Title: *Technology enhanced learning in sport*

Summary:
The bespoke pedagogical design for a diverse student cohort incorporating reflective practice, technology enhanced learning, real problem based learning and supported peer to peer group work.

What was done:
The design and implementation of the BSc (Hons) Football Coaching and Business Management represents a culmination of research obtained through industry collaboration. The programme featured a Technology enhanced learning approach which embedded problem solving and reflective practice within the intensive black teaching programme. Assessments were then designed to align to industry practice, with a focus on problem solving and presentations as part of a constructive process.

Analysis of market trends suggested a demand for a flexible higher education progromme which enabled experienced practitioners the opportunities to return to education while retaining a full time career.

A unique collaboration with the National Governing Body of Football (Irish FA) a detailed needs analysis was carried out, following thoughtful consideration of the findings the BSc Hons Football Coaching and Business Management degree was created. The unique features included its fast track part time nature, delivered as a block taught programme. Combination of industry case studies and academic under pinning and the embedded use of Technology Enhanced Learning throughout the programme.

The target market consisted of mature learners who had been away from formal learning for extended periods and thus required additional support

Recognition was given to the students prior knowledge, gained in practical experience therefore each daily delivery involved a practical case study delivered by an industry expert, this was followed by a lecture underpinning the theory prior to group problem solving tasks which drew out understanding and awareness of knowledge.

During the delivery nearpod was used to engage students and test existing knowledge by creating questions and scenario. Students then worked in groups to complete tasks providing students with an opportunity to demonstrate learning in context.

The intense nature of the block teaching combined with the students busy working life required support for students as a means to reflect on learning. Thus, each teaching session was videoed and made available to the students instantly via blackboard and you tube for reflective review, incorporating both full class lectures and clipped key concept elements with problem based questions. This use of technology enhanced learning builds on a second five and fifty objective by embracing the opportunities presented through emergent technologies to facilitate and complement teaching and learning practices.

Motivation and aims:

The sports Industry requires graduates who have both academic underpinning of contextual industry requirement, alongside high competence in presentation and problem-solving skills. As a result a new degree was designed and implemented to break down barriers for engagement providing a pathway for experienced coaches to attain academic qualifications.

The course was structured as intense part time block teaching (one week per module) with four modules per year, thus facilitating access for full time staff within the football industry. In creating the course structure recognition was given to the support needed to promote learning for a group with extensive previous knowledge with limited contact time due to working commitments.

The daily programme design included real case study from industry, underpinning theory and peer group work problem based learning, this approach builds on Biggs et al (1993) who promoted the need to understand and transform pre-existing knowledge as a means to promote active learning.

The intensity of the course meant that students needed to process a large amount of information in a short time. As a result all guest lectures and theory presentations were recorded, then clipped with key points highlighted and uploaded to you tube and blackboard to allow students to reflect later. This builds on Kolb (2013) Learning Cycle which promotes the need to reflect on the experience while testing learning out in new situations as part of the group problem solving exercises. Duncan, Lyons and Al-Nakeeb (2007) reported greater levels of student autonomy, engagement and enthusiasm as a result of using problem-based learning approaches in sport. This was further supported by Kamin (2003) who suggested the use of TEL within problem solving led to enhanced cognitive activities.

Nearpod was used to both understand existing knowledge and to test learning in new situations to promote learning in context as part of a Technology enhanced learning approach.

Developing presentation skills was an important graduate skill, therefore each group problem-based learning session finished with informal and formal presentations from students, these were recorded and feedback provided on both content and presentation skills. Formal assessment of a number of modules also include presentation skills which builds on the constructive alignment model published by Biggs, while creating an environment for students to learn from each other in both formal and informal ways (Boud 1998).

Implementation:
REFLECTION

In the first instance a period of needs analysis was carried out engaging key stakeholders in academia and industry to identify gaps and requirements for graduate skills. Secondly a survey was sent to more than 2000 registered coaches to explore preferences for learning and teaching. Following a return rate of 15% the course was constructed in partnership with the Industry Governing Body taking into account the needs of the prospective students.

It was clear from the initial survey and feedback from stakeholders that the most appropriate course structure was block teaching over an intense period. Therefore an engaging design which offered industry case studies, academic underpinning, peer group analysis and a period of facilitated reflective practice was need to engage and support the students. With this in mind a range of guest speakers were engaged and provided with learning outcomes for their teaching and a number of technology enhanced learning methods were reviewed to identify the most appropriate means to support and engage students.
I decided to record all teaching sessions to provide videos to support reflective practice and uploaded these videos to either blackboard or a secure youtube site for students to access both during and after the teaching block. Specific questions were posed as part of the problem based learning peer group work and students were able to access the videos to support learning. Through out the theory and group work sessions nearpod was used to engage students and facilitate learning. This approach drew on Kolb (2013) Learning Cycle and the need to embed reflective practice in learning. The use of nearpod was based on the fact that the students had *substantial prior knowledge gained in practical experience therefore the use of nearpod provided the opportunity for students to show their knowledge*
Which follows Biggs et al (1993) findings which suggests students have prior understanding which must be transformed during the learning and teaching process.

Following each problem based learning peer group session, students would feedback through a presentation to the group, this was also videoed and provided to those who presented as a means to support the development of presentation skills. Presentation skills were highlighted by industry as a core graduate skills and thus were embedded within the teaching and learning, feedback and assessment process for the early modules on the

course. This design builds on Biggs Constructive alignment model for promoting effective practice in learning and teaching.

Successes and lessons learnt:
It was clear that the market for the programme would be non traditional students with a majority of mature students. Therefore the programme was structured to meet needs on a part time intensive module, with four modules to be delivered each year over an intense five day period. Given the high number of students who had been out of education for an extended period of time combined with the intense nature of delivery. However the intensity of the module did present an additional issue as so much information was presented each day, therefore all sessions were recorded, this did require a substantial resource in equipment and additional tutor time in recording, editing and uploading session in an appropriate format to engage students. Additional support from technical staff would aid this process.

During each module nearpod was used to engage students in lectures and promote two way communication, this was a key mechanism to facilitate group work. Further Industry feedback promoted the importance of presentation skills within the sport and football industries. Thus presentations were incorporated as a major part of teaching, group work, feedback and assessment. Facilitated feedback from each group within the peer to peer sessions was recorded and uploaded online to allow student reflective practice.

Nearpod was also used to assess students feedback on both the learning environment and the structure of the programme, from the reviews carried out feedback highlighted the positive impact of the reflective videos

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'I realized how much I missed from the lectures when I watched back the videos'.

I missed a few classes with work and sport but I felt confident of keeping up when I watched back the videos'.

The students presentations were videoed and made available to the group to aid presentation skills. Presentation skills was a key method of assessment and therefore was embedded in learning, feedback and assessment. This use of presentation skills throughout the programme was based on feedback from industry of its vital importance to graduate skills. Student feedback on presentation skills was also positive:

'The presentations took me out of my comfort zone, ive never watched myself present before, being able to watch myself back certainly helped me prepare for the assessment'.

Adding regular student presentations as a formal part of learning from peer group work did stretch students and move them out of their comfort zone at an early stage, this process did need require additional support to manage fear which added to the overall module work load.

The modules delivered using this TEL problem based learning approach have attained a minimum of 4.5 across module feedback in terms of satisfaction highlighting the success of the approach.

Transferability:
The essence of the learning approach was to use problem based learning based on real industry issues which provided an opportunity for students to apply their own knowledge each situation. Reflective practice was then introduced as part of the learning process and was Nearpod used to guide self learning and provide students with the opportunity to showcase their learning.

Nearpod can be adopted and introduced across a range of topics with the Video recording of teaching and assessment easily transferred to other courses with the appropriate equipment. Colleagues within the School of Sport have adopted technology enhanced learning as part of the assessment process facilitating students to record and reflect on their learning prior to using the technology to support their assessment submission.

Further information:
The close cooperation between the Irish Football Association and Ulster University is reflected in the curriculum of the new programme. The BSc in Football Coaching and Business Management offers a perfect balance between academic consideration and practical focus. Such a bachelor's degree represents a new pathway for people interested in exploring the diversity of roles available in football. The fact that most of the course will be taught directly at the national football stadium will also for sure be a source of great inspiration for the students and the lecturers.

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Student Feedback

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Student module feedback for the modules using this approach are constantly above university average.