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A Reflective View of Pedagogical Teaching Framework Focused on Experiential Learning: Achieving University Teaching and Learning Enhancement Strategy and Graduate Attributes

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Abstract

Within teacher education reflection has been shown to be of beneficial use for improving practice across all stages of education. This article is reflective of individual teaching practice within Higher Education at Abertay University, specifically to the field of Sport and Exercise Science. Efforts to reflect on current practice in comparison to experiential learning are made. These are then compared to the 'Abertay Attributes' in order to determine the validity of including experiential learning within this field at the University. There are also comparisons made between classes where experiential learning is encouraged and the 'traditional' academic style of delivery, the lecture. It is strongly suggested that experiential learning enhances the learning experience of the student. There are also direct links with the aims of the teaching and learning enhancement strategy as well as the 'Abertay Attributes', most significantly the 'Intellectual', 'Professional' and 'Active Citizen' attributes.

Keywords: Experiential Learning, Teaching, University, Sport, Reflection.

Current Context and Background

As of August 2014 I started in a new position at Abertay University. The primary role of this job is being involved as a project assistant for the Dundee Academy of Sport. The Academy is a partnership project between Abertay University and the local Dundee and Angus College designed to engage students in education by using sport as a context for this learning to occur. The students we work with are from all areas of the curriculum, from primary school pupils to postgraduate students (Dundee Academy of Sport Brochure, 2014). The other part of the role encompasses teaching on Undergraduate modules within the sport and exercise science department at Abertay University. This is something I have prior experience of at another University within Scotland with a notable reputation for sport within the Higher Education sector, The University of Stirling (Complete University Guide, 2015). The content I am responsible for delivering within these modules is primarily Sport Psychology and Sports Science. Due to recent nature of my arrival at the time of writing, I am less familiar with staff and the 'normal' or accepted style of teaching at Abertay. This has posed certain challenges.

Due to the multidimensional nature of my role with the Academy of Sport, I am limited in the amount of teaching hours I can provide to the sport department. With regard to my influence on style of delivery within each module I have so far been encouraged to conduct the lectures, tutorials and practical sessions in whichever way I feel is best for the students. This has given me great flexibility in my teaching style and allows me to develop a pedagogical approach I am comfortable with for delivery purposes and also that the students will benefit from. Therefore I have reflected on both my previous practice of teaching at the University of Stirling and also my experience at the same University as an undergraduate and Masters student. Reflection has been shown to be highly beneficial in improving practice in pedagogical fields such as teaching and coaching (Gilbert & Trudel, 1999; Hatton & Smith, 1995). This has allowed me to appreciate the strengths and limitations of various different styles of delivery. I also can appreciate the perspective of the undergraduate student having been in a very similar position myself within the last five years. Upon reflection, one key aspect of being a student is being engaged and involved in the area of study. This meant when classes involved more group or practical work the students, and myself, learned more efficiently and in depth. An example of this style of teaching I benefited from was a Social Psychology module where we were encouraged to create and conduct our own experiments, which had to be approved by the module co-ordinator. In these experiments we were encouraged to break and challenge normally accepted social behaviour or 'norms' and observe the behaviour of unwitting participants when they reacted to the situation they were placed in. The reactions were often humorous and controversial, and as such the student felt more engaged in the subject area. This type of behaviour could have been studied in a textbook or in a lecture, however this would not have been as engaging an experience as the practical style of learning we participated in. Upon reflection, the module co-ordinator referred back to these experiments in his later lectures. This certainly helped me as a student make between the theory of

social norms and the 'real-life' situations in which they occur. By conversing with other students enrolled on the same module, it became apparent many students preferred this method of teaching.

Of course, this style of teaching and learning has been used in many academic institutions including Abertay University. Examples where this type of approach has been used in Higher Education include biology laboratory classes, projects for external clients in Business Management and practical placements in a Dentistry course. These are in stark contrast to the 'formal' or 'traditional' methods of teaching within Higher Education that include hour-long lectures involving no participation other than sitting still, taking notes and listening to the teacher at the front (Beard and Wilson, 2013). This 'traditional' style of teaching in Higher Education does not offer the student an immersive learning experience when compared to the examples described previously in the laboratory and experimental situations. The examples discussed also allow and encourage the student to learn from these experiences, and thus may best fit the model of 'Experiential Learning'.

What is Experiential Learning?

Arguably the most important author in experiential learning is John Dewey who explained experiential learning as a cyclical process of reflection, action and understanding and judgement (Dewey, 1938). The academically accepted structure of the model of experiential learning has remained cyclical and retains key aspects of the original model proposed by Dewey. One of the most widely cited models of experiential learning is that of David Kolb, which refers to four continuous cyclical stages of learning which are: Concrete Experience, Reflective Observation, Abstract Conceptualization and Active Experimentation (Kolb, 1984; 2014). Figure 1 below highlights the inner workings of this model.

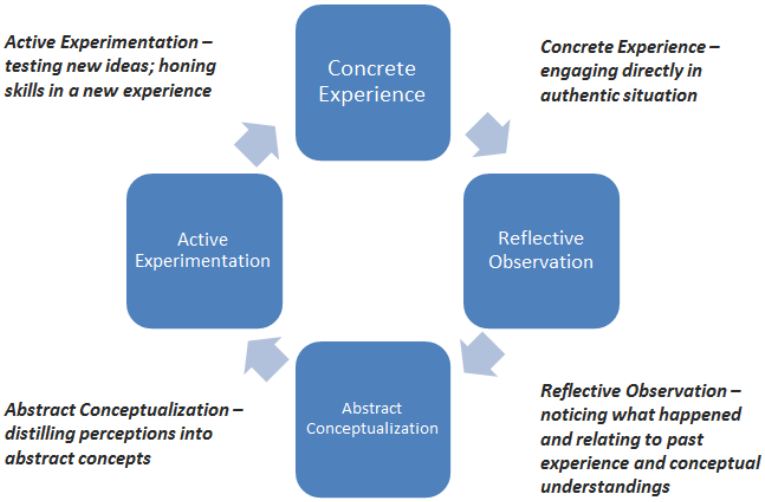


Figure 1: Experiential Learning Cycle (Kolb, 1984)

The 'concrete experience' refers to conditions that need to be present for information processing to occur. Once this information is processed it is reflected upon and then conceptualized into understanding. After this this knowledge and understanding is then tested and experimented with, which in turn forms a new experience and completes the cycle (Kolb, 2014). This cycle of experiential learning is endless and Kolb, Dewey and others propose learning can occur in this manner through all stages of life. Even in the most recent models proposed by authors such as Beard and Wilson (2013) the experience stage remains critical to the process. However Beard and Wilson differ from previous authors by highlighting the improved benefit of an 'immersive' experience. This means an experience that stimulates a variety of our senses and makes the learner feel involved in this experience (Beard and Wilson, 2013). This has been alluded to by previous authors (Keeton & Tate, 1978), however Beard and Wilson incorporated the vivid nature of this experience into his experiential learning model like no others before him. Within the model proposed by Beard and Wilson, there are six 'tumblers' of experiential learning referred to as the "learning combination lock" (Beard and Wilson, 2013) which are found within the external environment, the sensors and the internal environment. The external environment is comprised of two cogs (the learning environment and learning activities). The sensors

refer to the senses the students use to perceive the learning environment. Beard and Wilson hypothesised that by increasing the number of senses involved in the learning experience, the quality of the learning that can occur is also enhanced. Finally the internal environment is comprised of emotions in learning, reasoning and intelligence and finally learning and change. This is the final stage of the combination lock as it refers to the area where the learner has increased their knowledge and understanding and is able to then apply this knowledge to further academic and practical settings.

The external environment is the area where the facilitator has most control (Beard and Wilson, 2013). The teacher sets activities conducted within a class, and they have an impact on the learning environment. This is influenced by the leadership style of the teacher (Altman & Iles, 1998) and also by the methods in which the students work. A notable example of this has been when groups were formed to come up with an evaluation of environmental impact in the local area by reflecting upon previous experiences from previous academic research and also their own experiences in their lives outwith study (De Pedro Puente, 2007). By creating an environment for experiential learning to take place the authors in this study noted student contributions were markedly higher than in other tasks set previously (De Pedro Puente, 2007). There is more evidence of this experiential group project based work in academic settings working effectively too (Bell, 2010). De Pedro Puente did however express a limitation of the study which was that whilst the number of contributions was recorded, the quality of these contributions was not measured. With regard to student satisfaction it has been shown students within the Higher Education sector reacted extremely well to experiential learning within their course. Within the study, common words that were used by students to describe the style of learning included ‘interactive’, ‘discovery’ and ‘fun’ (Frontczak, 1999). When reflecting on tutorials and similar tasks that have taken place in my academic career thus far as a student and a teacher I would suggest getting students to contribute more often would increase the chance of valid and meaningful contributions being made to the area of study. The reason I say this is by adopting this approach it may help to negate situations in classes where somebody sits silently for the majority of the class. This is surely not beneficial to the student in question, therefore efforts to promote engagement within classes should be attempted.

How my Current Teaching Practice Links in to This Model

In the modules in which I am currently involved in the delivery of tutorial and practical sessions I have made an attempt to create an environment suitable for experiential learning to take place. Certain classes lend themselves to experiential learning better than others. Whilst a lecture can be made experiential and have students being involved (Beard and Wilson, 2013), it could be argued tutorial sessions lend themselves better to an environment suited more for experiential learning. This is because a tutorial is often conducted in a smaller room, where the layout has students grouped round a desk, this lends itself better to group work, which has been shown to be beneficial for experiential learning to take place (De Pedro Puente, 2007). As well as tutorial sessions there are also practical sessions allocated to the sport psychology module in which I teach, these are based in a sports performance laboratory in the University where there is physiological testing and sports equipment available. An appropriate example of how the learning environment was manipulated in such a way where experiential learning could take place was in a sport psychology practical class. Social facilitation refers to the effect of crowd and competition on performance (Strauss, 2002). Specifically to sport this differs between complex, fine motor skills and relatively simple tasks that involve more effort and use of larger muscle groups. Performance of complex motor skills is adversely affected by the increased arousal as a consequence of a watching crowd and direct competition. Conversely, performance of simple, effort driven tasks is enhanced by the increased arousal associated with the increased social pressure and competition. In order for the students to experience this is in a practical setting tasks were developed to fit in with the complex motor skills and simple, effort driven tasks. These were a timed football dribbling task (complex motor skill) and a timed period of the participant leaning their back against a wall with the angle between thighs and calves at 90°. This is commonly referred to as a ‘ski-sit’ and is a simple effort driven task. The students had to perform these tasks in three conditions (private/crowd/direct competition) with a partner timing them until completion (complex dribbling task) or exhaustion (simple ‘ski-sit’ task). The results went as hypothesized with the complex motor task being performed slightly poorer in the crowd and direct competition conditions in comparison to the private condition. With the simple motor task however the optimal performances came from the direct competition and crowd conditions in comparison to the private condition of the experiment. By conducting, and participating, in the experiment the students were able to engage a variety of senses in the process. They were able to ‘see’ the effects of social facilitation on

performance. When participating the students were able to 'feel' the psychological and physical responses of the body to direct competition and social crowd conditions. Finally they were able to 'hear' the crowd reactions to their performance within the task on both the crowd and direct competition conditions.

This links very well into Beard and Wilson's experiential learning combination lock. One area with a significant link to this is that the 'Sensors' (third tumbler) are the crucial link between the external and the internal environment. By increasing the number of senses involved in the learning experience as described above, the students are able to feel more involved or immersed in the activity (Beard & Wilson, 2013). Both tasks in this practical session involved a physical challenge, this links directly into the 'Learning Activities' (second tumbler) where it is accepted that if an activity is challenging or involves a journey then the learner is more likely to have a richer learning experience (Wright, 2000; Beard & Wilson, 2013). Throughout the module there have also been attempts within tutorials as well as practical sessions to set active group challenges, case studies and problem solving activities to try an engage the student further with the subject material. This has been shown to increase understanding and depth of knowledge (Omelicheva & Avdeyeva, 2008).

Traditional Academic Methods: Benefits and Limitations

Lecture style teaching has been the most common way of teaching within the Higher Education sector for some considerable time. This is most likely down to the efficiency of this style of teaching rather than the quality of this style (Beard & Wilson, 2013). With regard to efficiency, lecture style teaching can allow hundreds of learners to attend a class at one time. This reduces the staffing cost as well as room cost for a University or College. Another benefit of lecture style teaching is basic knowledge of a subject area can be absorbed efficiently by a large number of learners at one time (Omelicheva & Avdeyeva, 2008). An alarming finding regarding lectures is around a third of all students find their lectures boring. This is not only due to the style of delivery, but also because of the academically accepted way of delivery which is by powerpoint slides (Mann & Robinson, 2009). Also over half of the students within this study admitted to the maladaptive boredom behaviours of daydreaming, doodling and chatting. Other common behaviours exhibited were texting and passing notes round the class (Mann & Robinson, 2009). The use of powerpoint will of course vary between academic institutions, however there is a correlation between students being engaged in their classes and their quality of learning (Beard & Wilson, 2013). The same correlation exists between levels of engagement and academic achievement (Mann & Robinson, 2009). Therefore these are findings which should be taken seriously. Whilst some authors argue that lecture style delivery can be adapted to be more engaging and experiential (Matheson, 2008; Omelicheva & Avdeyeva, 2008; Beard & Wilson, 2013), these attempts can cost considerable amounts of money, due to staff training time, purchase of appropriate technologies to increase active engagement and adaptation of physical learning environment. There may need to be further study to validate whether these costs are worthwhile, or whether the extra labour of smaller more experiential tutorial and practical classes are more financially, and time wise, more viable options.

How Experiential Learning Can Work Towards Achieving the Abertay Teaching and Learning Enhancement (TLE) Strategy and Abertay Attributes

Based upon reflection and experience of multiple Higher Education establishments, there is much variance in strategy with regard to teaching and learning methods. At Abertay University the TLE strategic objectives and outcomes can provide a framework for teaching professionals at the University upon which they can shape their practice (Abertay TLE Strategy, 2013). There exists a direct correlation between these objectives and outcomes and experiential learning. A notable objectives in the current TLE strategy is that the curriculum is in the process of being reformed with the aim to 'advance students' knowledge' and also to 'enhance students' preparedness for post-graduation and the world of work' (Abertay TLE Strategy, 2013). Regarding preparation for work upon completion of a degree programme, classes which promote experiential learning often involve working within groups to address client needs or even by being given case study problems to analyse and find solutions to. By giving the students a platform whilst at University to work on real-life situations linked to their potential future employment will help prepare them for these situations. This style of delivery has been successful for preparing students for work at other academic institutions (Bell, 2010; Beard & Wilson, 2013), so there appears to be no reason why this could not apply to students at Abertay.

Another of the Abertay TLE outcomes achievable by the use of experiential learning within the curriculum is the aim of a distinctive student experience that incorporates excellent learning and teaching. Experiential learning can help achieve this target as it is certainly a distinct method of teaching that varies greatly from the 'traditional' teaching methods of other academic establishments (Beard & Wilson, 2013). As stated previously, experiential learning environments are associated with a more problem solving based approach has shown evidence of greater student engagement and subject interest. This can help attain the high quality learning targeted within the institution. This is also linked directly to the target of 'Excellent Abertay Graduates' (Abertay TLE Strategy, 2013). This target features the idea that students should have a high knowledge base within their subject and can be comfortably working with others as well as by themselves. As many experiential learning tasks focus around group work, this would allow the students to become more at ease with working with other people. Also classes that encourage experiential learning have been shown to increase interest (Wright, 2000; Kolb, 2014) and a deeper knowledge base (Beard & Wilson, 2013) of a subject area which also directly links to this outcome target. Lastly, with regard to the TLE outcome targets, the expectation of teaching staff is they should feel empowered and be able to offer innovative and efficient teaching and learning methods. The experiential learning paradigm encourages practitioners to engage as many senses as possible during classes and also promotes altering the external learning environment to one which facilitates group involvement, problem solving and work like tasks (Beard & Wilson, 2013; Kolb, 2014). This allows teachers to be creative and innovative in their lesson plans and alter them accordingly with the ever changing demands of potential future employment opportunities of the students.

The Abertay graduate attributes are also a significant target of the TLE strategy within the institution. These are a set of skills and values Abertay hope to instil within their students upon completion of their academic programme. There are four attributes: intellectual, professional, personal and active citizen (Abertay Graduate Attributes, 2014). One of the key components of the intellectual attribute is students should be able to identify and work out solutions to problematic situations. By incorporating group work and employment style challenges suggested by exponents of experiential learning this could be achieved. An example of this within my own teaching practice would be giving a group of sport psychology students a case study of a basketball team with low levels of team cohesion and working out suitable ways to identify this and work out a solution tailored to the specific needs of that group. This would involve them reflecting on their own experiences of team environments, utilising different assessment techniques and taking into account environmental factors associated with that team in order to develop a progressive plan. The professional attribute involves students being able to make decisions and solve problems. As well as this students should also be motivated to continue learning. Experiential learning environments can work in conjunction with this aim as increased engagement is a common finding associated with this type of environment, which can only stimulate motivation to continue study within their field. The ability to solve problems can be developed within experiential learning environments, perhaps through the use of a practical session revolving around attentional narrowing and physiological arousal with the use of an eye tracker in a golf putting task in a sport psychology class for example. The final attribute that experiential learning environments could help attain would be the active citizen attribute. Key components of this attribute are being being able to deploy skills and to be socially respectful of others. Practical classes involving experiential learning could be used to allow students to demonstrate skills by offering attentional narrowing solutions as described in the putting example explained in the professional attribute. With regard to being socially respectful, this can be achieved by way of incorporating group work within experiential learning environments. Without being respectful of others within the team, the ability to perform the task or solve the problem at hand would be severely diminished. This would help prepare students to be socially respectful upon graduation at Abertay.

Conclusion

Experiential learning environments and tasks have been shown to increase levels of student engagement, motivation and even academic achievement within other higher education establishments when compared to traditional methods of delivery, notably lectures. As my current teaching area is within sport, where students are normally engaged in participation of the same area, steps will be taken within my own teaching to incorporate experiential learning within my teaching. Whilst there are challenges to achieving this such as inappropriate physical environments, challenging the status-quo of traditional academic methods of delivery and the relative inefficiency of smaller tutorial or practical lessons when compared to lecture style delivery, these are not

insurmountable. Even traditional lecture style delivery can be made more interactive and engaging by use of appropriate technologies and room layout. Keeping students engaged and offering a variety of different learning environments helps cater for a number of different learning styles and is also in keeping with the objectives and outcome targets of the modern TLE strategy, and graduate attributes at Abertay University. This style of teaching and learning should be considered across various schools within the institution, as it is a model applicable to any academic discipline. Reflecting on my experiences as a student and a practitioner, I am aware of the potential benefits of this style of teaching and learning and will endeavour to incorporate it into my practice at appropriate times.

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