

The use of SNAPIs as a reusable learning resource

Background

UCD School of Veterinary Medicine currently runs a series of Graduate Certificate Programmes. These are taught postgraduate programmes delivered by distance learning and designed to promote continued professional development, pitched at Level 9 within the National Framework of Qualifications. The Graduate Certificate in Small Animal Medicine (SAM) is a new graduate certificate programme that was launched in early 2015, aimed at practicing Veterinarians wishing to develop their approach and knowledge more specifically in the areas of Canine and Feline Medicine. SNAPIs were developed by **Dr Emma O'Neill and Mark Carty** (Educational technologist) as a reusable learning resource within this programme; largely as a tool to promote active student engagement and the delivery of timely, formative feedback on authentic tasks. Whilst developed originally for use within this programme, SNAPIs are now being developed for the Veterinary Medicine and Veterinary Nursing undergraduate programmes with a studentship programme run this summer by **Dr Mary Gallagher and Dr Emma O'Neill**.

The importance of active learning and student engagement

Meaningful, or deep, learning has been described as the development of structured knowledge, where new concepts are related to previous knowledge and then gradually built on and refined over time (Ausubel 2000). In contrast, rote, or surface learning relies purely on the retention of facts. It has been shown that the approach taken by a student during their studies (surface versus deep) is profoundly influenced by the course design and assessment strategy (Gibbs 1992; Entwistle and Peterson 2004), hence care needs to be taken to align the course approach with the desired outcomes (Biggs 1996). Course characteristics that have been shown to foster a deep, more meaningful, approach to study include those that promote (Gibbs 1992; Volpe Horii 2007);

- An inherent interest and hence motivation in the student
- Engagement of learner activity
- Interaction with peers
- The development of a well-structured knowledge base
- The timely provision of feedback

SNAPI - Reusable learning resource:

One of the reusable learning resources developed to address the identified learning requirements within the Graduate Certificate programme were **SNAPIs** or **Small Nuggets Applied Practically to Inform**. These short clinical vignettes combine clinical commentary and clinical material, such as radiographs or clinical pathology results, with questions and targeted feedback. In addition they contain relevant links or references for further self-directed study. The questions posed include a combination of structured, formative single best answer or true / false questions, allowing the student to assess their clinical judgment on the material provided. The

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material was created using Storyline Authoring software, allowing the construction of reusable, stand-alone resources. As part of the Graduate Certificate SAM Programme, a number of these RLRs are then integrated into the Blackboard (VLE) and released on a gradual basis over the course of the programme to supplement more formal course content and provide individual, formative feedback.

The overall aim with SNAPIs, as indicated by the name, is that they are short, bite-sized learning resources that provide informative feedback and scaffold further learning. They are derived from clinical material promoting inherent learner interest and active learning. Their brevity and multi platform accessibility is designed to draw students in and appeal to our 'on the go' gadget-aided lifestyle.

Considerations for the use of SNAPI memory bytes

This SNAPI RLR approach that we have developed has broad potential applications. The general framework could be used in any setting where the aim is to get students to interact with material and gain formative feedback sparking further study. The current design has been specifically oriented towards an on-line delivery, however it could easily be adapted to allow a blended, flipped classroom approach. The simple structure aimed at small bites of information lends itself well to use on mobile devices and learning on the move. The use of clinical material, images and video draws students in, viewing it as a more 'light-touch', fun approach that captures their interest. It is in view of these attributes that we are currently working on developing a suite of SNAPIs for wider programme use.

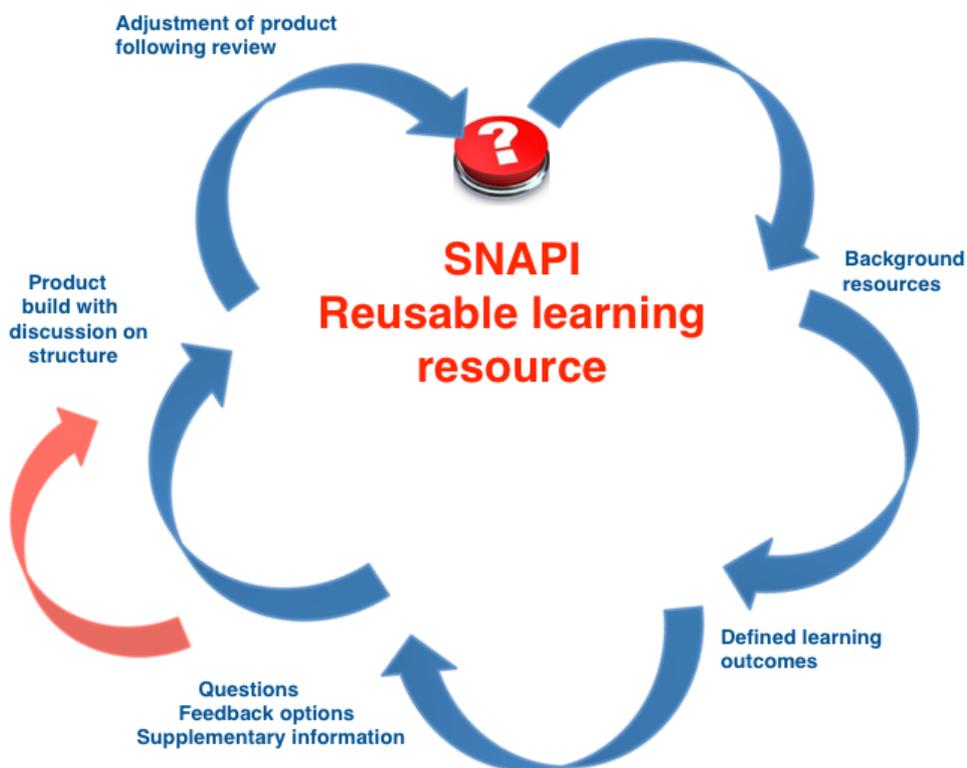
The following are a few points to consider when thinking of creating SNAPIs for use in your teaching;

- Consider their alignment within the module - integrate their use rather than using them once in isolation (Torre et al 2013)
 - They are used to provide formative feedback on clinical interpretation and reasoning tasks within the SAM graduate certificate programme.
 - In addition, they provided the opportunity for students to practice with the single best answer style questions used as part of the summative end-of-semester assessment.
- Material used should be authentic and relevant in your field to promote deep learning (Knowles 1980, Dale et al. 2008) as this:
 - Appeals to an adult learning style
 - Draws on prior knowledge and builds from there
 - Promotes motivation
- Consider the learning outcomes you wish to achieve
 - Do not try to achieve too much with a single SNAPI
 - Consider use of multiple SNAPIs following a theme or one linking into the formal lectures
- Assessment and active engagement are key drivers to learning (Chickering and Gamson 1987, O'Neill and McMahon 2005, Freeman et al 2014)
 - Consider the method of questioning
 - Single best answer questions can be more limiting and are often challenging to write

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- A selection of “which of the following are correct” style questions often provides a greater challenge as each answer must be considered on its individual merits
- Aim to incorporate higher learning tasks to drive deep learning (Bloom et al 1956)
 - Interpretation of an ECG
 - Interpretation of a radiograph
 - Clinical examination
- Consider different student learning styles
 - Vary the audiovisual content
 - Think of incorporating a variety of presentation styles / media
- Peer-peer learning is highly beneficial (Salmon 2002)
 - There is provision for the discussion of the SNAPIs on group discussion boards in the Grad Cert SAM programme.
- Remember SNAPI is bite-sized!
 - Short pieces draw students in, promote interest and spark further study
 - Ideal format for presenting controversial topics or important areas that may not lend themselves to a large lecture but are as important none the less

The framework below outlines the design process we currently employ



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Get involved!

Mark, Mary and I have teamed up with Karolina Jankowska and Maire O'Reilly to work together creating a selection of SNAPIs with broad application across the Veterinary Programmes. To this end, we are currently running studentships funded by a Digital Skills in Action project to help develop resources and clinical content. We hope to roll out our first round of broader application SNAPIs mid-way through this semester.

- Firstly, we would be really interested to hear any ideas and feedback from anyone who has tried out any of our SNAPIs!
- Secondly, if you would be interested in helping us to develop further SNAPIs or if you are interested in one of our studentships, please get in touch!

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