#THETA2017

H5P AND THE BRAVE NEW WORLD OF LEARNING INTERACTIVES

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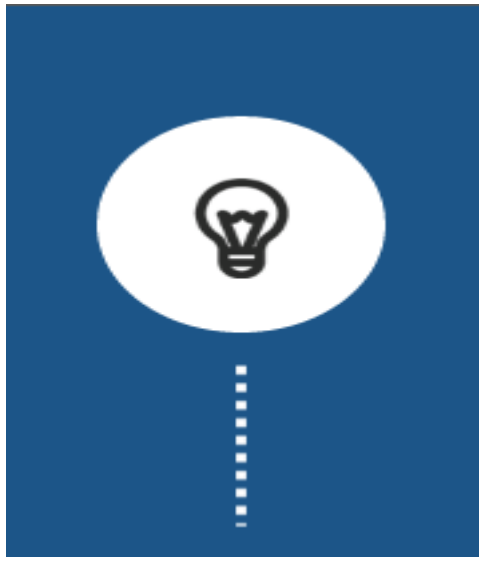
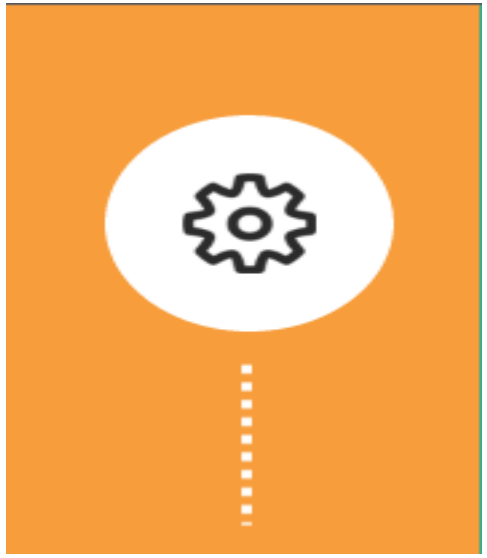
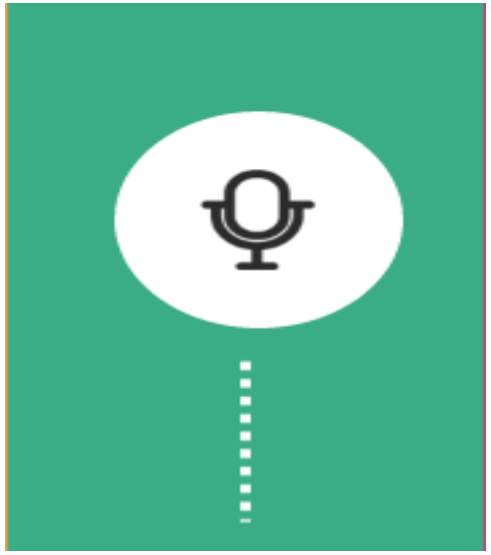
A CASE STUDY IN FIRST YEAR ANATOMY AND PHYSIOLOGY UNITS



IDEA



DESIGN / PROCESS



FEEDBACK

IDEATION

- Self-regulated learning – fostering independent learning – scaffold learning that may be done *in and away* from the classroom.
- Placement of learning technology in HE and Anatomy & Physiology education.
- **Facilitate learning by *active* participation and informal self-testing, along with formal graded testing.**
- Design and develop learning activities to promote higher level thinking, knowledge and skills.
- Recognise: Importance of individual learning styles, chunking information, active learning, assimilation of information – making sense of it all.

CONSIDERATIONS

- Implement in Blended Learning – combination of technology enhanced tools and traditional F2F classroom practice.
- Flexibility of pace, place and time.
- Mobile friendly, easy to create and use, no plugins, no large SCORM packages...
- LTI integration with VU Collaborate (our LMS) and its learner analytics.
- No design/software experience required for academics and other content creators.
- Open source and cheap (= free!).

CREATION

H5P

Course Presentation

Create a presentation with interactive slides

Interactive Video

Create videos enriched with interactions

Timeline

Create a timeline of events with multimedia

Drag and Drop

Create drag and drop tasks with images

Image Hotspots

Create an image with multiple info hotspots

Drag the Words

Create text-based drag and drop tasks

Fill in the Blanks

Create a task with missing words in a text

Questionnaire

Create a questionnaire to receive feedback

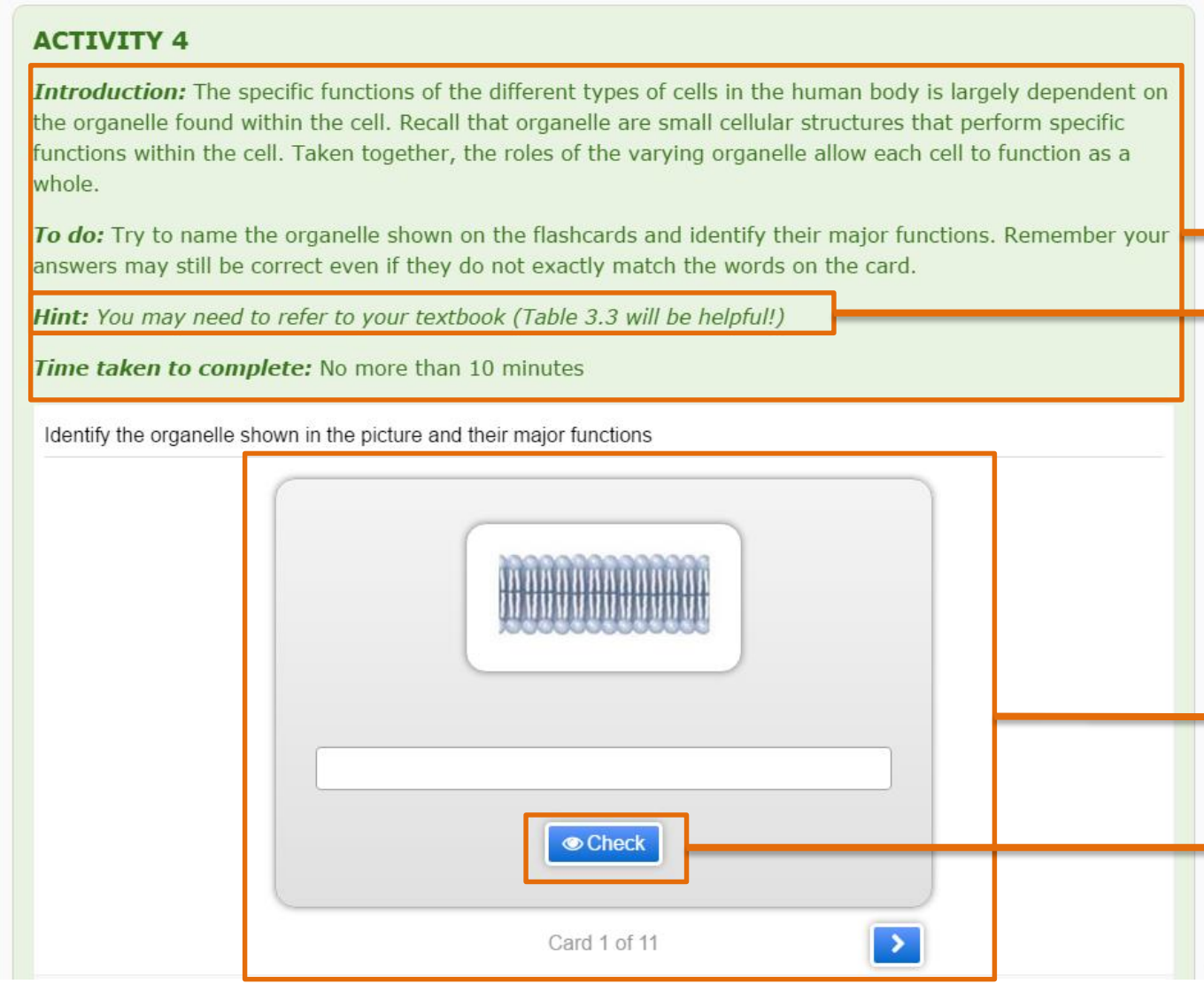
DESIGN

- **Key concepts:**
  - ✓ Interaction
  - ✓ Self-regulation
  - ✓ Active Learning
  - ✓ Flexibility

- **Key Features:**
  - ✓ Provide feedback
  - ✓ Pedagogical process
  - ✓ Problem-based
  - ✓ Reflective

- **Key Elements:**
  - ✓ Chunk
  - ✓ Chunk and
  - ✓ more chunk!
  - ✓ Instructional text
  - ✓ Target key learning outcomes
  - ✓ Contextualise and link back to unit material
  - ✓ 'Look & Feel'
  - ✓ Did I mention chunking?

VISUALISATION



Instructional text

Link to unit material

Chunked individual activity

Learning Interactive (H5P)

Feedback

CONTEXTUALISATION

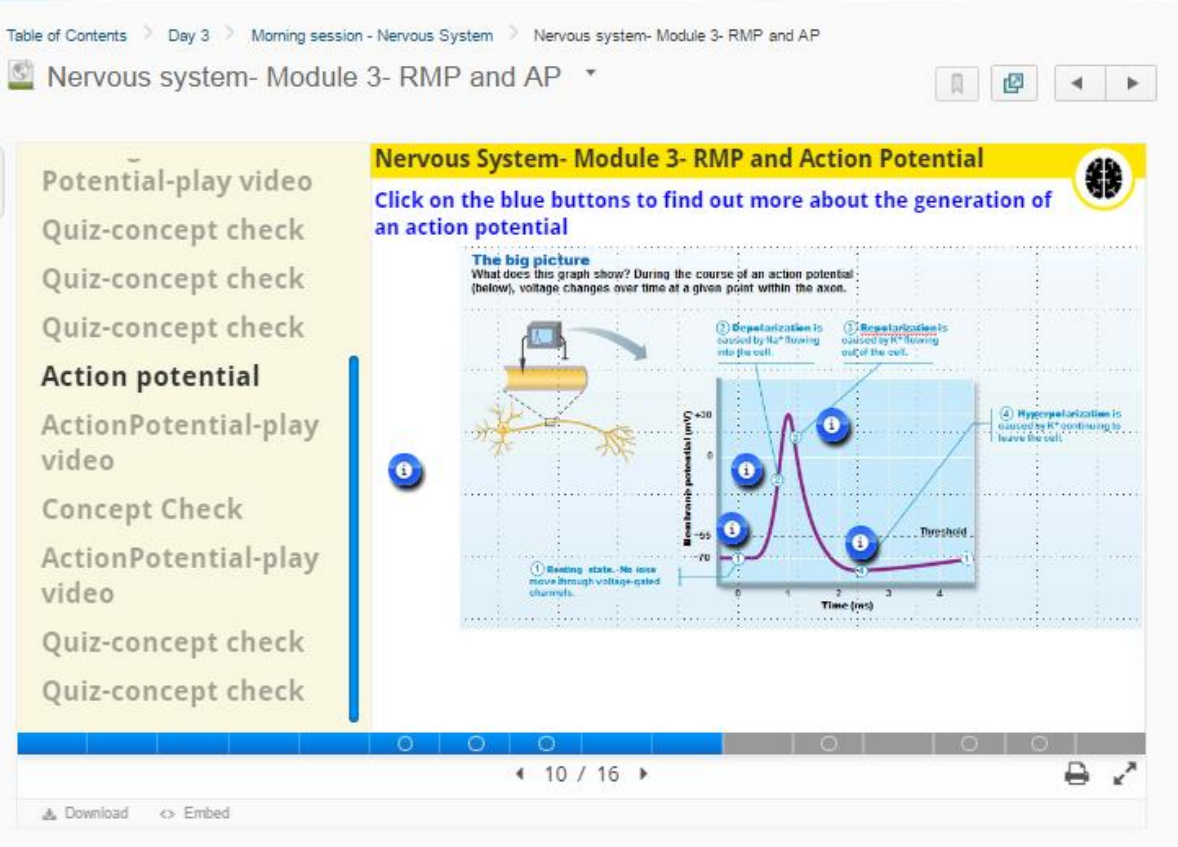
- F2F sessions: Process Oriented Guided Inquiry Learning (POGIL) - an example of an active learning approach - has been shown to significantly improve students' grades in Physiology (Brown, 2010).

- LMS modules: H5P inserted into 'activities modules' in the unit space – students to complete these pre-class, revise them in-class, practice post-class.

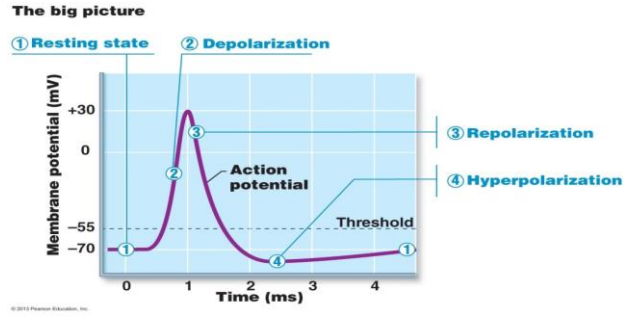
- Blended Approach: students exposed to H5P modules prior to attending face-to-face classes where they have opportunity to review the content in an active learning mode, employing team-based guided inquiry. Opportunity to revise and practice post-class.

EXAMPLE

Online Learning Interactive (H5P)



F2F classroom activity/practice



a. **What is the state of the membrane at phase (1)?**

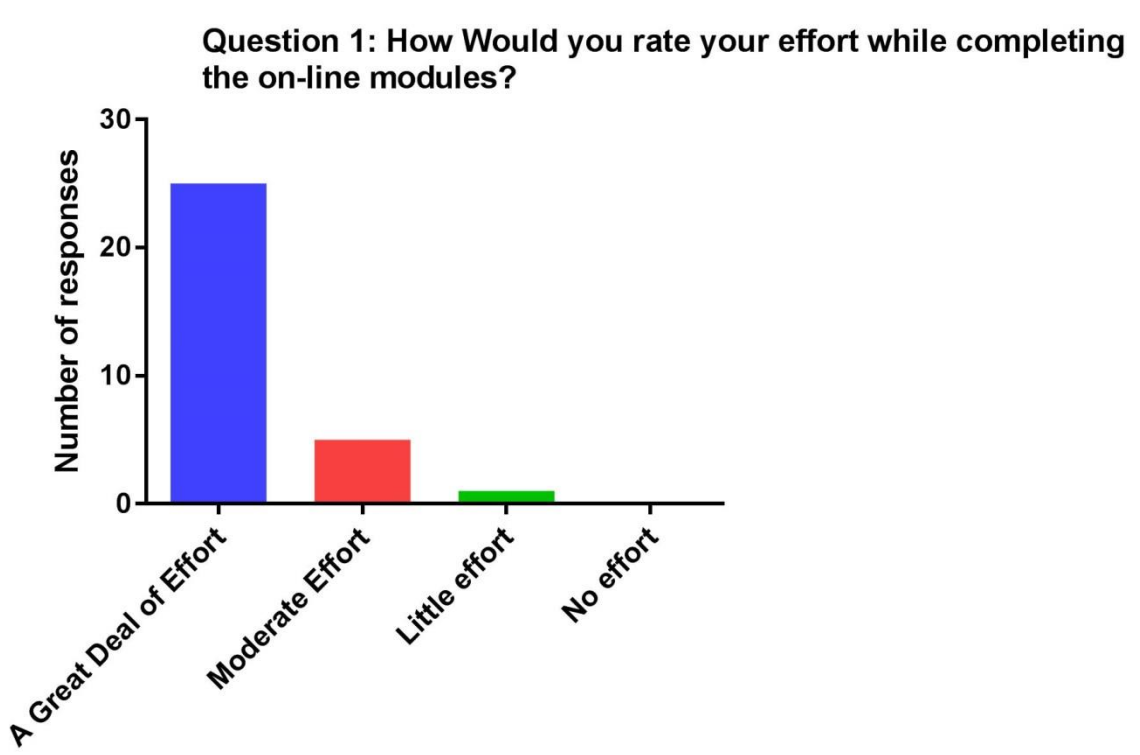
b. **Describe or name the ion channel that underlies the sharp increase in membrane potential seen in phase (2).**

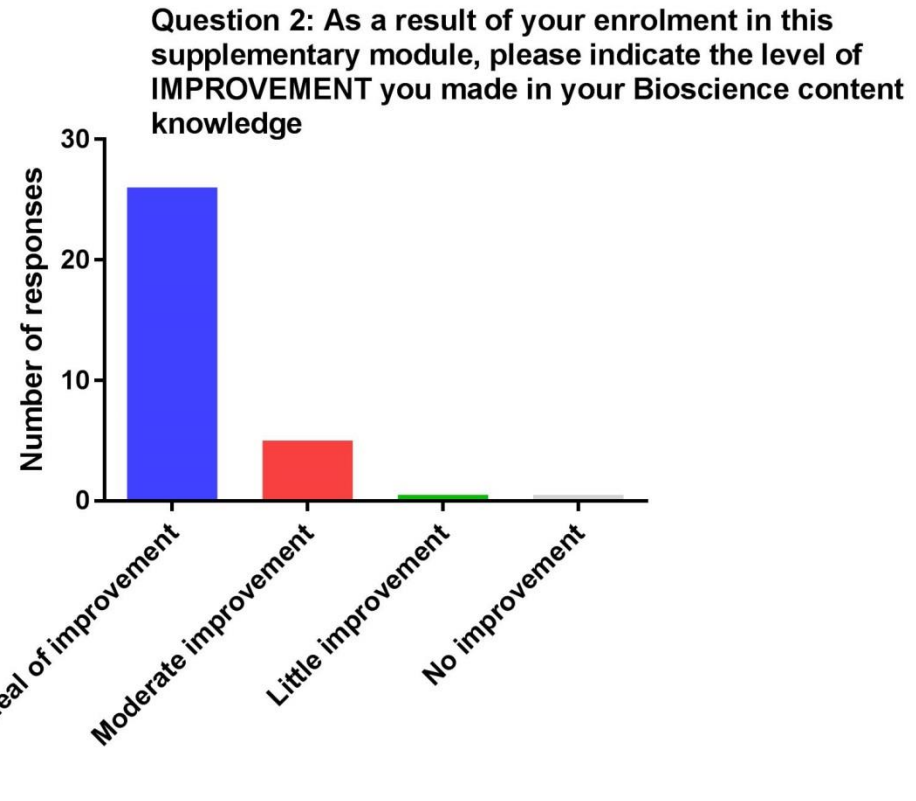
c. **What two events are necessary for the sharp fall in membrane potential seen through phase (3)? (Be as specific as possible.)**

d. **What ion is flowing, and in which direction, to explain the changes in membrane potential through phase (4) (you will likely need the aid of your textbook to answer this question.)**

e. **How is the concentration gradient of ions on either side of the membrane restored after an action potential?**

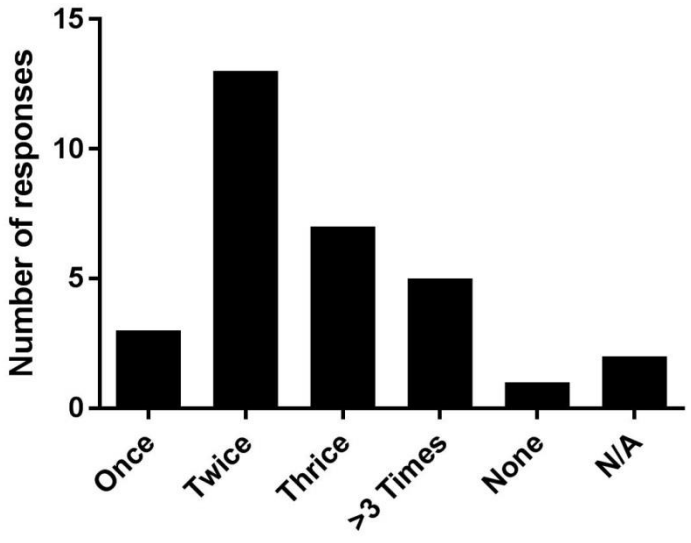
FEEDBACK (THUS FAR)



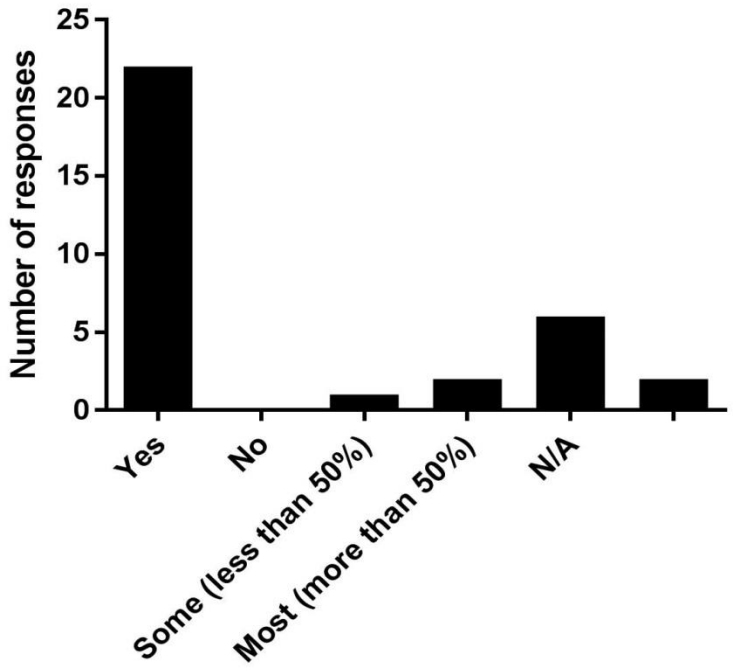


FEEDBACK (THUS FAR)

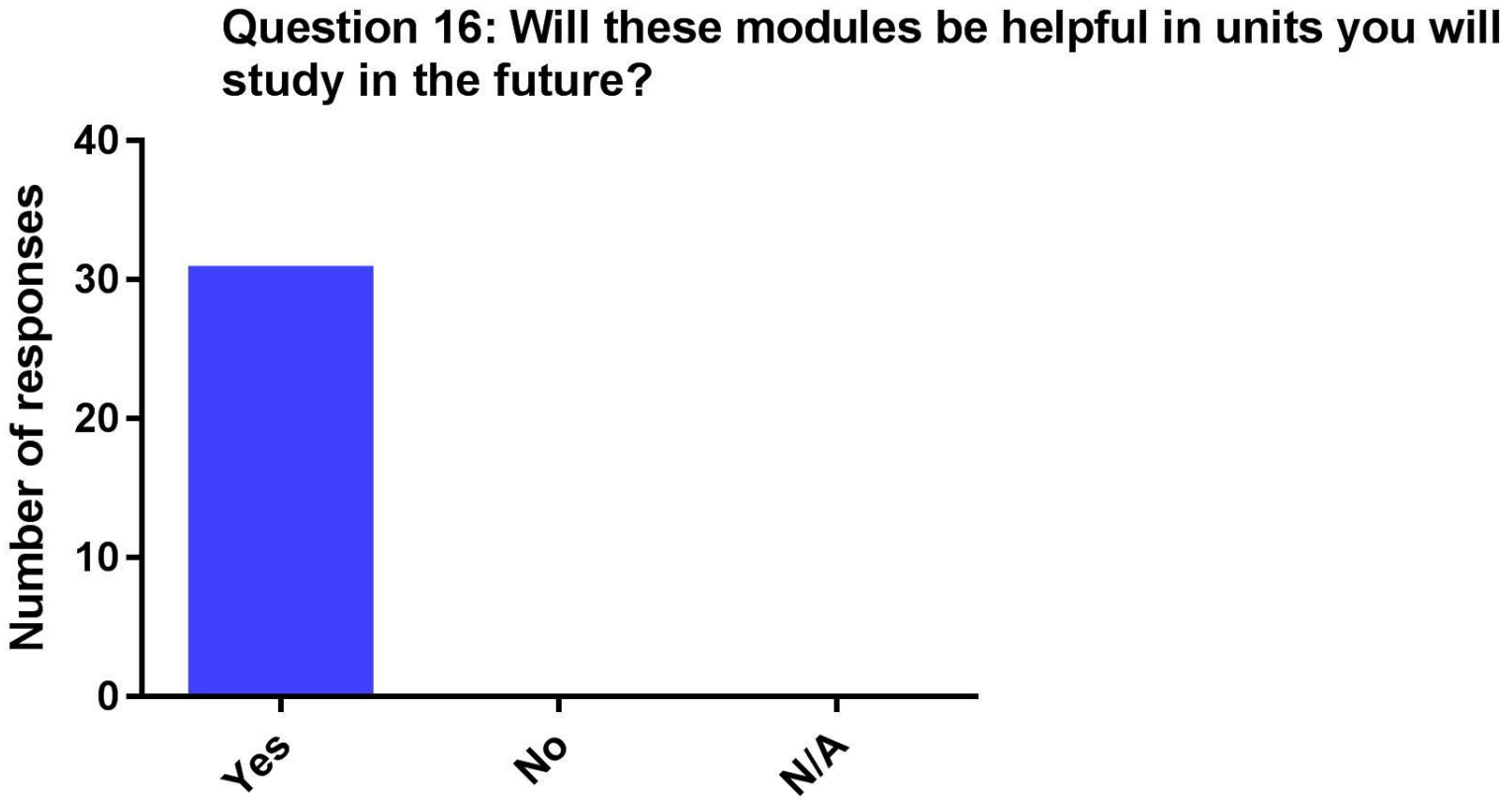
Question 12: How often did you repeat/do these modules?



Question 13: Did they align with your unit content?



FEEDBACK (THUS FAR)



CONCLUSIONS

- Continue this work in the next iterations of the unit.
- Follow the principles of learning by *active* participation and finding innovative ways to achieve this.
- Design and develop learning activities to promote higher level thinking, knowledge and skills.
- Continue to meet the challenges and experiment in this ‘brave new world’ of learning and teaching…