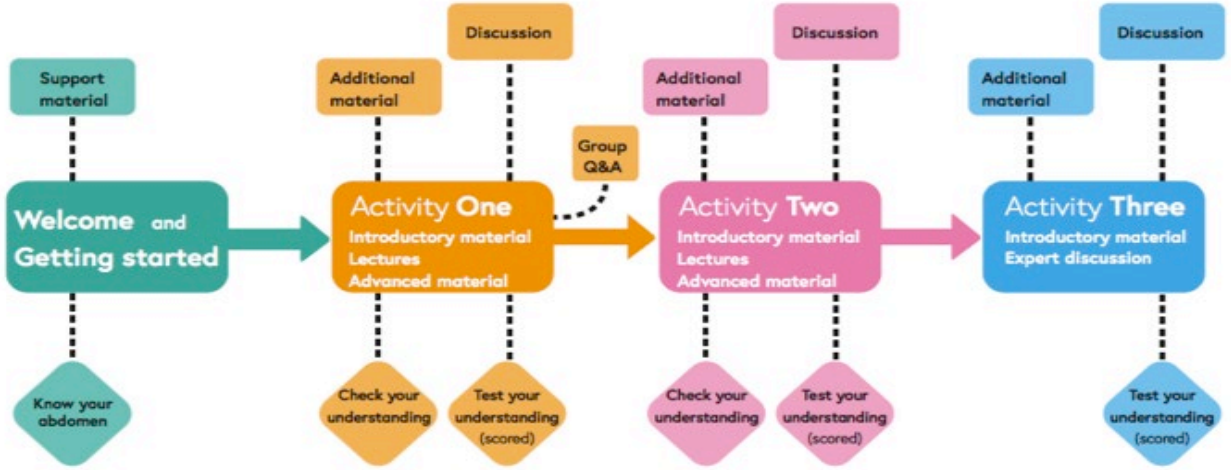


Exploring anatomy: **the human abdomen**

Course map



Recommended study schedule

for those who would like to contribute to forums

10th February	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
17th February	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
24th February	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday

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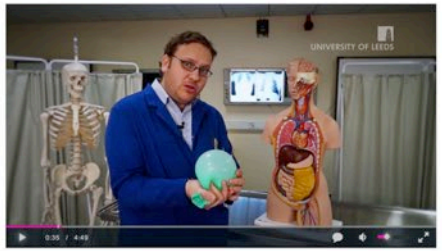
a



Having problems with this video? Report this

An introduction to the peritoneum

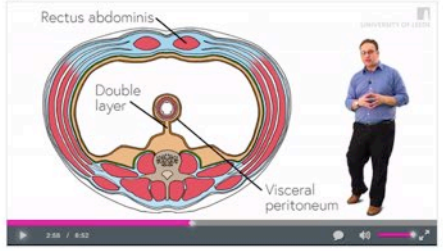
In this short video James outlines the basic function of the peritoneum for learners who do not have a background in human biology or anatomy.

Having watched this video you should be able to:

1. Describe the basic arrangement of the peritoneum
2. Name an important peritoneal structure that has a role in combating the spread of infection

Mark as complete

b



Having problems with this video? Report this

Core lecture: The structure of the peritoneum

This lecture deals with the peritoneum and its various formations within the abdominal cavity.

James outlines the peritoneum and its numerous ligaments that are involved in suspending the abdominal viscera within the peritoneal cavity. He also defines some important concepts like visceral and parietal peritoneum and also intraperitoneal and retroperitoneal. Numerous other peritoneal formations will be described including mesenteries and omenta with important examples given wh

Having viewed the lecture you sho

1. Describe the basic layers of pe with the viscera of the abdom
2. The various mesenteries of the

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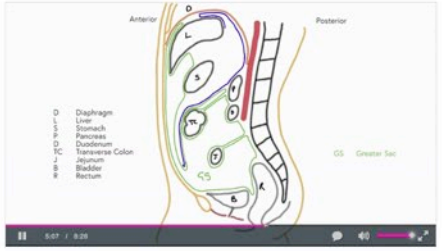

Having problems with this video? Report this

An advanced look at the peritoneum: greater and lesser sac

In this video James describes some important subdivisions of the peritoneal cavity to include the greater and lesser sac and also provides and alternative view of the lesser and greater omenta.

Having viewed this video you should be able to:

1. Describe the greater and lesser sac and their boundaries
2. Identify the number of peritoneal layers that form important

Mark as complete

d

Having problems with this video? Report this

Expert discussion: surgeon

In this video James is joined by Associate Professor Dermot Burke.

Dermot spends his time working as an abdominal surgeon within the NHS and he also has numerous teaching duties with the School of Medicine at the University of Leeds. In this video James interviews Dermot about the presentation, symptoms, types of repair and treatment of inguinal hernia. A common clinical problem where a portion of abdominal viscera protrudes through the abdominal wall.

If you are interested in learning more about the different approaches to inguinal hernia repair you may be interested in the rese one of James' medical students who used cadaveric spe compare the latest techniques to inguinal hernia repair.

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94 comments

EXPLORING ANATOMY: THE HUMAN ABDOMEN UNIVERSITY OF LEEDS 1.19

Test your understanding

Intro Q1 Q2 Q3 Q4 Q5 End

Complete the following graded test to ensure understanding of the concepts covered in activity one. You will need to complete this test if you choose to request a statement of participation.

TEST RULES AND GRADING

- You may take 3 attempts to answer each question
- Each question has 3 points available
- A point will be deducted for each incorrect attempt
- You can review your total score for the test at the end

BEGIN TEST

EXPLORING ANATOMY: THE HUMAN ABDOMEN UNIVERSITY OF LEEDS 1.12

Research and discuss

The introductory material has provided a foundation of information, now it's time for you to do some research.

Whether you are new to anatomy or an expert in the field you can join in this activity. For introductory learners, choose one of the topics (or more if you have the time), research a response and present your evidence to the discussion below. If you are new to researching online you may find it useful to take a look at the Skills@Library video that provides help with searching using Google scholar. More advanced learners are encouraged to provide further information and context from their medical practice.

Take the time to read and respond to the posts from other learners, ask questions and seek clarification - this is a great opportunity to learn together and share experience. You will find help with communicating online in the Learning online step in the Welcome section of the course.

1. 'Six packs' – vanity or a sensible health choice?
2. 'Beer belly' – what is it and what are the health implications?
3. Pear shaped or apple? Does it matter?
4. How might you strain your abdominal muscles?

Live Q&A Session

During Wednesday afternoon (GMT) James and the course mentors will provide an opportunity for those who have specific questions that have not been answered through the discussion threads to join a small group Q&A session.

These group sessions will be held on an external site and can be accessed through any major web browser. You won't need to register an account, just enter the room as a guest by entering your name. The sessions will be purely discussion based and will not involve audio or video; in this way learners with slower internet connections can participate.

How will this work?

During the afternoon there will be 4 x 45 minute time slots:

Links will be posted to the different sessions below on Wednesday, 12th February

Session 1 - 13.30 to 14.15

Session 2 - 14.30 to 15.15

Session 3 - 15.30 to 16.15

Session 4 - 16.30 to 17.15

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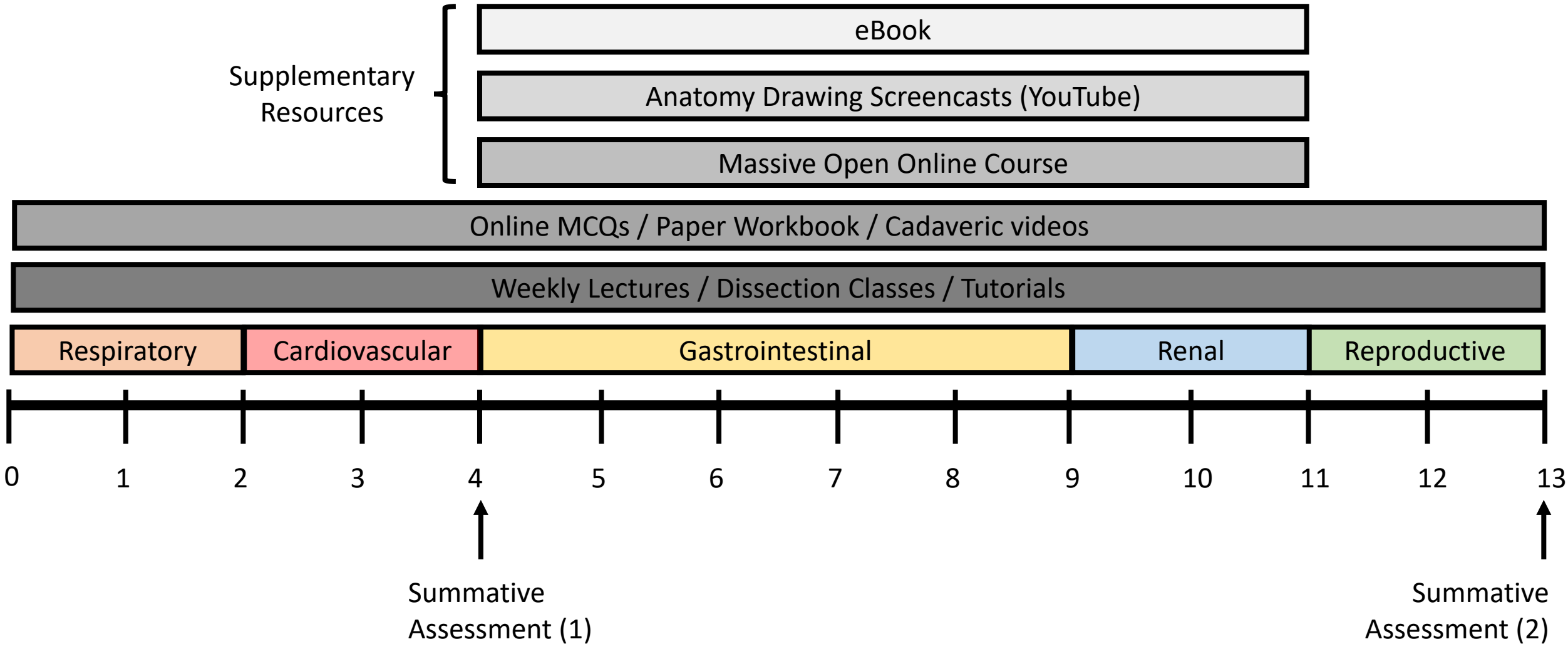
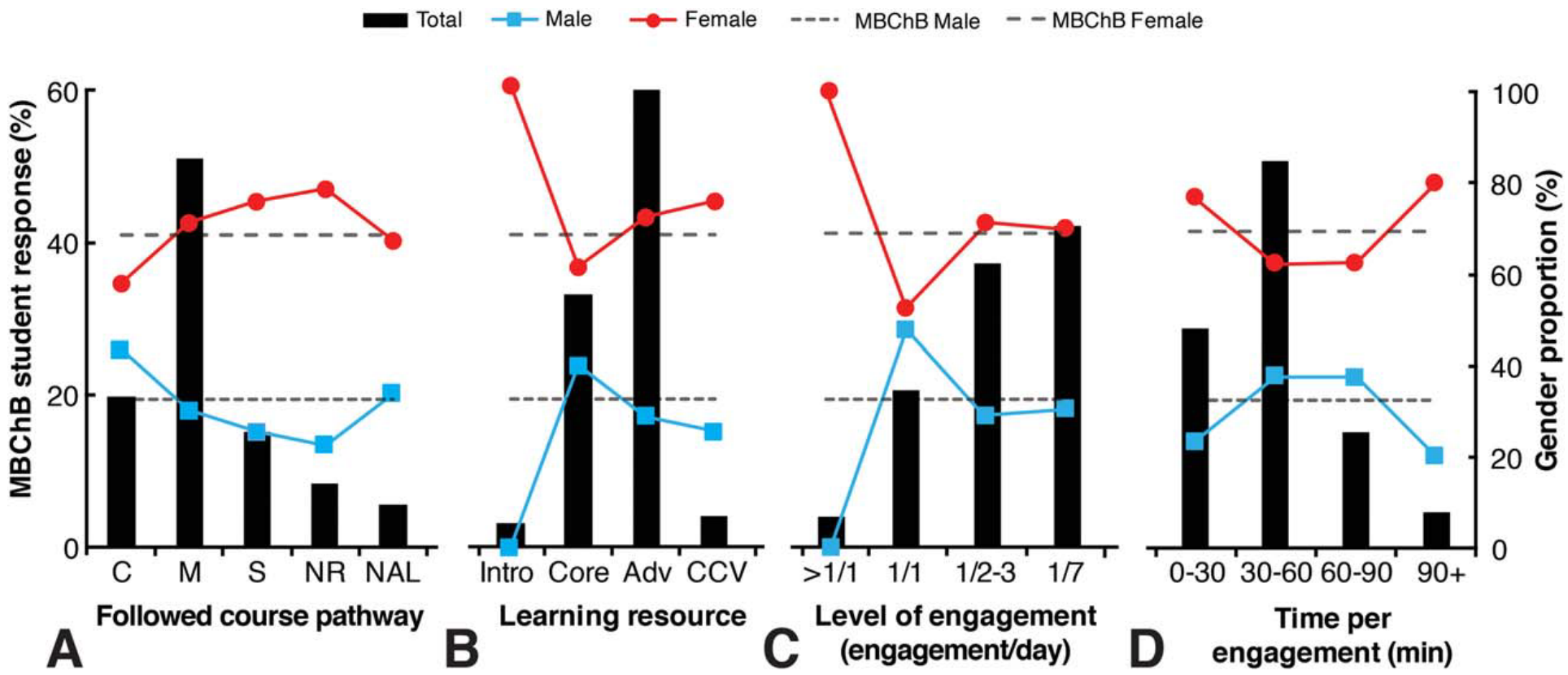
Integration of **Supplementary** Anatomy Resources

Body Systems Course plan:



Undergraduate medical students:



A - where a greater proportion of females, in comparison to males, worked through the course without following the suggested pathway.

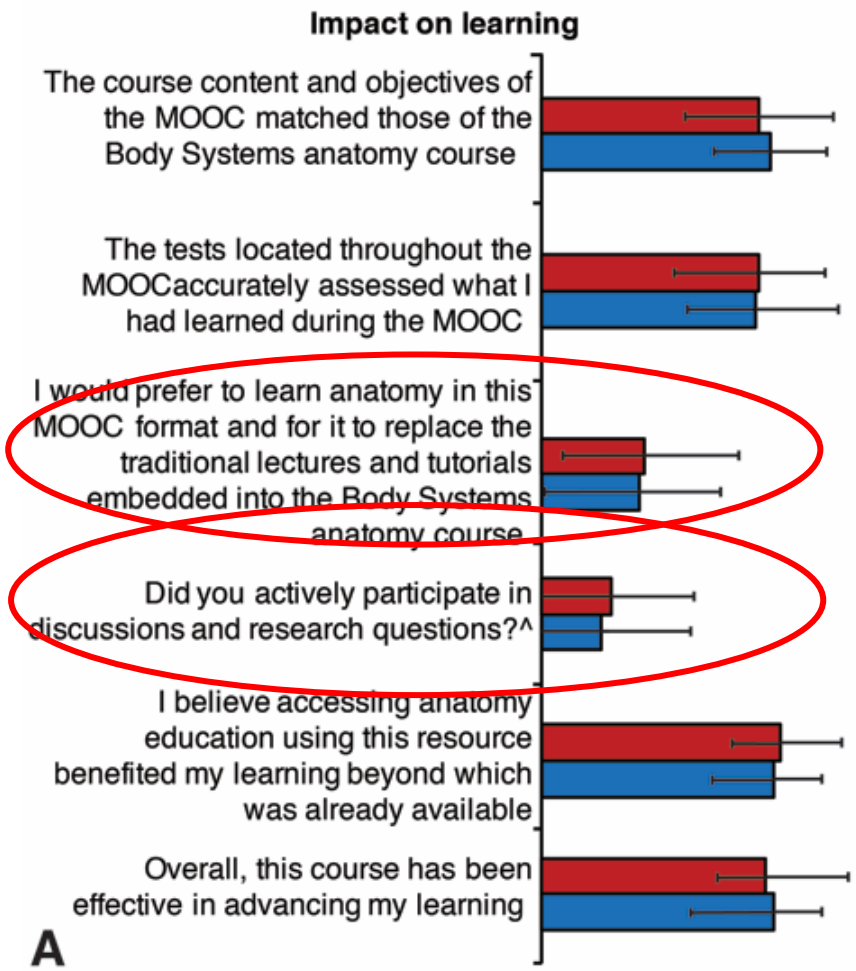
B - a higher proportion of male students engaged with the core lectures, compared with the females who accessed the advanced material in higher numbers.

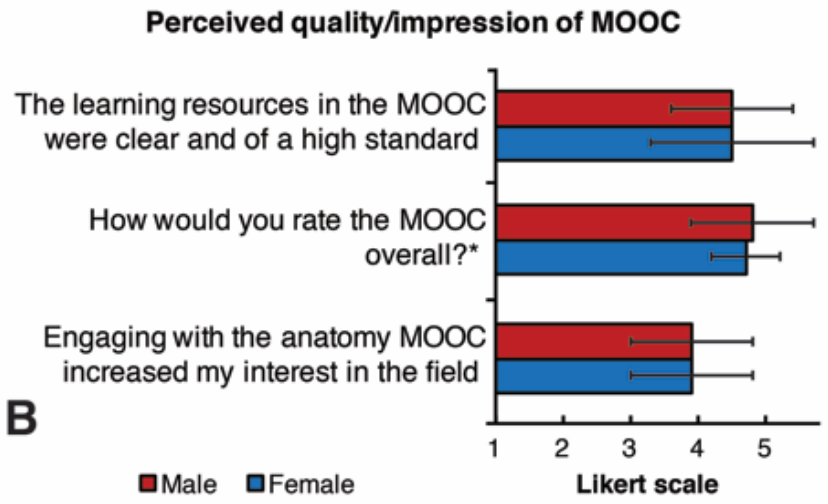
C/D - the level of engagement with regard to days during the week and time spent per visit were fairly consistent for both male and female students, with the majority engaging a few times a week and for approximately an hour each time.

Swinnerton et al., 2017

Study 1: Undergraduate medical students:

- Good quality resources = **Yes**; discussion fora = **No**; replace cadavers = **No**





Swinnerton et al., 2017

Study 2: Medical Student Engagement with TEL

The following **research questions** were developed:

(1) What patterns of engagement underlie the use of TEL resources within a medical anatomy curriculum and are these related to levels of usage and gender?
(2) Do these emergent patterns of engagement correlate with assessment outcomes?

Methods:

- TEL Engagement Scale created; 25 items, 5-point Likert scale;
  - Developed from three existing scales on student engagement and self-regulated learning (Krause and Coates, 2008; Gunuc and Kuzu, 2015; Fontana et al., 2015; Littlejohn et al., 2016);

- Released to Year 1 Medical Students on a compulsory 13-week MBChB Body Systems module;

- To determine if a factor structure was present exploratory factor analysis was conducted, with principle component analysis used as the method of factor extraction;

- Data on the perceived use of each resource was also collected.

Next steps – Study 3: UTAUT- Unified Theory of Acceptance and Use of Technology

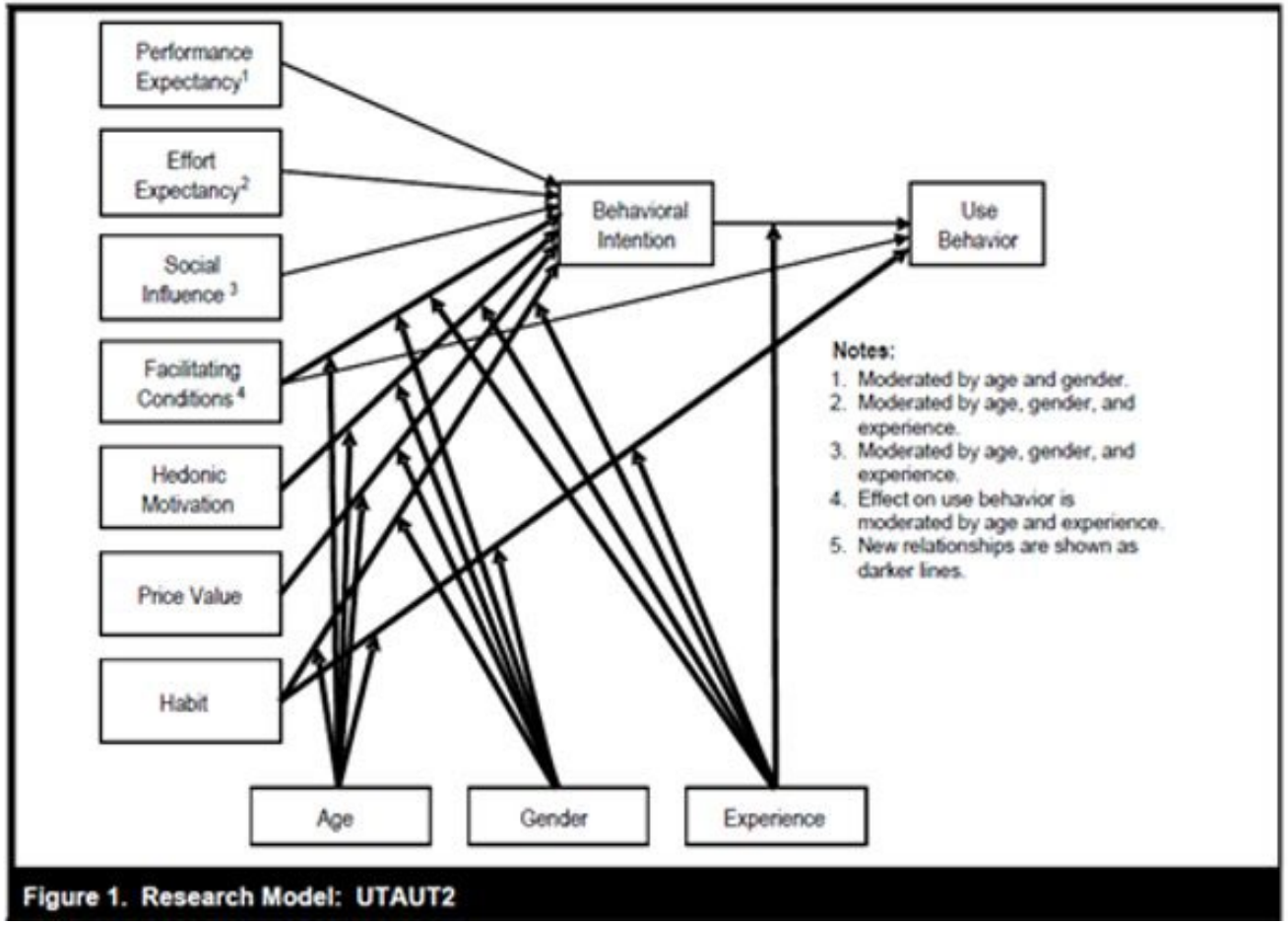


Figure 1. Research Model: UTAUT2

Venkatesh, Walton, Thong, & Xu (2012)

To be able to explore the why?

- Performance expectancy - “the degree to which an individual believes that using the system will help him or her to attain gains in job performance.”
  - Will using TEL resources help you to perform better on your medical course?
- Effort expectancy - “the degree of ease associated with the use of the system.”
  - Are these TEL resources easy to use, how much effort do you need to make to use them?
- Social influence - “the degree to which an individual perceives that important others believe he or she should use the new system”
  - Does the encouragement by James, my lecturer, make me more likely to use them, or someone else?
- Facilitating conditions - “the degree to which an individual believes that an organizational and technical infrastructure exists to support the system”
  - Do I have the appropriate equipment, can I get help if I’m having any problems using these TEL resources?

To be able to explore the why?

- Hedonic motivation - “the fun or pleasure derived from using a technology”
  - How much do students enjoy using these TEL resources?
- Price* - “consumers’ cognitive tradeoff between the perceived benefits of the applications and the monetary cost for using them.”
  - Not used in this study
- Habit - includes both experience and habit, and relates to both prior use and the passage of time. If you use something again and again over time until using it becomes automatic.
  - Are students used to using TEL resources, and if so, which ones? Has using TEL resources become part of their routine?

Adapted UTAUT2 survey for the three TEL resources

Which TEL resources did you access during the Body Systems anatomy teaching? (tick one per resource)	Used a lot	Used sometimes	Used a little	Did not use
MOOC on FutureLearn				
iBook				
Access Anatomy YouTube				

		Strongly agree	Agree	Slightly agree	Neutral	Slightly disagree	Disagree	Strongly disagree
1	I find TEL resources useful in my daily life							
2	Using TEL resources helps me accomplish things more quickly							
3	Using TEL resources increases my productivity							
4	Learning how to use TEL resources is easy for me							
5	My interaction with TEL resources is clear and understandable							
6	I find TEL resources easy to use							
7	It is easy for me to become skilful at using TEL resources							
8	People who are important to me think that I should use TEL resources							

Research questions

What is the pattern of TEL resource use?

Why do on campus students use TEL resources?

Is there a difference in the ‘why’ depending on which TEL resources are used more?

References

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