***An investigation of student teachers’ ability to reflect, using a range of reflective learning activities.***

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***Abstract from a current EdD which outlines the research.***

*“This is a study of student teachers’ ability to reflect on their own experience in order to support their learning. The study takes an interpretative approach to investigate how student teachers reflect over their PGCE year. This is an action research project generating qualitative data highlighting the views and experiences of students during their teacher training. This study took place over a one year period in one teacher training institution. There were six participants aged 22 or 23 years of age, who were all taking a post graduate route into teaching Physical Education. Analysis of the literature on reflection led to the formulation of two categories associated with reflection. These categories were reflection according to Dewey’s stages of learning and enhanced reflection. The data arose from different reflective learning activities and one subsequent interview. The data analysis initially distinguished the different stages of learning identified by Dewey (1933). This analysis created three research questions which focused on reflection, enhanced reflection and the use of narrative. Further analysis of the data demonstrated that most of the participants showed signs of reflection, with two participants demonstrating enhanced reflection which involves context, distance, ownership, power and emotion. All participants reflected by using a narrative to reconsider their experience. The conclusions were that given the opportunity student teachers demonstrated the ability to reflect but the oral reflective learning activities were the most effective and students require some guidance on how to reflect. The use of narrative was evident in all data and this may indicate an area for future research. The implication for initial teacher training programmes is that oral reflection through the use of a story provides the best opportunity to formalise learning through reflection. Therefore Schools of Education should provide opportunities for oral story telling. However the teacher training period is only the start of the reflection process and professional development programmes must provide further opportunity for teachers to develop their ability to reflect. Therefore career professional development programmes should incorporate opportunities for oral reflection.”*

**Background**

As Coultas (2008) states: “*An effective teacher is a learner”* and in order to formalise learning an individual should reflect upon their experience. The concept of becoming a reflective practitioner in teaching is not new but the pressures of a condensed Post Graduate Certificate of Education training (PGCE) year often make it difficult to include sufficient periods of reflection to formalise learning within the programme (Donald, 2002). This paper focuses on research which evaluated the impact and perceived effectiveness of reflective learning activities on PGCE Physical Education (PE) students.

This action research project took place within an Initial Teacher Training (ITT) programme in a small University and served two purposes. Firstly data gained from a previous study provided a starting point for the investigation which stimulated the introduction of a range of reflective learning activities in the PGCE training year. This demonstrated a spiral ‘action’ taken as a result of previous findings. Secondly this current project has created ‘theories of understanding’ which could be used to influence the thoughts of others. In other words both the ‘action’ and the ‘research’ have created a transformation in the mechanics of the PGCE course within one institution and the confidence and belief in the data to introduce alternative activities to encourage reflective learning (McNiff & Whitehead, 2010). Action research is a powerful tool for change (Cohen et al, 2009) and was used to improve the learning opportunities for the PGCE students. Carr and Kemmis (1986) regard action research as a self-reflective enquiry and emphasise the importance of the two aims of action research: to improve and to involve: a two themed approach. Rossi and Tan (2012) however provide a more progressive theory to action research when they talked about ‘a reflective process involving progressive problem solving’. This research is on-going and in truth will never be complete because each conclusion that is drawn will assist in the design of the next PGCE training year. This research followed an interpretative paradigm but adopted the theory presented by Pawson and Tilley (1997) to provide the project with a ‘bounded system’ (Gomm et al, 1993). The Pawson and Tilley model had three elements to the research process:

Context ------ Mechanism -------- Outcome

(Pawson and Tilley, 1997)

The project is based on the three elements as follows. The context was be variable. There were a variety of reflective learning activities and a research tool to investigate student reflection. The mechanism on the whole remained constant because the contexts were designed to provoke the students’ thought processes. Hence the mechanism was the students’ thoughts. The outcome was the student reflection. The assumptions were that the participants take part in several contexts, the mechanism remains constant but might be through various mediums and eventually the desired outcome of reflection was achieved.

**Reflection as a learning strategy**

The most important concern for ITT and school based staff is not necessarily how we formalise the learning from our reflection but making sure there is opportunity to ‘learn’ to reflect. The evaluation of a lesson with a mentor is only one step towards a critical review of the developing teacher or person (Moon, 2005).

Donald (2002) compared the novice to expert teacher and questioned whether the one year PGCE course could prepare a student to adapt quickly to classroom feedback and reflect on their teaching experience. Many PGCE students will rapidly learn to respond to the demands of their mentor or other external source primarily because little time is given to internal analysis or thoughts. The PGCE student will experience an intense learning curve and a process of ‘trial and error’ (Lovell, 1982), and in some cases students may withdraw because there is too much emphasis on reflection which could result in a fear of failure (Ghaye and Ghaye, 1998).

Reflection is regarded as a form of experiential learning and a way to formalise learning rather than cognitive acquisition. Evaluation of lessons taught and a reflection on personal learning is an essential quality in any effective teacher. Dewey (1955), Kolb (1984), Schön (1991), and Honey and Mumford (2006) have identified forms of learning relating to a step or phase system to a cyclical process of development. Dewey listed five stages of development: suggestion, problem solving, hypothesis, reasoning and testing, which have been used as a base line assessment of student development in this research.

All theories of reflection appear to suggest reflection is stimulated by a need or desire to solve a problem (Parson & Stephenson, 2005; Loughran, 1996) with the process being more important than the impact of any change. It is essential that the student moves from evaluating an event to reflecting on the reason ‘why’ (Parsons & Stephenson, 2005). Dewey defined reflection to be a persons’ ability to integrate new knowledge, feelings or attitudes with previous knowledge and to be a prerequisite for professional growth (cited in Peters, 1977). If a student cannot reflect on the lesson, the evaluation is reduced to mere impulse (Redmond, 2004). Student teachers however, have little teaching experience on which to reflect and can be totally overwhelmed by the requirements of the profession especially during the early stages.

Initial reflection from students is often descriptive but more detailed reflection that considers ‘other’ factors has been labelled in this project as ‘enhanced’ reflection. Reflection is an internal thought process but Bradbury et al (2010) stipulate there is a need to recognise the context, power dynamics or idealogical challenges from this process. These factors were labelled ‘enhanced’ reflection. According to Moon (2008) enhanced reflection provides a 3-D effect with the individual viewing the situation from the outside whereas descriptive reflection merely outlines the events.

**The Research Study**

This research embraced the theories of Dewey (five stages of development) and the suggestion made by Moon (2005) and Ghaye and Ghaye (1998) to introduce individual and communal forms of reflection in both the written and oral form. The research was carried out over a twelve month training period which equated to the PGCE year. There were six participants (3 male; 3 female students) who were all studying secondary Physical Education on a PGCE course at the same institution. The participants were aged between 22 – 24 years of age and all of them eventually graduated with Qualified Teacher Status.

The research questions which were the focus of this study were as follows:

a) Do student teachers demonstrate reflection through Dewey’s stages of learning?

b) Do students use narrative to reflect?

c) How do reflective learning activities impact on student teachers’ ability to reflect?

Method

The following diagram shows the pattern, dates and methods of the data collection.

***PGCE PE programme outline of reflective learning activities***

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| consent form – outline of researchREFLECTIVE JOURNALSDiscussion Group (1/2)***taped / transcribed***(September)  |

Students experience 5 weeks in placement school A

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| Action Learning Set (1/ 2) (November ) ***taped / transcribed*** |

Students complete 4 weeks in placement school A

***Christmas break –University contact***

Assignment One Completed – which has a reflective element

Discussion Group (3/4)

 ***taped/ transcribed***

Discussion

Students experience 8 weeks in placement school B

***Spring Holiday – no University contact***

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| Action Learning Set (3/4) ***taped / transcribed***Assignment Two (non PE) completed – which has a reflective element (April) |

Students experience 7 weeks in placement school B

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| Individual Interviews – 6 participants**(research tool)**Collection of Reflective Diaries Assignment Three Completed which has a reflective element(June - August) |

***PGCE PE trainees complete one year course June***

Thirteen student teachers were asked to take part in the research at the beginning of the research period and they completed a consent letter at the start and the conclusion of the project. Towards the end of the project once the content of the data were analysed six participants were chosen to take part in a formal interview. All were given the opportunity to withdraw from the project at any time. All data were confidential with student names being removed and a coding system adopted.

Three complementary reflective learning activities were chosen to investigate the development of the students’ ability to reflect. These were: discussion groups, action learning sets (ALS), and reflective journals. The activities included individual, communal, oral and written forms of reflection (Ghaye & Ghaye, 1998; Richert cited in Russell & Munby, 1992; Morrison, 1996; Parsons & Stephenson, 2005; Moon, 2005). The data collection concluded with a formal interview.

The aim of the oral reflective learning activities was not to discover ‘what’ the students were thinking, but more importantly how and why they came to that opinion (Morgan, 1997). The groups were established during University based sessions and the topic was always related to relevant issues of becoming a teacher and to helping the students achieve the 2007 ‘Q’ standards. The oral activities were informal, provided a relaxed atmosphere and allowed “emic” or natural information to be presented (Stewart & Shamdasani, 1990). The aim of the oral activities was to provide time and space for the student to reflect (Brockbank & McGill, 2004) and for the student to move away from being a ‘passive receiver of knowledge’ to a reflective practitioner (Greenwood & Levin, 2007). In addition to the oral activities a written journal was provided to assist with any written reflection that may occur during the year. At the conclusion of the year six students were interviewed formally with questions from the researcher designed to probe the comments already provided in the data.

**Results and discussion**

The data demonstrated that five of the six students demonstrated reflection through Dewey’s stages of learning and two of the five did show the early signs of enhanced reflection but this was limited. These two students started to make independent decisions (Fook, 2010). It could therefore be concluded that opportunity alone does not ensure learning from reflection. If this is the case then reflection could be considered unnatural. Reflection could be a learning tool that has to be taught. The participants were tracked through their ability to ‘layer’ their reflection by relating more recent learning to previous learning. This involved moving from one experience to the next and being aware of how they were learning from experience. Dewey’s stages of learning were being ‘layered’ on top of each other rather than becoming stages of learning. This meant the learner did not always return to a starting point but went through the stages in a different order or had juxtaposed certain steps or progressions.

The two students who showed signs of enhanced reflection by: demonstrating the ability to place their learning within an historical continuum of learning, considered their relationship with others and how this affected their own perceived status and had a positive emotional attitude to their training.

The data produced an interesting consideration in that each participant used a story to relive an experience from their life. Although the use of narrative was not essential to reflection, the opportunity to tell a story certainly helped the participants to start the reflection process. All participants told a story during the ALS and some used the journal to provide a written narrative. Interestingly, Elbaz (1990) felt the use of storytelling suited the profession of teaching, so it was no surprise to find each reflective learning activity produced a series of narratives from the students’ experience. The stories were told in different ways. Some were straight forward descriptions, other stories provided background detail.

Clandini (1988) stressed the ‘power’ of the narrative. This was demonstrated in this research as each recorded episode had relevance to the participant. This relevance usually came from either a positive emotional experience or occasionally a negative experience, which is interesting to note because it may explain why an individual would tell a story. In other words the participant chose to select the story for a reason. However the content of the story differed between the reflective learning activities. The discussion groups produced accounts concerning whole school issues. ALS were more personal and introduced topics relating to the individual and their personal experience. The oral reflective activities were expressed in ‘real time’. There was no transformation or time delay and the detail appeared to be very ‘fresh’ in the students’ mind. The journal, non-verbal activity, provided a brief sequence of events that were based on an historical overview of events.

**Conclusions**

This research project provided several opportunities for student teachers to reflect on their teaching and learning experience. The reflective learning activities did not always produce reflection. Although 5 / 6 students did show the early signs of reflecting through Dewey’s stages of learning only two demonstrated reflection that considered the context of their learning, ownership of the situation, a reference to power and emotion. The conclusion would therefore summarise that opportunity does not always equal enhanced reflection. Some students will have to be guided to consider and re-consider their experience in order to formalise their own learning.

 **Implications for ITT**

The data demonstrates that student teachers will not necessarily reflect on their experience if given the opportunity. This would indicate that students need to be encouraged or perhaps ‘taught’ how to reflect and ultimately formalise their learning. The quality of the reflection also requires consideration. The aim of ITT would be to stimulate the student to learn for the sake of learning rather than answer the requirements of the training ‘Q’ standards or for academic assignments. In most circumstances the student teachers need to be guided to enhance their reflection within the context of their own learning, with ownership, emotion, value and acknowledgement of their vulnerability. It would appear that ALS provide the most suitable environment for student’s voice their learning. Therefore ITT should arrange for suitable ALS to encourage narrative and learning. It could be argued reflection needs to be taught rather than nurtured. This has implications to the pedagogical approach within ITT and should identify suitable teaching strategies to ensure student teachers formalise their learning. This could raise the question, supported by Donald (2002) that the PGCE training year is too intense to consider enhanced reflection and that perhaps the reflection process can be initiated in the training year but continued overtly in career professional development programmes.

**Contribution to Knowledge**

The real contribution to knowledge is found in the contribution to my knowledge. As a researcher and a lecturer in ITT I have moved closer to understanding how student teachers formalise their learning and how I can facilitate this process.

The theory presented by Pawson and Tilley (1997) provided a suitable framework to structure an investigation into the learning of student teachers. The theory of context, mechanism and outcome enabled the identification of the mechanism and outcome that had to be accepted and the context that could be changed but the mechanism of the thought process and the outcome of reflection remained constant. The acceptance of this pattern of research allowed a focus on the context. The data only demonstrates that the combination of oral reflection in an organised structure is beneficial. As the oral discussion groups did not produce as much evidence of enhanced reflection I can only conclude that the student teachers in this project favoured the structured oral approach of the ALS in order to reflect. Therefore the contribution to knowledge would be to promote the use of ALS within a group of student teachers to encourage reflection.

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