

Incorporating blended and flexible learning strategies into the teaching of veterinary nursing competencies

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Introduction

The need for veterinary nursing students to receive clinical skills training is obvious. Despite this absolute requirement for skills training, there is little published literature on optimal practical teaching methods. These factors warrant the exploration of alternative teaching approaches to support the development of clinical skills whilst protecting animal welfare.

Objective

To support the learning of veterinary nursing practical skills by incorporating customized video clips into a blended learning equine nursing module.

Implementation

The video clip library was produced by the DKIT veterinary nursing lecturers. They demonstrated the correct performance of a range of practical veterinary nursing competencies e.g. bandaging, hand hygiene.

High definition (HD) footage was recorded on a Panasonic SDR-H81 HDD video camera in a 16:9 screen format and edited using iMovie '11 (version 9.0.4). The video library was made available to the students via Moodle, a virtual learning environment (VLE) and utilised for equine nursing practical class preparation (Figure 1).

Figure 1: Integration of video library into practical classes and work placement

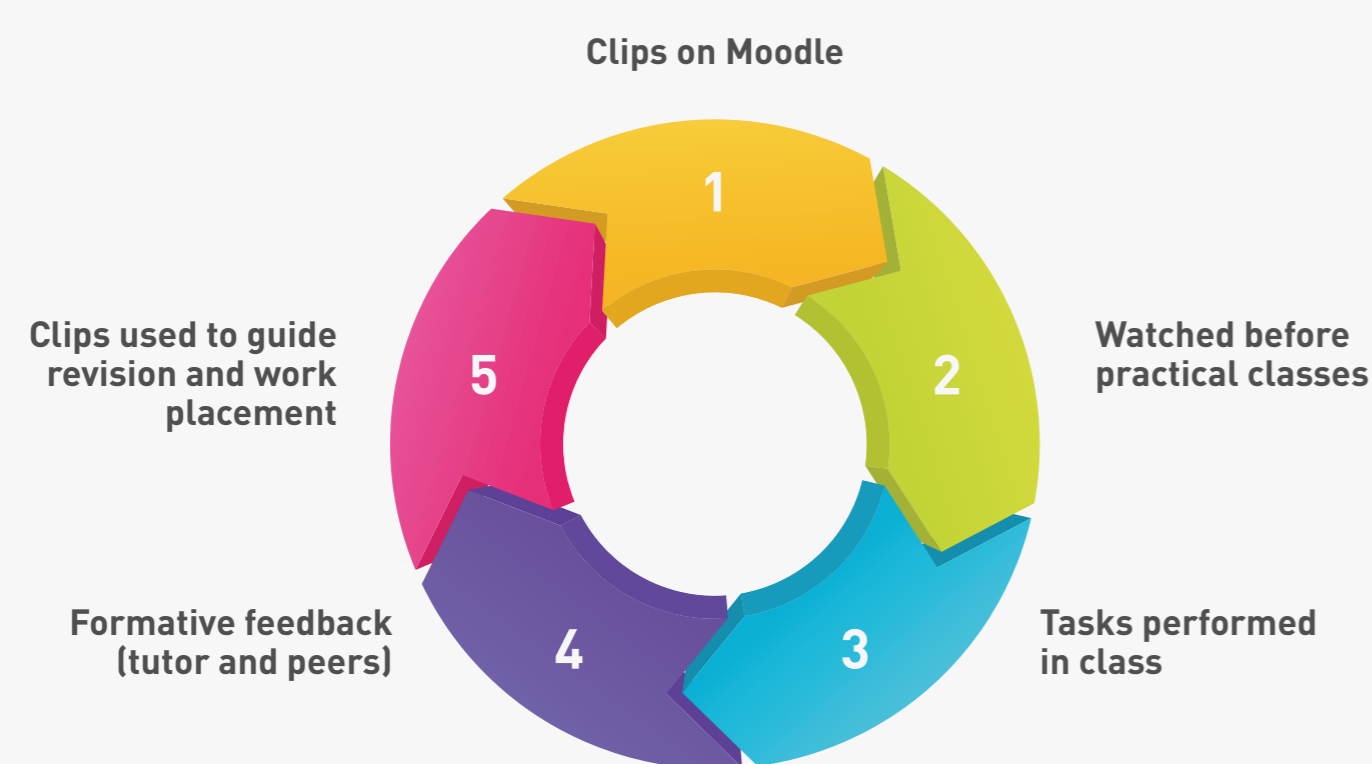
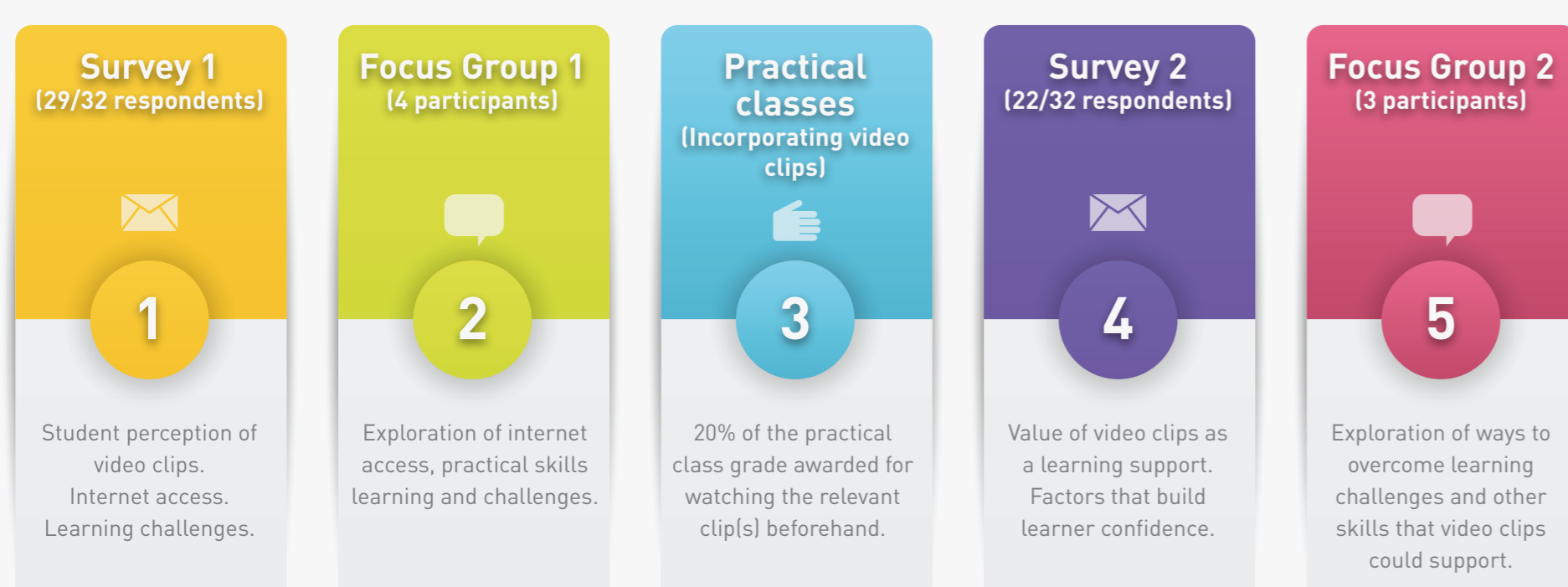


Table 1: Aims of the practical class design

To foster a sense of responsibility amongst the students for their learning
To reduce the amount of time spent in lecturer demonstrations and explanations
To eliminate poor visibility when a tutor demonstrated the task to a student group
To increase the amount of time the students spent actually performing the task and getting the chance to practise the technique in class
To allow the lecturer to spend more class time interacting with the students and providing guidance and formative feedback on their performance

Figure 2: Evaluation of the video clips as a learning tool



Results

Table 3: Key findings in survey 1.

100% of respondents considered video clips to be either very useful or quite useful.
Preferred methods of accessing clips were personal laptops (85%) and college PCs (52%). Home PCs and smartphones were lower at 33% and 19% respectively, while none of the students reported using netbooks or tablet computers.
The major learning barriers identified in college practical classes included "nerves" (43%), limited lecturer teaching time (39%) and large group sizes (29%).
Common work placement barriers included practices that don't perform the necessary skills (78%) and lack of time (52%). Limited opportunities to perform new tasks, or problems with unfamiliar equipment, were reported by 33% of students.

Internal student factors such as nerves and a lack of confidence in their ability to perform practical skills, were widely reported as a barrier to learning in the initial survey and focus group. This was an unanticipated outcome, but one that has the potential to significantly limit student learning. Furthermore this is not an issue that resources alone can address.

Table 4: Key findings in survey 2.

The most frequently requested content for additional video clips related to OSCE tasks, followed by large animal tasks.
73% of respondents reported the Personal Effectiveness and Learning Support (PELS) module from the previous semester to have boosted their confidence when performing practical tasks. 18% found it not very helpful and 9% reported it to be not at all helpful.
The teaching methods that helped build student confidence when performing practical tasks included one-on-one tuition, practise sessions, constructive feedback, video clips, demonstrations and small group teaching.
Tutor and peer enthusiasm for the topic was reported to build confidence and support a constructive learning environment.

To build confidence the students in the final focus group explained that not only did they need to practise a task repeatedly, but they also needed to know that they were practising it accurately. This was where they felt the real value of the video library came from: they trusted the tutor in the customised clip to perform the task correctly.

Conclusions and recommendations

Table 5: Conclusions and recommendations of the study.

Conclusion	Recommendation
Customised video clips are a useful resource for practical skills training.	Invest time and resources in developing customised video clips for practical skills training.
Both internal (learner) and external (resources) factors contribute to learning challenges in college and the workplace.	Make the video clip library as widely available as possible, and over a variety of formats, to maximise students' ability to access and use it.
Learner confidence is a key factor in developing practical competency.	Recognise the importance of fostering learner confidence and actively incorporate this into teaching and assessment strategies.
Learner confidence can be developed in a variety of ways and can "carry over" from one subject area to another.	Suggested interventions include group and peer learning, repeated opportunities to practise practical skills, constructive and prompt feedback and the provision of a positive and enthusiastic classroom atmosphere.

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