# Scaffolding teaching, learning and assessment in Higher Education

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# Abstract

This paper reports the initial findings of a small scale initiative undertaken in a modern university in the United Kingdom to investigate the use of a scaffolded approach to teaching, learning and assessment. The design of a specific module was structured such that the mode of assessment; in this case a presentation, became a focus for each taught session, with each session being strategically scaffolded to increase individual student engagement. The findings demonstrate that such an approach served to impact on students' ability to engage in self-regulated learning and to impact positively on the academic achievement of most students involved; however, for some students, the impact was 'negative'. The paper concludes that although a scaffolded approach to teaching, learning and assessment is, in the main, conducive to deep learning and can potentially lead to improved academic achievement, consideration needs to be given to how and why particular modes of assessment are used to assess student achievement.

**Key words:** Assessment; feedback; scaffolding; self-regulated learning; peer assessment

## Introduction

Assessment is a fundamental component of the teaching and learning processes and following the seminal review of Black and Wiliam (1998), the profile of formative assessment has been significantly raised (Tierney, 2006). Whilst the work of Black and Wiliam has had the greatest impact on assessment in schools in the United Kingdom, it has also been used to validate the importance of assessment for learning in higher education (Boud and Falchikov, 2007). In this paper, we critically reflect on the implementation of a scaffolded approach to teaching, learning and assessment in a specific module delivered in a modern university in the United Kingdom. We consider how its structure facilitated transparency in the assessment process and allowed students to engage in teaching, learning and assessment interactively.

# **Assessment in Higher Education**

Since the 1990s, many higher education institutions in the UK have moved to modularisation of degree programmes, the rationale being that this aids students' progress since it allows for 'credits' to be accumulated. However, a pitfall associated with such a model is very much evident in assessment where students are, by nature of the structure of the programme, assessed at the end of a module. By implication, students are driven by summative assessment and there is little time available for tutors and students to engage in formative assessment (Irons, 2008).

Such an approach is described by Murtagh and Baker (2009), as 'linear'. The engagement of the students is minimal, and the role of the tutor is prioritised. Murtagh and Baker (2009) acknowledged that a shift from linear approaches was desirable. They advocated an approach to teaching, learning and assessment which involved all parties, so that students were involved in a 'community of practice' (Wenger, 1998). Spronken-Smith and Harland (2009) note that in a Community of Practice (CoP) learning occurs through participation in a common enterprise. Such an approach enables students to engage in self-regulated learning. Students are active in the assessment and

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feedback process and this has the capacity to turn each item of assessed work into an instrument for the further development of each student's learning' (Hyland, 2000:34).

Lipnevich and Smith (2009) claim that detailed, specific and descriptive feedback focusing on 'learning' rather than praise per se, is the most advantageous type of formative feedback. It encourages a learning goal orientation. The focus here is on 'finding strategies for learning... [developing a] mastery-orientation pattern... [and maintaining] effective problem-solving strategies'(Dweck, 2000:17).

However, in contemporary undergraduate education, the sustainability of feedback is, Hounsell (2007) claims, under threat. This is evidenced by, for example, the National Student Survey (NSS, Surridge, 2008) in the United Kingdom, and three successive surveys in Australia (Krause, Hartley, James and McInness, 2005). In these surveys, feedback has emerged as a consistent major focus of student concern. Many student evaluations of teaching reflect a deep dissatisfaction with both the quality and quantity of feedback (Miller, Imrie and Cox, 1998; Mutch, 2003). There is evidence that students show little interest in the written or oral feedback offered to them. Indeed, a substantial number of students do not even bother to collect their work once it has been assessed, arguably because they are disenchanted with feedback which is too uninformative and unconstructive (Duncan, 2007). For instance, Mutch (2003), Lea and Street (1998) and Ivanic, Clark and Rimmershaw (2000) argue that students' failure to use feedback is due in part to the fact that they frequently do not understand much of it. Furthermore, Hounsell (2007) notes that students' lack of engagement with feedback can also be related to the fact that, as is the case in many end of module assessments, it is received too late for them to use it.

Consideration of Earl's (2003) conception of assessment provides a context for reflecting on the nature and purpose of assessment and feedback. Earl (2003:25) proposes the notion of assessment *as* learning. Assessment as

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learning, she claims, impacts directly upon student learning. She describes how in this conceptualisation, the role of the student is much clearer, whereby:

Students, as active, engaged, and critical assessors, can make sense of information, relate it to prior knowledge, and master the skills involved. This is the regulatory process in metacognition. It occurs when students personally monitor what they are learning and use the feedback from this monitoring to make adjustments, adaptations, and even major changes in what they understand. Assessment as learning is the ultimate goal.

The major focus in assessment as learning is on assessment that contributes to learning by the teacher (for learning) and by the student (as learning). It asserts the roles that both teachers and students play in assessment. Thus assessment is perceived as a seamless part of the learning process:

Learning is not a linear process. Assessment doesn't come at the end. Teaching is not the filling in the sandwich between curriculum and assessment. Taken together, curriculum, teaching, learning, and assessment interact in an iterative and sometimes cyclical process. They feed into one another and sometimes dart back and forth in seemingly unpredictable patterns. This does not mean that they are independent of or disconnected from one another. On the contrary, the interconnections are the key Earl (2003:83).

Earl's conceptualisation echoes that of Biggs (1999), who asserts that if we wish to improve students' use of feedback, assessment must have meaning for students. Meaning, Biggs states, is achieved through deliberate, considered feedback strategies. Of particular interest to this paper is Biggs' (1999) notion of aligning the processes of teaching, learning and assessment. Without such alignment, assessment becomes merely a postscript for learning and teaching (Brown & Knight, 1994; Biggs, 1999).

# **Research Design**

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For the study which underpins this paper we adopted an action research approach. The distinctive purpose of such an approach is that it seeks to develop and implement change (Newby, 2010). It is an approach that, in this case, uses research findings in order to inform and shape practice. We changed a specific module to allow for more sustainable feedback to students (see section below). Data were collated to review the change and identify any potential impact on students. Data regarding student perceptions of the change were elicited through accessing their 'thought processes'.

Clark and Peterson (1986) describe five such possible methods of inquiry. These are identified as: thinking aloud, stimulated recall, policy capturing, journal keeping and the use of the repertory grid technique. The fundamental advantage of adopting such approaches is that they allow access to introspective, higher order mental processes (Lyle, 2003). However, the reliance on such self-reporting strategies can be problematic. Capturing 'thoughts' is inevitably difficult. Some people may have difficulty in expressing thoughts and verbalising implicit knowledge. Some may 'sanitise' their accounts and say what researchers want to hear (Lyle, 2003). Nevertheless, we were keen to access the thoughts of the students involved in the study. We therefore adopted a 'think aloud' strategy. Newby (2010) describes how such a strategy involves people undertaking a task, and whilst doing so, describe what they are thinking. The role of the interviewer in this case was to sustain the narrative through the use of a prompt and through asking follow up guestions. To avoid any potential for 'sanitisation' and to ensure an ethical approach to data collection, the interviewer was entirely independent, unknown to the students and had had no input in any aspect of the degree programme or module.

Data were gathered using three think aloud interviews with small groups of students. The students involved in these were all female and self-selected for the study. The interviews were audio-recorded with the permission of the students. During the think aloud interviews, students devised concept maps as prompts to stimulate their recall of the module. The rationale was that rich

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data would be generated through engaging in active participation in devising a group concept map. The use of concept mapping in education is recognised as a good way of organising information related to a subject. Novak and Gowin (1984) developed the use of concept-mapping as a means of externalising internal processes.

# A scaffolded approach to teaching, learning and assessment

The BA Honours Degree Programme with Qualified Teacher Status (QTS) at our institution includes a specialist pathway for those interested in studying the Humanities. Students following this route study a specific Humanities module. A presentation was the assessment strategy for this particular module. It was delivered by an individual student to the full cohort and to tutors on a given issue.

The presentation was historically designed as a summative assessment, however, we were keen to capitalise on an opportunity to explore a means of providing more sustainable feedback. We adopted the principles outlined by Hounsell (2007) which are conducive to sustainable feedback, namely: greater focus on the provision of high value feedback, transforming the role of students in feedback, and enhancing the congruence of guidance and feedback. Therefore, the module was strategically scaffolded and designed so that the mode of assessment became a focus for each taught session. In short, students were scaffolded in moving through their zone of proximal development (Vygotsky, 1978).

Gipps (1994) extends the notion of scaffolding to assessment. If improvement in work is to take place, the learner must know the purpose of the task and how far this has been achieved. They must be supported in 'closing the gap' (Black and Wiliam, 1998). In order to close the gap and improve learning through assessment, Black and Wiliam (1998) established that teachers need to:

- Share learning intentions
- Involve learners in self-evaluation

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- Provide feedback which leads learners to recognise the next steps, and how to take them
- Be confident that every learner can improve and consider self-esteem.

A specific module therefore, became focused on an approach to teaching and learning which embraced the notions of Black and Wiliam (1998) and Hounsell (2007).

# Scaffolding Stage 1 – Sharing learning intentions through modelling practice

The first stage of the process was tutor driven. Learning intentions were shared orally at the outset of the module and in written form through a module handbook. Tutors also shared the assessment criteria with students, anticipating that in doing so students would have a clear understanding of the goals and, fundamentally, how to achieve them.

The premise of the module rested on the synergy between the teaching, learning and assessment processes. As described earlier, the assessment mode for this module was a 'presentation' on a given theme. In order to exemplify this, tutors initially explained the process through a lecture. Tutors then modelled to students how to conduct individual research in seminar sessions and how to present this in a cogent way to others.

# Scaffolding Stage 2 – Involving learners in self-evaluation and providing feedback

For the purpose of the module, the 24 students (22 female, 2 male) were arranged into four 'learning sets'. The constitution of the sets was negotiated between the Module Leader and tutors and with the students themselves. Each learning set was provided with a broad but different Humanities focus to research such as: Children should not be taught about lifestyles that they have no experience of because it confuses them. This includes past and present societies, Discuss

Rust (2002) notes that students are more likely to be interested, and therefore motivated, if they have choice in their assessment task and, coupled with learner activity and interaction, proposes the use of assessment strategies such as independent project work, group-work and problem-based learning.

The notion of peers working collaboratively is not revolutionary and there is a significant body of knowledge regarding the topics of collaborative learning and group work (see for example, Barnes and Todd, 1977; Johnson and Johnson, 1990; and Biott and Easen, 1994). Corden (2000), for example, draws on a range of studies to highlight the potential for cognitive and social development through peer collaboration (for example Sharan, 1980 and Slavin, 1983).

A crib sheet was provided for the students that advised on further research associated with each given 'focus'. This provided them with further relevant readings and scaffolded their initial thoughts through the provision of a set of potential lines of inquiry.

Consideration of the structure of the module was essential. Tutors wanted to encourage an approach to teaching and learning; through social interaction, individuals would develop an understanding of a range of perspectives leading them to critically analyse each issue.

A conscious decision was made by the Module Leader to ensure that all sets were aware of each others' focus. Such a strategy facilitated the opportunity for peers to begin to ask questions of each other in an informal peer evaluative context. This aids students in diversifying their own approaches and strategies in undertaking a learning task (Vu and Dall'Alba, 2007). It also deepens their understanding about high- or low-quality performance (Gibbs,

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1999; McDowell and Sambell, 1999) and better enables students to understand their own learning and the feedback they receive.

The class was organised in groups of six for the first attempt at the research and presentation. Each group worked together on a given focus and, as a group, presented findings to the whole cohort. This allowed for peer feedback to be given and received in a group context and thus eliminated potential anxiety in both the giving and receiving of feedback (Williams, 1992), whilst ensuring that the process was not perceived as 'supplementary' (Farmer and Eastcott, 1995).

# Scaffolding Stage 3 – Being confident that every learner can improve and considering self-esteem

The third stage of the process involved smaller learning sets. For this attempt at the research and presentation, the class was organised in groups of three. The rationale for this was that it would allow individuals the opportunity to communicate and share ideas and take a more active part. As the research was presented, tutors and students provided oral feedback, related to the learning outcomes and assessment criteria. It was anticipated that through this dialogue, students would have a clearer understanding of the assessment criteria for their final assessed presentation and that this provided frequent opportunities throughout the module for feedback discourses. Feedback discourse opportunities were aimed at facilitating time for students to engage in discussion about their work with tutors and peers in order to impact positively on future work. The underlying principle was that this would aid students in achieving learning goals because they could understand and have some ownership of them and be able to assess progress (Sadler, 1989).

## The assessment

The final element of the module involved individuals conducting an independent piece of research and presenting findings to the whole cohort and their tutor. The final assessed piece was summative in nature and was marked by the tutor.

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## **Student perceptions**

Students commented extremely positively about the teaching and learning approach of the module, claiming that it was 'innovative', 'real' and 'motivating'. They welcomed the link between the taught tutor sessions and the group activities, and as Anna stated:

'The tutors were great, I really enjoyed this module, it's been my favourite- the tutors practice what they preach, they don't just talk at you, and it's not boring'.

The students welcomed opportunities to 'teach each other' and this was perceived as motivational. It provided opportunities for students to engage in discussions with each other about the subject matter. For example, students welcomed the interactive style of the sessions, noting that they were not 'static' (their words). They enjoyed the autonomous elements of the approach, which allowed for shared learning to take place:

'Working on our own in groups on a topic was really great. The sessions were really good...everyone joined in and you felt that you had really learnt something from each other' (Di).

In addition to learning from each other, the trainees felt that a strength of the module was its direct relevance to their own practice. For instance, the issues that were under investigation by the students were all devised to enhance their subject knowledge and understanding of children's learning. As a result of engaging with the subject matter in an interactive manner, through questioning each other and devising a group presentation, students felt that the subject matter 'became real' (their words) and relevant. One student noted:

'It was relevant to my own teaching' (Beth).

And likewise Anna stated:

'We could use the information in our own teaching'.

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The responses from the students with regard to their own learning were largely positive, indicating that the approach met the learning needs of the group and impacted upon their subject knowledge. During a think aloud interview Di stated:

'I've had to really work hard, but weirdly I enjoyed it. Knowing we had to share with the others I really had to know my stuff, it was deep learning – not surface...'

## And similarly, Fran noted:

'This module has definitely been my favourite and I think it's because I feel like I've really learned something and enjoyed it at the same time'.

Indeed, all of the students interviewed noted that the opportunities of such an approach allowed them to explore particular issues in depth. They enjoyed working in learning sets where time was afforded for them to engage in independent and group research and presentations. During the think aloud interviews, each group pointed out that their confidence had grown with regard to engaging with others and delivering presentations to a wider audience.

*'I feel more confident now than I did at the start about doing a presentation in front of everyone'* (Gemma).

The findings from the think aloud interviews indicate that the trainees would welcome more opportunities in other modules for interactive teaching, related directly to the assessment mode.

'This has been my favourite module, we should have more like this – hint, Lisa, BIG hint!!' (Di).

Though many students agreed that they were initially anxious at the prospect of conducting an individual presentation at the end of the module, they overwhelmingly agreed that the assessment process was a positive experience academically. All students interviewed claimed that they had

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researched their issues in depth, and had had opportunity to do so through the whole teaching and learning experience. For example:

> 'On a usual assignment I feel like I'm just copying from books and rewriting in my own words. With this though I didn't, I even enjoyed it and that's not normal! I worked harder on this than on any other and it didn't feel like I was doing an assignment' (Anna).

A further positive element was that the students welcomed the earlier opportunities for presenting in larger groups and receiving on-going feedback about their presentational style and subject matter:

> 'It was so useful doing all of the presentations to the class...the feedback helped me each time, and I became more and more confident' (Erin).

This sentiment was echoed by many other trainees who saw such an approach as positive in that they could develop a 'voice'. For example, Di noted that on her previous assignments, feedback had indicated that she needed to have a clearer 'voice' in her responses. Through aiming to do this is in stages 1 and 2 of the process in this module, Di gained in confidence

> 'I find it hard to say "I" in an assignment, and so I find it hard to write. Feedback in the past has said that I need to have a voice in my work, but I find it hard to do. With this, though it was much easier to give my own opinion. We talked in the groups and this made me more confident about having an opinion, so when I had to do the presentation on my own, I was much better' (Di).

What was of further interest with regard to this point was that the students felt that this had built their confidence in having an opinion about a particular subject. They felt that this would help them to 'have a voice' in future assignments.

> 'I think that this will help me in other assignments, to say "I" and give a good opinion' (Di).

*'It has made me think about how I can have an opinion and how I put it across and I think this will be easier now'* (Erin).

Although such a view was common amongst the groups, it is important to note that one trainee stated that she had found the individual presentation challenging. She described herself as 'shy' and therefore felt uncomfortable with the approach. She commented that she had received a lower mark for this assignment than was usual. Nevertheless her comments remained positive:

> 'I prefer to write an assignment, I find it much easier and do well. Others don't. I got a lower mark this time and I know lots of others who did much better because it played to their strengths, but that's life, isn't it? I still worked hard and learnt a lot, and even though the presentation was really hard for me to do, I did it and I'm pleased with myself' (Gemma).

Although the students welcomed opportunities for group work, there were occasions when group dynamics were problematic. For example, one group identified that two members 'didn't pull their weight' and this 'was annoying'. However, despite this, the students acknowledged that they themselves had:

'...had to work harder at this module than any other 'cos I didn't want to let anyone down' (Anna).

# Strengths and limitations of the study

The main strength of this study is the impact that it has had on our practice. This action research allowed us to reflect on changes and identify implications for the future. Being contextualised within our own institution facilitated the opportunity for us to explore our own day-to-day teaching, learning and assessment methods.

A further strength of the study is that it allowed us to access the student voice. The use of an independent interviewer and the think aloud approach enabled students to talk candidly about their experiences. This allowed us to consider improvements to programmes to meet the needs of students.

It is important to note that although the think aloud interviews provided rich and relevant data, they came at a cost. One, for instance, is generalisability, given its scale and the nature of the all female respondents. The approach illustrates what happened in a particular context, but not necessarily what will or must happen.

## Conclusions

Our aim, throughout this module, was to provide opportunities for sustainable feedback (Hounsell, 2007). There is evidence to illustrate that sustainable feedback can be achieved through reconfiguring the linear teaching, learning and assessment cycle (Murtagh and Baker, 2009). By considering assessment as learning (Earl, 2003), the assessment criteria became transparent. Opportunities were afforded for active ownership of the teaching, learning and assessment process. Students were encouraged to monitor what they were learning; giving and using feedback to make changes in what they understood.

We introduced an innovative method to teaching, learning and assessment, premised on a 'Community of Practice' approach (Wenger, 1998). Students were engaged together in a common enterprise, namely conducting group research and presenting findings. The students identified that the module was interesting and relevant. As a result, the students took responsibility for their own learning which deepened their understanding of a given focus.

The process has the potential to impact positively upon academic achievement. Students developed their ability to put forward their own opinion in an academic forum. They identified that they gained confidence in using research to support their personal suppositions and saw the potential for impact on other academic modules.

## Recommendations

For the purpose of this module, the approach involved the assessment mode being embedded in the teaching and learning of the module. We would argue that such an approach allowed for engagement with learning outcomes and assessment criteria. There is perhaps, therefore, scope for us within other modules to give consideration to such a synergised approach. For example, many of our current modules require students at the conclusion of the module to submit a written assignment on a given topic, yet we arguably do not provide scaffolded opportunities for shared writing and peer assessment of this in our teaching and learning sessions.

However, although the module has, debatably, been a very welcome and positive experience for our students, we believe that there are further implications that need to be considered in our future work.

Firstly, the main concern associated with this approach centres around group dynamics. What is of interest, and pertinent to this paper, is that in organising and managing collaborative learning, there is research to demonstrate that it will not simply happen merely because a teacher has sat students together and given them an instruction. Corden (2000:88) discusses the importance of managing and organising collaborative work carefully, stating:

Successful group interaction depends on the cooperation of the children and their willingness to make it work...adults are more likely to cooperate if they know why they are doing something and appreciate the benefits of what they are doing.

Secondly, although the approach to the module has, for some students served to impact positively on their academic achievement, this is not true for all. Such a finding is unsurprising in many ways, given that as human beings we all have preferred ways of communicating with each other, nevertheless, it makes us conscious of the notion that there is 'no one approach that fits all'. It allows us the opportunity to question our approaches to assessment. For example, we are keen to explore opportunities whereby students not only

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have choice in terms of the subject matter (as was the case with this module), but also that there is flexibility in terms of *how* they are assessed, such that they can, in the words of the students 'play to their strengths'. Whilst such a perspective is supported by Rust (2002), we acknowledge that a purpose of our undergraduate degree programme is to produce rounded and experienced students. Students should therefore experience a range of forms of assessment. Conceivably, we could adopt approaches to some modules where students could have the choice to either present orally via a presentation or through a visual representation, such as posters or through submitting a 'traditional' written assignment.

The introduction of an innovative approach to teaching, learning and assessment has illustrated that students can be supported in engaging with feedback about their practice. It enhances their development of the competences and skills required for their degree programme and the process has served to engage students in the module in an interactive and transparent manner. We believe that we have made a good start in developing a module in which students are developing as self- regulated learners and it is our intention to continue to evaluate our approaches and to build on this success.

# References

Barnes, D. and Todd, F. (1977) Communicating and Learning in Small Groups. (London, Kegan and Paul).

Biggs, J. (1999) Teaching for quality learning at university (Buckingham, SRHE).

Biott, C. and Easen, P. (1994) Collaborative Learning in Staffrooms and Classrooms (London, David Fulton).

Black, P. and Wiliam, D. (1998) Inside the Black Box: Raising Standards through Classroom Assessment (London, Kings College).

Boud, D. and Falchikov. (2007) Rethinking Assessment in Higher Education (London, Routledge).

Brown, S. & Knight, P. (1994) Assessing learners in higher education (London, Kogan Page).

## Citation:

Clark, C. M. and Peterson P. L. (1986) Teachers' Thought Processes in M. Wittrock (ed.) Third Handbook of Research on Teaching (New York, Macmillan).

Corden, R. (2000) Literacy and Learning through Talk: Strategies for the primary classroom (Buckingham, Open University Press).

Duncan, N. (2007) Feed forward: Improving students' use of tutors' comments Assessment and Evaluation in Higher Education 32 (3), 271–283.

Dweck, C. S. (2000) Self-Theories: Their role in motivation, personality and development (Philadelphia, Psychology Press).

Earl, L. M. (2003) Assessment as Learning: using classroom assessment to maximize student learning (London, Sage).

Farmer, B. and Eastcott, D. (1995) Making assessment a positive experience,

in: P. Knight, (Ed.) Assessment for learning in higher education (London, Kogan Page).

Gibbs, G. (1999). Using assessment strategically to change the way students learn, in: S. Brown and A. Glasner (Eds) Assessment matters in higher education: choosing and using diverse approaches (Buckingham, Open University Press).

Gipps, C. (1994) Beyond Testing: Towards a Theory of Educational Assessment (London, Falmer Press).

Higgins, R., Hartley, P. and Skelton, A (2002) The Conscientious Consumer: reconsidering the role of assessment feedback in student leaning, Studies in Higher Education 27, 53-64.

Hounsell, D. (2007) in Boud, D. and Falchikov (2007) Rethinking Assessment in Higher Education (London, Routledge).

Hyland, P. (2000) Learning from feedback on assessment, in: A. Booth and P. Hyland (Eds) The Practice of University History Teaching (Manchester,

Manchester University Press), 233-247.

Irons, A. (2008) Enhancing Learning through Formative Assessment (London, Routledge).

Ivanic, R., Clark, R. & Rimmershaw, R. (2000) What am I supposed to make of this? The messages conveyed to students by tutors comments, in: M. Lea

and B. Stierer (Eds) Student writing in higher education: new contexts (Buckingham, SRHE).

Johnson, D. and Johnson, R. (1990) What is cooperative learning? In M. Brubacher, R. Payne and K. Rickett (Eds) Perspectives on Small Group Learning: Theory and Practice (Ontario, Rubicon).

Krause, K., Hartley, R., James, R. and McInnis, C. (2005) The First Year Experience in Australian Universities: Findings from a Decade of National Studies: A Project Funded by the Higher Education Innovation Programme, Department of Education, Science and Training: Final Report (Melbourne, University of Melbourne).

Lea, M. and Street, B. (1998) Student writing in higher education: an academic literacies approach, Studies in Higher Education, vol. 23, no. 2, 157-172.

Lipnecich, A. A. and Smith, J. K. (2009) Effects of Differential Feedback on Students' Examination Performance Journal of Experimental Psychology: Applied 15, (4(, 319–333.

Lyle, J. (2003) Stimulated recall: a report on its use in naturalistic research. British Educational Research Journal, 29, (6), 861-878.

McDowell, L. and Sambell, K. (1999) The experience of innovative assessment: students' perspectives, in: S. Brown and A. Glasner (Eds) Assessment matters in higher education: choosing and using diverse approaches (Buckingham, Open University Press)

Miller, A., Imrie, B. & Cox, K. (1998) Student assessment in higher education:

a handbook for assessing performance (London, Kogan Page)

Murtagh, L. and Baker, N. (2009) 'Feedback to Feed forward: student response to tutors' written comments on assignments, Practitioner Research in Higher Education. 3, 20-28.

Mutch, A. (2003) Exploring the practice of feedback to students, Active Learning in Higher Education, 4 (1), 24\_38.

Newby, P. (2010) Research Methods for Education (Harlow, Pearson).

Novak, J. D. and Gowin, D. B. (1984) Learning how to learn (Cambridge, Cambridge University Press).

## Citation:

Rust, C. (2002) The impact of assessment on student learning. Active Learning in Higher Education, 3, 145-158.

Sadler, R. (1989) Formative assessment and the design of instructional systems. Instructional Science, 18,119-44.

Sharan, S. (1980) Cooperative learning in small groups: recent methods and effects on achievement, attitudes and ethnic relations, Review of Educational Research, 50, 241-271.

Slavin, R. (1983) Cooperative Learning (New York, Longman). Spronken-Smith, R. and Harland, T. (2009) Learning to teach with problembased learning, Active Learning in Higher Education, 10, 138-153.

Surridge, P. (2008) The National Student Survey 2005-2007: Findings and Trends. A Report to the Higher Education Funding Council for England [Online]. Available at: <u>http://www.hefce.ac.uk/pubs/rdreports/2008/rd12\_08/</u> (Accessed 10<sup>th</sup> December, 2009).

Tierney, R. D. (2006) Changing practices: influences on classroom assessment, Assessment in Education, 13, 239-264.

Vu, T. T. and Dall'Alba, G (2007) Students' experience of peer assessment in a professional course, Assessment and Evaluation in Higher Education, 32, 541-556.

Vygotsky, L. S. (1978) Mind in Society: The Development of Higher

Psychological Processes (Cambridge, M.A, Harvard University Press).

Wenger, E. (1998) Communities of practice: learning as a social system.

Systems Thinker. Retrieved January 15th, 2008 from: http://www.co-i-

I.com/coil/knowledge-garden/cop/lss.shtml

Williams, E. (1992) Student attitudes towards approaches to learning and assessment, Assessment and Evaluation in Higher Education, 17, 45-58.