BG Research Online

Abstract:

This article investigates the learning and academic attainment of undergraduate education students on enterprise placement projects in a longitudinal mixed methods study. By observing the placement learning and analysing previous and subsequent attainment of a second and third year group it adds to the ontology of purpose for enterprise in education and concurs with the growing body of work identifying placements with sustained academic improvement.   The qualitative investigation identifies five key learning factors from the placements which support improved academic attainment. These are: pressure to learn; critical personal learning events; seeing the setting as a learning environment; professional attachments, and having space to learn. These factors support the transfer of learning from one context or situation to another and using concepts of transformative learning (Mezirow 2000; Jones, Matlay, and Harris 2012) or transitional learning (Illeris 2007) contributes to a cycle of increasing self-esteem and motivation and a sustained improvement in academic attainment. It concludes that a praxis curriculum, using self-assessments, continuous short (micro) reflections and taught awareness of the placement as a place to look for and recognise learning, would underpin these five factors and contribute to the academic processes underpinning attainment.

Keywords: Enterprise, Learning, Attainment, Placements, Praxis Curriculum.

Introduction

The National Centre for Universities and Business (NCUB) sees enterprise as beneficial to innovation and the economic performance of society and benefits students through the development of an industry related research base, better undergraduate employability, and improved curriculum (CBI 2015). Henry (2013) reported a broadening of the enterprise education curriculum across all higher education subjects yet the ontology of the role and nature of enterprise in education is unclear (Beresford and Elliott 2010) This study reports on the learning and academic attainment of two groups of undergraduate students on enterprise modules as part of an Education Studies degree programme. The research objectives were; firstly, to outline the results from a case study investigation of the students undertaking enterprise modules, secondly, to identify factors which improved their

academic learning and attainment, and thirdly, to begin the process of discussing a praxis curriculum for enterprise learning for socially motivated students.

The study builds on the work of Reddy and Moores (2012) and Jones, Green, and Higson (2015) who indicate placements improve academic attainment, and considers an expanded definition of enterprise education by recognising education students have distinctly different motivators than students from subjects such as business, or engineering, who often have more career based, or financial objectives (Hobson et al. 2004; Kim, Markham, and Cangelosi 2002; Handscombe 2009). The article draws together the three themes of enterprise, placements, and attainment, and makes the case for a clear link between attainment and enterprise placements with five features: pressure to learn; critical personal learning events; seeing the setting as a learning environment; professional attachments, and having space to learn. It underpins these findings theoretically suggesting transitional learning (Illeris 2007), or transformative learning (Mezirow, 2000; Jones, Green, and Higson 2012) where learning in one situation can be applied to others, creates deep learning (Moon, Curtis, and Dupernex 2013) where students develop and apply knowledge and skills to improve their self-efficacy improving their academic performance (Bandura 1986; Higson 2008). Finally the article considers a curriculum approach to consolidate attainment factors suggesting a reflective model of learning linked to a contemporary assessment regime and regular micro reflections to support important personal learning.

Defining Enterprise for Education Students

The distinction between enterprise and entrepreneurship is often confused and the terms 'are often used synonymously' (Jones and Iredale 2010, 10). To compound this education studies students tend to be more socially motivated than students on programmes where career or financial considerations are paramount. Hobson et al. (2014) argue people enter the education/teaching profession for social rather than personal gain. The top four reasons people wish to teach are:

- to help young people to learn;

- to work with children or young people;

- being inspired by a good teacher themselves;

- to give something back to the community; (14)

Cochran-Smith and Zeichner (2005, 20) argue even more idealistically that teachers enter the profession because;

> ….they love children, they love learning, they imagine a world that is a better and more just place, and they want all children to have the chance to live and work productively in a democratic society.

Business students for example, are more financially motivated and self-concerned. Research by Kim, Markhan, and Cangelosi (2002, 30) identifies their prime motivators as:

- the prospect of gainful employment;

- career expectations;

- monetary rewards, and,

- personal interest.

Economic motivators such as pay and career prospects, while evident, did not appear to be an overriding reason for choosing an education course. While Rae (2010) recognises that business students are generally becoming more socially aware, their key motivators are still unlikely to be the same as education students. Therefore enterprise education in this context is:

….an undertaking with many similar traits and activities to entrepreneurship but which might or might not make a financial or even material gain. It can include activities where a social, personal, physical or intellectual enhancement exists. It is about the enterprise education student being involved in learning from capacity building and legacy, and could range from enhancing a child's knowledge of an apple, to building a school. (Gazdula 2015)

Review of the literature

There is a broad base of literature on enterprise learning with the largest body centred on business subjects (see Jones and Iredale 2010; Pittaway and Thorpe 2012; Rae 2010; Rae et al. 2012). As an academic discipline education has a more limited literature on enterprise learning. A number of studies from Finland (Lepisto and Ronkko 2013; Ronkko and Lepisto 2015) consider the views of education teachers and approaches to entrepreneurial teaching which offers some insight into how they learn. Also a number of recent studies link learning from placements to improved academic attainment. Watts et al. (2010) argue the development of personal organisation on placements (time management, a professional approach to work and a more mature outlook) aid student attainment. Reddy and Moores (2012) find a broad range of placements are beneficial to academic attainment, while Naughton and Naughton (2016) link student placements to improved attainment as long as the placement is closely aligned to the subject discipline. Jones, Green, and Higson (2015) find higher calibre students are attracted to work placements but still suggest placements have a positive effect on student performance.

For placement learning to affect academic attainment in a long term, consistent sense, learning needs to take place in one situation and be applied in a different situation or context. As such Mezirow (2000) explains how one type of experience can be transformed into another experience and transformative learning helps to explain how seemingly unrelated practical events can aid academic achievement, while Jones, Matlay, and Maritz (2012) argue transformative learning may be particularly relevant in the case of enterprise

experiences. Smith and Patton (2014) comment on a number of relevant concepts including: transferable skills, communication, and collaboration. Illeris (2007) discusses the concept of transitional learning, learning in one place applied elsewhere while Moon, Curtis and Dupernex (2013) argue specifically that enterprise education promotes a deeper form of learning facilitated by the directly link between abstract learning and praxis.

Cope and Watts (2000 cited by Pittaway et al. 2009, 11) consider 'learning through critical episodes or events,' and Cope also recognises;

> ...entrepreneurs can experience distinctive forms of 'higher-level' learning
> from facing, overcoming and reflecting on significant opportunities and
> problems during the entrepreneurial process. (Cope, 2003, 432)

Seeing the placement setting as a place to learn is noted as an important factor in creating a learning environment. Duignan (2003) and Lucasa and Tana, (2013) specifically identify key factors of learning when students are prepared to see the placement setting as a learning environment, with reflections a determinant of attainment. Illeris (2007) also describes the importance of the environments and sees interaction with content and social groups as a key learning attribute.

The importance of reflecting on enterprise experiences is described by Cope (2003; cited in Warburton et al. 2005) and as this study progressed the identification of what to reflect on becomes an important consideration. Kolb's experiential learning cycle (1984) suggests reflecting on the application of academic ideas used in practical situations is the way to gain knowledge. However the enterprise education students reported critical learning events outside their academic direction. Pepin (2012) cites Dewey (1938) stating reflexivity should be a broad endeavour which should continue through a whole enterprise process. The approach taken in this study placed students at the centre of the placement as a learning experience. Jones and Iredale, (2010) argue enterprise learning needs to allow students freedom to explore, while Henry, Hill and Leitch (2005) suggest students develop their own

knowledge and personal values from placements. Henry (2013) also cites the higher education Quality Assurance Agency (QAA) in advocating the benefits of reflecting on enterprise experiences. Reflecting often, on all meaningful experiences during and after a period of placement should prove beneficial for learning.

Finally an exploration of positive stress - reported by students - brought up research papers on stress in education (Collins and Onwuegbuzie 2003; Andrews and Wilding 2010) without really recognising the positive nature of pressure. The underpinning approach to stress in this paper is advised by Nixon (1982) who explains the positive side of stress as an area of optimum performance. A number of academics however challenge the requirement in enterprise programmes to accept failures and move on, and the literature (Rea 2003; Cope 2003) which suggests stress is an important enterprise learning factor, while Pekrun and Linnenbrink-Garcia (2014) argue that even outright failure can be motivational to students.

Overall there is a large body of work on enterprise, placements, skills, and employability, which has informative work in relation to this study, but enterprise placements linked to education students learning and attainment, is less well studied.

Research Methodology and Theoretical Context

The study's research question asked if enterprise placements affected student attainment. While acknowledging the majority of educational research can be regarded as a messy place (Cohen, Mannion, and Morrison 2007). The study of enterprise education can be even more bewildering and any number of case studies have been reported as beneficial without the support of rigorous academic research (Huddlestone 2010). To ensure as much rigour as possible a longitudinal mixed methods approach was taken. Some academics regard mixed methods as the only way to conduct research in social science (Burke-Johnson and Onwuegbuzie 2004) with researchers such as Denscombe (2008) arguing it creates as complete a picture as possible of the object of study. The research instruments were designed and used with a positivist approach as information was collected by questionnaires, and then short individual interviews. This gave way later in the study to a wholly interpretivist approach during the post module interviews which uncovered the

majority of the detail reported here.   Two types of placements were chosen. A second year undergraduate module, Enterprise Education (n=28) consisted of students working in groups to deliver entrepreneurship sessions to primary school children in after school clubs, and a third year group, Professional Practice (n=44) where students worked individually to develop training need reports for various public and private sector organisations. The projects were chosen to isolate certain effects, namely; group work, vocational choice, and the education students' preference for working with children.

The investigation was planned in two stages, pre-module and post module, with each stage having individual questionnaires and follow up interviews. All students who completed the modules agreed to be part of the investigation and completed both stages. Students were allowed out of classes for a set number of hours to complete appropriate tasks for selected partners. Assignments were based on preparation for the placement and then on reflections of work done for the placement. Preparation classes were compulsory at the beginning of the modules, in the middle of the module for assessment briefings, and at the end for reflective presentation assessments. Tutors staffed all classes as consultants to provide advice. Projects were selected on the basis of appropriateness to the overall Education Studies programme, to ensure learning was compatible with the module learning outcomes, and for appropriate taxonomy. Running parallel to this was an archival investigation through the year to isolate their grades from their peers, and compare them for significance. The first stage questionnaire used a Likert Scale with 25 questions which could be re-grouped to find student perceptions on employability concerns, learning, the moral basis to doing work which might earn the university money, to gather a profile of student expectations, find their reasons for doing the module, and to identify the nature of previous enterprise exposure. Individual interviews then explored the students' feelings on the type of work they expected to do, their objectives and their personal aspirations for the module. The second stage investigation at the end of the module used individual questionnaires with a numerical scale (1=5) asking students to rate the effect of learning and motivation of given experiences encountered during their placement. These were: Working with your group, the setting, the focus group (employees or school children), improved employment prospects, improved financial prospects, better employability skills, factors related to the enterprise being undertaken itself such as special interest in

entrepreneurship, , and an option to add other factors. Comments were encouraged. Themes were then drawn from these questionnaires using the broad thesis' outlined in Mezirow (2000), Jones, Matlay, and Maritz (2012) and Illeris' (2007) work which were then used to frame subsequent individual student interviews.

As the research sample were students on a programme led in part by the researcher(s) a number of approaches were taken to reduce the effect of researcher bias. Different tutors were used on each of the modules; grades from the modules were passed through a rigorous academic process including second marking and external moderation. The study of two year groups also gave a measure of comparison and control.

However personal bias exists in all forms of social science research and Greenbank (2003) and Lodico, Spaulding, and Voetgle (2010) recommend critical reflexivity to uncover this. There is an inherent supposition that an enterprise learning approach might be advantageous in some ways to students (Rae 2007, 2010; and Rae et al. 2012) and while some researcher bias here might be inherent, this is likely to be limited from an educationalist perspective.

The sample group of students were studying one of two modules as part of their Bachelor of Arts (BA) degree in education studies. To provide context the two modules are briefly described below.

Enterprise Education - The Young Entrepreneurs Project

Enterprise Education, a 30 credit year two module, ran for 26 weeks through the academic year. The placement was The Young Entrepreneurs Project designed to introduce young children of primary school age, 5-11, to entrepreneurial skills and build self-esteem. Students in groups of four or five developed, delivered, and ran, 12 one hour after school, entrepreneurial education sessions in thirteen primary schools to develop micro businesses run by pupils. On the final week the pupils, supported by students, displayed their goods and services, at city hall in a Dragon's Den type event, and recognised entrepreneurs assessed the contributions using pre-set criteria. It was competitive, in that

schools would compete against each other, and schools with the best micro business won prizes. Student groups were wholly responsible for planning, preparation and delivery of the clubs although a teacher or University employed monitor was available in the club for monitoring purposes. These staff were not involved in the club's organisation and running. Students attended 11 two hour classes at the university with a further 15 sessions given over to placements. The first five classes gave an academic introduction to enterprise education and preparation training for the placement. Two were scheduled in the middle of the module for assessment work and placement reviews, with four at the end for reflection and final assessment work. The University's Virtual Learning Environment (Moodle) was also used to provide materials and information. Assessments consisted of an essay critically appraising the nature of enterprise in education (20% of module weighting), a justified resources pack (60% weighting) and a reflective group presentation (20% weighting). This module received £12,500 sponsorship from Liverpool Local Authority's Extended Schools Service but experience had shown paying students distracted them from academic work, so no wages were offered. However students were paid expenses, and given budgets to support their work with the children.

Professional Practice – Training Needs Analysis for Organisations

This was a 26 week, 30 credit third year module aimed at developing knowledge and skills appropriate for higher education level six by introducing an element of consultancy. Students worked with staff in organisations, rather than children. Nine initial classroom sessions were delivered to introduce underpinning ideas and skills for adult training, outline the placement requirements and develop consultancy skills. Students were encouraged to have a pre-meeting with managers in their placement setting to organise staff interviews. Placement work and times were flexible but had to be agreed with the settings. Tutors provided consultancy support throughout. Students were allocated discussion groups to facilitate problem solving but few ran due to time pressures. This module had three assessments: a micro-teach (25% of the overall module assessment), a Training Needs Report for the organisation (50%), and a reflective observation of the placement (25%). The Training Needs Report was presented to senior management in their placement organisation and a follow up approach was made offering professional university services to deliver the training. Students would be employed to do the training. Moodle's

Virtual Learning Environment provided supporting materials and further information.

Investigating Attainment

A t-test was used to establish the degree of confidence that students were a representative sample and their academic results for their previous years were isolated and analysed against other Education Studies students. Table 1 shown below indicates there was no significant statistical difference between the enterprise groups' marks and the general population of Education Studies student marks before the placement. At the beginning of the study the students represented a normal distribution sample of students in respect of attainment scores.

Table 1: t-test Results of Previous Year's Enterprise Education Student Assessment Results Compared to Total Education Studies Results in Year One

	Enterprise Education: students while on Yr 1: Average Modules Grade	Education Studies Yr 1 Pathway: Average Grade	Professional Practice students while on Yr 2: Average Modules Grade	Total Education Studies Pathway Yr 2: Average Grade
Assessed Students	34	278	46	190
Mean Grade	57.52	56.55	64.12	65.76
Standard Deviation	8.72	10.41	8.55	8.85
Confidence Level		80%		80%
Statistically Significant Difference?		No		No

After the placement period the enterprise student grades were again compared to the grades of all Education Studies students. Table 2 shown below demonstrates the enterprise students had, following their placement experience, higher average grades which were statistically significant.

Table 2: t-test results of the Enterprise Education Modules Assessment Results Compared to Total Education Studies Assessment Results

	Enterprise Education Yr2 Module:	Education Studies Yr 2 Pathway: Average Grade	Professional Practice Yr 3 Module: Average Grade	Education Studies Yr 3 Module: Average Grade
Assessed Students	34	276	46	188
Mean Grade	65.59	58.84	69.95	64.125
Standard Deviation	7.36	9.32	4.07	8.85
Confidence Level		99%		99%
Statistically Significant Difference?		Yes		Yes

To consolidate the findings, average marks from all modules taken by the enterprise placement students, excluding marks from their enterprise modules were compared against the module mark average for all Education Studies students. This showed the enterprise students had increased their overall attainment over students on other modules. Table 3 below shows the uplift in attainment was statistically significant. The enterprise students had higher average assessment marks than their peers across a range of educational modules, including subjects which had more academic delivery and more traditional assessment approaches (e.g. time constrained examination).

Table 3: T-test results of the Enterprise Education Students Module Assessment Results in all Modules (excluding enterprise modules) Compared to Total Education Studies Pathway Module Assessment Results

	Enterprise Education Yr2 Module overall mean across all modules:	Education Studies Yr 2 Pathway: Average Grade	Professional Practice Yr 3 Module: Overall mean across all modules	Education Studies Yr 3 Module: Average Grade
Assessed Students	34	276	46	188
Mean Grade	64.98	58.84	67.45	64.125
Standard Deviation	7.34	9.32	4.07	8.85
Confidence Level		99%		99%
Statistically Significant Difference?		Yes		Yes

The enterprise students were a normal Education Studies cohort in respect of attainment at the beginning of their enterprise placement, but at the end of the placement year, both groups of enterprise placement students had higher average attainment than other Education Studies students who had not taken the module and participated in the placement experience.

The following section outlines the key themes taken from the questionnaires and follow up interviews to provide a framework for curriculum design.

Developing Learning Themes

From the categories on the questionnaire only the setting scored significantly as a factor in learning. Other factors not originally foreseen when planning the research were included as comments and provided further themes for the final interviews. These were:

- Being under pressure or stress;
- The setting;
- The focus group being worked with, and,
- The need to be organised.

In the final interviews students were invited to talk about these factors and open questioning uncovered:

- The importance of small, critical, personal learning events;
- Seeing the setting as a place to learn;
- Professional attachments , and,
- Having space to learn.

These final interviews provided the most important information.   Enterprise Education students are prefixed below with an 'A' and Professional Practice students a 'B'.

Pressure to Learn

The placements created a need to cope with unforeseen situations putting students under significant pressure or stress. Twenty-four (69%) Enterprise Education and 23 (51%) Professional Practice students described pressure or stress in their final questionnaire.   Students also mentioned pressure or stress, as they were explaining answers they had given. Student A1, a second year Enterprise Education student described the way working with children put her "…under pressure all the time, even at home, planning classes." Professional Practice student B2 said "….it made me get going," and B7, "I probably worked harder because I didn't want to let other people down." Students said they hadn't felt the same pressure academically. Examples generally focussed on things they needed to know for their placement project and they seemed to prioritise their placement work to a greater extent than their academic work. Student, A9 summarised the heavy requirements of placement work as it seemed to force her to plan and get more organised; she stated "…you only get one chance in the real world." The reference to real world demonstrates how the placement was often seen in contrast to the students' academic world.

Most higher education students experience pressure to learn for attainment purposes from peers, parents, tutors, their institutions (Collins and Onwuegbuzie 2003; Andrews and

Wilding 2010). This is often reported as stress in academic studies but Nixon (1982) highlights areas of optimum personal stress and pressure to facilitate maximum learning was evident in both enterprise groups. Nixon argues that optimum stress is motivational and students from both groups felt the nature of their enterprise placement projects had been a source of pressure but because of the sense of achievement their work generated it had been important in improving their self-esteem. While there are few emotional assessments of motivation Pekrun and Linnenbrink-Garcia (2014,132) explore this from an academic perspective arguing that even negative pressure could '…induce a measure of anxiety and shame which may induce motivation to avoid failures by investing effort, thus strengthening academic motivation.' The nature of the enterprise placements made students face challenging situations and deal with them. Pressure to learn developed a deeper understanding of their capabilities as they worked though real problems. This reflects the process of deep learning where applying knowledge in difficult situations creates a lasting understanding (Moon, Curtis, and Dupernex 2013). This process supported students in their academic endeavours beyond the placement period.

Critical Personal Learning

Events on the placements became a source of critical personal learning for the students. They were keen to discuss the way they coped with unfamiliar situations. Student A3 acted as spokesperson for an Enterprise Education group that ran out of ideas for the last sessions of their after school club, and wanted these sessions to be as "…great as the first (session)." After being offered some ideas she led her group through the sessions, receiving a commendation from the school. Events such as these seemed to have great personal meaning to the students. Cope and Watts recognises the importance of 'learning through critical episodes or events,' with a heavy 'investment of self,' (Cope and Watts 2000 cited by Pittaway et al. 2009, 11). These support distinctive forms of 'higher-level' learning due to 'facing, overcoming, and reflecting on significant opportunities and problems during the entrepreneurial process' (Cope 2003, 432). Students recognised they could learn as situations unfolded and that prior knowledge was not as important as seeing events as part of a continuous professional and personal learning process. They felt they became more confident when dealing with unfamiliar or unexpected situations and worked out their own solutions. Recognising this learning would improve capability and self-efficacy (Bandura

1986).

Learning Environments

The placement setting was seen by the students as a place to learn and apply knowledge. This was evident from the pre-course questionnaires as students saw the placements as an opportunity to apply academic learning. On the first questionnaire, 76 % of Enterprise Education students saw the setting as important or very important to their learning but only 20% of the Professional Practice students felt the same way. During the post course interviews it became apparent some Professional Practice students spent less time in their settings but students from both groups recognised the importance of the learning opportunities their work afforded them. Duignan (2003) explores the differences in attainment and approaches to learning between students on two business courses. By preparing students to see and use the workplace as a learning environment using information sessions, and aligning the placement with learning outcomes, he felt prepared students achieved better academic attainment after their placements than unprepared ones. Yorke (2011) also considers suitable learning outcomes as an important part of placement learning. Many features of Duignan's preparation to create a learning environment for the second course were evident in our enterprise modules. Learning outcomes were clear and pre-determined, although formative and ipsative outcomes, as described by Yorke (2011), may have added to this. .

Professional Attachments

Professional attachments formed on the placements improved personal organisation. Students began to adopt a professional approach to their work. Gomez et al. (2004), Mandrilas (2004), and Reddy and Moores (2012) all find improved attainment among students after placement due to a more professional outlook, better personal organisation, and a more mature approach to academic work. Mandilaras (2004) argues students mature quicker, are more organised, reliable, and take academic work more seriously, than the general student population citing the effect of professional environments being competitive, and students realising the link between academic work and employment. Enterprise Education student A4 commented she needed to be "….very organised, to do the school clubs properly, but it helped having others to ask who were

professionals (teachers)". This was explored further in the interviews, and the ability to observe others working professionally (role models) was recognised as an important factor in students' development. The enterprise placements allowed students to observe traits they felt were professional and their adoption led to a more professional approach to their own placement and academic work practices.

Space to Learn

The flexibility provided by the placements gave students a chance to explore things they were personally interested in and work through problems. Enterprise Education student A12 found she didn't like to teach, but liked lesson planning. Faced with a lively group of pupils, she led a difficult session finding class control hard, and handed over leading her group to another student. On the Professional Practice class student B15 reported developing questionnaires as problematic and felt she had needed support from her tutor. She did however find she enjoyed interviewing and reporting back to the line manager in her placement organisation.

One example which highlighted the criticality of the learning evident in these learning spaces occurred when a child forcefully decided to leave one of the school clubs. The students followed the rules on child safety and after a quick discussion one of them walked home with the child and waited for a parent to arrive. They felt this was a significant learning event from their placement as they were initially unsure what to do and had to work through the options to arrive at a reasoned decision. Enterprise learning placements may not be the only place these types of events occur, but their ability to create a combination of pressure, critical learning events, and the space to allow students to think through solutions and appears intrinsic to enterprise learning and improves confidence and self-efficacy.

Reflections on Enterprise Placements

Discounted Factors

The effects of social learning, collaborative learning, and learning through group work, were evident in the successful completion of the enterprise projects and tasks, but links to improved attainment were tenuous. Enterprise Education students had enjoyed working in

groups and may have struggled with tasks on their own but they were not reported as factors in attainment. Additionally the Professional Practice group worked individually yet the attainment of the two groups was statistically similar. Improved academic attainment seems to require a level of personal involvement and realisation of self-determination as individuals (Cope 2003). Employability concerns were mentioned and 'the job' was mentioned in a number of questionnaires. However on exploring this in the interviews, the ability to get references from a placement organisation seemed to be the prime motivator and little evidence could be found to suggest this was a factor in attainment.

Further Research

Further research building on data from this study will include identification of an approach for preparing students to learn from unplanned opportunities (Rea, 2003, 2007). The development and study of reflexive practices to help capture personal learning using micro-reflections is an important next step recognising the significance of personal learning on enterprise placements to support student attainment.

Conclusion

Reddy and Moores (2012) and Jones, Green, and Higson et al. (2015) argue placements aid academic attainment, and Andrews and Higson (2008, 416) report '...my grades and coursework improved a lot in the final year due to what I'd learned on the placement...' (UK graduate). This article supports those findings and the qualitative investigation following the placements showed five significant factors were instrumental in supporting improved attainment. These were; pressure to learn, critical personal learning, a learning environment, professional attachments, and having space to learn. The theoretical investigation suggested that experiences gained due to these five factors are key to facilitating transformative learning (Mezirow, 2000; Jones, Matlay, and Maritz 2012) or transitional learning, (Illeris 2007). This creates deep learning (Moon, Curtis, and Dupernex 2013) where students develop and apply knowledge and skills to improve their self-efficacy and general confidence. This in turn can be linked to improved academic performance (Bandura 1986; Higson 2008).

Pressure to learn is difficult to plan and embed within academic programmes. Nixon (1982)

recognises the dangers of excess stress but espouses the benefits of an appropriate level. The projects put students under pressure but having the personal space to explore their own abilities and solve problems, allowed them to begin to manage and accommodate pressure themselves. Even failure can be motivational (Pekrun and Linnenbrink-Garcia 2014) but on reflection, consultant tutors will form a normal part of future enterprise placement modules to monitor and ensure these pressures are dealt with appropriately. There were many reports of events contributing to significant personal learning which created a rich portfolio of informal learning and were reported with enthusiasm as students recognised their importance. To ensure students capitalise on these personal events as learning, future enterprise placements will use a micro-reflections blog as learning capture methodology. The concepts of opportunity learning (Rae 2007), and future learning (Scharmer 2009) suggest there are benefits in preparing students with the knowledge to anticipate learning and a self-awareness assessment should encourage students to see placements settings as a learning environment (Duignan, 2003). These should facilitate the adopting of organisational skills and traits of professionals observed on placements and encourage improved personal organisation (Gomez, Lush, and Clements 2004; Mandrilas 2004; Higson 2008). Gomez, Lush and Clements (2004) describe how even menial tasks may contribute to personal organisation so the more complex tasks performed by enterprise students would again emphasise good personal organisation and contribute to improving attainment by better planning, perhaps giving more time for assignments and effective questioning of tutors. What is clear from the experiences of the students reported here is the enterprise placements did help their professional and personal formation by providing the opportunity to experience and learn from the challenges and rewards beyond the academy, but which were then applied as academic skills and knowledge to improve their attainment.

Human subjects research protection
The research informing this paper was granted full ethics approval by the Ethics Committee at Liverpool Hope University.

Notes on Contributors

Joe Gazdula is Senior Lecturer in Partnership and Management at the University of Bolton. His main research expertise lies in partnership development and student learning with a focus on graduate enterprise and attainment. He is Programme Leader for the MSc. in Project Management in Malawi, Zambia and Botswana and teaches management and education subjects internationally and supervises international doctorates. Joe is the University of Bolton External Consultant at Reed Global and a Senior Fellow of the HEA

Chris Atkin is Professor of Higher Education at Bishops Grosseteste University. His main research expertise lies in the policy and practice of post-school education and training; with a particular focus on rural communities. He has completed a range of research projects funded by the UK funding councils and currently teaches on masters and doctoral programmes. Chris is a Fellow of The Royal Society for the encouragement of the Arts, Manufacturing and Commerce (FRSA), a Fellow of the Royal Anthropological Institute (FRAI) and a Fellow of the Higher Education Academy (FHEA)

Disclosure Statement

No financial conflict of interest or benefit is involved in the research or documentation submitted here to the authors knowledge.

.

References

Andrews, B., and J. Wilding. 2010. "The relation of depression and anxiety to life-stress and achievement in students." *British Journal of Psychology* 95 (4): 509–521.

Andrews, J., and H. Higson. 2008. "Graduate Employability, 'Soft Skills' Versus 'Hard' Business Knowledge." *A European Study Higher Education in Europe* 33 (4): 411-422

Bandura, A. 1986. *Social Foundations of Thought and Action*. New Jersey: Prentice Hall.

Beresford, R., and G. Elliott. 2010. "Knowledge transfer, innovation and enterprise in post-compulsory education: an introduction to the special issue." (Editorial) *Research in Post-*

Compulsory Education, Special Issue: Knowledge transfer, innovation and enterprise in post-compulsory education 15 (3): 245-248

Burke Johnson, R., and A. Onwuegbuzie. 2004. "A Mixed Methods Research: A Research Paradigm Whose Time Has Come." *Educational Researcher* Vol. 33 (7): 14-26

CBI. 2015. *The Best of Both Worlds: guide to business-university collaboration.* National Centre for Universities and Business

Cochran-Smith, M., and K. Zeichner. 2005. *Studying Teacher Education: The Report of The AERA Panel On Research And Teacher Education The American Educational Research Association.* Abingdon: Routledge

Cohen, L., L. Mannion, and K. Morrison. 2007. *Research Methods in Education* (6th Edition). Cambridge: Routledge

Collins, K., and A. Onwuegbuzie. 2003. "Study coping and examination taking coping strategies: The role of learning modalities among female graduate students." *Personality and Individual Differences* 35:1021-1032

Cope, J. 2003. "Entrepreneurial Learning and Critical Reflection: Discontinuous Events as Triggers for "Higher-level" Learning." *Management Learning.* 34 (4): 429–50

Cope, J., and G. Watts. 2000. "Learning by doing – An exploration of experience, critical incidents and reflection in entrepreneurial learning." *International Journal of Entrepreneurial Behavior & Research* 6 (3): 104 – 124

Denscombe, M. 2008. "Communities of Practice: A Research Paradigm for the Mixed Methods Approach" *Mixed Methods* 2 (3): 270-283

Dewey, J. 1938. *Experience and Education*. New York: Simon and Schuster

Duignan, J. 2003. "Placement and adding value to the academic performance of undergraduates: reconfiguring the architecture – an empirical investigation" *Journal of Vocation Education and Training* 55 (3): 335-350

Duchar, R. 2008. "`All you need is an idea!' the impact of values-based participation on pupils' attitudes towards social activism and enterprise." *Improving Schools* 11 (1): 19-32

Gomez, S., D. Lush, and M. Clements, 2004. "Work placements enhance the performance of bioscience undergraduates " *Journal of Vocational Education and Training* 6 (3): 373-386

Gazdula, J. 2015. Enterprise Learning. *The British Education Studies Association Conference* Cardiff Metropolitan University.

Greenbank, P. 2003. "The Role of Values in Educational Research: The case for reflexivity." *British Educational Research Journal* 29 (6): 791-801

Handscombe, R., E. Rodriguez-Falcon, and A. Patterson. 2008. "Embedding Enterprise in Science and Engineering." *Departments Education & Training* 50 (7): 615-625

Henry, C. 2013 "Entrepreneurship education in HE: Are policy makers expecting too much?" *Education & Training* 55 (8/9): 836–848

Henry, C., F. Hill, and C. Leitch. 2005 "Entrepreneurship education and training: Can entrepreneurship be taught?" *Education and Training* 47 (2): 98-111

Higson, H. 2008. *How to improve employability: Aston University's placements programme*, [available at: The Guardian http://www.theguardian.com/higher-education network/blog/2012/feb/29/aston-university-student-placements (Accessed 29/10/15)]

Hobson, A., L.Tracey, K. Kerr, A. Malderez, G.Pell, C. Simm, and F. Johnson. 2004. *Why*

People Choose to Become Teachers and the Factors Influencing their Choice of Initial Teacher Training Route: Early Findings from the Becoming A Teacher Project London: DFES Publications.

Huddlestone, P, 2010. "Enterprise Education in Further Education: Now you see it now you don't." *Research in Post-Compulsory Education Special Issue:Knowledge transfer, innovation and enterprise in post-compulsory education* 15 (3): 249-258

Hytti, U., and C. O'Gorman. 2004. "What is "enterprise education?" An analysis of the objectives and methods of enterprise education programmes in four European countries "*Education and Training* 46 (1): 11-23

Illeris, K. 2007 *How We Learn – learning and non-learning in school and beyond* Abingdon: Routledge.

Jones, B., and N. Iredale. 2010. "Enterprise education as pedagogy" *Education and Training* Vol. 52, (1), pp. 7-19.

Jones, B., H. Matlay, and A. Maritz. 2012. "Enterprise education: for all, or just some?" *Education and Training* Volume 54 (8): 813 - 824

Jones, C., J. Green, and H. Higson. 2015. "Do work placement improve final year academic performance or do high-calibre students choose to do work placements?" *Studies in Higher Education Early online*. 10.1080/03075079.2015.1073249 (Accessed 20/1/16)

Kim, D., F. Markham, and J. Cangelosi. 2002. "Why students pursue the business degree: a comparison of business majors across universities." *Journal of Education for Business* 78 (1): 28-32

Kolb. D., and R. Fry. 1975. "Toward an applied theory of experiential learning." Cooper, C. (ed.) *Theories of Group Process*, London: John Wiley: 33-57

Lodico, M., T. Spaulding, and K. Voegtle. 2010 *Methods in educational research: From theory to practice.* Laureate Education, Inc., custom (ed.) San Francisco: John Wiley & Sons.

Lepistö, J., and M. Ronkko. 2013. "Teacher students as future entrepreneurship educators and learning facilitators" *Education and Training* 55 (7): 641-653

Lucasa, U., and P. Tana. 2013 "Developing a capacity to engage in critical reflection: students' 'ways of knowing' within an undergraduate business and accounting programme." *Studies in Higher Education* 38 (1): 104-123

Mandilaras, A. 2004. "Industrial Placement and Degree Performance: Evidence from a British Higher Institution" *International Review of Economics Education* 3 (1): 39-51

Mezirow, J. 2000. *Learning to think like an adult: Core concepts of transformation theory.* J. Mezirow (Ed.) & Associates, Learning as Transformation. San Francisco: Jossey-Bass: 3- 34

Moon, R., V. Curtis, and S. Dupernex. 2013. "How enterprise education can promote deep learning to improve student employability." *Industry and Higher Education* 27 (6): 433–448

Naughton, V., P. Naughton. 2016. "The Effect of Work-Based Placement on the Final Year Attainment of Students Reading for a Broad BSc Hons Degree Programme in Biosciences in Northern Ireland—Case Report." *Open Journal of Social Sciences* 4: 177-181

Nixon, P. 1982. "The human function curve - a paradigm for our times" *Activitas Nervosa Superior.* Supp. 3 (pt1): 130

Pekrun, R., and L. Linnenbrink-Garcia. 2014. *International Handbook of Emotions in Education,* London: Routledge.

Pepin, M. 2012. "Enterprise education: a Deweyan perspective." *Education and Training* 54 (8/9): 801 – 812

Pittway, L., P. Hannon, A. Gibb, and J. Thompson. 2009. "Assessment practice in enterprise education International." *Journal of Entrepreneurial Behaviour and Research* 15 (1): 71-93.

Pittaway, L., and R. Thorpe. 2012. "*A Framework for Entrepreneurial Learning: A Tribute to Jason Cope.*" Entrepreneurship and Regional Development, Special Issue. 24 (9-10): 837-859

Rae, D. 2010. "Universities and enterprise education: responding to the challenges of the new era." *Journal of Small Business and Enterprise Development* 17 (4): 591-606

Rae, D., L. Martin, V. Antcliff, and P. Hannon. 2012 "Enterprise and entrepreneurship in English higher education: 2010 and beyond." *Journal of Small Business and Enterprise Development* 19 (3): 380-401

Reddy, P. and E. Moores. 2012 "Placement year academic benefit revisited: effects of demographics, prior achievement and degree programme." *Teaching in Higher Education* 17 (2): 153-165

Rokeach, M 1973 *The Nature of Human Values.* New York: Free Press.

Ronkko, M. J. and Lepisto. 2015. "Finnish student teachers' critical conceptions of entrepreneurship education." *Journal of Enterprising Communities: People and Places in the Global Economy* 9 (1): 61-75

Scharmer, O. 2009. *Theory U: Leading from the Future as it emerges.* San Fransisco Berret-Koehler.

Sharp, C., T. Chamberlain, J. Morrison, and , C. Filmer-Sankey. 2007. *Playing for Success: An Evaluation of its Long Term Impact National Foundation for Educational Research*, Nottingham: DfES Publications RR844

Smith, A. and R. Patton. 2014 "Embedding enterprise education: A service based transferable skills framework." *The International Journal of Management Education* 12 (3): 550-560

Warburton, T., B. Corbin, L. Black, and R. Thorpe. 2005. *Enterprise Education in Action* Liverpool: The Bluecoat Press

Watts, C., K. Wray, C. Kennedy, P. Freema, and G. Trainer. 2010 "Embedding enterprise in Biosciences Added value for employability." *Industry & Higher Education* 24 (6):487–494

Yorke, M. 2005. *Issues in the assessment of practice-based professional learning.* Milton Keynes, Open University Press

Yorke, M. 2011. Work-engaged learning : towards a paradigm shift in assessment. *Quality in Higher Education* 17 (1):117-130