

# Perspectives on Pedagogy and Practice

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**Volume 4 September 2013**



# **Perspectives on Pedagogy and Practice**

Volume 4, September 2013

Centre for Higher Education Practice

**Perspectives on Pedagogy and Practice**  
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## Foreword

I am pleased to have this opportunity to provide a short foreword to the fourth issue of the Centre for Higher Education Practice's Journal, Perspectives on Pedagogy and Practice.

It is very opportune, coming out as it does at the start of the new academic session and the first year of the implementation of the University's new Learning and Teaching Strategy (2013/14 – 2017/18). That Strategy has as its vision, *'Empowering Learners to excel in professional life through transformative higher education'*. The emphasis within the Strategy is most simply defined in terms of a shift in focus on how teachers teach to an emphasis on how students learn. This learning paradigm eschews a distinction between teaching and support since it takes a holistic view both of the student experience and the ways in which students learn most effectively. To that end the Strategy commits us to continue to develop collaborative ways of working between students, academic, professional and learning support staff, and external agencies and employers. It will involve us in placing less emphasis in the future on supporting individual innovators and champions and more on developing communities of practice to effect cultural change, in terms of an institutional legacy, through the mainstreaming of effective practice.

It is both reassuring and gratifying to note that the contributions to this fourth edition resonate with the Strategy's emergent themes, namely, student retention and success, assessment and feedback, graduate employability, leadership and change in higher education, and student engagement. Papers which explore these and related themes, including the roles of technology in improving learning and teaching and the teaching-research nexus would be particularly welcome in future editions.

I also hope that the Journal's readership will be inspired, encouraged and motivated to participate in the CHEP's activities in 2013/14 and consider disseminating relevant pedagogic research and practice through the Centre's Seminar Series, conferences and Journal. However, dissemination of itself, does not automatically equate to change. We will also need to effect change to enhance further the learning and teaching experiences of our students.



Finally, I would like to thank all those colleagues, and in particular, the Journal's retiring editor, Barbara Skinner, who generously gave of their time and talents to bring this fourth edition to press.

**Denise McAlister CBE**  
**Pro Vice Chancellor (Teaching and Learning)**

## **Editorial: Volume 4, September 2013**

In this fourth issue of *Perspectives on Pedagogy and Practice*, seven articles, from internal and external contributors, present different aspects of practice in learning and teaching issues from across the University. These include a range of initiatives, concerning, for example, leadership and change in higher education, transition issues, work placements, reviewing peers' work, rubrics for quality feedback and audio feedback. These should appeal to us all as we consider their relevance to our own professional context.

The external articles represent invited contributions and are written by academics closely associated with the Centre for Higher Education Practice. The first, by Torgny Roxå, CHEP Honorary Fellow and his colleague Katarina Mårtensson (both academic developers at Lund University in Sweden), focuses on aspects of leadership and cultural change in higher education. The article contributes to the literature by providing a model which shows that academics participate in teaching and learning change processes in different ways: by either opposing change, being in favour of it or by being part of the silent majority who do not express how they feel. The authors propose that leaders should work with the 'silent majority' of academic staff because 'if *they* engage, and if they develop new ways of seeing, talking and practising, change will ensue'.

Two of the articles deal with first year transition. Liston, Breslin and McFeely describe an enhanced induction programme designed for first year students studying on Sport and Exercise Sciences and Sport: theory and practice programmes. 'Fire up your brain', a bespoke learning and study skills workshop was facilitated by Amazing Brains Northern Ireland on day 3 of the induction. The workshop challenged new students to reflect on their long term visions, interact with Ulster Sports Academy graduates, explore multiple methods of learning, mnemonic challenges and mind mapping techniques and to plan a weekly timetable which considered the balance between paid work and university time commitments.

The paper by Breslin, Liston, Prentice, McCloughlin and McConnell

also deals with first year sports students. The authors explored the importance of intrinsic versus extrinsic motivation to successful transition from school to university and found that the 127 students who participated in the study generally showed relatively strong intrinsic motivation, that is, they participated out of wanting 'to know', wanting to complete a task and having a desire to make a contribution and for personal achievement. These students also had high expectations in relation to lecturer performance and also to their own academic performance; they predicted a mean score of greater than 70 percent for their educational achievement at the end of their first year.

Green, Foster, Houston, McAree, McCann, McCarthy, McWall and Pogue's article deals with the central issue of whether employment at graduate level is related to the completion of a work placement year. Findings show that degree classification, total tariff points on entry and the completion of a work placement year are statistically significant in predicting whether a student will achieve graduate level employment. Their findings raise the question whether placement should be compulsory, even in the current economic climate, and whether findings such as these should be marketed to students to foster an ethos that taking a placement year should be the normal expectation.

Three of the articles cover a range of issues which deal with feedback and assessment. Hack's article asserts a need to use rubrics to support the quality of feedback given to students. A rubric was designed to be used alongside an assessment schedule for feedback on an assignment in Bioethics. The rubric provided detailed descriptors for each part of the assignment; the introduction, formulation of a question and references, and these descriptors were cross referenced to grades. She found the use of a rubric both raised the marks students achieved in their main assignment and improved marker reliability. Students found the rubrics very helpful in clarifying performance and promoting self-assessment, whilst the eTutors thought that it was a time efficient and informative method of providing feedback.

Carruthers and McCarron's paper explores the use of audio as a way of giving feedback to a group of Hospitality and Tourism

Management students. They used the Wimba voice authoring tool within Blackboard Learn+ to give feedback on individual student's essays. Students liked that this method meant they could re-access their feedback, listen to it again, take on board the comments and use for future assessments. This then facilitates 'feed-forward' and closing the feedback 'loop'.

The final article, another in the area of assessment and feedback, is by Emeritus Professor David Nichol, CHEP's Visiting Professor. He explores the learning benefits afforded when students *produce* feedback for their peers rather than receive feedback from others. He explains producing feedback is cognitively challenging and requires the students to engage at a higher level with the substance and skills of their discipline. For example, students must rehearse and reconstruct their own understanding of a particular topic; criteria and standards used to assess student work are more likely to become internalised and that through critically analysing and evaluating the outputs of others, students are put into the same decision space as experts which can help support acquisition of the tacit knowledge that experts use when tackling a task.

The purpose of the journal is to share practice in new initiatives in learning and teaching issues from across the University and so contributions are always welcome, from those who already have experience of pedagogical publishing but especially from those who are new to pedagogical research and writing for publication. I hope you enjoy reading the varied collection of papers in this fourth issue of *Perspectives on Pedagogy and Practice*. I wish to thank those who have volunteered as mentors to the authors, those who have served as reviewers of articles and the members of the Editorial Sub-Committee. They have all made a tremendous contribution to the journal and without their support it would be impossible to produce a quality journal.

**Barbara Skinner**

Editor and Chair of the Editorial Sub-Committee



## **How leaders can influence higher education cultures**

Torgny Roxå, CHEP Honorary Fellow, University of Ulster and Lund University and Katarina Mårtensson, Lund University, Sweden

“Understanding leadership calls for careful consideration of the social context in which processes of leadership take place”  
(Alvesson, 2011, p.152).

### **Introduction**

John Dewey once wrote: “The essence of critical thinking is suspended judgement; and the essence of suspense is inquiry to determine the nature of the problem before proceeding to attempts at its solution” (Dewey, 1998, p. 74). Dewey’s quotation applies well to leaders in higher education. Or perhaps more realistically put, it *should* apply to leaders in higher education.

Over the last decades higher education organisations have been asked to reform teaching. Stakeholders, some external to and some internal to higher education itself, have raised these demands. Whatever direction this development will take, leadership comes into view as an important issue for discussion. This text therefore discusses leadership from a theoretical perspective, especially in relation to cultures in higher education. Hence, it focuses on the interactions among academics and especially on how conversations can be an entry point for leaders seeking to influence their respective organisation. The text starts (Part 1) with a discussion about leadership and followership, where the latter indicates the active agentic aspect of being an academic trained in critical thinking. It introduces a few key aspects useful for conceptually understanding the following (Part 2), where engagement and conversation among the academics are emphasised. These key aspects are important for any leader seeking to influence the organisational cultures that stabilise teaching traditions. The main argument is that development ensues through changes in conversational patterns; accordingly cultural influence cannot be achieved without altering or varying those patterns of interaction.

The backdrop to the text is formed out of 25 years of experience as

academic developers and out of consultation with teachers, program leaders and deans. This in itself has been an iterative process. But also a process linked to positive outcomes in terms of engagement for teaching and an institutional change in the conversations where teaching is talked about, planned and evaluated. Parts of these changes are due to societal changes beyond the border of the organisation at hand, but some parts, perhaps small but most likely vital, are due to acts of leadership. Outcomes of these processes are presented in various publications (Olsson *et al.*, 2010; Mårtensson *et al.*, 2011) and readers are advised to look into these and judge for themselves whether the theoretical perspective presented here is congruent with the slightly messier but also, and perhaps therefore, more realistic descriptions of processes and outcomes. The purpose of this text is not to present another case study or another empirical study. Instead the purpose is to conceptually contribute to a discussion about ways to influence cultures in higher education.

## **Part I: Background**

### ***The academics***

In discussions about academic leadership, academic teachers in higher education in general are commonly viewed as conservative and slow in adapting to societal demands, sometimes even resistant. This text argues that such claims are formulated out of a limited and underdeveloped conceptual understanding of higher education and academic culture. Sometimes those points of view are projected onto higher education from outside stakeholders with a personal experience formed in practices resting on other basic assumptions about higher education. Sometimes they originate from myths about academics upheld by academics themselves. Contrary to these assumptions, it is argued here that higher education is a specific practice, unique in at least some respects, e.g. the fact that academic teachers operate from a standpoint heavily influenced by critical thinking. Throughout their professional careers, starting from the first day at university, most academics continuously construct a complex, personalised, and coherent body of knowledge which forms the backdrop against which critical thinking materialises. This has to be accounted for in any discussion about academic leadership.

The paradox in this is the intense sociality that permeates academia. Academics in higher education institutions are constantly assessed by colleagues, not only through the peer-review system that forms the basis of research, but also during everyday interaction in meetings, seminars, projects, and publication (Ehn and Löfgren, 2007). The outcomes of this continuous assessment in turn influences what networks and collegial contexts the individual academic will have access to. Thereby these processes of assessment influence what resources the individual will have at his or her disposal and consequently his or her future career. Over time these conditions have generated a prestige economy (Blackmore and Kandiko, 2011), a culturally formed system of norms in which academics have to position themselves, either by their own choice or as a result of collegial assessment. Academics can of course to a certain degree choose not to adhere to these norms but they cannot avoid them totally.

From the above follows that academic teachers are social beings and dependent on collegial orientation and recognition. Roxå and Mårtensson (2009) show that academic teachers engage in personal, complex, and trustful conversations about teaching with a few significant others. These can be colleagues sharing a professional context or individuals found elsewhere. The most important feature of these conversations is their backstage (Goffman, 2000) nature. They take place in private and consequently things said are different from what is said during formal meetings. Academic teachers, in these private conversations, express concern about their students and their teaching. They discuss concrete problems and possible solutions and they voice critique of aspects in their professional context. Thus, it might still be true that classroom teaching is a solitary business, but the teachers themselves, as professionals do not develop in solitude. They use their respective *significant networks* for support, scaffolding, inspiration, and development.

Roxå and Mårtensson (2009) conclude that it is in these conversations that academic teachers formulate their beliefs about teaching. It is here they construct, maintain or develop their conceptual understanding of the teaching they are engaged in.



The study also shows that the number of conversational partners is higher if the individual academics perceive their working context as supportive of these kinds of conversation. This result is congruent with Ramsden *et al.* (2007) who furthermore show that academic leaders that foster a supportive climate in their respective organisations are more likely to lead teachers whose students engage in quality learning.

Now, these links between academics talking about teaching and students' approaches to learning are not well researched, but it is certainly a fair prediction that the importance of a leadership suitable for academic conditions can be found along the lines mentioned. Arguably, the key for this kind of leadership would be its ability to link the prestige economies prevalent in research to emerging prestige economies in teaching. Further, as a significant feature, this leadership would have an ability to foster productive, open, and even informed conversations on academic teaching and student learning.

The above portrays some of the overall conditions that leaders in higher education have to consider and to conceptually master if they aspire to influence academics and academic teaching. The current text is an attempt to add to the on-going discussion of these matters and hopefully aid those who want to widen their understanding of leadership in higher education. The focus clearly lies on the conceptual level and few concrete actions will be presented. However, it is a fact that effective theoretical constructs often generate a multitude of ideas for what to do. Possible actions are also heavily context-dependent, meaning that a theoretical construct can generate different possible actions in relation to different local, institutional, regional and national contexts.

### ***Followership***

It has been claimed that academic teachers cannot be led: "It's like herding cats". As it turns out, this is not true. The metaphor of a shepherd evokes connotations of a single leader with his or her flock. This is close to a commander metaphor (Alvesson and Spicer, 2011) where the followers follow their leader without personal reflection, simply trusting the leader to direct them wisely. For leaders in academia who are leading through such a conception the

cat-metaphor is most likely appropriate. And sadly, the commander metaphor for academic leadership is still frequently in use. Allan *et al.* (2006) found it to be the most used leadership-position in all texts throughout one entire year of “The Chronicles of Higher Education” (a widely spread American newsletter). It is used, the authors contend, while praising prestigious leaders for their lifetime achievements. In a massive majority of the texts they analysed, leaders are mainly men who are described in military terms or sports-terms placing leadership in a threat or combat position where saviours, winners, and losers populate the scenery.

However, this language and this position have little or nothing to do with productive leadership in academic settings (Billot *et al.*, forthcoming). The relevance of the cat-metaphor most likely relies on a poor overall understanding of academic leadership rather than on an inherent aspect of academic lives and identities. What is true is that academics often display a strong professional integrity where they are sensitive to leaders. Moreover, this sensitivity is vastly more fine-grained and thought-through than the blunt signals used by leaders pretending to be commanders. Academics do indeed appreciate good leadership (Trevelyan, 2001; Martin *et al.*, 2003; Ramsden *et al.*, 2007; Sutherland, 2013) as much as they resent bad leadership, which exists and causes considerable costs in academic organisations worldwide. A cost measurable both in monetary terms but also, and perhaps most importantly, in emotional costs caused by eroded trust, downfall in academic productivity and negative professional development among those being subjected to bad leadership (Billot, *et al.* forthcoming).

Alvesson and Spicer (2011) identify a shortage within the massive literature on leaders and leadership. They claim that leadership research has been excessively preoccupied with the leaders and left the other end of the interaction almost totally in the dark, that is the followers; and this despite the fact that leaders without followers indeed constitutes an empty concept. It is, paralleling another important academic practice, like teaching without students: an endless harangue without interest. Leaders, just as occasionally teachers, sometimes become blinded by the resources at their disposal and use them to enforce the audience to pay attention.

Many students are forced to sit through meaningless teaching hours and exams, just as followers have to do what they are told solely in order to receive payment. Consequently, it can and perhaps must be claimed that any discussion about leadership in higher education has to show at least rudimentary interest in the followers. And maybe since academics, as claimed above, generally are people with strong integrity and often with advanced critical thinking skills there are even stronger reasons to show interest in those who lead within academia.

The term follower, however, appears a term indicating subordination and a complacent behaviour uncomfortable for academics who are trained in independent and higher order thinking skills. Skills they unconditionally must use in research. Hence, it appears strange that academics should transform themselves from critical thinkers while engaged in research into a follower-attitude of subordination while interacting with a leader of teachers. Therefore, the term followership has been suggested (Billot *et al.*, forthcoming) as a more appropriate term in higher education. To be engaged in followership entails a more active and agentic stance towards the world than does being a follower. Academics engaged in followership allows for the kind of engagement necessary for other academic practices and should therefore also be appropriate while academics interact with their leaders.

### ***Leading cultures***

Good leadership will look differently depending on the perspective used by the leader. If the organisation, from the leader's point of view, can be viewed as a machine where actions emerge from planning, he or she should act accordingly. If the leader perceives the organisation predominantly as an arena for power, alliances, and debate, actions have to follow this view. And, again, if the organisation appears to be governed by traditions and habits, appropriate actions again will be different. This is why a conceptual discussion about leadership in higher education is so important.

Without disregarding other perspectives this paper elaborates on higher education organisations from a cultural perspective. Reasons for this are that in the literature the number of studies emphasising

this perspective have increased (Trowler, 2008; Clark, 2009; Roxå and Mårtensson, 2011) and higher education has often been labelled as a practice that relies heavily on traditions. Or, as argued by Stensaker in an extensive study of Norwegian higher education: “Hence, in this organisation [higher education] authority concerning the quality of teaching and learning would not follow the hierarchical but rather the informal structure, and through mechanisms such as socialisation and training” (Stensaker, 2006, p.47).

A cultural perspective stresses habits, traditions and recurrent practices. It is in the everyday interactions between individuals that culture is constructed and maintained. Leadership through a cultural perspective therefore can be defined as “about influencing the construction of reality – the ideas, beliefs, and interpretations of what and how things can and should be done” (Alvesson, 2011, p.161). Organisational culture always extends to professional identities (Wenger, 1999; Wenger, 2000), to interpersonal relationships, and deeper layers of assumptions (Schein, 2004). It puts the leader in a delicate situation because, as Alvesson states while summarising research on leadership and organisational culture, “leadership is better understood as taking place within and as an outcome of the cultural context” (Alvesson, 2011, p.163). This means that leaders using a cultural perspective in effect have only a limited possibility to influence the organisational members. In effect, leaders trying too hard, asking too much from the organisation, run the risk of being marginalised by the culture and eventually replaced. The result is often a seemingly stable organisation where the leader seldom is given the opportunity to address all the members simultaneously, and if he or she does, the members will inevitably interpret the message according to their own values.

It is the intention of this text to elaborate and discuss aspects of leadership through a culture perspective and to present a useful perspective. Thus, it is neither a roadmap nor a recipe but an attempt to conceptualise a challenge: How to influence cultures in higher education displaying many of the above features?

## Part II: a conceptual model of leadership

### ***Influencing the conversations***

The first step for a leader is perhaps also the most important. It is to bring backstage conversations out into the open. If this happens the leader can start to interact with the organisation and, which is probably even more important, the individuals can start to interact with each other. If that happens, it constitutes a major initial achievement in itself (Foucault, 2004; Foucault, 2006; Dean, 2009; Dean, 2010).

As indicated above, teaching practices are related to the interactions among the few trusted academic colleagues within significant networks. Especially in knowledge intensive organisations these processes frequently cause fragmentation (Alvesson, 2011). The organisation is turned into a patchwork of locally formed clusters, or what has been called *knowledge-networks* (Hannah and Lester, 2009). These clusters are often signified by intense internal communication, intense both in frequency and emotionally. In such an organisation the members form and maintain their beliefs during interaction inside the clusters and moreover, they also develop norms and sanctions within the clusters securing stable identities and loyalties (Roxå *et al.*, 2011; Roxå and Mårtensson, 2011; Mårtensson *et al.*, 2012). It goes without saying that leaders under such circumstances have little to no influence on existing beliefs and identities.

It should be noted that in the processes described here leaders never control those engaged in followership (Billot *et al.*, forthcoming). Instead they interact with them and therefore the followers, just as in any two-party interaction, influence them back. This is inevitable; if leaders want to influence followers to a certain extent they have to accept being influenced by the followers (Alvesson, 2011). Power thus works both ways in mutual interaction (Giddens, 2004). If a leader formulates excessive long-term outcomes and devotes large power-resources to control change processes, the engagement invested by the followers can potentially become violated which in turn can cause withdrawals into the personal networks. In knowledge intensive practices where leaders

are dependent on the followers' expertise and engagement, such a strategy implies a considerable risk. In the end, no matter how well intended the goals formulated by the leader was; it is often the means, which were employed that are remembered. The "means used to achieve political goals are more often than not of greater relevance to the future world than the intended goals" (Arendt, 1972, p. 106).

Conversely, if successful, the leader might contribute to a cultural development where the sheer number of individuals engaged in the change constitutes its success. In many traditional and top-down reform efforts, the thinking is done by the leader himself or herself, or at best by a group attached to the policy level. This in itself means that suggestions about the practice at hand already from the start are formulated at a distance from the knowledge-networks and therefore run the risk of being alienated from day-to-day activities. On the other hand, in a cultural development that is gaining momentum the number of individuals influencing the practice will grow and changes implemented will be already formulated in close interaction with the practice at hand. In such a situation a leader should concentrate on coordinating and further fuelling the process rather than controlling it (Senge, 2006).

### ***A principle model***

So far we have described the organisation as a number of more or less independent, loosely coupled knowledge networks each understanding teaching and learning in slightly different ways. Increasing the number of individuals engaged in an open discussion would achieve several things: first, the intensified conversations among the members will make it easier for the leader to listen to the organisation; second, knowledge networks would find themselves, their conceptions, and also their practices challenged by other networks; and third, individuals who previously perceived themselves isolated within a particular network will now be able to choose new interactional partners. Individuals will no longer be dependent on one network only. In turn, since more interactions happen across network borders, this will secure a greater influx of ideas than before into the knowledge networks. In all, if this happens the organisation will become more dynamic than before.

The organisation becomes less partitioned and more integrated, it will move towards being one organisation instead of several more or less independent knowledge networks.

This section presents a potentially helpful perspective to aid leaders who are trying to develop a particular higher education institution. Of course, in any such organisation the members' enthusiasm for the attempts made by a leader varies. Some members will be in favour and some will be more sceptical. Even though they take these positions for a whole range of reasons this is not the place to discuss those. In fact, as we will see, the members that have taken a strong position on an issue are not so important. What is important is the group in the middle, the seemingly neutral group.

Sometimes this group is called the silent majority, a term originating from a speech by president Nixon (Nixon, 1969). It is however doubtful if they constitute a majority in any other way than just being silent. The majority may indeed be silent, but that does not make them a majority in how they place their sympathies. It is much more likely that some are more anti and others are more pro and that there are individuals who cannot make up their minds, or even just do not care.

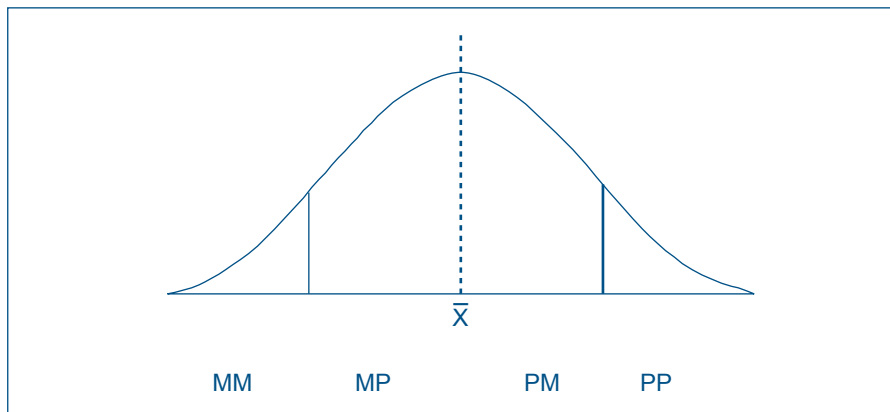


Figure 1: The Gaussian bell-curve illustrates organisational members' attitudes towards a leader and towards his or her initiatives in teaching and learning. The minus-minus (MM) is assumed to be actively engaged in opposition, the plus-plus (PP) engages in favour. The MP and the PM are silent but sympathise with MM and with PP respectively.

We can use the commonly known Gaussian bell-curve (fig. 1.) to describe reactions towards any initiative taken by a leader. Of course, the proportions will vary depending on many things. But overall, there will be groups strongly in favour (here they are called plus-plus or just PP), and people who disagree passionately (minus-minus, MM). But there will also be individuals who do not engage in the conversation, some of them will silently lean towards the PP, and some towards the MM.

The positions taken by PP and MM should not be considered an effect of a personal trait. It is more productive to view them as knowledgeable individuals. It might be that a negative or positive attitude towards change is connected to values and ideologies of a complex nature or that it is linked to loyalties to other individuals and thereby to personal identities. However, in this context we shall keep those wider explanations in the background and focus on the communicative processes during cultural construction. After all, if a leader starts to think about MM as expressing “a natural inclination against change”, “a fear of change”, or a “personal hostility” towards the leader he or she diminishes their expertise and makes it harder for them to contribute to the organisation in the future. A constructivist attitude towards the opposition also prevents, to some degree, the creation of a ‘them’ and ‘us’ divide in the organisation.

The most distinguishing feature of MM and PP is the level of engagement: they simply are engaged and show this for example in the degree of participation in debates; they discuss and therefore they become visible in the organisation. The other two groups, MP and PM, appear more passive, often silent, often minding their own business, appearing detached from the battle between MM and PP. As it seems they simply wait for the others to settle the conflict. But as has already been pointed out, many of them are not neutral. For various reasons and to various degrees they sympathise with one of the more active groups. If they were forced to vote MP would most likely vote in favour of MM and PM would vote for the PP. This is a reminder of the fact that the silent majority is just a majority in the sense of being silent, not in the opinions they would express *if* they decided to do so. Instead, their opinions are multifaceted and, as we will see, this is the major reason why leaders should focus on them instead of the active MM and PP.



Two aspects are important here: 1) the attitude itself and 2) the degree of engagement. Hypothetically we can assume that the entire organisational population is equally divided in terms of attitude, 50% being negative and 50% being positive, however to various degrees, as in reality these numbers fluctuate. As for the other aspect, the degree of engagement, the proportions are very different. The two engaged groups almost without exception constitute a small minority while MP and PM together constitute a vast majority (fig.2.). For a leader engaged in influencing an entire culture this majority becomes a key. It is a key simply because this is where the major part of the every-day culture-construction and culture-maintenance goes on. If changes would appear here, it would constitute a true breakthrough. And this is the very reason why the *silent* majority is worth paying attention to. Another argument is that within these two groups, thanks to a lower degree of engagement, individuals have not yet established firm identities as being pros or cons and are therefore still possible to influence.

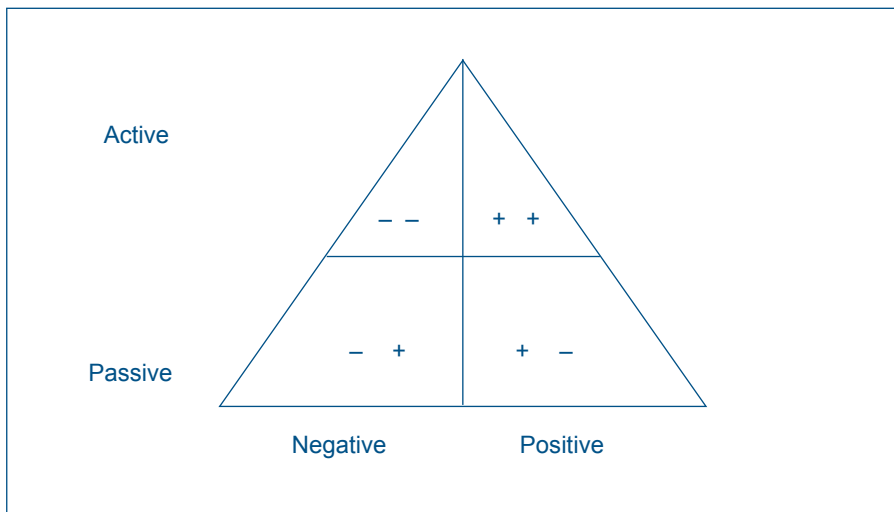


Figure 1: A diagram illustrating the proportion of members belonging to each position, in relation to the passive/active and negative/positive dimensions

The resulting model (fig 2.), displays the four groups, the level of engagement, and the relative size of the groups. It might guide us away from those groups calling for attention (MM & PP), not to neglect them but to realise that they do not hold the key to cultural change. It will also support an understanding of the fact that what is easily perceived as a debate between pros and cons, is in reality a much more complex discussion. As MM and PP formulate standpoints and arguments the result is often a deadlock. If and when the MP and PM engage new aspects are bound to emerge, as their experiences have previously been unvoiced. The sheer number of new angles and aspects will fuel the discussion further and increase its relevance. These two groups will thus push the development into new and unanticipated directions.

A gradually increased uncertainty about where things are going is a price to pay for leaders embarking on cultural change. A leader can influence but never fully control the outcome or the direction of the development we are talking about. Therefore, a leader should initially act wisely not to formulate the outcomes of cultural change too explicitly beforehand. Partly because it might prevent MP and PM from engaging and also, and this is probably the most important reason, because the leader cannot control the process in detail. If a leader invests too much in a specific outcome he or she runs the risk of being replaced by the culture, if things take a different turn. He or she simply has to rely on the members' capacity to be reflective and knowledgeable as they take on the initiative. What the leader can do, though, is to feed material into the process, that is, he or she can utilise discursive power (Dean, 2009).

### ***Engaging the majority***

Affecting culture takes time. Just consider the number of interactions that has to be influenced in order to alter "the construction of reality – the ideas, beliefs, and interpretations of what and how things can and should be done" (Alvesson, 2011, p. 161). In short, to influence a culture means to change what members consider important to talk about and the way they talk about it. This will inevitably have further effects on personal and professional identities, things that profoundly affect individuals. Therefore, the possible impact made by leaders on the culture they are engaged in will always be limited. There are

no quick fixes and no thumb rules, just persistent and informed hard work with a somewhat unclear outcome. It is important to remember that a leader can never control a culture; it is much more likely that the culture controls the leader.

Leaders often make the easy mistake of focusing on the two groups that are constantly calling for attention, i.e. MM and PP. Such a focus may lead to stronger balancing forces (Senge, 2006) that, in fact, would counteract change. As has already been stated, it easily creates a deadlock. Furthermore, the risk is always that an open support for PP simply causes more activities among MM. To directly challenge the MM will provide their side with more attention and thereby possibly contribute to an increase and elaboration of their arguments. To release funding for PP, in the hope that they will reform the practice at hand is problematic since experience shows (Bamber *et al.*, 2009) that the same individuals will often benefit from this opportunity over and over again. Such repeated advantage may further isolate PP from the majority and thereby make them an easy target for MM. The overall principle is that resources allocated to one group will stir activity on the opposite side.

On the other hand, resources directed towards PP might be necessary in order for them to try out new practices, create good examples and by doing so gain vital experiences for the organisation; they also refine arguments and can be viewed as forerunners of any change aimed at by the leader. MM are important because within their arguments values emerge that might otherwise run the risk of getting lost. Another aspect is that if change succeeds MM might become more strategic in their resistance. With the perspective above in mind a leader can interpret this tougher opposition as a sign of change actually taking place. If MM organise themselves it can mean that they react to an unfavourable shift in the culture. They may thereby answer to signals that are invisible to a leader. Caution and close observation of the system is of greatest importance.

But the golden eggs lie, as argued above, with the PM and MP. This is where most of the attention should be placed. *If* they engage and *if* they develop new ways of seeing, talking, and practising, change will ensue.

Again there are pitfalls. Culture is indeed constructed during interactions in places hidden from any leader. They take place during everyday activities where the practice is planned and carried out and where practitioners solve problems, big and small. Culture is constructed and maintained on a day-to-day basis. Most of the time, it is impossible for any leader to interfere directly with these situations. Nevertheless, the leader has to influence these conversations. To do this, the conversations must be brought into the open. In fact, and this is one of the major messages to take away from this discussion: open organisational communication is a prerequisite for allowing the opportunity to influence a culture. It is always worth remembering that individuals have all the opportunities in the world to be silent or to edit their conversations. Leaders cannot do much about this. Therefore, efforts to encourage PM and MP to engage openly in conversations is from this point of view the core enterprise for a leader. It is absolutely the most important conclusion from the above: individuals must be offered the freedom to formulate themselves without interference. Cultural construction and maintenance is always about what the members of the culture find meaningful and important in relation to the practice at hand. These are the processes a leader must tap into rather than distort. At the end of the day it is the meaningful things that matter, that is, what the organisational members find meaningful.

However, even though a leader cannot decide on the content of these conversations he or she can influence the formats. Organisational cultures always contain basic values and assumptions (Schein, 2004) that include norms for how communication is to be carried out. When formats for conversations are to be decided a leader may be wise to hold on to these basic values. For example, most academic contexts are created around disciplines, which in turn are formed through scholarly activities. Academic identities are generally attached to these disciplines (Henkel, 2005) and consequently also to the scholarly formats for conversations through which the disciplines are formed. Therefore, arenas organised to support open conversations during processes of cultural change in higher education are suggested to include elements from traditional disciplinary conversations. It means that they should be influenced by the same scholarly values as the

disciplinary conversation. If, in the future, conversations about teaching and student learning happen more in the open than before and through a scholarly approach, this would indeed be a sign of a major cultural change.

### ***Discursive power***

Discursive power refers to the process of influencing individuals not by direct force or by references to rules and norms but by altering what is perceived as important or not. The topic is too complex to be discussed at any depth here. Readers are advised to read into Mitchel Dean's work on Governmentality (Dean, 2009; 2010). In short, discursive power implies that a leader can in the flow of events elevate some issues and ignore others. He or she can use the resources available not to tell people what to think but to present to them what they could pay attention to. If this is done wisely, aspects of these issues will appear in the everyday conversation between members. These words and perspectives will thereby influence future rational decisions. If it is done bluntly the members will look through the leader's intentions and counteract them. They will feel manipulated. The attempt will backfire. To use discursive power requires an ability to "listen in" to the conversations within the organisation. Only then can a leader decide how to use discursive power. If the leader listens only to the loud voices of PP and MM, he or she will perceive a distorted description of the majority's reality. Leaders acting on these descriptions will risk being out of tune with the organisation and consequently the material fed into it will easily be recognised as manipulation.

Discursive power cannot be escaped. It is always present in arguments and debates, but of course with varying scope and with the use of different resources. Throughout history it has been utilised in drastic and totalitarian forms. In George Orwell's novel *1984*, the oppressors tamper with the meaning of words as exemplified by "war is peace". By doing so they alter the very rationality through which individuals construct their lives. In totalitarian states this extreme form of discursive power is frequently used (Arendt, 2005). At the other end of the spectrum, parents throughout the ages, while trying to persuade their children, also use discursive power. By feeding aspects from the adult world into the conversations they

have with children, they influence children to make wiser (according to the parents) decisions. It happens all the time, so often and so smoothly that we hardly notice it.

## **Summary**

There are in the literature so many metaphors for leadership (Alvesson and Spicer, 2011), most of which are formed by an excessive interest for leaders and for what leaders do. Leaders often appear as strong, foresighted, and powerful in what they do to organisations. In reality leaders are heavily dependent on their organisation and its members. After a change process, it is always a valid question to ask whether it was the leader or the members of the organisation who actually took the lead.

Nevertheless, leaders often have resources at their disposal and are expected to, also by the organisational members, to use them. If they use them wisely they are appreciated also in higher education; if they do not use them at all or use them unwisely, leaders frequently become marginalised and run the risk of being replaced.

This text has discussed aspects of leadership and cultural change in higher education from a conceptual perspective. A model is presented with a potential to support leaders while attempting to influence cultures in higher education. Organisational members always react differently to a leader's initiatives. The key aspect in developing teaching cultures is to encourage more individuals to take part in conversations about teaching and student learning. Central in the model is the silent majority who initially appears to be neutral. But in reality they sympathise with one of two minorities, that is, those two parties that have been actively engaged in the debate from the very start. By focusing on the silent majority and gradually engage them in an open conversation about teaching and learning, change will take place. In fact, it is the change in conversational patterns that constitutes the most important part of any cultural development. The key is to bring the backstage conversations of the majority into the open and influence the format for these discussions.

It is critical that a leader allows the conversations to lead

themselves. Members will only engage with things they find meaningful. Instead of steering this conversation the leader should use his or her resources to feed material into the discussion, material that the leader finds relevant. The leader should also influence the format for the conversations. If these become scholarly, informed and public, they are most likely good productive conversations. These are the three lessons to take away from the above: 1) engage the silent majority in open discussions; 2) let people discuss what they themselves find meaningful but influence the conversations indirectly by feeding relevant material into the conversations; and 3) influence the format of the conversations in a scholarly direction.

Cultural change will take time and neither the process nor the outcome can be fully controlled. Timing, conceptually rich persistence, and patience therefore are vital attributes for any leader embarking on the paths discussed here.

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## **Breaking the ice: the first year transition to university**

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### **Introduction**

The Ulster Sports Academy (USA) is one of the largest schools in the Faculty of Life and Health Sciences, University of Ulster, attracting approximately 1,000 first year undergraduate applicants per annum for its full-time Bachelor of Science programmes in Sport: Theory and Practice and in Sport and Exercise Sciences. The Academy accepts between 100 and 150 students annually from a range of educational backgrounds including A-levels, Business Technology Education Council (BTEC) qualifications, and combined BTEC and A-level qualifications. Over the course of the first year, student performance as reflected in formal assessments has tended to improve from semester one to semester two, thereby suggesting a critical transitional learning period for students in educational and personal terms. Indeed, research at other higher education institutions has noted the dual challenges faced by first year university students in becoming familiar with the formal curriculum in their respective discipline areas and in being socialized into new, and often uncertain, study patterns and the hidden curriculum (McInnis, 2001; Bergenhenegouwen, 1987).

“International research on student transitions to university highlights the importance of this key period in their academic life, as those who have difficulties with the transition may perform poorly and/or disengage at an early stage from university life” (Gibney, Moore, Murphy and O’Sullivan, 2011, p.352). In particular, three main themes have emerged from research on the first year university experience, these being: student motivation and transition; student expectations (of themselves, of lecturers and of the ‘new’ learning environment); and time management/allocation within the context of a shift away from the highly structured nature of post-primary education. These three themes are briefly considered next in

order to demonstrate the ways in which they informed the design and delivery of an enhanced bespoke induction programme by the academic staff, in consultation with a learning facilitator from Amazing Brains NI.

### **The first year experience: motivation and transition, student expectation and time management**

Many universities around the world have established various formal and less formal initiatives designed to support students through the first year transition and to encourage student engagement in what can be, for some at least, an intimidating environment. For instance, in the United States of America, first year induction programmes include first year seminars, peer mentoring, common reading groups and orientation (Barefoot, Gardner, Cutright, Morris, Schroeder, Schwartz, Siegel and Swing, 2005). Closer to home, at the University of Ulster Lowe and Cook (2003) noted that those students who have transitional difficulties are more likely to disengage from university life and/or perform poorly during this time, thereby reinforcing the important link between student performance and motivational factors like support for learning, expectations of higher education and interest. Indeed, this literature suggests a link between “the attitudes of first year students and their likely behavior during their first year at university” (Gibney *et al.*, 2011, p.354). For these reasons, and the aforementioned pattern in the performance of first year students across semesters one and two, the academic staff at the Ulster Sports Academy sought to design an enhanced series of induction activities that were stimulating, involved active (and not passive) learning and had specific and very direct relevance to students’ transitional needs and expectations. Goldfinch and Hughes (2007, p. 260) argue that “students tend to enter university with high confidence in their key skills”, even if this may be somewhat misplaced for some, if not all, given the need to acquire new skills for a new learning environment. This having been said, Fazey and Fazey (2001) noted that confidence might have positive outcomes in terms of motivation and student engagement. However, given the increasing diversity in the student body in the United Kingdom and beyond, not all first year students will approach their university careers with optimism. In the United Kingdom, Cooke, Bewick, Barkham, Bradley and Audin (2006)

found that anxiety was one of the most pressing feelings for the first year student while, in the Ulster context, Lowe and Cook (2003) reported that living away from home brought with it a number of mostly anticipated problems. Four potential concerns were also outlined in Hockings, Cooke and Bowl's (2007) investigation of pre-entry university students. These were making friends, finances, identity changes, being treated fairly, and as adults. Given the move towards mass education throughout Western Europe, it is not surprising that feelings of isolation and uncertainty dominate the first year experience, thereby highlighting the potential need for induction programmes to seek to mitigate against these factors. High confidence was a likely feature of the first year USA cohort given the high demand for the two full-time undergraduate programmes and the UCAS asking grades. The larger cohort sizes (and indeed the size and layout of the Jordanstown campus) were equally likely to generate feelings of isolation for some students. For these reasons, day one focused on familiarization with the Jordanstown campus, while days two and three of the induction programme focused on the establishment of peer friendship groups, group-based activities and embedding key study skills appropriate for the new university learning environment and for the specific content of the two formal undergraduate curricula. Central to this is the movement towards independent learning and the particular demands this places on students to manage and utilize their time effectively.

If the proliferation and increasing availability of 'how-to-study' textbooks are a reasonable indication of those aspects of transition regarded as most important by university professionals, then the themes of time management and study skills training that proliferate these books are crucial to first year students. In the Ulster context, Lowe and Cook (2003) reported that students' expectations of their weekly time spent in lectures and in independent or private study were slightly lower than the notional 40 hours for a full-time student while, in a follow-up survey, students' reports of actual hours spent in independent study and in lectures were lower again. Given this mismatch, and the wider transition from a typically highly structured post-primary education into one that is more adaptable and less structured, the flexibility to manage time is both a priority for first year students but it may also be one of the most difficult

aspects of this transition. This is compounded by the balance of time spent on paid and academic work and the wider transition from family to independent living for those students who move out of the family home. Effective time management and balancing the demands associated with paid work (typically part-time), social life and independent study are, therefore, amongst some of the most common debates in higher education (see, for example, Krause, Hartley, James and McInnis, 2005; Winn, 2002; Harvey, 2005; Darmody and Smyth, 2008).

### **The Ulster Sports Academy first year experience**

These three themes – time management, student expectation, transition and motivation – have also been the focus of much discussion by the academic staff of the Ulster Sports Academy over the past number of years in light of what has been a significant change in the composition of student applicants to undergraduate study and, thus, in their pre-entry educational experiences and related skills. For instance, in 2011, the Sport and Exercise Sciences' intake included 30 students from A-level backgrounds, 22 with BTEC awards and 12 students with combined A-level and BTEC awards. The Sports Studies degree (now retitled Sport: Theory and Practice) attracted 23 students from A-level backgrounds, 43 with BTEC awards and 20 students with a combination of A-level and BTEC awards. In particular, the increasing numbers of students from non-traditional educational BTEC qualifications, has challenged USA staff to design an innovative and integrated first year curriculum that supports students in the efficient and optimal management of their independent study time as well as supporting them to prepare for, and be successful in, a wider range of summative assessments ranging from exams and academic essays to reflective portfolios, practical assessments and online multiple choice questions. In this regard, the varying degrees of competencies exhibited by first year students has led the USA team to prioritise the University of Ulster's seven principles of assessment and feedback at different points across the undergraduate programme. Arising from this, the USA identified the importance of an enhanced induction programme designed around the three themes in research on the first year experience: student expectation, time management and student motivation, with the aim of raising students' awareness of the

transitional challenges in the first year of university, the supportive mechanisms available to them within and beyond the USA and, importantly, multisensory learning and their specific learning needs (Baines, 2008).

### **The enhanced induction programme**

With this in mind, the USA designed an enhanced three-day induction programme delivered on 19<sup>th</sup> - 22<sup>nd</sup> September 2011. The three-day event was designed such that the USA could meet the three fundamental learning needs of students, these being affiliation (a sense of belonging), agency (a sense of self) and autonomy (becoming independent) (McLean, 2009). Day One, nominally a welcome and registration day held on the Jordanstown campus, was led by the respective year one tutors in Sport: Theory and Practice and Sport and Exercise Sciences and included a formal welcome by the Head of School. This was followed by an information-sharing session on aspects such as BSc programme handbooks, module content, tutor expectations, assessment, student academic timetables, various other organisational issues and a formal registration component. Members of staff were also introduced to students, notably those staff centrally involved in the delivery of first year teaching and assessment. Day Two involved staff and students directly in a teambuilding activity day organized off-campus, within programme cohorts (September 20<sup>th</sup> and 21<sup>st</sup> respectively) and facilitated by the Belfast Activity Centre (based at Malone Road, Belfast), while day three consisted of an all-day bespoke study skills workshop designed by Amazing Brains Northern Ireland Community Interest Company (McFeely) in consultation with a USA staff member (Liston) experienced in working with first year students across both undergraduate programmes.

The learning outcomes on day one were focused, appropriately, on: students' awareness of academic structures; becoming and/or being an independent learner; course management and the module course structure; types and timing of assessments; the academic timetable; and, information on the three individual modules delivered in semester one. Course handbooks were also distributed and explored in some detail. Day one also included the provision of information about the social support services available to university



students around health, finance, and accommodation as well as general information about the physical layout of the university campus and surrounding local amenities. To glean their information recall, consolidation tasks were completed around the content, names and locations of modules and timetabled classes. Students' responses to these tasks demonstrated that the majority of the entire first year cohort was unfamiliar with the immediate and surrounding locality, making the geographical and transport information an important organizational component of their induction (see Table 1).

Academic Components	Social Support
<ul style="list-style-type: none"> <li>■ Introduction to staff</li> <li>■ Registration</li> <li>■ Course management</li> <li>■ Types of examination and assessment</li> <li>■ Modular course structure</li> <li>■ Timetable</li> <li>■ Type of teaching delivery (lectures, labs, practical classes, seminars)</li> <li>■ Assessment</li> <li>■ Library services and commercial block</li> <li>■ Studies Advisor</li> </ul>	<ul style="list-style-type: none"> <li>■ Student Union and sports clubs</li> <li>■ Support services (Health, finance, Accommodation, Catering, campus behaviour)</li> <li>■ Finding your way around – room numbers (teaching rooms)</li> <li>■ Travelling to and from the University – bus, car and train</li> <li>■ Local attractions</li> </ul>

Table 1: The content and themes for Induction Day One

Lastly, on day one students were provided with an opportunity to collect their USA-branded sportswear for practical sports classes. This sportswear is solely available to USA students within the University of Ulster and plays an important role in the formation and subsequent embedding of a student and cohort identity for this group. In this regard, Scanlon, Rowling and Weber (2007) suggested that the transition to university is a loss experience, that is, students enter university having only “knowledge about” rather than “knowledge of” the new learning context. For them, “identity results from situated interactions in which students pick up cues regarding the horizons of possibility for identity formation in the university transition” (2007, p.223), one aspect of which is a sports-related identity for USA students.

Having achieved the learning outcomes from day one, day two was designed to facilitate the formation of peer friendship groups as well as building relationships between students and their Studies Advisors (appointed from within the USA staff team). The primary aim of day two was to “break the ice” between students, and between students and staff in an enjoyable context that involved active and reciprocal group tasks. Grosset (1991), cited by Pearce and McLaughlin (2005, p1), states “an attempt to include social activities early in the course increases the extent to which a student is socially integrated into the academic community. This also leads to greater goal and institutional commitment, reducing the probability of dropping out.” The secondary aims of day two were: to provide an opportunity for all students to make friends in an informal setting that was more familiar and comfortable to them, thereby inscribing a cohort identity; to create the opportunity for staff and students to meet each other in a less formal environment; and, to facilitate preliminary contact between academic/studies advisors and advisees and discussions around students’ expectations of university life. In particular, the activities designed by the Belfast Activity Centre (an outdoor activities facility) were oriented around the need for teamwork to complete various tasks including rock climbing, a high ropes course, cave exploration, mountain biking and various problem-solving tasks. Students were typically organized into groups of six to eight, usually with their allocated Studies Advisor, and activities lasted six hours in total with a short lunch break. This off-site teambuilding day was followed by a return to the university campus on day three where a bespoke learning and study skills workshop was delivered by Amazing Brains NI with the support of USA staff.

Day three – “Fire Up Your Brain” – lasted six and a half hours (including a lunch break) and was, for students, their first experience of the daily routine and rigour of the academic timetable. This learning and study skills workshop was delivered to the full cohort of year one students (n=145) and was facilitated by two staff from Amazing Brains and one USA lecturer (Liston). Notably, the two facilitators from Amazing Brains were highly experienced in working with youths and young adults, and they employed techniques honed through their extensive experiences in formal

and informal youth and adult sectors in Northern Ireland. Both were also regularly involved in the delivery of study skills workshops to over 200 post-primary schools across Northern Ireland and the Republic of Ireland. The learning outcomes for “Fire Up Your Brain” were: to help students to “gel” as an incoming university cohort; to motivate students to achieve their optimal academic performance at university; to introduce them to the growth mindset and the concept of multisensory learning; related to this, to challenge their thinking about notions of fixed intelligence and the processes of learning; to educate them on the range of study skills techniques available to them including mind mapping, mnemonics and information recall as well as effective reading and note taking strategies; and, to consolidate the information from day one into a number of active individual and group tasks designed to prepare them for the first week of university. The latter included, for example, a time management task designed around the organization of “spare time” in the semester one timetable and an opportunity to meet three USA graduates and to engage with them about their experiences of university life.

Students were randomly allocated to non-friendship groups comprising no more than four per group who worked with each other on a series of interactive tasks over the course of the day. Prior to the morning session on day three, students completed a short pre-workshop questionnaire that asked them to identify their expectations of, and aspirations for, the day. These aspirations included making new friends, better familiarization with the university’s expectations for study, clarifying the organization of the academic timetable and, personalised study skills preparation for university learning.

“Fire Up Your Brain” included a number of interactive tasks broken into morning and afternoon sessions. The morning session included: reflections on students’ long-term visions, the completion of a careers aspiration table and a “meet and greet” with USA graduates; introducing multisensory learning and integrating experiential learning of this concept using a problem solving task (‘Box Clever’) requiring teamwork, reciprocal teaching and the identification of individual skill requirements. Allied to this, a learning preferences

reflection was also completed by students incorporating a preview of visual, auditory and kinaesthetic content from semester one modules. The afternoon session included: student-led demonstrations of the benefits of multiple methods of learning, mnemonic challenges and mind mapping techniques; and, a time management task designed to raise students' awareness of the USA's requirements around independent study, charging students with responsibility for planning their weekly timetable and finding the balance between paid work and university time commitments. Finally, students were provided with a learning support booklet that consolidated their learning on "Fire Up Your Brain". This workshop, involving active and contextualized learning, completed the three day enhanced USA induction programme and was followed by a student evaluation of the full range of activities.

## **Evaluations of the induction programme**

### ***Programme design***

A total of 145 (Mean Age = 18.8 SD = 1.21) first year undergraduate BSc (Hons) Degree students within the Ulster Sports Academy completed an enhanced induction programme in September 2011, one week before the first week of academic term. Of these, a total of 121 completed a full evaluation of various aspects of the programme and commented on what they felt they had gained from the induction experience. A short survey was employed to evaluate the three-day induction programme that involved qualitative and quantitative dimensions. To evaluate the team-building day (Day Two), students completed a cross-sectional online forum that focused on how useful they found the Belfast Activity Centre. A total of 68 responses were received to this. In order to evaluate the perceived relevance and success of "Fire Up Your Brain", a post-workshop questionnaire was completed by 121 students. A further 21 evaluations were incomplete. This questionnaire consisted of a series of open-ended and closed questions that asked students to reflect on their pre-workshop aspirations as well as assessing their workshop learning around: study habits; time management; independent learning; transition to university life; motivation to, and preparedness for university life; and, their learning needs. Closed questions were rated on a five point Likert Scale ranging from strongly agree to strongly disagree. Descriptive statistics for closed

question answers to the day three evaluation are presented here as a percentage (%) of responses. Responses to the open ended questions for the team building (day two) and study skills phases (day three) are summarized based on a Content Thematic Analysis (TCA) approach. TCA is “a descriptive presentation of qualitative data” wherein the researcher conducts a form of “low hovering’ over the data (and) the researcher groups and distills from the texts a list of common themes in order to give expression to the communality of voices across participants” (Anderson, 2007, p.1).

## Evaluations of the induction programme

### Results

The activities performed by the students on day two – Belfast Activity Centre – were perceived by them to be an effective way for students to get to know others on their programme in an enjoyable, friendly and sociable environment. It was also a good opportunity for students to ask questions arising from day one of induction and to discuss some of the personal challenges that they anticipated, or were already encountering, in the transition to university. Examples of these responses are presented in table two.

“The Belfast Activity Centre was a great ice breaker as it was fun and enjoyable, and an easier way to meet people”
“I found Belfast Activity Centre very helpful as it introduced us to each other and made us feel comfortable and get used to university life”
“I found Belfast Activity Centre to be very interesting and educational about outdoor activities. There was a wide range and variety of outdoor group activities available such as; Rock climbing, Cave exploring, Bicycle riding on grass and Archery”
“I thought it was a good day. Got to meet everyone and got to know people’s names”
“Belfast activity centre was a worthwhile experience that helped me meet the people in my class”
“It was good! Very exciting and good way to kick off the course”
“It was a great team building activity day”
“Worthwhile met plenty of people, would recommend it”

**Table 2: Belfast Activity Centre student feedback  
(Induction Day Two)**

Of the 121 student responses to the evaluation of Fire Up Your Brain, 93 per cent (n=113) agreed that, following the workshop, they knew what was expected of them as an independent learner at university, 89 per cent (n=108) felt ready to begin their university studies, and 63 per cent (n=76) agreed that university was less daunting after the workshop. This having been said, 35 per cent (n=42) remained neutral in their response and 2 per cent (n=2) disagreed that the seminar made university less daunting, thus presenting a deeper picture of the complex factors in student transition ranging from self-confidence, wider changes to the educational context for students and the impact of this on perceived self-efficacy, to student perceptions of the learning journey and individual maturation. Of the factors relating directly to preparedness for higher education, 97 per cent (n=117) of students felt that they learned more about good study habits, 86 per cent (n=104) were more aware of multisensory learning and their own responsibility in their learning, and 97 per cent felt that the material covered in the workshop was useful in their first year at university. The workshop was perceived by 96 per cent (n=116) of students to be a good use of their time in preparing for university (see Table 3).

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
I know now what is expected of me as an independent learner	38%	55%	7%	-	-
University is less daunting after today	16%	47%	35%	2%	-
I feel ready to begin my University Studies	25%	64%	9%	-	2%
I learned more about good study habits	42%	55%	3%	-	-
This material will be useful in my first year at University	51%	46%	3%	-	-
I know my preferred learning styles	18%	68%	13%	1%	-
Today was a good use of my University time	38%	58%	3%	1%	-

Table 3: 'Fire Up Your Brain' student feedback (Induction Day Three)

In addition to the descriptive quantitative analysis of these responses, a content thematic analysis of open-ended questions demonstrated that all students felt the seminar was beneficial to their learning and development. These inductive themes included: a reflection on the transition and motivation to study at university; student expectations of attending university; the development of time management skills; being cognizant of course specific details; and, student confidence in going forward and progressing with their university studies. Table 4 includes some examples of these responses by theme.

"I expected to learn new things and meet new people and I accomplished this today"
"I learned lots of new study skills and techniques which will greatly benefit me throughout my first year at University"
"It was fun and interesting and I met new people"
"I met new people and enjoyed learning effective ways to study"
"I gained further information about the structure of the course"
"Very productive – helped me see the organizational skills I need for Uni. I feel a lot more confident about starting on Monday"
"I expected it to be quite dull and boring but in actual fact I found it interesting and helpful and there was a great atmosphere"
"Really enjoyed the day and I gained some valuable knowledge, especially about time keeping"

Table 4: Open-ended responses to  
'Fire Up Your Brain' (Induction Day Three)

## Discussion

The aim of this educational practice paper was to determine whether an enhanced three-day induction programme for first year undergraduate sports students could facilitate better their transition to university. Given the three themes that permeate existing research on student transition to university – time management/ allocation, student expectations, and transition and motivation – and the ways in which these themes had already informed the design of the USA's enhanced induction programme, it is not surprising that they appeared, in various guises, throughout student evaluations

of the programme. The three-day event was designed such that the USA would meet the three fundamental learning needs of students, these being affiliation (a sense of belonging), agency (a sense of self) and autonomy (becoming independent) (McLean, 2009). In particular, the student evaluation demonstrated the current (and future) relevance of carefully designed induction programmes that enable students to establish friendship groups at an early stage, thereby supporting the formation of a 'new' cohort identity for the group as a whole. Moreover, student expectations of the learning experience at university were shown to be an important feature of their pre-entry mindset, irrespective of whether their expectations of themselves as learners were fully informed and accurate, inaccurate or had yet to be reshaped in the "strange surroundings of a new educational institution" (Pearce and McLaughlin, 2005, p.1). Involving the cohort in off-campus team building activities was shown to promote cohesion between students, a finding consistent with previous research in team sports, and particularly relevant here given that students were studying sport (Schmidt, McGuire, Humphrey, Williams and Grawer, 2005). Interestingly, however, the organization of day three into non-friendship groups of four, and the interactive and contextualized learning that ensued, was also shown to be as important in engendering a positive (first) academic experience and promoting group cohesion as the off-site teambuilding day.

Students' evaluations of the induction programme were resoundingly positive and many exhibited levels of enthusiasm that, according to writers in other educational contexts (e.g. Bryson and Hand, 2007), indicate engagement in learning or at the very least a willingness to engage. Whilst preparedness to engage in university learning was evident even if it was limited to self-measurement (and can be seen in responses to questions one, three and six of Table Three), students were also motivated to begin their university studies. Further research on this would enable a greater understanding of the inter-relationships between motivation and student behaviour in this critical transition period given the fact that research on first year students at an Irish higher educational institution found that "intrinsic motivation appears to have a positive effect on the mindset with which students enter university and on their initial experiences"



(Gibney *et al.*, 2011, p.359). McLean (2009) goes further and suggests that although 'teachers' cannot motivate students to learn *per se*, they can nurture and facilitate students' intrinsic motivation to learn, in effect, demonstrating that student motivation and effective learning are inextricably linked.

Whilst several theoretical frameworks exist to explain motivation in various domains of human behaviour, few studies have applied a framework to understand first year students' motivations to study at university. Although not included here, preliminary results from a closely related longitudinal study (examining the psychological predictors of first year sports students' academic performance expectations) indicated that students reported a relatively strong orientation towards intrinsic motivation including the need for achievement and mastery goals, and less orientation towards extrinsic motivational factors (see, Breslin, Liston and Prentice, 2013). Those students who self-reported greater use of mastery goals motivation, and had a higher self-efficacy, also expected a higher result in assessments compared to those who did not. Ongoing research of cohorts of sports students at Ulster, undergraduate students from other degree programmes at Ulster and of students studying at other universities will continue to examine motivation and the relationship with academic performance while also applying Self Determination Theory (SDT) (Deci and Ryan, 1985), that is, the extent to which a person's motivation for a particular behaviour is considered to be relatively autonomous or controlled and, in so doing, predicting why some people engage in behaviours and others do not. According to Deci and Ryan (1985), those individuals who score high in extrinsic factors are less self-determined. By fulfilling an individual's basic psychological needs of autonomy, competence and relatedness it is predicted that a person will become more self-determined in their choice of activities. In line with SDT we propose that any student induction should assess and account for the type of motivations and perceived levels of autonomy, competence and relatedness in making the transition to university.

Returning to the specific outcomes of the induction programme itself, evaluations highlighted high levels of student enjoyment,

high levels of engagement in induction and the programme is demonstrably relevant to the learning environment at university. However, there are those first year students who, for reasons that require further explication, do not manage their time appropriately, whose expectations of the programme(s) are not matched by their experiences of it, and for whom motivation and maturation levels are relatively lower in comparison to their peers. A related key finding from a study at University College Dublin was that students also “make decisions on their choice of university programme at an early age and, anecdotal evidence would suggest, with significant parental input” (Gibney *et al.*, 2011, p.363). Thus, further examination of students’ motivations for studying sports at Ulster is required alongside a greater understanding of the decision-making process undertaken by pre-entry applicants. In this regard, a more proactive approach to the provision of accurate information about undergraduate sports programmes, and the subsequent dissemination of this to careers teachers, physical education teachers, student applicants and their parents, might be an important addition to the USA’s pre-entry strategies if student expectations are to match the new learning environment that empowers students to make “good” learning decisions, particularly in the first year. In this regard, the compilation of an empowering worksheet for parents and careers teachers on how to help their teens and students make an informed decision about university choices may be warranted. Exploring these factors using SDT would also provide evidence beyond the descriptive research that has mainly been conducted in this area. Equally, a longitudinal study exploring the differential impact of pre-entry characteristics, initial expectations and goals, integration, and external (as in non-university) commitments of university students would generate a valuable insight into the learning journey, from their perspective. The latter is currently underway. An assessment of students’ perceived autonomy, competence and relatedness as they progress through their academic studies could also be completed to determine whether, and how, these factors have a moderating effect on expected and actual academic performance.

Given the significant planning that went into the delivery of the enhanced induction programme, it is also appropriate to comment

briefly on the human and financial resources required to deliver this. The USA has now established a “minimum” toolkit of activities for days one and two that could be employed in-house in future years, given that most of the USA staff have experience in delivering teambuilding activities themselves, particularly those of the type on offer at the BAC. These activities might also be of some interest and relevance to other schools within the university who seek to enhance their induction programmes. Whilst this internal expertise of USA staff may make the induction programme more sustainable into the future, at the same time the USA continues to prioritise the design and delivery of the bespoke learning and study skills workshop at an additional cost to them, this having been funded previously by internal and external funding secured specifically by the Academy for that purpose (for example, Employability Development Opportunities Review Toolkit (EDORT) monies and funding from the Garfield Weston Foundation). Importantly, the Academy has identified a community interest company (a social enterprise of sorts) with learning expertise as being an appropriate educational partner in this venture.

## **Conclusion**

It is clear that the USA and all schools need to invest resources into the induction experiences of first year students if they are to transition successfully to the new learning environment, this success defined typically by the university in terms of attendance, student performance in formative and summative assessments and in identified retention targets. However, students’ perceptions of a successful transition to higher education may differ. In the past, there has been a misconception on the part of students about what constitutes full-time study as well as a related misunderstanding that university learning/work occurs only on campus, and during contact or teaching time. This is particularly true of the USA first year programme which has a less rigorous timetable than the typical post-primary timetable, and has more emphasis on independent study time than other first year Faculty programmes which make more significant time demands on their students. Of equal and future importance in the drive to induct students better for their university experience is the need to continue to learn from good practice in higher education elsewhere where specific interventions

such as “meet-and-greet breakfasts/lunches”, peer mentoring and pre-entry social networking opportunities have been developed to promote social integration and identity formation. Importantly, while this paper has demonstrated that the process of reshaping student expectations around independent and interdependent learning, and around time allocation, can be instigated through appropriately-designed induction activities which help students to “gel” and to “fire up their brains”, the challenge remains to support those students who reveal a tendency to “flounder” in the early stages of a less structured post-secondary/post-grammar/ further education college environment. Given the increasing financial pressures on students, it is tempting to attribute a lack of engagement and/or problematic attendance on the part of some first years to their spending a significant amount of time in paid employment. In the absence of a formal understanding of first year students’ perceptions of success in the course of their transition to full-time undergraduate studies, university professionals can only continue to maintain their focus on high quality, contextualized and tailored induction programmes that support students through the early stages of this transition.

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**Making the successful transition to university:  
psychological predictors of first year sport students'  
academic performance expectations**

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**Introduction**

Making a successful transition to university study can be a challenge for some first year students and it has been demonstrated that those who have difficulties with the transition may perform poorly in assessments and/or disengage from university at an early stage (Lowe and Cook, 2003; Pitkethly and Prosser, 2001; Gibney, Moore, Murphy and O'Sullivan, 2011). Research on the first year university experience in particular establishes that the motivation for applying for the course of study, whether intrinsic or extrinsic motivators or a combination of both, may determine a successful transition. However, research on the motivations of students entering sports-related undergraduate programmes is comparatively underdeveloped. This is somewhat surprising given the increasing popularity of sport as a programme of study for students throughout the United Kingdom (UK) and Ireland, and the highly developed research agenda on sporting performance outwith the educational sector more generally.

This study reflects preliminary analyses from a longitudinal study examining the role of an enhanced first year induction programme for sport students at the University of Ulster and the psychological factors impacting on the first year transition including: motivation; academic stress; self-esteem; student and lecturer role expectations; and, academic performance expectations. The findings have relevance both to the design of induction programmes and the content of first year undergraduate programmes but also for the



wider management of student engagement and student retention. Central to this is motivation and the need to promote “pupils’ engagement in learning and motivational resilience” (McLean, 2009, p.5).

## **Motivation**

Motivation is a primary psychological factor in determining engagement in learning and achievement and it is considered to be more conducive to intervention than student cognitive ability *per se* (Van der Sluis, Vinkhuyzen, Boomsma and Posthuma, 2010). An extrinsically motivated student tends to strive to prove his/her competence while intrinsically motivated students tend to improve their competence-based skills (Schraw *et al.*, 1995 cited in Shia, 1998). Extrinsically motivated individuals “perform activities with a sense of pressure or demand by external contingencies” (Isiksal, 2010, p.574). These external contingencies can include authority expectations as a result of pressure from family, teachers and lecturers, the need for peer acceptance, proving competence to others and fear of failure (Shia, 1998). In contrast, intrinsically motivated students participate out of curiosity – wanting ‘to know’ – and they engage for the sake of participating in, and completing, a task (Shia, 1998). The need for personal achievement (Shia, 1998) and a desire to make a contribution (Dev, 1997) are also important aspects of intrinsic motivation. While intrinsic motivation has been linked to various positive outcomes including higher academic achievement (Soenes and Vansteenkiste, 2005), more enjoyment of academic work (Vallerand *et al.*, 1989), and higher quality learning (Grolnick and Ryan, 1987), conversely extrinsic motivation is linked more to negative outcomes including greater anxiety and poor ability to cope (Deci and Ryan, 2000). However, “motivation does not come solely from getting what you want from others or your environment. Neither does it come entirely from within. It comes from the interactions between yourself and others, the task and your surroundings” (McLean, 2009, p. 22).

This research study sets out to examine students’ intrinsic and extrinsic motivations over the course of their university studies, the first stage of this analysis having been completed during their induction programme. As part of this, students completed

a questionnaire on their academic performance expectations controlling for a range of psychological factors including: academic stress; self-esteem; self-efficacy; student and lecturer role expectations. The proportion of academic performance expectations explained by background factors, that is, by gender, by proportion of university fees paid by the student, and study hours, were also considered. Next is a brief overview of the longitudinal research design including information on the content and outcomes measures in the validated questionnaire, the participants involved and the research procedure. This is followed by a discussion of the findings in relation to improving learning and achievement, both of which are integral to the management of student engagement and retention.

### **Research participants and procedure**

The findings presented here are the first from a longitudinal project examining university students' motivations. The project involves a number of universities on the island of Ireland and various academic programmes in which students' expected and actual performances will be examined over the course of their studies. Here, the focus is sport students, the participants ( $n = 126$ : Male ( $n = 89$ ; 70.6%), Female ( $n = 37$ ; 29.4%)) being full-time undergraduate students studying at the University of Ulster's Sports Academy in 2012-2013. The Ulster Sports Academy is one of the largest schools in the Faculty of Life and Health Sciences, University of Ulster. It attracts approximately 1,000 applicants per annum for its fulltime BSc programmes in Sport: Theory and Practice and in Sport and Exercise Sciences. Of these, the Academy accepts between 100 and 150 students annually from a range of educational backgrounds including A-levels, Business Technology Education Council qualifications (BTEC), and combined BTEC and A-level qualifications. UCAS grades for A-level applicants are set at two As and a B (or three distinctions for BTEC National Diploma candidates).

All participants completed the questionnaire described below in a computer laboratory within the university. The study was approved by the Sport and Exercise Sciences Research Institute Ethics Committee and the questionnaire was disseminated on day three of an enhanced induction programme. This programme included an information-sharing and registration day (day one) held on campus,

a teambuilding and outdoor activity-based day (day two) at the Belfast Activity Centre and, a learning and study skills workshop on day three, facilitated by Amazing Brains Northern Ireland and an academic member of staff. An informed consent declaration was included at the start of the questionnaire outlining the contact details of the principal researchers, their intentions to treat the data with sensitivity, and the need for students to include their student number to allow tracking of their responses. The students were assured that their student numbers would not be used in any publications. The first section of the questionnaire included demographic items relating to gender, plans to work in paid employment, proportion of university expenses provided by parents, family or a significant other, and plans to study. The second section contained sixty items relating to aspects of intrinsic and extrinsic motivation, and a self-efficacy question. Section three included thirty items relating to lecturer expectations. The last section included in the current investigation consisted of items relating to academic stress. A rigorous scale selection process was undertaken to ensure that the design of this questionnaire addressed the objectives effectively. The final version of the questionnaire consisted of scales used successfully in previous research (see, for example, Shia, 1998; Pithers and Holland, 2007; Agolla and Ongori, 2009).

## **Questionnaire Content**

### ***Intrinsic and Extrinsic Motivation Questionnaire***

The Intrinsic and Extrinsic Motivation Questionnaire (Shia, 1998) is a seven-point Likert style, 60-item self-report questionnaire, consisting of two intrinsic and four extrinsic factors. Participants were asked to choose a response that best described them ranging from strongly disagree to strongly agree. The intrinsic motivational factors entailed mastery goals (10 items) and the need for achievement (10 items) associated with completing academic tasks. In contrast, the extrinsic motivational factors resulted from external pressures and related to power motivations (10 items), fear of failure (10 items), authority expectations (9 items) and peer acceptance (11 items). After reversed scoring of relevant items, each set of items associated with the respective factor was totalled, higher scores indicating greater levels of the relevant aspect of intrinsic or extrinsic motivator. Good internal consistency reliability for the entire questionnaire ( $\alpha = .78$ )

has already been reported for the questionnaire (Shia, 1998) while good construct validity, that is, the extent to which what was to be measured was actually measured, was also established through positive correlations between the total intrinsic and extrinsic scores from the questionnaire (Shia, 1998) and the respective intrinsic and extrinsic subscales of the Motivated Strategies for Learning Questionnaire (Pintrich and DeGroot, 1990; Pintrich, Smith, Garcia and McKeachie, 1993).

### ***Lecturer Expectations Scale***

The Lecturer Expectations Scale (Pithers and Holland, 2007) is a five-point Likert style, 30-item self-report scale, consisting of items related to students' perceived level of importance of various lecturing-related issues including expertise in the subject, use of structured learning, warmth and humour, and credibility. Response categories ranged from very unimportant to very important. As with the other scales, all the items were totalled with higher scores indicating greater levels of lecturer expectations. Good internal consistency reliability ( $\alpha = .84$ ) was also achieved for this scale in the current study.

### ***Academic Stress Scale***

The Academic Stress Scale (Agolla and Ongori, 2009) is a five-point (strongly disagree to strongly agree) Likert style, 13-item self-report scale, consisting of items related to student academic stressors including poor performance, workload, poor facilities, competition, job after graduation and parental expectations. Here, higher totalled scores also indicated greater levels of academic stress and good internal consistency reliability ( $\alpha = .81$ ) and content validity have been reported for the scale (Agolla and Ongori, 2009).

### ***Self-efficacy***

A single item was specifically constructed for self-efficacy based on a seven-point Likert response format (definitely false to definitely true). Participants responded to the statement "I am confident that I will perform well at the end of semester (exams and assessments) at my university/ college". This item was constructed by following a set of validated guidelines for the assembly of Theory of Planned Behaviour measures (Ajzen, 1988; 2002) that contain items relating

to self-efficacy, here the focus being the role of self-efficacy in explaining academic performance expectations.

### **Questionnaire outcome measures**

Supplementary information was also gathered on gender, paid employment, number of hours worked each week, support for paying university fees and the number of hours per week that students intended to devote to study. Given that the questionnaire data form part of the first stage of a longitudinal study, their analysis here was mainly descriptive or correlational in focus and the regressed outcome measures reflected expected scores rather than actual module and yearly academic performance. These were also supplemented by a series of qualitative data from evaluations of the induction process. Of direct relevance to this study were students' comments on the importance of establishing friendship groups – "it introduced us to each other and made us feel comfortable and get used to University life"; "it was a worthwhile experience that helped me to meet the people in my class" – and the palpable anxiety generated by the transition to a new (and sometimes) daunting learning environment. Here, one third of sport students felt that university was a daunting prospect at the end of day three of the enhanced induction programme. The results of these outcome measures are presented next followed by an overview of students' orientation towards the various motivational factors. Notable here were the external pressures to work while studying – responsibility for university expenses was mainly theirs – and the related impact of this on intended hours of study per week.

### **The realities of studying: paid work, university fees and time for study**

Regarding plans to work in paid employment, 34.1 per cent ( $n = 43$ ) stated that they would not have a job during their studies, 34.1 per cent ( $n = 43$ ) stated they would work "1-10 hours a week", 29.4 per cent ( $n = 37$ ) stated "11-20 hours a week", and 2.4 per cent ( $n = 3$ ) stated "31-40 hours a week". Thus, above and beyond their voluntary sports-related roles which many sport students hold, almost two thirds of the cohort intended to combine full-time study with part-time paid employment. The majority of students (64.3%;  $n = 81$ ) stated that "none or very little" of their university expenses

would be provided by parents, family or a significant other, 18.3 per cent ( $n = 23$ ) stated “less than half”, 11.9 per cent ( $n = 15$ ) stated “more than half”, and 5.6 per cent ( $n = 7$ ) stated “all or nearly all”. Thus, more than four fifths of the cohort bore primary responsibility for their university expenses themselves.

Regarding plans to study, 15.1 per cent ( $n = 19$ ) stated they would study between “6-10 hours a week”, 20.6 per cent ( $n = 26$ ) stated “11-15 hours a week”, 32.5 per cent ( $n = 41$ ) stated “16-20 hours a week”, 19.8 per cent ( $n = 25$ ) stated “21-25 hours a week”, 9.5 per cent ( $n = 12$ ) stated “26-30 hours a week”, and 2.4 per cent ( $n = 3$ ) stated “more than 30 hours a week”. Given that the typical first year sports timetable for students includes up to fourteen hours per week of organised classes, the remainder being allocated for independent study, most students’ intentions for independent study did not appear to meet this initial requirement. Anticipating this mismatch, the programme team focused on the organisation and management of the timetable as a key item in the learning and study skills workshop that followed students’ completion of this questionnaire (on the morning of day three of induction). Ascertaining students’ orientation towards intrinsic and extrinsic motivational factors is reported next.

	<i>M</i>	<i>SD</i>	<i>Range</i>	<i>Possible range</i>
Need for achievement	51.80	4.47	34 – 62	10 – 70
Mastery goals	51.62	5.00	34 – 65	10 – 70
Power motivations	33.54	5.38	21 – 49	10 – 70
Fear of failure	40.33	6.76	26 – 56	10 – 70
Authority expectations	39.94	4.97	27 – 54	9 – 63
Peer acceptance	37.03	5.61	26 – 49	11 – 77
Self-efficacy	5.20	1.10	2 – 7	1 – 7
Academic stress	33.06	7.69	6 – 46	0 – 52
Lecturer expectations	127.67	16.68	34 – 150	30 – 150
Expected overall result	71.31	9.03	50 – 90	0 – 100

Table 1: Descriptive statistics for the variables included in the regression model

### **Students' orientation to intrinsic and extrinsic motivational factors**

On average, students self-reported a relatively strong orientation towards the intrinsic motivational factors of need for achievement ( $M = 51.80$ ,  $SD = 4.47$ ) and mastery goals ( $M = 51.62$ ,  $SD = 5.00$ ) (See Table 1). In contrast, they self-reported less orientation towards the extrinsic motivational factors of power motivations ( $M = 33.54$ ,  $SD = 5.38$ ) and fear of failure ( $M = 40.33$ ,  $SD = 6.76$ ), but the average levels reported for these factors still signify quite frequent use of these motivational strategies. Taking into account the variation in possible ranges for authority expectations ( $M = 39.94$ ,  $SD = 4.97$ ) and peer acceptance ( $M = 37.03$ ,  $SD = 5.61$ ) (both extrinsic motivation factors), on average, the self-reported influence of authority expectations was noticeably stronger in this cohort of students.

The majority of the students also self-reported relatively positive self-efficacy levels ( $M = 5.20$ ,  $SD = 1.10$ ) in relation to performing well in end of semester examinations but, taking into account the variation in responses to this item, there were some students with low levels of self-efficacy ( $Range = 2 - 7$ ). Self-reported academic stress ( $M = 33.06$ ,  $SD = 7.69$ ) was moderately high, on average, within the cohort. Students self-reported high expectations of lecturer performance ( $M = 127.67$ ,  $SD = 16.68$ ) and related issues and, generally, most self-reported high expectations in relation to their overall first year results at university ( $M = 71.31$ ,  $SD = 9.03$ ). The predicted influences on these expectations are reported next.

### **Predicted influences on students' expectations**

In the regression analysis, expected overall first year results were regressed on each of the predictors (see Table 2). Mastery goals had a weak significant influence on expected overall first year results ( $\beta = .28$ ,  $p = .008$ ), suggesting that participants that self-reported greater use of mastery goals motivation expected a higher result compared to those not using that strategy. Perceived self-efficacy also had a weak significant influence on expected first year results ( $\beta = .23$ ,  $p = .031$ ), suggesting greater levels of confidence on the part of students towards higher expected results. The other predictors did not have a significant influence on expected overall first year results. The overall model did significantly explain a sizable

	<i>R</i>	<i>Adj. R<sup>2</sup></i>	$\beta$	<i>t</i>	<i>Sig.</i>
<b>Predictors</b>	.46	.12			
Gender			-.08	-.81	.418
Paid employment hours			.05	.52	.603
University expenses			-.09	-1.01	.317
Study hours			.08	.83	.410
Need for achievement			-.05	-.51	.613
Mastery goals			.28	2.72	.008
Power motivations			.06	.62	.539
Fear of failure			.02	.22	.824
Authority expectations			-.08	-.81	.421
Peer acceptance			-.11	-1.01	.313
Self-efficacy			.23	2.18	.031
Academic stress			-.00	-.05	.964
Lecturer expectations			-.00	-.03	.978

Table 2: Predicting expected overall results among first year students

amount of variance (12%) in expected overall first year results (*Adjusted R<sup>2</sup>* = .12;  $F(13, 112) = 2.29$ ,  $p = .010$ ).

### Concluding comments

This study examined the intrinsic and extrinsic motivational factors impacting on undergraduate sports students' engagement in their first year of full-time study at the University of Ulster. It also identified the predictors – gender, paid employment, study hours, university expenses, academic stress, self-esteem, student and lecturer role expectations – affecting their academic performance expectations. It was shown that students reported a relatively strong orientation towards the intrinsic motivational factors of need for achievement and mastery goals and less orientation towards the extrinsic motivational factors of power motivations and fear of failure. Based on research elsewhere on the benefits of intrinsic motivation to students (see, Schraw *et al.*, 1995 cited from Shia, 1998; Dev, 1997) and on the motivational model proposed by McLean (2009), this is a preferred and more positive type of motivational profile. Given the previously identified dearth of research on the motivations of full-time sports students, these findings offer a comparative baseline



for examining the motivations of cohorts of sports students in other UK and Irish universities, not least because some of these students may also be engaged in, or motivated by, high performance sport. Of course this motivational profile also has some relevance for our understanding of all undergraduate students' transitional experiences to higher education, not least in terms of the institutional drivers to manage student retention.

Not only do students use intrinsic motivational strategies but they also activate extrinsic motivations, even if these are considered to be somewhat less effective for sustaining student engagement, particularly if they are taken in isolation from the overall motivational climate where significant others, operating in the so-called external environment of the student, play a central role in nurturing students' needs for affiliation, agency and autonomy. As McLean puts it, "while there is much to be gained by a deeper understanding of the internal energizers that drive pupils' motivation from within, it is important to remember that motivation is a quality of the transaction between the learner and the classroom" (2009, p. 229). It is this that might become a fruitful area for intervention by educationalists. We propose this because, as has been demonstrated here, on average the influence of authority expectations for this cohort was stronger compared to the need for peer acceptance. Therefore, the impact of educationalists in shaping the new learning environment experienced by first year students may be more important than peer acceptance, at least in the early transitional period from secondary to higher education.

According to Deci and Ryan's Self Determination Theory (SDT) (1985), those individuals who score high in extrinsic factors are less self-determined in their activities and may not meet the basic psychological needs of autonomy, competence and relatedness. Thus, if the motivation to attend university is mainly driven by significant others forging the development of extrinsic motivations, then self-determination is less likely to be achieved for that student. Here, a majority of 64 per cent of students indicated that very little to no financial support was provided by parents, family or others, which indicates a potential positive intrinsic motivational climate. Further analysis of this motivational climate during induction could

assess, and account for, the types of motivations and perceived levels of autonomy, competence and relatedness, which might also include the impact of guidance by careers teachers, parents, siblings or other peers in making choices about programmes of study at university. Of course this majority percentage may be displaced by the requirement to work longer hours in part-time employment to fund studies. Here, 66 per cent of students intended to work between six to 30 hours per week. This necessity to work may also impact on the displacement of time per week between studies and work commitments. Therefore, the determination of time spent studying and working in a part-time job also requires further exploration within the context of developing a more effective motivational climate for students transitioning to higher education.

While the majority of students reported positive self-efficacy levels in relation to performing well on their programme of study, the range of scores demonstrates that some students may have had lower levels of self-efficacy. This, combined with a moderate to high level of academic stress, would suggest that early intervention with these students is crucial in supporting students to manage the transition and the approach to new tasks and assessments in a competent way. Because mastery goals and self-efficacy predicted higher expected results at the end of the year, interventions embedding these characteristics might also be more effective in the management of student transition and retention.

Generally, most students reported high expectations in line with achieving a first class honours degree for their first year studies. This finding is not surprising given that, elsewhere, Goldfinch and Hughes (2007, p.260) demonstrated that “students tend to enter university with high confidence in their key skills”, even if this may be somewhat misplaced given the need to acquire new skills for a new learning environment. Given that confidence may have positive outcomes in terms of motivation and student engagement (Fazey and Fazey, 2001), the importance of managing student expectations whilst nurturing intrinsic motivation is, therefore, a vital component of any early intervention such as a first year induction programme. Taken collectively, then, the findings from this study demonstrate that sports students utilise a combination of intrinsic and extrinsic

motivational strategies in the early stages of the transition to higher education. Mastery experiences and high levels of self-efficacy also appear to be stronger at this stage for predicting expected results at the end of year one. It remains to be seen whether these findings will be borne out in subsequent analyses of this cohort (and others) over the course of their first and subsequent years of study. In anticipating this, the research team will compare questionnaire data for this cohort across the two semesters of the first academic year at the University of Ulster, as well as examining any changes in these students' motivational status that may be correlated with actual academic results. Of some interest here will be the gender breakdown of the cohort, being predominantly male, and the potential relevance of this for understanding the motivational factors of male students.

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**Student engagement and graduate level employability:  
An empirical investigation into the impact of  
a work placement year**

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**Introduction**

In the White paper (2011) the UK Government affirms that students should expect to receive excellent teaching. One of the dimensions identified by Gibbs (2010) of a high quality learning experience is the levels of student effort and engagement. It is argued that the reforms contained in the White paper (section 2.7, p.27) will "...restore teaching to its proper position, at the centre of every higher education institution's mission". The first reform outlined is the introduction of a Key Information Set (KIS). All universities and colleges are now required to publish a KIS on their web-site for all undergraduate degrees (of more than one year's duration). Graduate level employment statistics will form part of this set. Whilst such statistics are currently available (Higher Education Statistics Agency, (HESA), and [unistats.direct.gov.uk](http://unistats.direct.gov.uk)) it is likely the introduction of the KIS will draw considerable attention to this area and increasingly sixth form students, parents, school principals, career teachers and career officers will be assessing a university's performance as measured against criteria such as graduate level employment when completing their UCAS applications.

Graduate level employability is relatively easily measured (see Elias and Purcell, 2004), but measuring student engagement is much more problematic not least due to the variety of definitions for "student engagement". Kuh et al. (2007) promulgate a rather broad definition which essentially states that engagement relates

to the extent to which students are participating in activities that higher education research has shown to be associated with learning outcomes. There is certainly currently quite a substantive and growing body of work which suggests that the taking of a work placement (or internship) year (a 48 week period of full-time work experience) is associated with better final year degree performance (see, for example, Foster et al., 2011; Green, 2011 and Green et al., 2012) and a logical extension to this work is to investigate the impact of students engaging in a work placement or internship year upon graduate level employability.

A previous survey of students' views at the University of Ulster does provide an insight into the issues of interest. A survey of final year students across a number of undergraduate degrees conducted in week 11 of the second semester was undertaken in 2010. It was conducted on-line and students were asked to express their agreement or disagreement to a number of statements, on a 5 point Likert scale from 5 strongly agree to 1 strongly disagree. Six of the 72 questions related specifically to students' perceptions on the relationship between employability, student engagement in a work placement year and degree classification. The results are reported in table 1.

Students' views on the importance of degree classification, work experience and engaging in a work placement year are relatively unambiguous with regard to indicating agreement or disagreement to relatively straight forward statements (statements 1 to 3, table 1). However, when a value judgment is required in terms of ranking the importance of work experience and degree classification with regard to future employment the student response becomes less clearly defined. This reflects the fact that students need a more informed framework on the relationship between graduate level employability, degree classification and student engagement in a work placement year.

There is some evidence on the relationship between work placement and employment. Bowes and Harvey (1999) investigate the impact of a sandwich year on employment using HESA national statistics. The results of the study support the contention that (p.3) "graduates

STATEMENT	Strongly Agree (%)	Agree (%)	Neutral (%)	Disagree (%)	Strongly Disagree (%)	Mean Response	Median Response	Mode Response	Number of Respondents
1. I believe that any paid employment, whether part-time or full-time, is important in securing full-time employment on graduation?	50.3	37.6	10.5	4.2	1.4	Agree	Strongly Agree	Strongly Agree	165
2. I believe that my degree classification is important in obtaining future full-time employment.	49.7	36.4	10.9	2.4	0.6	Agree	Agree	Strongly Agree	165
3. I believe that taking a placement year is important in obtaining future full-time employment.	47.9	29.7	11.5	9.1	1.8	Agree	Agree	Strongly Agree	165
4. I believe that my degree classification is <b>more</b> important than work experience in obtaining future full-time employment.	23.9	29.4	25.2	19.6	1.8	Agree	Agree	Agree	163
5. I believe that my degree classification is <b>more</b> important than taking a placement year in obtaining future full-time employment.	11.0	26.2	29.9	28.0	4.9	Neutral	Neutral	Neutral	164
6. Part-time employment gives me all the work experience I need to secure a job on graduation.	6.1	12.7	25.5	35.2	20.6	Disagree	Disagree	Disagree	165

It should be noted that 106 of the respondents had actually completed a placement year.

Table 1: Placement, employability and Degree Classification



who undertook a sandwich placement as part of their course of study are more likely to secure full-time paid employment within six months of graduating than graduates from full-time courses.” Similarly, HEFCE (2009, p.28) find that 88% of graduates from 2006/2007 who had taken a work placement year were employed, compared with 81% of all graduates. Neither of these studies distinguishes between graduate level and other employment nor is there any consideration of other factors which may impinge upon graduate employment. The most recent research study conducted by Moores and Reddy (2011, p.1) suggests that, “...placement programme graduates across the university (Aston University) are significantly more likely to be (1) in work, and (2) in graduate level jobs.” The authors proceed to suggest that: “when analyses (*data*) were split by degree classification obtained, it was shown that amongst those graduates with 2.1 degrees reporting themselves as working, more placement vs. non-placement programme graduates had obtained graduate-level jobs (63% vs. 33%). In 2.2 classified graduates there was no significant association.” The Moores and Reddy (2011) study makes a significant contribution to the literature in that both graduate and non-graduate employment are separated, tests of statistical significance are performed and the impact of degree classification is explored. However as noted by the authors, “the possibility that pre-existing differences between placement and non-placement students on one or more individual difference dimensions may account for some or all of the benefits.” (p.13)

This study investigates whether employment at a graduate level is related to the completion of a work placement year for a sample of graduates from the University of Ulster. A number of control variables are included in an attempt to address individual difference dimensions referred to by Moores and Reddy (2011).

### **Data and methodology**

The sample is drawn from 12 undergraduate degrees largely from within the Ulster Business School (note that degrees such as Business Studies with Computing, Business Studies with Accounting etc. are all classified as Business Studies as per table 2), and utilizes data for two graduating cohorts, 2008/9 and 2009/10. The Destination of Leavers from Higher Education (DLHE) survey is

used to obtain data on graduate status six months after graduation. The maximum number of observations in the final sample is thus 651. This represents the number of students in the population of these courses who responded to the DLHE. Some analysis is restricted to a lower number due to non-availability of all data (for example, the socio-economic status of parents).

A combination of non-parametric and parametric tests is used to investigate the issues of interest. In addition to the standard Mann-Whitney and Kruskal-Wallis non-parametric tests, Kendall's tau\_b is used as a test of statistical association between two variables which is the primary test adopted by Moores and Reddy (2011). The parametric test employed is binary logistic regression. The goal of logistic regression is to correctly predict the category of outcome in this case employment/graduate level employment for individual students using the most parsimonious model. The form of the model to be estimated is:

$$\text{logit}(p_i) = \ln \left( \frac{p_i}{1 - p_i} \right) = \beta_0 + \beta_1 \chi_{1,i} + \dots + \beta_k \chi_{k,i}.$$

Where,  $p_i$  is the probability of a student ( $i$ ) gaining employment/graduate level employment within six months of completing university study,  $\beta_0$  is a constant term introduced to capture the impact of omitted variables and  $\chi_1$  to  $\chi_k$  are the independent variables, namely a combination of continuous, dummy and nominal variables for the completion of a placement year, final year degree classification, subject discipline, gender, socio-economic status, location of study (campus), total tariff points on entry, the nature of pre-university schooling and disability. No prior studies have adopted this methodology nor attempted to model the impact of control variables.

## Descriptive statistics and results

Table 2 provides descriptive statistics for the sample under study. With regard to the completion of a placement year, it should be noted a large percentage of students included in the DLHE data (66.7%) had completed a placement year. Further analysis

TABLE 2: Descriptive statistics for the sample under study

**GENERAL STATISTICS**

Destination	DLHE Response (%)	PLA (%)	Gender Male (%)	Average Tariff Points	Average Final year Mark (%)	Disability (%)	Number
Graduate employment	32.8	77.1	28.0	311.9	63.3	7.0	<b>214</b>
Non-graduate employment	47.5	62.9	28.1	288.6	60.4	6.8	<b>309</b>
Further study	11.3	60.8	31.1	298.7	63.4	9.6	<b>74</b>
Unemployed	8.4	55.6	46.3	283.8	59.8	5.6	<b>54</b>

**PRE-UNIVERSITY SCHOOL STATISTICS**

Destination	1. Grammar	2. Secondary	3. College	Unidentified	Number
Graduate employment	37.4%	47.2%	8.9%	6.5%	<b>214</b>
Non-graduate employment	29.7%	51.3%	11.0%	8%	<b>309</b>
Further study	44.6%	36.5%	4.1%	14.8%	<b>74</b>
Unemployed	20.4%	63.0%	5.6%	6.0%	<b>54</b>

**LOCATION STATISTICS**

Destination	1. JORDANSTOWN	2. COLERAINE	3. MAGEE
Graduate employment	36.7%	21.4%	30.6%
Non-graduate employment	46.3%	46.4%	52.1%
Further study	9.8%	24.1%	5.0%
Unemployed	7.2%	8.0%	12.4%
<b>Number</b>	<b>417</b>	<b>112</b>	<b>122</b>

## SOCIO-ECONOMIC CLASS OF PARENTS

CLASS	Graduate employment	Non-graduate employment	Further study	Unemployed
1. Semi-routine occupations	9.8%	11.6%	5.4%	11.1%
2. Small employer & own account	17.8%	12.6%	10.8%	22.2%
3. Lower managerial & professional	23.4%	20.6%	23.0%	16.7%
4. Higher managerial & professional	5.6%	6.5%	12.2%	5.6%
5. Lower supervisory & technical occupation	5.1%	6.5%	8.1%	3.7%
6. Routine occupations	5.6%	10.6%	5.4%	5.6%
7. Intermediate occupations	13.8%	11.0%	12.2%	11.1%
Missing	19.2%	20.6%	23.0%	24.1%
<b>Number</b>	<b>214</b>	<b>309</b>	<b>74</b>	<b>54</b>

## SUBJECT AREA

Subject	Graduate employment	Non-graduate employment	Further study	Unemployed	Number
1. Accounting	44.2%	30.2%	16.3%	9.3%	<b>86</b>
2. Business studies	26.2%	56.9%	8.6%	8.3%	<b>313</b>
3. Consumer studies	18.4%	42.1%	36.8%	2.6%	<b>38</b>
4. Economics	30.8%	46.2%	0	23.1%	<b>13</b>
5. Human resource management	52.1%	41.5%	3.8%	1.9%	<b>53</b>
6. Management	30.0%	50.0%	10%	10%	<b>10</b>
7. Marketing	37.7%	40.6%	11.6%	10.1%	<b>138</b>

Total number of respondents from DLHE report 651

indicates that there is a statistically significant impact of completing a placement year upon whether a student is in graduate level employment or non-graduate level employment (Mann-Whitney  $U = 28,460$ , prob = 0.001). The average total tariff points on entry are highest for students obtaining graduate level employment within 6 months of graduation and there is a statistically significant difference between those achieving graduate level positions and those achieving non-graduate employment (Mann-Whitney  $U = 23098$ , prob < 0.001). With regard to gender, there is no statistically significant association with category of employment (Mann-Whitney  $U = 33,161$ , prob = 0.995). There is a statistically significant difference in the average final year degree mark achieved for students obtaining graduate level as compared to non-graduate level employment (Mann-Whitney  $U = 24948$ , prob < 0.001), with those gaining graduate level employment achieving higher marks. Pre-university education has no statistically significant impact, attending grammar, secondary or college has no impact upon the category of employment achieved (Chi-square = 3.136, prob = 0.077).

A break-down by location (or campus) of study, reveals that for all campuses non-graduate employment is dominant, with students at Jordanstown having the highest level of graduate employment. Statistical tests suggest significant differences in employment categories across the three campuses (Chi-square = 5.023, prob = 0.025). This result may derive from the nature of the degrees offered at the various campuses but it may also be related to a "location effect". It is not clear whether the differences in the data linked to location are due to there being more employers closer to particular campuses and there is anecdotal evidence which suggests that students at the University of Ulster tend to seek employment close to home. Further research is required on this issue.

Analysis of the socio-economic status of students' parents reveals that this is not statistically significant with respect to the nature of employment achieved (Chi-square = 0.454, prob = 0.500). Relating to the nature or subject area of degrees studied, it is clear that graduate level employment varies across subject area, with vocationally based degrees such as Accounting and Human

Resource Management being associated with higher graduate level employment and more generalist degrees such as Business Studies having a relatively lower level. Statistical analysis, based upon the median (across all courses) does indicate statistically significant differences in employment category (Chi-square = 9.950, prob = 0.002).

Next attention is directed toward bivariate non-parametric correlation analysis. Specifically the association between the following variables is investigated:

E is a dummy variable taking the value of 1 if a student is in any type of full-time employment and 0 otherwise, i.e. in further study or unemployed.

GE is a dummy variable taking the value 1 if a student is employed at a graduate level according to the Elias and Purcell (2004) criteria and 0 if employed at a non- graduate level. Students in further education or unemployed are thus excluded.

Subject is a nominal variable defined as per table 2.

Location (LOC) is a nominal variable defined as per table 2.

TT this is the total tariff points on degree entry.

Gender is a dummy variable taking the value 1 for male and 0 for female students.

PLA is a dummy variable taking the value 1 if the student completed a one year placement (48 weeks) and 0 otherwise.

DISAB is a dummy variable taking the value 1 if a student had registered any disability and 0 otherwise.

Socio-economic status of parents (SEC) is a nominal variable defined as per table 2.

Classification (CLAS) is a nominal variable defined as 1 first class, 2 second class upper division, 3 second class lower division, 4 third class and 5 pass.

Y3 is a student's average final year degree mark upon which classification is determined.

School (SCHC) is a nominal variable defined as per table 2.

The results of the analysis are reported in table 3. It should be noted that as a number of dummy and nominal variables are included, the sign of the estimated correlation coefficients on such variables do not always have a meaningful interpretation, other than the conclusion that there is/or not a statistically significant association. The correlations of particular interest are highlighted.

Table 3 reveals that from a bivariate correlation analysis the factors which individually have a statistically significant association with a student being employed at a graduate level (GE) rather than any other employment are, location of study (university campus), total tariff points on degree entry, average final year mark, the completion of a placement year and the degree classification achieved. Further, with regard to a student being in any type of full-time employment (E) as opposed to being in either further education or unemployed, statistically significant associations are found with the location of study, gender and the completion of a work placement year. In the context of this study the most important finding is that the completion of a placement year is positively associated with all categories of employment.

The analysis thus far has focused upon singular relationships between employment both non-graduate and graduate level and the variables which may *a priori* be related to employment. Perhaps of more importance is how these variables combined can predict employment outcome. To investigate this, binary logistic regression is employed using two dependent variables, first whether students are employed full-time in any category (E) compared to being in further education or unemployed, and second whether students are employed at a graduate level as opposed to a non-graduate level (GE). The results are provided in tables 4 and 5 respectively. It should be noted that the analysis is performed stepwise with forward conditionality imposed. The independent variables entered into the estimation for both regressions are; subject area, location, total tariff

Variable	Statistics	Subject	LOC	TT	Gender	Y3	PLA	DISAB	SEC	CLAS	SCHC	GE	E
Subject	Cor Coe N	1.00 651											
LOC	Cor Coe N	0.13** 651	1.00 651										
TT	Cor Coe N	-0.04 620	-0.39** 620	1.00 620									
GENDER	Cor Coe N	-0.01 651	-0.00 651	-0.08* 620	1.00 651								
Y3	Cor Coe N	-0.11** 651	0.02 651	0.23** 620	-0.17** 651	1.00 651							
PLA	Cor Coe N	-0.19** 651	-0.05 651	0.02 620	-0.07 651	0.26** 651	1.00 651						
DISAB	Cor Coe N	-0.07* 647	-0.02 647	-0.01 616	-0.01 647	-0.03 647	0.02 647	1.00 651					
SEC	Cor Coe N	-0.06 517	0.00 517	0.05 496	0.04 496	0.01 517	-0.03 517	0.03 515	1.00 647				
CLAS	Cor Coe N	0.10** 651	0.02 651	-0.26** 618	0.16** 651	-0.74** 651	-0.30 651	0.03 647	0.00 517	1.00 651			
SCHC	Cor Coe N	-0.03 595	0.08 595	-0.10** 569	0.05 595	-0.02 595	-0.07 595	0.02 593	-0.09* 491	0.01 595	1.00 585		
GE	Cor Coe N	0.05 523	-0.10* 523	0.17** 497	-0.00 523	0.17** 523	0.15** 523	0.00 520	-0.03 419	-0.20** 523	-0.08 484	1.00 523	
E	Cor Coe N	-0.03 651	-0.11** 651	0.02 620	-0.08* 651	-0.01 651	0.09* 651	-0.02 647	-0.01 517	0.04 651	0.05 595	1.00 523	1.00 651

\*\*Correlation is significant at the 0.01 level using a two-tailed test.

\*Correlation is significant at the 0.05 level using a two-tailed test.

Table 3: Non-parametric correlations (Kendall's tau\_b)



points on degree entry, gender, the completion of a placement year, disability, socio-economic status of parents, degree classification and pre-university schooling.

### Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 <sup>a</sup>	Location	-.369	.144	6.548	1	.010	.692
	Constant	2.073	.265	61.034	1	.000	7.952
Step 2 <sup>b</sup>	Location	-.362	.145	6.259	1	.012	.696
	Degree classification	.432	.195	4.943	1	.026	1.541
	Constant	1.151	.483	5.672	1	.017	3.161
Step 3 <sup>c</sup>	Location	-.328	.145	5.108	1	.024	.720
	Placement year	.637	.281	5.126	1	.024	1.890
	Degree classification	.602	.209	8.286	1	.004	1.826
	Constant	.298	.610	.238	1	.625	1.347

- a. Variable(s) entered on step 1: Location.
- b. Variable(s) entered on step 2: Degree classification.
- c. Variable(s) entered on step 3: Placement year.

### Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	440.613 <sup>a</sup>	.013	.022
2	435.553 <sup>a</sup>	.024	.039
3	430.540 <sup>b</sup>	.034	.056

- a. Estimation terminated at iteration number 4 because parameter estimates changed by less than .001.
- b. Estimation terminated at iteration number 5 because parameter estimates changed by less than .001.

Total number of observations in the estimation is 469.

Table 4: Binary logistic regression estimation.  
Dependent variable any employment

## Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 <sup>a</sup>	Degree classification	-.745	.180	17.116	1	.000	.475
	Constant	1.240	.400	9.603	1	.002	3.455
Step 2 <sup>b</sup>	Total tariff points on entry	.005	.002	6.928	1	.008	1.005
	Degree classification	-.592	.189	9.830	1	.002	.553
	Constant	-.669	.824	.658	1	.417	.512
Step 3 <sup>c</sup>	Total tariff points on entry	.006	.002	8.457	1	.004	1.006
	Placement year	.678	.279	5.905	1	.015	1.970
	Degree classification	-.402	.205	3.853	1	.050	.669
	Constant	1.794	.954	3.538	1	.060	.166

- a. Variable(s) entered on step 1: Degree classification.  
b. Variable(s) entered on step 2: Total tariff points on entry.  
c. Variable(s) entered on step 3: Placement year.

## Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	499.200 <sup>a</sup>	.047	.064
2	492.081 <sup>a</sup>	.065	.087
3	485.966 <sup>a</sup>	.080	.107

- a. Estimation terminated at iteration number 4 because parameter estimates changed by less than .001.

Total number of observations in the estimation is 383.

Table 5: Binary logistic estimation.  
Dependent variable graduate level employment

From table 4 the combination of factors which best predicts students' gaining any form of full-time employment is location (university campus), degree classification and the completion of a placement year. This model predicts 81.7% of employment outcomes. From table 5 the combination of factors which best predict students gaining graduate level full-time employment is degree classification, total tariff points on degree entry and the completion of a placement year. This model predicts 64% of graduate level employment outcomes.

### **Policy implications**

In a recent report High Flyers state: "Nearly two-thirds of recruiters warn that graduates who have had no previous work experience (*in this context, both part-time and full-time work experience is being referred to*) at all are unlikely to be successful during the selection process and have little or no chance of receiving a job offer for their organisations' graduate programmes" (2011, p.32). The most recent (at the time of writing) report from High Flyers (2012, p 9) notes that: "virtually all of the UK's leading employers now require their graduate applicants to meet minimum academic standards. More than two-thirds of recruiters insist on a 2.1 degree, whilst a quarter specify a minimum UCAS tariff for candidates, typically in the range of 240 to 320 (equivalent to 'CCC' to 'ABB' at A-level). Just one in five employers are happy to accept applicants with a 2.2 degree."

The results of this study provide robust and rigorous empirical evidence that supports both of these statements with regard to graduate level employment. Degree classification, total tariff points on entry and the completion of a work placement year are statistically significant in predicting whether a student will achieve graduate level employment. Further, existing research (Foster et al., 2011) supports a positive association between the completion of a work placement year and better final year performance and that "weaker" students, i.e. those who perform less well in second year, benefit more (Green et al., 2012). The policy question these findings raise relate to whether placement should be compulsory, even in the current economic climate or whether these findings should be marketed to students to foster an ethos that taking a placement year should be the normal expectation?

The current views of the UK Government (Wilson Review, 2012) and specifically in Northern Ireland from the Department for Employment and Learning (Graduating to Success, 2012) is that all students should have the opportunity to engage in a work placement period and that degrees that incorporate a placement year should be encouraged via a collaborative effort from universities, employers and the Government. Whilst there have been some changes to funding with regard to MaSN (a placement student does now equate to 0.5 with regard to maximum student numbers) relatively little has taken place to date to implement these positions. It would seem highly likely that it will be up to the universities to lead in implementing the collaborative effort.

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## Using rubrics to improve marking reliability and provide effective feedback

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### Introduction

Concerns over consistency and quality of marking and its impact on academic standards led to the introduction of assessment grids to evaluate student performance over a range of criteria (Price and Rust, 1999). An assessment grid or rubric normally consists of three main features (Reddy and Andrade, 2010):

- Evaluation criteria: which are usually mapped to the learning outcomes or competencies that are to be measured;
- Quality criteria: qualitative descriptions of what is expected for a given grade or mark;
- Scoring system: grade ranges or degree classifications mapped to the quality description.

Price and Rust (1999) developed a grid comprising of 35 criteria, from which staff could identify a sub-set of criteria, or 'mini-grid' for use in individual assignments in modules across a number of related programmes. The grids improved guidance for students; provided greater consistency of marking, and facilitated moderation and providing feedback. However, this work identified the need to ensure quality descriptors were understood by both staff and students (O'Donovan, *et al.*, 2001) and raised concerns about the ability of the grid to provide comprehensive assessment criteria. However, subsequently, it has been demonstrated that rubrics have been particularly effective in providing student guidance on specific skills and competencies such as reflective writing (Koole *et al.*, 2012; Wald *et al.*, 2012), clinical skills (Isaacson and Stacy, 2009; Hancock *et al.* 2010), discussion board contributions (Penny and Murphy, 2009; Giacumo *et al.*, 2012), scientific reasoning (Timmerman, *et al.*, 2011) and oral presentations (Reitmeier and Vrchota, 2009; Welch, Suri and Duran, 2009; Lunney and Sammarco, 2009).



The importance of high quality feedback for student learning is recognised in both the University of Ulster Teaching and Learning Strategy (2012) and the National Student Survey. The Higher Education Academy initiative: Student Enhanced Learning through Effective Feedback (SENLEF) identified seven basic principles of feedback practice (2004). Similarly, at the University of Ulster, seven principles of feedback and assessment were identified to support students and staff in providing effective feedback (University of Ulster, 2011) which are to:

1. Clarify good performance
2. Encourage time and effort on task
3. Provide timely high quality feedback
4. Provide an opportunity to act on feedback
5. Encourage positive motivational beliefs
6. Develop self-assessment and reflection skills
7. Encourage interaction and dialogue

Rubrics have been shown to provide high-level feedback (Nordrum *et al.*, 2013). Students can be provided with a rubric prior to submission of an assignment, which helps to clarify what is required for good performance, and they can be used with or without marks for formative assessment (Hancock and Brundage, 2010; Diefes-Dux *et al.*, 2012). Rubrics have also been shown to promote self-reflection and critical assessment of a student's own work. The provision of feedback via a rubric can help students identify the specific elements of their work that require improvement, and help instructors identify the areas of the syllabus or teaching that require further consideration.

Rubrics can improve rater reliability (Oakleaf, 2009; Thaler *et al.*, 2009; Timmerman *et al.*, 2011) and are therefore particularly useful where multiple or inexperienced assessors are employed or for peer assessment. This action research project was initiated following observations made during Peer Supported Review (PSR) on the consistency of marking across eTutor groups and the performance of students as they progressed through the module.

## **The Module**

The module was a 15 credit point, level 7 module in Bioethics delivered to two cohorts of postgraduate students, a small on-campus cohort (8-15 students) and a large distance learning (DL) cohort (90-120 students). The aim of the module was to promote the analysis of the ethical issues that arise from advances in life and health science. The majority of the cohort had little experience of ethical analysis prior to this module; it was therefore important that students got feedback at an early stage of the module, to clarify the requirements for good performance. The assessment strategy, which was informed by the Ulster Principles for Assessment and Feedback, was designed to provide prompt feedback on a short piece of work, which the students should be able to implement in a more substantial second submission. Students completed a short analysis (1000 words) of an ethical issue in which they were required to identify the key stakeholders and the ethical issues pertaining to them. They were provided with feedback on this assignment prior to the submission of a more extensive critical review of a current ethical issue, such as stem cell research, pharmacogenomics or genetic screening.

## **Identifying the problem**

The module was delivered in semester one to over one hundred distance-learning (DL) students. The students were organised into groups comprising 20-25 students with an eTutor who was responsible for assessment and feedback. eTutors are subject specialists and are experienced in teaching, learning and assessment; they undertake academic induction and further in-post training as and when required. Both students and eTutors were provided with marking criteria, which outlined the requirements for the assignment and the generic assessment criteria for qualitative based work at level 7 (University of Ulster, 2012). Marks and feedback were provided on the marking criteria form.

Assignment 1 marks were classified into five groups according to the grade boundaries: Fail: < 50%, 50-60%, 60-70% and Distinction >70% (Figure 1). The difference in individual marks as students progressed from assignment 1 to assignment 2 was calculated, and the average change determined for each group. It was noted that

the only group in which the average mark increased as students progressed from assignment 1 to assignment 2 was the group who failed assignment 1. Ten students failed the first assignment, the average improvement for students in this group was 2.5%, however notwithstanding this slight improvement, only two students in this group passed the second assignment. The average mark in each of the other classifications decreased as students progressed from assignment 1 to assignment 2.

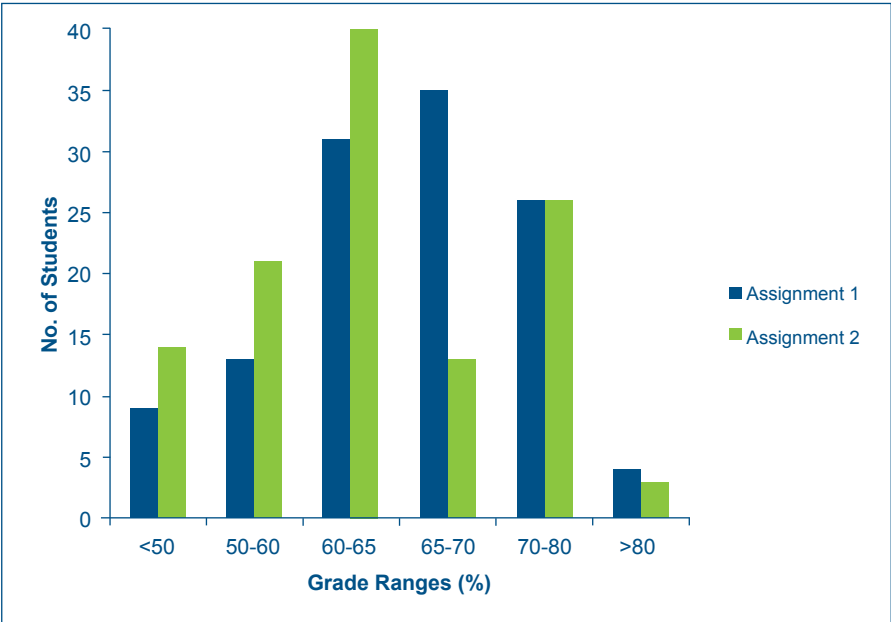


Figure 1: Marks achieved by distance learning students in assignment 1 and assignment 2 prior to introduction of rubrics.

The marks were then analysed according to eTutor group. The eTutor group mark average for assignment 1 varied from 58% to 73%, with a similar variation in assignment 2 (Figure 2). The standard deviation varied from 3.1 to 17.6, indicating that the eTutors were marking across very different grade ranges. To ensure there was fair and consistent marking across the module the marks had to be moderated by the module coordinator; this required a significant amount of work and presented delays in giving feedback to the student. It was also noted that there was wide variability in the quantity and quality of feedback given to students.

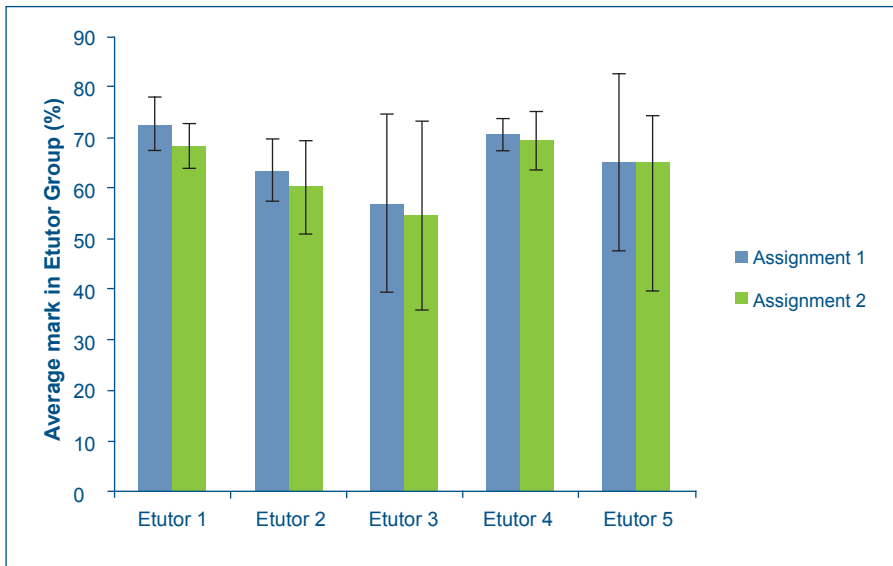


Figure 2: Average mark within the Etutor groups prior to the introduction of rubrics. The bars indicate the standard deviation within the Etutor group.

### Original Reflection

The assessment and feedback strategy was designed to clarify good performance, deliver timely high quality feedback and to provide opportunities for students to act on feedback. It was clear from the analysis that the feedback was not effective. There were several factors that could have contributed to this:

- students either did not use or understand the feedback;
- students did not receive feedback in time to use it for the second assignment;
- the feedback did not clarify what was required for good performance;
- the feedback did not encourage self-assessment and reflection.

These problems were exacerbated by what appeared to be inconsistencies in the assessment and feedback provided by the eTutors.

## Action research cycle 1: Cohort 1 (9 students)

### *Designing and implementing the Rubric*

Following an evaluation of the literature and attendance at a Blackboard Learn (BBL) training workshop on feedback and assessment, it was felt that the use of a rubric could clarify the assessment criteria for both eTutors and students, improve the consistency of the feedback, and provide an efficient method for providing timely feedback. Rubrics were designed using generic assessment criteria for qualitative based work at level 7 (University of Ulster, 2012). These were then contextualised within the specific requirements for the two pieces of coursework. There are many on-line tools available for creating rubrics; for this assignment the rubric tool within the Blackboard Learn Virtual Learning Environment (VLE), was used which provided a streamlined process for marking, moderating and providing feedback and marks. Students were presented with the rubric in BBL alongside the assignment requirements, and they received their feedback via the rubric grid (Figure 3). Feedback for assignment 1 was received two weeks before the submission date of the second assignment.




	Fail	Pass	distinction
Introduction	<b>Points Range: 0 - 1.5</b> Introduction provides brief background to topic. Little or no evidence/ presented. No rationale as to why this is important ethical topic. Vague and unfocused	 <b>Points Range: 1.6 - 1.8 Points: 1.6</b> Provides a brief introduction to a challenging topic. Why is it relevant ( support with evidence) and why does it raise ethical issues.	<b>Points Range: 2 - 3</b> Provides a focussed introduction to a novel, complex and/or challenging topic. Why is it relevant ( support with quality evidence) and why does it raises ethical issues.
Question	<b>Points Range: 0 - .8</b> Not phrased as question, not appropriate question (does not raise ethical issue)	<b>Points Range: 1 - 1.2</b> Identifies a clear question that the matrix will address	 <b>Points Range: 1.4 - 2 Points: 1.8</b> Novel and challenging question which raises difficult/ important ethical issues or a question which addressing an issue currently in mainstream debate.
References	<b>Points Range: 0 - .8</b> Makes statements with no evidence. Limited evidence of reading. Few current references, references predominantly websites. Missing either scientific or ethical evidence, or evidence to support position of key stakeholders	 <b>Points Range: 1 - 1.2 Points: 1</b> Evidence of reading of supplementary sources: bibliography/ references from scientific and ethical papers. framework.	<b>Points Range: 1.4 - 2</b> Balance of references from science and ethics. References supporting either side of argument. References predominantly from current, peer reviewed journals.

Figure 3: Part of rubric for Assignment 1 following grading by eTutor.

### *Observations: Quantitative analysis of marks*

Following the introduction of rubrics to the pilot group of on-campus students the average student mark increased by over 5% between

assignment 1 and assignment 2. A paired t-test indicated that there was a significant increase in the mark that students attained as they progressed from assignment 1 and 2. This was a very encouraging result as the second assignment was a more substantive piece of work than the first, and required that the students reached many more learning outcomes. Interestingly, students who were scoring grades in the Merit range (60-70%), had the biggest increase in their grades, achieving a Distinction (>70%) in the second assignment.

### ***Student Feedback***

Students were asked how helpful they found the rubric both prior to submission of their assignment and in receiving feedback, for both assignment 1 and assignment 2 via an on-line questionnaire. The questions were framed in terms of meeting six of the Ulster Principles of Assessment for Feedback and Learning, omitting the delivery of timely high quality feedback, as this small cohort received feedback within 7 days. The majority of students found the rubric very helpful in clarifying good performance and developing self-assessment and reflection skills.

### ***Reflection***

Whilst the small cohort size restricted the ability to interpret too much from the data; both the quantitative results and student feedback supported the implementation of the rubrics with the larger cohort, albeit with minor modifications to the quality criteria.

### **Action research cycle 2: Cohort 2 (94 students)**

It was recognised that the eTutors required training in the use of rubrics as well as clarification of assessment criteria and the aims of providing feedback. An on-line workshop on assessment and feedback was delivered to eTutors. The workshop was based around the Ulster Principles of Feedback and Assessment, and gave the eTutors the opportunity to discuss the principles, and identify which of the principles they felt they had a role in delivering. Prior to the workshop the eTutors were provided with an example piece of coursework and a set of rubrics. They were asked to discuss what feedback they would give to the student. They then looked at the rubrics and discussed whether the use of rubrics could facilitate assessment and/or providing feedback.

**Observations: E-tutor Workshop**

E-tutors on the workshop indicated that they would welcome the use of rubrics to assist in marking coursework. They agreed that the rubrics should be made available to students prior to submission to clarify good performance.

**Quantitative analysis of student marks**

The marks were classified according to grade boundaries as for the initial observation. Six out of the 94 students failed assignment 1; 6.3 % compared with the 8.5% failure rate observed prior to the introduction of the rubrics. Each of these failing students saw an increase in their individual mark for assignment 2, with three students passing the second assignment. The pass rate in assignment 2 by students who failed assignment 1 rose from 20% (pre-rubric) to 50% (post-rubric). A significant improvement was also observed in the next grade boundary, i.e. those students who achieved 50-60% in assignment 1. Prior to the introduction of the

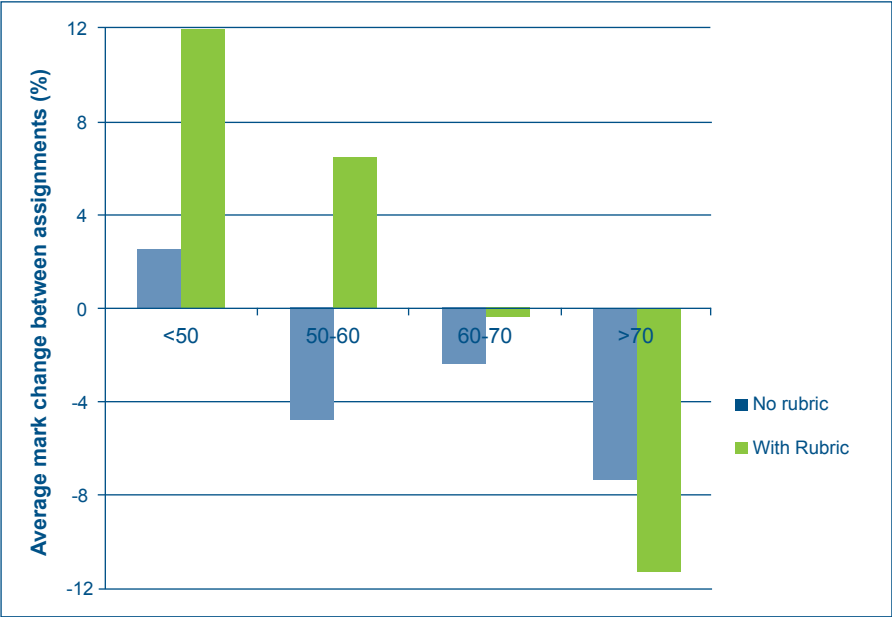


Figure 4: The average change in the group mark between assignment 1 and assignment 2, prior to introduction of the rubrics and post introduction of the rubrics

rubric, there was an average drop in marks of 4.8% as students progressed from assignment 1 to assignment 2. Following the introduction of rubrics the average mark increased by 6.5 % between assignments. In the higher grade boundaries, marks either stayed similar for both assignments or dropped slightly.

Prior to the introduction of the rubrics there was a 15% variation in the average mark attained in each eTutor group, and a wide variation in the standard deviation within each group, from 3-17. This indicated that some eTutors were marking across a very narrow range, whilst others were making a fuller use of the grade range. Following the introduction of the rubric the average mark for each eTutor group varied by 10% (Figure 5) whilst the standard deviation for each group was between 7.2 and 15.2; indicating that the eTutors were marking more consistently and across a wider range of marks.

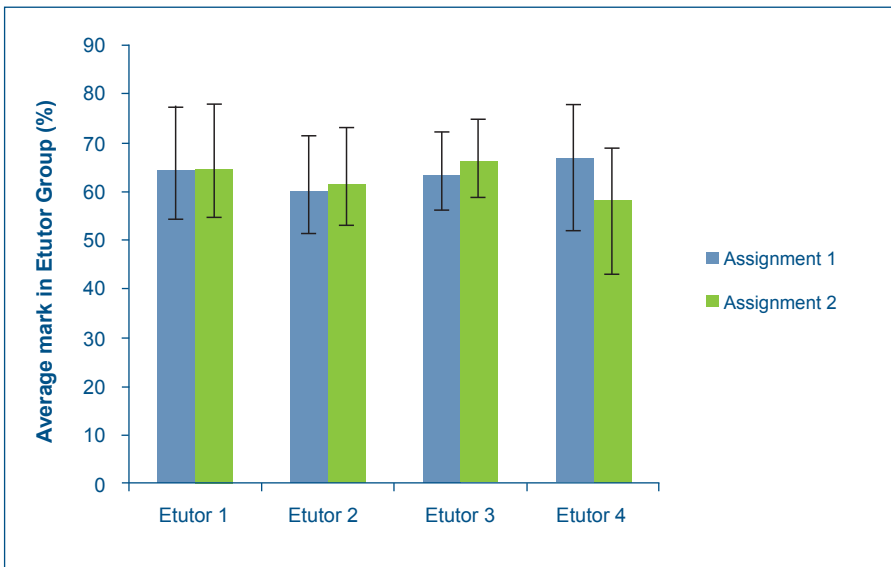


Figure 5: Average mark within the Etutor groups following the introduction of rubrics. The bars indicate the standard deviation within the Etutor group.

All four eTutors indicated that they found the use of rubrics more efficient and informative for students than providing feedback via the marking criteria form. All eTutors felt that the rubric was better at providing general feedback, although two eTutors felt that the previous form was more effective for providing specific feedback.



### **Student feedback**

Students were asked how helpful they found the rubric both prior to submission of their assignment and in receiving feedback. The questions were framed in terms of meeting six of the Ulster Principles of Assessment for Feedback and Learning. The results indicated that the rubrics were most valuable in clarifying good performance and developing self-assessment skills. Feedback indicated that the students did not consider that the rubrics encouraged interaction or dialogue around learning.

### **Discussion**

This action research study supports other works which have demonstrated the value of rubrics for clarifying performance and developing self-assessment skills (Reddy and Andrade, 2010). These results indicate that performance can be enhanced by providing students with the rubric prior to submission and delivering feedback via the rubric. To be effective the rubrics have to:

- Map to the learning outcomes of the module
- Be informed by the appropriate level assessment criteria
- Use clear language that is understood by students and markers.

The most noteworthy enhancement in student performance was observed by students in the lower grade ranges, i.e. students who failed or submitted poor first submissions saw the biggest improvement as they progressed to assignment 2. There were several factors that could be contributing to this. As the students start to prepare for the second assignment, they have already used the rubric for the first assignment, they may be both better able to understand the rubric as they have seen it exemplified with their own work, and they have been provided with clear feedback on how to progress. Students who scored high marks in the first assignment on average dropped slightly for the second assignment. Again there are several factors which have potential to contribute to this observation. Assignment 1 is worth only 20% of the module marks, and is designed to ensure that students have a basic grasp of the ethical analysis process. The second assignment was a more substantive piece of work than the first, and required that the students reached many more learning outcomes. It may be easier



Figure 6: Student evaluation of Rubrics to meet the Ulster Principles of Feedback and Assessment, prior to submission (top graph) and post submission.

for students to gain higher marks in the first assignment than the second. However it was also observed that some eTutors were over-marking the first assignment, resulting in grade inflation. As eTutors become more practised in using the rubric they are providing more accurate marking and this may be masking individual improvements by students. The provision of the rubric therefore had two effects: more accurate and consistent marking and a better understanding of what was required for good performance. By analysing the data both within grade boundaries and within eTutor groups, it is possible to infer that the poor performing students are improving due to a better understanding of what is required, an opportunity to act on feedback and the development of self-assessment skills. The more able students were already more competent at these skills, however this group were adversely effected by a more consistent and accurate marking process. This is supported by the fact that the high achievers in the on-campus cohort (where all assignments were marked by a single assessor), the group in the 60-70% boundary saw the most improvement in their grades. The use of rubrics within the large distance learning module was particularly effective at improving grading efficiency and reliability. The eTutors provided a wider range of marks when using the rubric, indicating that they were more confident about what was required for each grade boundary, furthermore the eTutors stated that they found the rubrics an efficient way of grading assignments and providing informative feedback. The outcome of this project was disseminated to the course team leading to the introduction of rubrics across the programme and their evaluation through the Peer Supported Review process.

## **Conclusions**

This action research project has demonstrated that the introduction of rubrics improved marker reliability and helped students in clarifying performance and prompting self-assessment. The eTutors thought that it was a time efficient and informative method of providing feedback. Following the successful implementation of rubrics to this module; colleagues were encouraged and supported to introduce rubrics into their modules.

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## **Was that loud enough for you? – Students' perceptions and staff reflections of audio feedback**

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### **Introduction**

The National Student Survey (NSS) highlights that students are “notably less positive about assessment and feedback on their assignments than about other aspects of their learning experience” (Williams et al., 2008, 2). A clear relationship has been identified between student satisfaction and feedback (The Higher Educational Funding Council for England (HEFCE), 2007 as cited by the Joint Information Systems Committee (JISC), 2010), therefore the consideration of alternative mechanisms to enhance student feedback has never been timelier. Further, given the context of the ‘digital native’ generation and the move towards full integration of delivery and support for all aspects of student learning via virtual learning environments (VLEs) such as Blackboard Learn+, it is opportune to consider alternative feedback mechanisms. Concomitantly, there is an increasing higher education (HE) evidence-base that demonstrates the need for and benefits of more innovation in the use of technology in supporting assessment and feedback for learning (Nortcliffe and Middleton, 2007; Rotheram, 2007; Merry and Orsmond, 2008).

The objectives of this project were firstly to ascertain students' attitudes to and perceptions of audio feedback via Blackboard Learn+; secondly, to identify areas of best practice and thirdly, to highlight any issues in relation to implementation of audio feedback. After careful reflection the results of the study would be used to redesign activities in time for the next academic year. Further, this project complements and extends the existing evidence base for audio feedback and seeks to disseminate best practice and encourage its use by colleagues in the HE sector.



## **Background and context**

Prior to the introduction of audio feedback students normally received hand written or typed summative feedback on their work, made available to them in class time but then returned to the lecturer for external examiner approval. This does not allow students the opportunity to revisit the feedback and reflect on it for the purposes of submitting subsequent pieces of coursework. This project addresses students' perception of audio feedback on assignments and attempts to ascertain whether providing audio feedback would be more beneficial, in particular in terms of being able to re-access their feedback, reflect upon it and hence facilitate feed-forward learning.

Many institutions have initiated various strategies aimed at improving quality of assessment and feedback, thereby enhancing student experience and satisfaction (Williams et al., 2008). One such strategy at the University of Ulster was the development of the Principles of Assessment and Feedback for Learning (Centre for Higher Education Practice, 2013). The Principles, based on the Reengineering Assessment Practices Project (REAP) were endorsed in June 2011 and rolled out in 2012-13. The current project aims to meet Principles 3 and 4, namely to "Deliver Timely High Quality Feedback" and "Provide Opportunities to act on Feedback" (ibid). The project aim was that this would be achieved by providing timely, constructive and personalised feedback via a medium that is convenient and flexible for staff and students alike.

## **Literature review**

Media enhanced assessment and feedback is not an entirely new phenomenon, earlier practice includes feedback via analogue cassettes (Nortcliffe and Middleton, 2008; Rotheram, 2009a). More recently VLEs that incorporate tools to facilitate audio feedback, such as Wimba voice authoring/email in Blackboard Learn+, have enabled media enhanced feedback.

## ***Audio feedback for feed-forward learning***

Nortcliffe and Middleton propose "a strategy for integration of digital audio into assessment feedback to promote feed-forward student learning" (2007, 3) that encourages self-reflection and student

learning through feedback into feed-forward and ultimately “has the potential to increase student academic performance” (ibid.). Ekinsmyth also reports that audio feedback was valued by students for formative feedback in that it was more detailed, personalised, clearer and more constructive than written comments, sometimes in “poor handwriting” (2010,75). Similarly, Rodway Dyer et al. (2011) found that 76% of students in their case study of 73 students receiving audio feedback on an individual essay reported that it would help them perform somewhat better, underlining its use again as an effective method for facilitating feed-forward. They concluded that students’ responses largely indicated that the audio feedback received was timely, recognised as feedback, understood and facilitated feed-forward learning.

### ***Audio feedback and time efficiencies/inefficiencies***

As well as providing benefits to the students there is also evidence that it can bring benefits to the academic tutor. It can be time-efficient in comparison with other feedback mechanisms, thereby reducing workload (Ice et al., 2007; Nortcliffe and Middleton, 2007; Dixon, 2009). Key findings of the joint JISC and Leeds Metropolitan University funded Sounds Good Project, indicate that audio feedback can be a more time efficient mechanism for staff and that it can provide richer feedback to students, with both staff and students strongly in favour of it (Rotheram, 2009b). Even in circumstances when it was not more time efficient staff were still in favour of it because it provided opportunity to give “more, and higher quality feedback” (ibid: 2), which the staff involved felt was worthwhile in itself. Similarly, Trimmingham and Simmons, in their Higher Education Academy (HEA) case study, found in the instances where staff reported it took longer to provide audio feedback, that they also felt “they were giving more, and higher quality, feedback to each student this time” (5), concluding that audio feedback “has tremendous potential for improving the quality of feedback” (ibid: 6).

However, a word of caution is also offered by Dixon (2009) who notes that in some instances, for example where all work is double marked, audio feedback can be more time consuming and King et al. (2008) found no evidence of time efficiencies for staff. Similarly, in Horan’s HEA case study, finds that audio feedback was less time efficient for individual feedback for large class sizes, but more

effective for general cohort feedback, group work feedback and feedback for assessed presentations.

One of the issues identified by Horan (ibid.) was that each individual audio clip had to be uploaded to the VLE, therefore using a VLE with a fully embedded or plug in audio facility, such as that of Wimba in Blackboard Learn+ eradicates this problem. Indeed Merry and Orsmond (2008) recommend that further research investigate the use of audio feedback that is integrated in to the VLE. Stockwell also found that the marking process was longer, but that it was actually easier and that “considerably more feedback” (2) could be provided using audio. This is an important aspect of recognising that audio feedback may not be appropriate for all types of assessment at all levels, but that even when it does take longer, it can be more valuable. Further, the Sounds Good Project found that audio feedback could be more time efficient on staff under certain conditions, namely: that they were comfortable with the technology, that they speak more quickly than they write, that a substantial amount of feedback is provided and that there is a quick and easy method of delivering the audio file (Rotheram, 2009b).

### ***Student perceptions of audio feedback***

In their study on students’ attitudes to the use of audio feedback Merry and Orsmond (2008) demonstrate the benefits to students as including their perception that it is of greater quality and that this allowed them to implement the feedback more effectively. Further, the evidence was that they actively participated in the process by seeking understanding on some aspects of the feedback and many of them re-accessed their feedback on more than one occasion. Many of the students in this study liked the facility to pause, rewind and listen again and they indicated that they would be likely to refer to the feedback again in preparing for future assessments. Ultimately this research found that “students perceive and implement audio file feedback in different and more meaningful ways than written feedback” (2008). Further audio feedback is also recognised as being more personalised (Ice et al., 2007; Rotheram, 2007; Merry and Orsmond, 2008; Nortcliffe and Middleton, 2008; Dixon, 2009) as the expression, nuance, tone and personal input add layers of meaning for the listener.

The benefits of audio feedback are also identified by JISC (2010) as including more personalised communication, the opportunity to present tone of voice, being motivational, giving specific and directed advice on how to improve, ensuring students take on board all the feedback, not just selected parts and as a useful alternative to, at times, illegible handwriting. Further evidence of best practice is presented by King et al. who conclude that audio feedback allows for more detailed feedback and it can be “richer, more authentic.... which may contribute to better understanding” (2008: 158).

The evidence therefore suggests that audio feedback can provide richer, more personalised, detailed and constructive feedback for students, but that there may be issues in relation to time efficiencies for staff. In light of that evidence this project seeks to expand on and add to the existing literature and provide evidence of where and how audio feedback can be useful for more constructive feedback in practice and in doing so highlight any problems in relation to its implementation.

### **Methodology**

The methodological approach taken for this research was action research, incorporating reflective practice. The nature of this research was to identify a potentially more effective mechanism for student feedback that would evidence best practice and thus transform practice in light of the findings, and hence its fit with action research which “is fundamentally about the transformation of practice” (McIntosh, 2010, 35). This research is also consistent with reflective practice, in that it “begins with a perceived problem” (McKernan, 2008, 216) and that from there we “take action to redeem knowledge....through personal enquiry” (ibid). Further, the nature of action research is such that it is essentially reflective in that it “is an empirical approach to the importance of data in reflectively improving practice” (McIntosh, 2010, 34). Indeed McIntosh goes on to identify the overlapping qualities of both action research and effective reflection, in that they “can coexist alongside each other and simultaneously be embedded within each other” (2010, 52).

### **Project Design**

The project design is the use of two case studies of audio

feedback in practice across a level 5 (L5) and level 6 (L6) module, representing 113 and 34 students respectively. This research lent itself to case study design in that each cohort of Hospitality and Tourism Management students naturally represented a case study which could involve “empirical investigation of a particular contemporary phenomenon within its real life context” (Robson, 2002, 178) and indeed a case study approach is common in action research design (McNiff and Whithead, 2010). In each module the students were required to submit an individual essay and Wimba audio feedback was provided via the grade centre in Blackboard Learn+. The University of Ulster generic assessment criteria grid for qualitative work at L5 and L6 were applied in the marking of the work (University of Ulster Assessment Handbook, September, 2012). The project was conducted in the Department of Hospitality and Tourism Management, Ulster Business School, University of Ulster, semester two, academic year 2011-12.

Staff recorded the feedback using their PCs and recording headsets and upon completion of recording, the audio file was made available in the students’ personal grade centre along with their grade. Upon receipt of the file the students were asked to email the lecturer to confirm that they had received the file and listened to the feedback and they were then emailed their individual assessment criteria grid indicating where they achieved their marks. The annotated copy of the essay and the assessment grid were then made available in hard copy at the next available lecture, regardless of whether the students had accessed their audio feedback or not.

In relation to students’ perceptions of the use of the audio feedback, data was gathered via a survey questionnaire. Out of 147 students who received the feedback, a total of 39 questionnaires were returned representing a 27% response rate. The questionnaire incorporated 8 closed questions, 11 closed/open questions and one open question enabling both quantitative and qualitative data to be gathered and analysed. This approach was necessary to gather data on the numbers of students accessing and re-accessing their feedback and the detail on their thoughts and perceptions of it. The questionnaire design centred around the key issues that are highlighted in the literature in relation to the benefits and

drawbacks of such feedback mechanisms including accessing and re-accessing, preferences for receiving feedback, the benefits and limitations of such feedback, technical issues and referring back to the feedback.

### ***Ethics and Pedagogic Research Design***

The nature of the teacher-student relationship and the ethics of conducting research in this context has to be considered given the “dual role as educator (and researcher)” (Ferguson et al, 2004, 1) and the issue of “double agency when faculty involve students as participants in their research” (ibid). Such ethical considerations include voluntary consent, confidentiality of data and identity, anonymity and conflict of interest (McNiff and Whitehead, 2010 and Ferguson et al., 2004). Ferguson et al (2004) note that while there may be a need to advance knowledge of the pedagogy, it creates an inherent tension between those goals of the researcher and those of the teacher, and these tensions and issues must be addressed in research design.

The researchers considered the relevant issues to be participant voluntary consent, confidentiality of data and identity, anonymity and conflict of interest and strategies to address these issues were built into the research design. In terms of voluntary and informed consent the participants were not forced to participate, while they were required to engage with the grade centre in Blackboard Learn+ to access their qualitative feedback, the use of technology facilitated learning is accelerating in all aspects of student learning and this was viewed as an extension of that. They were not required to access their feedback to get their matrix or their grade and, in addition, annotated hard copies of their work were also made available to them in class time, so whether they accessed the audio feedback was an entirely voluntary decision. In turn their participation in completing the survey was also voluntary, they were not incentivised or induced to participate with any of these aspects.

The benefits of the study, why the researchers were using audio feedback and why they wanted the students to participate in the survey were all explained to the students in advance and all responses were confidential with no way of identifying individual

participant responses. In addition, the participants were assured of confidentiality of data in that the data was used entirely for the purposes of the research and would not be made available to others outside this context as recommended by Ferguson et al. (2004) and McNiff and Whitehead (2010).

Ultimately the researchers viewed “the need for scientific evidence to support disciplinary pedagogy....with the ultimate goal of improving the learning situation for students” (Ferguson et al., 2004, 3) as a worthy goal in the context of the “double agency” relationship (ibid: 1).

### ***Study limitations***

The researchers believe that this research methodology was effective and robust insofar as it met the overarching research aims, however, they recognise a few study limitations that will be considered in designing similar projects in the future, indeed the researchers currently have a subsequent study under way that has been designed in light of these limitations.

The researchers recognise that the study has relatively limited breadth, in terms of both sample size and range of assessments, thus any subsequent studies will aim to have a larger sample size to provide more breadth across a wider variety of assessment types. On reflection the researchers believe that a more formal mechanism to capture lecturers’ perceptions would have been more advantageous, so any future study would incorporate a staff reflective record so that staff can more formally record and reflect on their experiences of using the audio feedback facility. Norton (2009) advises that written reflective journals are common aspects of action research and Goodnough (2003, as cited in Norton, 2009) suggests that recording your reflections in a journal assists in making your thinking explicit. Further this technique has been used effectively by Merry and Orsmond (2007) in their study on students’ attitudes to the use of audio feedback.

Finally, the researchers recognise inherent weaknesses in survey design in terms of providing study depth and thus, future studies will incorporate mechanisms to capture depth of perception from both



staff and students, such as focus groups and the aforementioned reflective records.

## **Results and Discussions**

### ***Access and Convenience***

95% of the respondents accessed their feedback, representing 100% of the L6 students and 90% of the L5 students. This is certainly a high proportion of students accessing feedback and notably all of the L6 students accessed their feedback. In terms of how they accessed it, 17% of students accessed their feedback on a mobile device, while this is a relatively small percentage, it does highlight the potential convenience for students in accessing such feedback. Many students commented specifically on the ease and convenience of accessing their feedback:

*“Feedback was easy to access”*

*“The feedback is good as you can access it from home”*

Although this does not tell us much about how they used their feedback or their perceptions of the quality of the feedback it does indicate that it may be an effective mechanism for making feedback conveniently accessible to students. With an ever increased move towards the embedding of all aspects of student learning via VLEs and their own competencies and expectations as the ‘digital native’ generation, ease of access and convenience are important factors in making feedback available to students. This can potentially counter the problem of making it available in class time, in office hours or in Departmental offices when some of it may go uncollected.

### ***Feedback preferences***

Students were asked what their preferred mechanism for feedback was where they could select more than one response and 62% selected a combination of feedback types. This represented 72% of students at L6 and 52% of L5 students. Numerous variations were selected as to what this combination might be, including audio along with face-to-face feedback, audio and lecturer’s comments on written work, audio and a completed assessment criteria grid. Notably it was the L6 students who were concerned with receiving



feedback in more than one format. This indicates that they want the detail on where they did well or not so well in their assignments as well as the breakdown of where they achieved their marks and opportunities to explore such with face-to-face contact.

Students were also asked about their preferences to receive audio feedback in other types of assessment and other modules, with 77% of the students confirming that they would like to see more audio feedback in their courses/other modules. In terms of where they would like to see it they were asked about specific types of assessment, where they could select more than one option, the results indicated that students would like to see audio feedback in essays (69%) and in reports (67%). These forms of assessment typically provide summative feedback as written qualitative comments accompanied by an assessment grid and a grade/mark, indicating that students would prefer the audio feedback mechanism in place of those written comments. Interestingly 44% of the L6 students would like to see it incorporated into feedback for their final year research paper/business plan, whereas only 29% of L5 students selected this option. The L6 students at the time of the study were completing their final year research papers/business plans so this issue was of immediate relevancy to them, and they could perhaps see where it might be most constructive in relation to that. In addition this type of feedback throughout the semester is formative in nature, indicating that students would value this type of feedback for formative as well as summative assessment.

### ***Feedback for feed-forward***

Students were asked if they would be likely to refer back to the feedback they received when they were preparing other assignments and if this mechanism allowed them to see where they did well and areas that they might improve upon. 77% of students confirmed that they would refer back to the feedback provided here in the preparation of coursework in other modules, with 87% of them selecting yes this feedback mechanism allowed them to see where they did well and 95% of them indicating that it showed them where they could have improved performance in this coursework.

As practitioners we felt the most significant finding here was that

students commented on the opportunity the feedback gave them to re-access it, listen to it again, and take on board the comments and importantly its usefulness in preparing for future assessments. Specifically many of the students identified this feedback mechanism as providing the opportunity to reflect for future submissions, thereby enhancing feedback, facilitating 'feed-forward' and closing the feedback 'loop'. Many of them commented on the fact that they could re-access it and that it was always there, unlike written work which typically they do not have re-access to unless they specifically request such, which they felt facilitated reflection:

*"I found it extremely beneficial in terms of how I could improve"*

*"found this very useful for my research paper"*

*"The feedback allows you to revisit time and time again so you can improve in other assignments"*

*"I feel this type of feedback is modern, convenient and extremely useful. I've had one experience with the audio feedback and found it the most informative piece of feedback I have received whilst studying at UU. I hope this type of feedback is adopted for future students. Thank you!"*

*"I think this type of feedback is very good. You can save it and listen to it later for future reference when doing another assignment"*

*"Very good - can have it to look back on and have it for future reference/where you can improve"*

*"It is a great way of obtaining feedback and you can listen to it when you need help with other essays/exam preparation. Would recommend it for other modules"*

The use of audio feedback to facilitate "feed-forward" learning has been one of the key outcomes of much of the existing work in this area, including that of Nortcliffe and Middleton (2007), Merry and Orsmond (2008), Ekinsmyth (2010) and Rodway Dyer et al. (2011). This again underlines its use as an effective method for facilitating

feed-forward and certainly given the context of the NSS such learning may well be a factor in improving the student experience in relation to feedback.

When asked if they had accessed their feedback more than once only 10% of L5 students confirmed that they had re-accessed their feedback in comparison with 33% of the L6 students, this may well be reflective of how L6 students engage with feedback. Of those who did re-access they gave the following as some of the reasons they did so:

*“To take notes for future reference”*

*“To be able to go back and listen to the comments again”*

*“I wanted to hear it again and ensure I did not make similar mistakes in other essays”*

It is clear from the responses that students re-accessed their feedback to provide further clarity and to identify any aspects that they could consider for future assessment submissions. This factor is clearly linked to the constructive nature of the feedback already discussed, but it further highlights the fact that students were motivated to re-access their feedback, in particular the L6 students, either to further clarify points of detail, but importantly so they can improve on aspects of their performance in future assignment submissions:

*“Very useful as students can listen to again with own work to record comments etc.”*

*“Overall I felt that the audio feedback was very useful as I am able to go back and listen to my feedback when I need or want to”*

*“The feedback allows you to revisit time and time again so you can improve in other assignments”*

*“Easily accessible and accessible more than once/use for referral to next piece of work to strengthen areas of concern”*

Related factors included the fact that students felt it provided more detail of feedback on specific areas: *“...useful because as well as giving the mark you are able to listen to specific areas on where you did well or not”* and *“I’m pretty satisfied by the type of feedback as I was able to hear the lecturer in what areas I did well in and areas I needed improvement”*. Again further evidencing its use as mechanism to facilitate feed-forward learning. Further comments included those in relation to having more time to absorb the feedback because they were able to access it remotely in their own time, taking it “out” of the classroom environment and allowing them to access and re-access it at a time and place of their own convenience. Further comments included those in relation to more detailed feedback provided, the ability to convey meaning and the personalised nature of the audio feedback mechanism. This further underlines the findings of JISC (2010) who identify the benefits as being more personalised, ability to present tone of voice, being motivational and as allowing the ability to give specific and directed advice.

In addition some students commented on the fact that receiving audio feedback negates the difficulty of having to decipher handwriting that may be difficult to read: *“I believe it is good overall as some students do not understand the lecturers’ writing which benefits students through this feedback”* and *“easy to understand rather than handwriting”*. This reflects also the findings of Ekinsmyth (2010) and JISC (2010) and while, of course other alternative electronic feedback mechanisms may well address this aspect, such feedback is not coupled with the additional benefits of audio feedback identified in this study. This may seem like an unimportant aspect, but in fact if the NSS results indicate dissatisfaction with elements of assessment and feedback the ability for students to read it has clear relevance to, and bearing on, their feedback experiences.

### **Technical Issues**

Students were asked if they experienced any technical problems in accessing their feedback with 36% of students confirming that they had experienced technical difficulties when they first tried to access their feedback. They were asked specifically what the difficulties

were and in the main they were related to three factors, namely: the need to update Java; browsers that do not support the Wimba voice authoring Java plug-in and; broadband speed:

*“Easily accessible but difficult to work on some browsers”  
“Needed to update Java script”*

*“Didn’t have the most up to date version of Java”*

*“It was very slow to download when accessing”*

*“Found that it did not open in certain web browsers”*

Once these issues were identified and worked through with the lecturers involved, in conjunction with support from Technology Facilitated Learning, any technical issues were relatively easily resolved. But importantly it highlights potential issues in relation to introducing feedback via any technological method and similarly the need to anticipate such in advance of students receiving feedback.

### **Staff Reflections**

These reflections were based on informal discussions between the staff involved, after the feedback was provided. In terms of time efficiencies in this study the researchers did not particularly find any huge time savings, however we did feel that we were able to provide better quality, more detailed feedback in the same time or marginally less than we would have given written feedback, so ultimately a net gain. This benefit is also something that has been found in previous studies (Rotherham, 2009b; Trimmingham and Simmons, see website listed at end).

As an exercise in confirmation of this reflection the researchers transcribed an average audio file of 2.5 minutes and compared it with written feedback that had been provided to the previous year’s cohort for the same essay. The audio feedback provided 376 words of feedback in comparison with 129 written words the previous year. While this tells us nothing about the qualitative aspects of the feedback it does indicate that this mechanism allows for providing almost three times as much feedback in terms of detail. This may

well be one of the reasons why the students liked it and commented on its effectiveness in facilitating feed-forward learning.

Horan identified time inefficiencies in uploading individual audio clips to the VLE, which is something that the Wimba voice authoring tool negates, because it is integrated into Blackboard Learn+, thus creating efficiencies for staff and convenience for students. Similarly Rotherham (2009b) found that audio feedback could prove to be more time efficient if there was a quick and easy method of delivering the audio file, which Wimba voice authoring in Blackboard Learn+ facilitates.

In relation to the technical problems experienced by students, the researchers have devised a short briefing on what audio feedback is, why we use it and how to access it. This includes instructions on accessing it, resolving technical difficulties in advance and hints and tips for making the most of their feedback. The researchers feel confident that this will greatly reduce any technical difficulties experienced by students in accessing their audio feedback, ensuring they gain the maximum benefits that audio feedback can bring.

### **Conclusions, practical recommendations and further directions**

Ultimately this study found that on the whole students favoured audio feedback over written feedback because they valued its benefits including the ease of access and convenience, the level of detail of feedback, the ability to re-access and listen again and its ability to facilitate feed-forward learning. It also highlights that students would like to see further use of audio feedback in other aspects of their courses and that they would also like to see it used alongside some of the other traditional methods of feedback such as completed assessment grids and hard copies of their work annotated with lecturers' comments. It also highlighted some technical issues in relation to its implementation that help provide useful practical recommendations for other practitioners. These practical recommendations may ensure the smooth implementation of audio feedback into modules and are as follows:

Recommendations for students:

1. Provide details of expectations of audio feedback in module handbook;

2. Brief the students in advance as to why audio feedback is being used and how to access their feedback and counter potential technical difficulties;
3. Provide an opportunity for students to access any marked annotated work in addition to the audio feedback that might also be useful for them and an opportunity for them to discuss any aspects of the audio feedback with the lecturer.

#### Recommendations for Staff:

1. Attend/set up training in the use of the Wimba voice authoring tool in Blackboard Learn+;
2. Try out audio feedback initially with small cohorts, until such times as the practitioner becomes familiar with the technology and is aware of any time inefficiencies that they feel it might create;
4. Keep a reflective record of the experiences of using audio feedback, so that in keeping with the concept of reflective practice, subsequent activities can be redesigned based on those reflections;
5. Set up a “test” student account in Blackboard Learn+, where you might practice the audio, grading and uploading any attachments, this way, practitioners will be able to see exactly what students see when they access their feedback, which again may help eliminate any potential technical problems.

Although this project involved only a relatively small sample it has now been used as the basis for a more extensive project in the current academic year that involves 6 undergraduate modules at all levels, across five courses and two campuses, for both formative and summative assessment feedback. Further Wimba voice authoring/email training has now taken place in the Department of Hospitality and Tourism Management to support the extension of this project and wider dissemination of audio feedback as best practice is already planned based on projected findings. Such dissemination will focus on the key benefits of using audio feedback for students, as well as making practical recommendations as to how it might be incorporated into effective feedback practice.

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## **Peer review: putting feedback processes in students' hands**

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### **The power of teacher feedback**

While much has been written about the power of teacher feedback as a means of enhancing learning, evidence of its effectiveness as currently practised in higher education is not always convincing at least in terms of students' responses to national surveys. The UK National Student Survey [NSS], for example, shows that students are less satisfied with the quality of teacher feedback than with any other aspect of their course (Higher Education Funding Council for England, 2011). Each year across all disciplines, and across most HE institutions, students report dissatisfaction with the timeliness of teacher feedback, about its level of detail and about its failure to clarify things they did not understand. As a result, institutions have responded by putting in place interventions to address these issues such as faster turnaround times for assignments, feedback calendars to clarify the timing of feedback, electronic feedback to automate delivery, audio feedback to enhance personalisation, more attention to providing corrective advice to scaffold learning improvements and structured feedback rubrics to enable students to better gauge their progress towards learning outcomes.

Although the NSS has usefully highlighted feedback as an important aspect of learning, the interventions being put in place as a result of these surveys are not without their problems. Firstly, such interventions usually require significant increases in staff workload, which is problematic given current resource reductions. Secondly, they do not always result in enhanced learning or higher student satisfaction as many research studies show (Crisp, 2007; Bailey and Garner, 2010; Wingate, 2010). Indeed, university lecturers are still finding that students, even those who are vocal in requesting more and better quality feedback, still do not pick up their corrected assignments or appear to act on the teacher comments. Also, for some students feedback is never enough or of the right type. Thirdly,

to many researchers, increasing opportunities to 'tell' students what is right and wrong and what can be improved in their assignments will not on its own enhance learning and develop disciplinary expertise (Sadler, 2010; Boud, 2000). Nicol (2010a) for example argues that feedback must be conceptualised as a dialogue not a one-way transmission process. If students are to learn from feedback they must also have opportunities to construct their own meaning from the transmitted information: they must do something with it, analyse the message, ask questions about it, discuss it with others and connect it with prior knowledge. Hence interventions to improve feedback must go beyond merely enhancing teacher delivery and must address the way that students interact with and use feedback.

Finally, it is arguable that educational initiatives that focus only on enhancing the quality of teacher feedback are far too narrow in scope if we wish to develop the students' ability to make their own judgements about the quality of work. To achieve this, students need direct practice in assessing work and in generating feedback themselves (Cowan, 2010; Nicol and Macfarlane-Dick, 2006). This is the position taken in this paper and it is one that is gaining increasing support as evidenced through the recent writings of two international groups of educational researchers (Boud and Associates, 2010; Osney Grange Group, 2009).

### **The case for peer review**

One way of engaging students actively with feedback processes that is beginning to receive more attention in higher education is to implement peer review (Liu and Carless, 2006; Cartney, 2010; Nicol, Thomson and Breslin, 2013). Peer review is an arrangement whereby students evaluate and give feedback on the work of peers and, in turn, receive feedback from peers on their own work. Peer review can help address some of the issues raised by students in national surveys. It can add significantly to the amount and variety of feedback students receive, without a corresponding increase in teacher workload. As well as increasing feedback quantity, peer review can also address the timeliness issue. For example, in peer review students normally comment on drafts of work produced by their peers; they therefore usually receive feedback in a timely

manner, while it still matters and with the opportunity to act on it before the assignment is completed. It has also been shown that feedback from peers is often more helpful than that provided by teachers because peers are able to provide commentaries on work at a level, and in a discourse, that is more understandable than that of the teacher (Topping, 1998; Falchikov, 2005). The receipt of feedback from multiple sources (peers) rather than a single source (the teacher) also mimics more closely the reality of life beyond university. In employment settings, professionals rarely receive feedback from a single source; rather the common scenario is that they must interpret feedback coming from a variety of perspectives, sometimes complementary and sometimes contradictory, and then decide which feedback to respond to.

While there are unquestionably benefits in the feedback that students receive from peers, over and above that which they receive from teachers, the foregoing analysis still locates feedback within a 'telling' or 'delivery' paradigm. However, peer review is not just about supplementing teacher feedback with extra feedback from peers: it is also about students constructing feedback themselves. From this perspective, peer review is an important alternative to teacher feedback, as it provides a platform to develop students own evaluative skills, skills which are highly valued in professional practice but that are not usually given sufficient (or explicit) attention in higher education curricula. Indeed, in workplace settings, professionals are not just 'consumers' of feedback, they are also active 'producers'.

### **Students as constructors of feedback reviews**

The research on peer review has primarily investigated the learning benefits that result from students' receipt of feedback reviews. Very few studies have explored the learning benefits afforded when students produce feedback reviews, although there are some recent exceptions (e.g. Cho and MacArthur, 2011; Cho and Cho, 2011; Nicol, Thomson and Breslin, 2013). The following provides a brief summary of some of the most important findings from some recent studies.

### ***Learning through reviewing and constructing feedback***

The unique feature of peer review that distinguishes it from other feedback scenarios is that students are required to make evaluative judgements and construct a feedback commentary. From this angle, reviewing is a high-level activity that is cognitively very demanding. Think of the mental effort required to review and comment on a journal article in one's own discipline. While students can avoid paying attention to the feedback they receive, even if it is provided by peers, they cannot easily avoid engagement if they are required to produce commentaries on the work of others. Research on peer review provides some support for this assertion.

Nicol, Thomson and Breslin (2013), in a study of peer review in engineering, have shown that students' perceive feedback construction as involving qualitatively different cognitive process from reading feedback provided by others. Students reported that reviewing involved them in thinking critically, in making evaluative judgements and in justifying these judgements through feedback explanations whereas the same students reported that receiving reviews alerted them to deficiencies or gaps in their work and to how different readers might interpret their writings. Also, in discussing reviewing, students talked about the skills they were acquiring (e.g. ability to apply criteria) whereas when they discussed receiving reviews they mostly talked about subject content. In another controlled study of peer review, Cho and Cho (2011) found that students gained more from giving feedback comments than from receiving them in terms of the improvements they subsequently made to their own assignments. One interpretation of the Cho and Cho results is that asking students to produce feedback explanations promotes further knowledge building in the topic domain as students must rehearse and reconstruct their own understanding in order to produce these commentaries. This active 'knowledge building' process is not necessarily activated when students merely receive reviews (see, Nicol, 2013 for an extended discussion of feedback processes in relation to knowledge building).

### ***Engagement with criteria and standards***

A second feature of reviewing is that it requires that students actively engage with assessment criteria and standards. They must exercise

criteria from multiple perspectives as they review and comment on examples of the same work written by different peers. Hence criteria and standards are more likely to become internalised in a way not possible through the receipt of feedback reviews. Research shows that the main reason for the under-performance of students in assessment tasks is that they do not know what is expected of them (e.g. Rust, O'Donovan and Price, 2003). Feedback construction, with its focus on criteria and standards helps address this issue in a powerful and compelling way. Indeed, Nicol, Thomson and Breslin (2013) found, in their study that, through reviewing, students not only learned to apply the criteria provided by the teacher to frame their feedback commentaries but that they also created their own criteria as they compared the peer assignments they were reviewing with the work they had produced themselves. This led these researchers to conclude that, in terms of criteria, reviewing affords double-duty as 'students generate richer criteria than those provided by the teacher but sounder criteria than those they might be able to formulate on their own'.

### ***Reflection and learning transfer***

Many of the learning benefits from producing reviews derive from the fact that students have usually beforehand written an assignment in the same topic domain as those to be reviewed (Nicol, Thomson and Breslin, 2013). When the topic domain is the same (or overlapping), evidence shows that students invariably use their own work as the main reference point against which to compare and evaluate the work of peers. In turn, this comparative process acts as a catalyst for reflection and learning transfer: students reflect back and think about their own work in relation to that of their peers and they actively transfer ideas generated through this comparative process to inform their thinking about their own work. For example, students report seeing things in the peer's assignment – different approaches to the task, alternative arguments, perspectives or solution strategies or errors or gaps – that they can use to enhance their own work (Nicol, Thomson and Breslin, 2013). From this perspective, reviewing the work of peers is quite different from reviewing an academic paper, as the latter would not elicit the same kind of backward reflection. A further, and related, benefit of reviewing is that students see a range of approaches to the same assignment (written by peers) which can



help them become more aware that quality is not a fixed attribute but that it can be produced in different ways.

### ***Disciplinary expertise***

Giving students regular experience in making evaluative judgements and writing feedback commentaries also develops disciplinary expertise. In critically analysing and evaluating the outputs of others, students are put into the same decision space as experts (Salder, 2010); and in writing feedback commentaries they not only acquire explicit understanding but they also acquire the tacit knowledge that experts use when tackling a task. Taking a similar perspective, Cho and MacArthur (2011) suggest that reviewing is a way of developing students' problem solving skills in the discipline, as it involves them in detecting and diagnosing problems in the work of peers and in recommending solutions.

### ***Learning communities and responsibility***

Reviewing also requires a movement away from learning, and indeed assessment, as a private activity. Engaging students in reviewing and giving feedback to each other in a safe and trusting environment can help develop social cohesion and foster learning communities (Carless, 2013). Indeed both giving and receiving reviews encourages students to take more responsibility for learning, their own learning and that of others.

### ***Self-assessment skills and professional life***

Finally, when students are given regular practice in evaluating the work of peers, they also develop the capacity to review and assess their own work – as exactly the same skills are involved. Being able to make qualitative judgements and to provide a feedback rationale for those judgements is not only a core skill in professional settings, it also underpins the development of most, if not all, graduate attributes (Nicol, 2010b). It is surprising, therefore, that the ability to review and to comment on the work of others is rarely stated explicitly as a learning outcome in course and programme documentation.

### ***Issues in implementing peer review***

New lecturers often raise issues about how to implement peer

feedback. Some are concerned that students do not have the knowledge or skill to comment on other students' work. Others argue that students can be too critical and harsh in their comments. Still others lament that peer review might compromise the academic integrity of individually produced work: that is students will be able to plagiarise from others. All these concerns can be addressed through well-designed peer review tasks.

Ideally, peer review should begin in the first year with some simple review tasks with complexity and depth being enhanced in later years. Peer review need not be about asking students to 'criticize' each other's work: the task might be as simple as suggesting something that might improve an assignment or the highlighting of an issue or perspective not dealt with in the work. One can address academic integrity and circumvent plagiarism by having students review assignments produced by peers and then comment on their own assignment, but without having the opportunity to rewrite. Teachers can then see how other's ideas have been 'interpreted'. A specific question concerns the administrative workload involved in peer review. Many software systems can ease this burden. Further suggestions on task design and software can be found in the literature (see Pearce, Mulder and Baik, 2009) and at <http://www.reap.ac.uk/PEERToolkit.aspx>

In the context of this paper, peer review refers to scenarios where students construct a feedback response in relation to the work of other students. This would usually be a written response based on an evaluative judgement of the work against some criteria. Sometimes students would be given the criteria and at other times they may be responsible for formulating them. The latter would have more fidelity in relation to how work is evaluated in the professions. In that context, peer feedback will generally be more productive for future learning if the peer task is authentic and calls on knowledge and skills relevant to the discipline and when it simulates the kinds of peer processes that occur in professional practice.

There are numerous ways of implementing peer feedback that can be easily integrated into current teaching practices. Below are two brief examples, one easy to implement and one involving the use of

peer review software. More examples can be found at <http://www.reap.ac.uk/PEERToolkit/Examples.aspx>

### **Examples of implementation**

Gibbs ([www.testa.ac.uk/resources/videos](http://www.testa.ac.uk/resources/videos)) describes a scenario where a lecturer who was concerned about the poor quality of students' lab reports in science redesigned the task by asking students in groups to produce their lab report as a poster. All the posters were pinned to the walls in the lab class and the lecturer asked students to walk round, look at the posters and scribble feedback comments on them. This led to significant learning gains in lab reporting and in the exams. This study emphasises a number of factors. Students learned week-by-week from evaluating and constructing a feedback responses to each others' posters, it was a regular activity so they had opportunities to use their learning in subsequent reporting, it was a required classroom task so there was a high level of engagement, it was public so it enhanced students' motivation - it encouraged positive competitiveness across groups who didn't want their work to look stupid in public – and it created a positive social climate for classroom learning.

Nicol, Thomson and Breslin (2013) describe peer review processes in an Engineering Design class with 82 students where peer feedback was implemented using PeerMark Software part of the Turnitin suite. This software manages the anonymous distribution of assignments and feedback comments. Students produced a draft assignment (a design specification for a product) and then reviewed the assignments of two peers before reviewing their own assignment. The lecturer provided a rubric (criteria) for the review; for example, students were asked to comment on the convincingness of the design rationale. They were also asked to identify a worthwhile improvement that could be made to the design specification and to provide a reason for this. Marks were awarded for participating in the reviewing activities but not for the quality of the reviews.

In the evaluation, which involved a survey and focus group interviews, the students were positive about their experiences of engaging in peer review. They reported that reviewing the work

of peers resulted not only in their generating feedback for others but also, through a reflective process, in their constructing inner feedback about their own work. They maintained that if they were given more opportunities to engage in reviewing they might need less teacher feedback, as this would help them identify deficiencies and needed improvements in their work by themselves. They also noted that providing feedback reviews for others made them more critical, detached, analytical and logical when they came to review their own assignment. As mentioned earlier, these students also believed that producing reviews and receiving reviews afforded different learning benefits. Producing reviews was seen as an active process that involved making critical judgements, applying criteria and reflection and learning transfer whereas receiving reviews was seen primarily as a way of getting different reader perspectives and of helping them to identify gaps, inconsistencies or weaknesses in their assignments. Importantly, however, both activities - producing and receiving reviews – were regarded by these students as beneficial to their learning.

### **Peer assessment and peer review**

In examining the current literature on peer review, it is clear that its learning potential has not been fully realised. One reason for this is that most published implementations of peer review focus on scenarios in which students award each other grades, rather than on scenarios where students are required to make evaluative judgements and to rationalise those judgements through a feedback commentary. This literature is, in fact, dominated by studies of peer-tutor grade correlations, often with the sole purpose being to show that peers can act as surrogate assessors for teachers.

Peer review, however, need not involve students marking or grading each other's work and to gain maximum learning benefit it is better not to use peers as surrogate markers. Indeed, many studies show that this is the main reason why peer review is difficult to implement successfully. Some notional peer marking might accompany feedback reviews but it is better if these marks do not count in the final grading. On the other hand it can be helpful if teachers mark the quality of the reviews provided by peers, as this will encourage engagement by students and will help them learn to compare and to

calibrate their own judgements against those of an expert. Further advice on implementing peer review can be found at <http://www.reap.ac.uk/PEERToolkit.aspx>

## **Conclusion**

In conclusion, while there has been some interest in peer review in recent years this has been primarily focused on the students' ability to grade the work of others or on enhancing the variety of feedback students receive from others. What has not been fully researched is the untapped potential of peer review as a process whereby students develop critical judgment by reviewing and commenting on the work of fellow students. Moreover, this capability to make evaluative judgements and to construct feedback is a fundamental requirement in professional settings and for continuing learning beyond university. This suggests that peer review should receive much greater attention in higher education curricula.

## **Resource**

The PEER Toolkit project (2012-13) was funded by the UK Joint Information Systems Committee (JISC) to develop a set of resources to support teachers and others wishing to implement student peer review. The website pages can be found at <http://www.reap.ac.uk/PEERToolkit.aspx>

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