# ASSESSMENT FEEDBACK TO ENHANCE STUDENT DEVELOPMENT AS EFFECTIVE CONSTRUCTION INDUSTRY PRACTITIONERS

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Assessment feedback has been identified as playing a key role in enhancing student learning and academic success, and effective feedback can also promote self-regulating learners which in turn translates to more effective practitioners. There is a considerable amount of literature concerning assessment feedback, however most of the research is generic and does not focus on the needs of particular academic disciplines, nor of relevant professional practice. For built environment students, assessment feedback can strengthen links between academic learning and professional practice, supporting the development of effective construction industry practitioners. To evaluate assessment feedback within this context, a study focusing on links between assessment feedback and professional practice is being undertaken. Early findings are presented here, based on content analysis of assessment feedback on submitted assignments. Data was analysed using a numeric approach, recording frequency of key words. Findings suggest there is scope to enhance practice via the use of revised documents and thus enhance the student learning experience as well as promoting deep learning and development of reflective practitioners. This preliminary study indicates the need to re-consider wording of key documents provided to students.

Keywords: assessment, feedback, professional practice.

## INTRODUCTION

Assessment feedback to students has been recognised as a valuable device to enhance student learning (Sadler 1998; Prosser and Trigwell 1999; Hyatt 2005; Hattie and Timperley 2007; Giles, Gilbert and McNeill 2014). For built environment students, assessment feedback can also strengthen links between academic learning and professional practice, supporting the development of effective construction industry practitioners. To evaluate assessment feedback within this context, a doctoral study focusing on links between assessment feedback and professional practice is being undertaken. The study is concerned with assessment feedback as a key device to enhance links between academic learning and professional practice, and which turn contribute to students' professional development as effective industry practitioners. If used in this way, feedback has potential to enhance learning by closing the loop of course design, assessment, student performance and professional practice. It also may be perceived as enhancing the value of feedback for students on professionally recognised courses.

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The number of undergraduate students in higher education in the UK has expanded considerably over recent years. One important rationale for and benefit of this expansion is economic growth (De Meulemeester and Rochat 1995), as it is recognised that skills developed in higher education are important contributors to a healthy economy (Leitch 2006; Smith *et al*. 2012). However, the UK higher education system has evolved from being elite to a mass system, one of low-cost high-quality provision (Salmi 2011). The challenge now for Higher Education Institutions (HEIs) is to provide a high-quality teaching and learning environment, and for professionally recognised courses such as construction management to develop students as effective industry practitioners.

Undergraduate courses have Learning Outcomes that identify knowledge and skills it is intended that students develop, and assessment is designed around Learning Outcomes. Early findings of this study indicate assessment feedback may be a weak link in the assessment process. Biggs (1996) coined the term 'constructive alignment' whereby learning activities and assessment align with Learning Outcomes: this paper proposes that assessment feedback should be considered integral to constructive alignment. Such feedback would represent an important opportunity to enhance students' development as effective practitioners, providing direction and guidance. At this time of national economic stringency and debate surrounding the cost and funding of higher education (Tatlow and Conlon 2013), efficiently providing a high quality teaching and learning environment that supports students' academic and professional development is more important than ever, and enhanced use of assessment feedback has the potential to add value to the student experience and support development of industry practitioners.

This paper is based on the preliminary work of a doctorate that is currently in progress. The main study intends to develop the data gathering and analysis, and include exploration of qualitative aspects of this topic.

## THEORETICAL PERSPECTIVES

### The nature and value of assessment feedback

Assessment is often considered *"a form of testing or evaluation"* (Sambell, McDowell and Montgomery 2013: 3) with feedback to encourage learning (Hernández 2012). In a construction management discipline assessment is frequently designed around professional practice, which may be regarded as an important part of the context the tutor creates (Proser and Trigwell 1999) and is important for learning. Although the student learns, the tutor plays a central role in creating and maintaining a suitable environment to promote learning; assessment and assessment feedback are central to this environment. Black and William (1998) found a positive impact of effective assessment, designed to facilitate learning.

Assessment feedback *"includes all feedback exchanges generated within assessment design, occurring within and beyond the immediate learning context, being overt or covert (actively and/or passively sought and/or received), and importantly, drawing from a range of sources"* (Evans 2013: 71). Feedback as an exchange suggests a two-way dialogue. It is important both parties share a common understanding of such dialogues, and how they may benefit the student. To be effective, assessment feedback should be read and acted upon by students, timely and help students improve their learning (Higher Education Academy 2013). Feedback should be integral to the learning process, regarded as being linked with improvement (Sambell, McDowell

and Montgomery 2013) and enhance the learning experience (Shute 2008). Positive feedback is that which helps learning (Askew and Lodge 2000). This paper suggests that feedback should also encourage students' development as effective practitioners.

*"Written feedback plays an important pedagogic role"* (Hyatt 2005: 351) and is *"part of the teaching process"* (Hattie and Timperley 2007: 82). Quality Assurance Agency (2012) identify assessment feedback as playing a fundamental part in promoting learning. In order to add value and aid student learning feedback needs to be of high quality (Sadler 1998). Eraut (2004: 803) develops this further asserting *"the most important factor in learning is usually the quality of the feedback on performance."* A learning environment where assessment feedback promotes learning is integral to the student learning experience.

The nature of feedback students receive is important in shaping its efficacy (Hattie and Timperley 2007). It is important to recognise that dialogue is central to valuable feedback, and should encourage the learner to take a qualitative approach to learning, which is encouraged by a *"student-focused approach to teaching"* (Prosser and Trigwell 1999: 68). Feedback is one means by which tutors can encourage learners to engage with actively learning for themselves. Cramp (2011) argues the benefit of first year personal tutorials to discuss and develop the use of individual feedback. This could potentially encourage students to link their learning experiences as they progress through their course and make good use of feedback, making connections between subjects and taking forward their feedback. This reflective activity would also provide an opportunity to explore professional practice issues. As Kolb (1984) acknowledges, reflective observation is an important part of student learning. Reflection is important both for the enhancement of student learning and also reflective practitioners, which in turn is essential for students' development as effective practitioners.

It is worth noting that feedback does not automatically lead to enhanced performance. This may be because the learner does not act on feedback they receive: possible reasons including lack of student application, lack of knowledge about the next steps required or not understanding the feedback. If the feedback is too remote from professional practice, students may feel that it is not relevant to their work. Alternatively, feedback indicating good performance can subsequently lead to reduced performance if the learner becomes complacent (Kluger and DeNisi 1998). To aid students to use feedback effectively, students need information to help them understand the value of feedback and how to use it well (Entwistle 2009).

Many students do not use their feedback and lack of knowledge as to how to do this is a key reason (Jonsson 2013), which suggests potentially the dialogue aspect of feedback may be under-used as a teaching device, and students may benefit from information and discussion regarding how to use feedback. It is important that tutors are assessment literate and understand *"how to gather dependable evidence of student achievement and use the assessment process and its results either to support or to certify student achievement depending on the context"* (Stiggins 2014: 67). But it is also important that tutors are able to assess and provide feedback to develop students academically and also address their professional practice.

**Factors impinging on student learning**

Assessment influences student learning behaviour (Boud and Falchikov 2007) and so assessment literacy of academic staff is of *"paramount"* importance (Ball *et al.* 2012: 17). Assessment literacy is concerned with achievement targets in the areas of i)

subject knowledge, ii) demonstration of thinking skills, iii) behaviour exhibited, and iv) products created, and assessment should direct students to a clear achievement target (Stiggins 1991). In a built environment discipline assessment often is around real-world professional practice scenarios, which is the focus of student learning.

Assessment feedback is one part of the learning process. Lublin (2003) argues that teaching has become facilitation and tutors facilitators. As such, the role of assessment feedback is increasingly important as part of this facilitation to aid student learning. Ball *et al*. (2012) recognise feedback contributes to student learning, and that students should be involved with the feedback process, for example by monitoring and reflecting on their own progress. However, feedback may be linked to assessment criteria or mark scheme rather than to the learning process (Hughes 2011). This reinforces the importance of constructive alignment for student learning and the value of assessment feedback as integral to this. Unfortunately mark schemes and professional practice are often little used in literature, for example see Quality Assurance Agency (2012).

In summary, the examination of the literature thus far has revealed that there appear to be key essential elements of model feedback on student assessment. These elements are required to aid student learning and help their future academic and professional development, and are shown below.

From the student:

- An element of self-assessment before and self-reflection after the assessment submission. This enables the student to take ownership of their performance.

From the tutor:

- Feedback on the student's performance compared to what is expected and linked with Learning Outcomes;
- Feedback on progress made in comparison to the mark scheme;
- Feedforward on what the student should work on and improve for their future learning; and
- Professional practice issues and how these link to the student's work.

If any of these elements in the model are missing, it is likely that the student may not be able to gain the maximum from the experience to enhance their learning.

## METHOD

The goal of this preliminary research was to explore assessment feedback provided to undergraduate students in a built environment discipline and feedback on students marked coursework was analysed. It was felt that *"unobtrusive measures"* (Gray 2014: 498) were valuable as it was important to maintain discretion and anonymity. Such data has the advantage of being independent of the researcher. In this preliminary study, feedback on mark-bearing assessed coursework was used.

The sample used was one of convenience, comprising n = 43 items of assessed coursework that had been submitted by n = 31 students. This had been marked and feedback provided on scripts and mark-sheets, but had not been collected from the returns office within the required timescale, and would otherwise have been destroyed. Students could not return collected courseworks to the returns office for

any reason. Coursework items ranged across all undergraduate levels of study. The reason for using these particular items of coursework was to avoid delaying return of work to students. A level of 'quality' within this sample was assured as the external examiners for all of the courses from which the sample assessments were gathered had acknowledged that 'good feedback' had been provided for students in terms of quality and quantity. External examiners raised no issues regarding quality of feedback provided and one examiner identified feedback provided as an example of good practice.

The sample was not random, in the sense that it was not taken from the complete number of all submitted coursework. However, there is no reason to believe that this form of sampling would have led to any serious bias - that is that the work left uncollected would have received feedback that differed significantly from that collected by other students. Nevertheless, the ability to generalise from these samples is limited as the sample size is small (Gray 2014).

In order to explore the feedback provided, content analysis (Tonkiss 2004) was undertaken of the sample assessments. Three areas of interest were explored: Learning Outcomes, marking schemes and professional practice. Explicit reference to the phraseology was required, to ensure there would be no ambiguity regarding the tutors intent in this respect and that students would have had the opportunity to recognise these aspects within the feedback.

The three elements - reference to Learning Outcomes, mark scheme and professional practice - were chosen as it was felt that these should each be central to undergraduate learning and assessment in professionally recognised built environment courses. Learning Outcomes are the bedrock of undergraduate courses, mapping intended learning. Assessment should be designed around this intended learning with mark schemes designed accordingly to develop appropriate skills or knowledge in students. Reference to Learning Outcomes or mark scheme were clearly either present or not, and there was no ambiguity here in the data gathered. However, reference in feedback to professional practice could have been more nuanced. The analysis searched for phrases such as *"in the workplace"* or *"in practice"* throughout the narrative. If a reference to professional practice was too opaque for the researcher to register then it is highly unlikely students would have appreciated it. Professional practice is at the heart of built environment courses, which are designed to accommodate demands of relevant professional practice activities and requirements of professional bodies. External examiners are alert to assessment briefs delivering this, and their annual reports suggest they are satisfied this is achieved. Teaching, learning outcomes and assessment should be constructively aligned (Biggs 1996). Including reference to professional practice in feedback has potential to alert students to the importance of this and shape the direction of their learning.

There are limitations of this study. First, content analysis is arguably limited in its approach and the depth of analysis that can be undertaken. Second, the sample used will have constrained the study, being limited in size and that it was not a truly random sampling technique. There is no analysis by subject or level, nor consideration of student or tutors perspectives, as it is intended to examine these later in the research, although it is recognised that there are many constraints and pressures for the actors involved. However, it is suggested that this approach does not lead to any significant bias and is suitable for the early stage of this research. The analysis is able to provide initial insights into the aspects of feedback considered in this paper,

and therefore begin to set out relevant directions and structure for the future research proposed in this area.

# FINDINGS AND DISCUSSION

The feedback provided encouragement and direction for students to consider their work, its strengths and failings which if remedied would enhance the work. Staff generally provided both annotated comments written on the text of students' work and also prose regarding the generalities of the work. This research was concerned with particular aspects of the feedback, not all of it.

## Reference to Learning Outcomes

First, the number of items of coursework where the feedback explicitly made reference to Learning Outcomes was counted. The number of items of marked work that included Learning Outcomes in the feedback was ten (23%). Of these, one item (2% of the total) made explicit reference to Learning Outcomes with a narrative regarding the coursework vis-à-vis Learning Outcomes. The remaining nine items (21% of the total) allocated a mark or grade against achievement of each Learning Outcome so that students could understand how they had fared in that area, but did not provide detailed feedback that could be used to improve achievement against the Learning Outcomes.

## Reference to the mark scheme

Second, the number of items of coursework where the feedback made explicit reference to the mark scheme was counted. Thirteen items (30%) made explicit reference to the mark scheme. All modules have a mark scheme or mark criteria contained in the module guide, a copy of which is provided to students at the start of each module delivery. This suggests opportunity to enhance feedback provided with reference to the mark scheme in order to help students understand clearly why they have achieved their mark, the level of their performance and what they may do differently in future to achieve a higher level of attainment.

## Reference to professional practice

Third, the number of items that explicitly linked academic work with professional practice was counted. No items explicitly or implicitly made a connection between academic work and professional practice in the assessment feedback. Findings in this section of the work were surprising, as many of the coursework briefs were designed explicitly around professional practice scenarios, frequently assessing skills and knowledge that would be needed in professional practice. This suggests there is opportunity to enhance links between academic study and professional practice, developing student learning as well as developing students as effective industry practitioners. If the link is not made explicit then for students the meaning and application may be more difficult for them to appreciate or understand. Students may have to make links between professional practice and academic learning for themselves. It is not fully understood regarding the extent to which students make such links, but will be explored in a subsequent phase of this research.

## Discussion

Assessment is central to student learning and feedback is a device to enhance learning. Student involvement with learning is encouraged by teaching methods, Learning Outcomes and assessment being constructively aligned (Biggs 1996). However, findings from this study suggest that such constructive alignment does not always

embrace feedback to students and thus complete the loop. Using feedback to enhance the learning loop of constructive alignment may be under-used yet represents an opportunity to enhance undergraduate learning, potentially enhance the student experience and most importantly encourage development of professional practice knowledge and skills in students as effective construction industry practitioners. As Walton (2011) observes, constructive alignment influences the quality of learning. In the current economic downturn, findings of the study suggest scope to enhance the student experience and learning at little or no additional cost.

Assessment feedback is a potential means to enhance undergraduate students' development and learning as effective professional practitioners. There is scope to enhance feedback practice, to re-consider assessments and mark schemes, and to re-consider the links between Learning Outcomes, assessment, mark scheme, professional practice and assessment feedback. In turn this may enhance the student learning experience as well as promote deep learning and development of reflective practitioners. However, currently there is under-use of feedback as a device to enhance learning. It is not fully understood how feedback may be used to promote students achievement of Learning Outcomes and develop their skills as reflective practitioners. This work has assumed that feedback which signposts Learning Outcomes, mark scheme and professional practice is beneficial for built environment students learning. Professional bodies are concerned professional skills and knowledge are developed in those who wish to join them, and these are reflected in course design. Using assessment feedback to help develop these skills in students aids the industry as well as forming part of constructive alignment. In view of students at most HEIs continued evaluation of feedback as being a weak part of their learning experience, this is an area worth exploring. Further, it may be that revised documents to signpost Learning Outcomes, mark scheme and professional practice would encourage students focus on these aspects of their learning. Encouraging constructive alignment of assessment and feedback with professional practice may enable students to become more aware of the knowledge and skills needed to develop this and links with academic work.

Although surprising, these findings must be treated with caution owing to the small sample size and limited analysis. However they do suggest the need for further research to explore this issue in depth. These findings structure future research towards further investigation regarding the nature of the feedback provided and perspectives of the actors. Investigating actors' perspectives of feedback and exploring the potential of feedback to explicitly link Learning Outcomes, mark scheme and professional practice with learning and development of students as reflective practitioners will require an in-depth qualitative approach. Future work in this study intends to develop the data gathering and analysis to explore qualitative dimensions of the issue under investigation. This will be an exploration of the social world as *"the subjective experience of individuals"* (Cohen and Manion 1994: 8). The object is to gain an in-depth understanding of human behaviour, of both students and tutors. The world is regarded as *"socially constructed and subjective"* (Amaratunga *et al*. 2002: 19). Exploring this subjective world, within which student learning takes place, will illuminate how students and tutors interpret and engage with the issues around feedback and professional practice. This will be important in the research as assessment feedback is a human experience and needs to be examined in this light.

## CONCLUSIONS

Effective practitioners are important for the industry to promote an efficient and productive service for clients. Additionally, effective practitioners make a positive contribution to team performance and should be reflective, able to develop their own professional practice and career enhancement. Providing opportunities to develop these qualities should be encouraged through enhanced feedback.

Although this study identified potential scope to enhance learning opportunities and to provide more powerful support for students' development as effective practitioners, results suggest that feedback does not always offer such support. Whilst professional practice informs course design, and in particular Learning Outcomes for modules, neither Learning Outcomes nor professional practice were routinely evident in the feedback examined in this initial study. Effective feedback needs to be linked more clearly with Learning Outcomes and professional practice in order to support student development as effective practitioners.

Constructive alignment is identified as important in the provision of an effective learning experience for students, and this research explores the value of assessment feedback as part of that provision. Developing students as effective practitioners as well as developing their academic rigour is valuable both for students, their employers and society by enhancing firms' efficiency and contributing to a healthy economy.

Feedback practice that is effective in developing and reinforcing professional practice should be based on:

- Explicit linkage between Learning Outcomes and professional practice;
- Use of or reference to Learning Outcomes in providing feedback on assessment; and
- Reference to professional practice in feedback narrative.

These findings structure the next phase of this research towards investigating the qualitative dimension of feedback, tutors perspectives and interpretations of feedback held by students on professionally recognised courses.

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