Developing Students Conceptions of Learning through Formative Assessment

Anna Reid and David Leat
Research Centre for Learning and Teaching (CfLaT)
Newcastle University


This paper derives from a Knowledge Transfer Partnership (KTP), funded by the ESRC between Northumberland County Council with Bedlington Community High School on one side and Newcastle University on the other, where the focus is on developing an assessment/progression framework for enquiry skills. This is the first KTP based in a state school. The bid stressed the need not only to raise achievement but more fundamentally to raise aspirations in a region with the lowest participation in HE. The framework is planned to span subjects and to make links to the framework for Personal Learning and Thinking Skills (QCA, 2007). The project is funded for two years and involves a KTP associate working with teacher and student researchers/enquirers to develop more enquiry learning opportunities within the curriculum and a shift in learner identity through peer and self assessment. Work began in January 2008 with 7 teachers, two each from English, science and mathematics and one from art. There is also an academic supervisor and a Deputy Head teacher supervises and supports progress in school. In its second year has included a further 6 teachers and the methods have been disseminated to all staff as a stepping stone towards long term curriculum change.

There has been considerable activity. The project teachers have used enquiry ‘tools’, there have been half day student enquiries, but some teachers have gone much further effectively handing over teaching to students for several weeks. Pairs of project teachers have planned and taught enquiries in which students are beginning to assess their ‘habits of mind’ (Costa & Kallick, 2000) and other metacognitive aspects of learning (application of strategies, knowledge of task etc.). In parallel an overlapping subset of staff are setting up a digital assessment space to allow the construction of individual portfolios, which may eventually resemble a ‘learning disposition grid’ (Carr & Claxton, 2002). The involvement of the student researchers has been central to the project as they are seen as part of the research and development capacity within the school, and they are intended to be key players in the invitation to further cohorts of students to engage with the assessment framework and the conceptions of learning implied.

It is clear from the work of Cowie (2006) and Blanchard (2007) that issues around students’ conceptions of learning, assessment and whose role assessment is, can be problematic. Further, changing assessment practice and curriculum are not purely technical matters, the spirit of formative assessment implies that a whole school community thinks through some fundamental organisational issues and relationships, which affect all parties.

The parameters of formative assessment and self theories

There is no shortage of critiques of the current English twenty-first century education system (and other countries besides). There is much evidence of the distorting and negative effects of high stakes national assessment on individual learning and on approaches to teaching and learning (e.g. Harlen & Deakin-Crick, 2003). Reay & William (1999) used qualitative data focus on Y6 pupils facing National Curriculum Key Stage 2 tests, which provide a staging post in their developing understanding of themselves as learners. Some experience the testing process as a definitive statement about the sort of learner and individual they are, and the experience is accompanied by no little anxiety and fear. In evaluating the impact of the national curriculum and its assessment structures on primary pupils, Pollard et al. (2000) expressed concern about the attitudes and lifelong learning skills of low and average ability pupils. Such pupils learned that they were relative failures and generated negative self theories. In a linked project (Osborn, 1997) through a comparative study of the attitudes of French and English primary school children, it was noted that many English children did not want to be best in the class, and felt lukewarm about getting a good mark or praise for good work. Some children went...

anna.reid@newcastle.ac.uk
d.j.k.leat@newcastle.ac.uk
so far as to say that they did not want to be seen as too good by the teacher whereas no French child said this.

The work of Assessment Reform Group and more particularly the review by Black & Wiliam (1998a) and the popular by-product ‘Inside the Black Box’ (Black & William, 1998b) are familiar to most. Formative assessment has been a somewhat elusive concept, but may broadly be taken to mean assessment which is intended to improve student learning, rather than grade such students. Thus it stands in tension with summative assessment and depends significantly on the concept of feedback. It has become confused somewhat with Assessment for Learning which is the Department for Children Schools and Families (formerly DfES) formulation of formative assessment which has a stronger press on targets and next steps and the summative use of formative tests. Paul Black et al. (2003) regard formative assessment as characterised not by the methods used (e.g. sharing criteria, peer assessment, feedback and traffic lights) but more by the functions which they serve in supporting students’ learning (substantially via feedback). As Marshall & Drummond (2006) have pointed out, in the classroom such aspects are put into operation by most teachers in a somewhat formulaic fashion, which they dub as the ‘letter’ of formative assessment, while a minority have a more grounded approach which accords to the spirit of formative assessment. This of course still leaves very wide interpretations of the term learning, which has a significant impact on formative assessment strategies, an issue to be returned to in the discussion. Therefore formative assessment may be seen as related to the style of interaction between teachers (and indeed the school as a system) and students.

Therefore one might expect that the strength of formative assessment as an experiential factor to vary from classroom to classroom, depending on the pedagogical skills, beliefs and experience of the teacher. In a study of the implementation of formative assessment in Jersey, Webb & Jones (2009) identified three levels of classroom practice:

**Level 1** (Trialling) Teachers using and evaluating formative assessment tools and strategies in parts of their practice but not in an integrated way. They were evaluating the effects on their students and thinking about other changes they needed to make.

**Level 2** (Integrating) Teachers have changed classroom practice using a range of formative assessment strategies. Teachers and students felt comfortable with the ways of working, although they were used more frequently in some curriculum areas than others.

**Level 3** (Embedded) Formative assessment was integrated throughout all teaching and learning. Classroom practices had changed in a number of ways including changes in students’ and teachers’behaviours.

Self concept is an overall global understanding or perception of oneself. As indicated below there are other self-related concepts with overlapping meanings. Identity is another related concept but implies a more conscious process of representing oneself to others as we use stories and events to construct our identity through narrative processes. Thus opportunities to reflect upon and discuss experiences are significant in identity formation, as a function of the discourses available within the cultural context. Geijssel & Meijers (2005) have indeed argued that identity change is the critical outcome of educational reform. Students develop a view of themselves both in global and subject specific terms and this self-view in turn impacts on how they respond to classroom experiences. Carol Dweck (1999) is well known for her sustained work on self-theories and she has proposed a duality in self-theories related to intelligence. Many students in the US develop what she calls an entity or fixed theory of intelligence, who see intelligence as fixed at birth, so they try to avoid challenging work which might make them look ‘dumb’ and undermine their conception of themselves. They do not see improvement as within their orbit and display helpless patterns of behaviour. In contrast the students with an incremental theory of intelligence, like challenges and see failure as a source of learning and stimulus. They seek ways of improving their outcomes in order to master the domain. Dweck attributes learned helplessness to high praise for ‘neat’ work in early school experiences which attaches predominantly to girls.

Miller & Lavin (2007) have specifically investigated the effects on self esteem of formative assessment implemented by teachers with some expertise in Scottish primary schools. Although, for principled reasons they had no control group, they found significant improvements in self esteem over a six month period. The effect was more pronounced for the self-competence element of the instrument they used (Rosenberg Self-Esteem Scale) than for self worth. Furthermore the effect was greater for low achieving and high achieving pupils, and for those with previous experience of

anna.reid@newcastle.ac.uk

d.j.k.leet@newcastle.ac.uk
formative assessment. In the eyes of the pupils and teachers this was attributed to a large degree to confidence and greater reflection on learning and learning processes. Interestingly teachers also reported that their teaching had changed as a result of formative assessment towards seeing children as more active participants in the classroom constructing their own understanding. Students’ self theories are also reflected in Cowie’s (2005) study of their response to formative assessment opportunities in secondary schools in New Zealand through their view of the relative roles and responsibilities of both themselves and their teachers for learning. Students who engaged most with the process are those who do see themselves as having a significant choice and control in learning opportunities. However those students who see their learning largely within the orbit of the teacher’s actions do not respond with such enthusiasm.

Given the work outlined above, it is reasonable to suggest that the larger benefits of formative assessment are likely to come from those teachers who are capable of more interactional styles that are less constrained by narrow attainment objectives and who believe essentially in social constructivism. Miller & Lavin invoke Black et al.’s (2006) ‘Trojan horse’ metaphor meaning formative assessment is a vehicle to engender pedagogical change in the direction of more explicit discussion of learning. Such a style is reflected in the characterisation of divergent assessment (as opposed to convergent assessment) described by Torrance & Pryor (1998).
Table 1. Convergent and divergent formative assessment (adapted from Torrance & Pryor, 1998, p. 193)

<table>
<thead>
<tr>
<th>Convergent Assessment</th>
<th>Divergent Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assessment which starts from the aim to discover <em>if</em> the learner knows, understands or can do a predetermined thing. This is characterised by:</td>
<td>Assessment which starts from the aim to discover <em>what</em> the learner knows, understands or can do. This is characterised by:</td>
</tr>
<tr>
<td><strong>Implications</strong></td>
<td><strong>Implications</strong></td>
</tr>
<tr>
<td>a. precise planning by the teacher and an intention to stick to it;</td>
<td>a. flexible planning or complex planning which incorporates alternatives;</td>
</tr>
<tr>
<td>b. recording via check lists and can-do statements;</td>
<td>b. open forms of recording (narrative, quotations etc.);</td>
</tr>
<tr>
<td>c. closed or pseudo-open teacher questioning and tasks;</td>
<td>c. primarily open tasks with questioning by teachers and learners directed at ‘helping’ rather than testing;</td>
</tr>
<tr>
<td>d. a focus on contrasting errors with correct responses;</td>
<td>d. a focus on miscues—aspects of learners’ work which yield insights into their current understanding—and on prompting metacognition;</td>
</tr>
<tr>
<td>e. authoritative, judgmental or quantitative feedback;</td>
<td>e. exploratory, provisional or provocative descriptive feedback aimed at prompting further engagement from the learners;</td>
</tr>
<tr>
<td>f. feedback focussed on performance and the successful completion of the task in hand;</td>
<td>f. discussion prompting reflection on the task and its context with a view to constructing understanding of future situations in which new knowledge might be applied;</td>
</tr>
<tr>
<td>g. formative assessment focused on communicating criteria usually closely related to those used in summative assessment;</td>
<td>g. formative assessment focused on a holistic view of criteria, the learners’ understandings of them and how they fit into wider notions of knowledge and competence;</td>
</tr>
<tr>
<td>h. involvement of the learners as recipients of assessments;</td>
<td>h. involvement of the learners as initiators of assessments as well as recipients;</td>
</tr>
<tr>
<td>i. an analysis of the interaction of learners and the curriculum from the point of view of the curriculum;</td>
<td>i. an analysis of the interaction of learners and the curriculum from the point of view of both learners and the curriculum;</td>
</tr>
<tr>
<td>j. conforming to either a behaviourist or a constructivist view of education;</td>
<td>j. conforming to a socio-cultural view of education with an acknowledgement of the importance of the context for the assessment;</td>
</tr>
<tr>
<td>k. an intention to teach or assess the next predetermined thing in a linear progression;</td>
<td>k. an intention to teach in the zone of proximal development;</td>
</tr>
<tr>
<td>l. an interaction usually embedded within an Initiation-Response-Feedback (IRF) sequence;</td>
<td>l. part of an on-going dialogue between and amongst learners and teachers where learners initiate as well as respond, ask questions as well reply;</td>
</tr>
<tr>
<td>m. a view of assessment as accomplished mainly by the teacher.</td>
<td>m. a view of assessment as a collaboration between and amongst teachers and students.</td>
</tr>
</tbody>
</table>

Enquiry is a curriculum and pedagogical model which is driven by questions, doubts, problems and uncertainties, for which there are many essentially cyclical models. The description of divergent assessment shares many features with enquiry based approaches to teaching. For example:

- c. primarily open tasks with questioning by teachers and learners directed at ‘helping’ rather than testing;
- f. discussion prompting reflection on the task and its context with a view to constructing understanding of future situations in which new knowledge might be applied;
- l. part of an on-going dialogue between and amongst learners and teachers where learners initiate as well as respond, ask questions as well reply;

anna.reid@newcastle.ac.uk

annareid@newcastle.ac.uk

d.j.k.leat@newcastle.ac.uk

Page 4 of 13
The potential relevance of enquiry as a pedagogical model in shaping identity can be understood through Pryor & Crossouard’s (2007) socio-cultural model of formative assessment. They use Basil Bernstein’s (1996) concepts of framing and classification as a language to discuss the rules and social positioning within educational systems. Classification refers to the strength of the boundaries separating categories of discourse, for example subjects such as mathematics, economics or English. Framing refers to the strength of the social rules in place in the educational settings such as classrooms and involves a ‘pedagogic discourse’ which helps define how students see themselves as a result of the classroom experiences. Instructional discourses reflect the selection of knowledge for teaching, such as its sequencing and criteria for assessment, while regulatory discourses concern the social relations in the classroom, with regard to expectations of conduct and manner. They see students’ understanding of the task and the quality criteria as central to formative assessment achieved through negotiation stimulated by observation (by the teacher), questioning and feedback. It is, according to Pryor & Crossouard, metacontextual reflection, underpinned by issues of power and control, which allows students to use the action of formative assessment to construct identities. The argument is complex but important, as they see the outcome of such reflection bringing Bernstein’s recognition rule into play, allowing students to see (and perhaps even influence) what is appropriate learning behaviour across contexts.

Methodology

Whilst this paper has many elements of case study it also has an ethnographic strand in that the first author was the KTP associate in the school and worked intimately alongside both the teachers and the student researchers in developing enquiry-based teaching the assessment framework. In the process a wide variety of data has been collected, ranging from teacher learning journals and pupil view questionnaires to video recorded lessons and an evaluation of two visitor days. This is a critical case study which seeks to derive theoretical and practical indications regarding how students may reconfigure their identity as learners through assessment innovation. In choosing a case study frame we are putting the emphasis on how and why the students’ self theories are changing. For the sake of brevity the data referred to in this paper comes specifically from four sources:

- Interviews by an consultant with a sample of student researchers and a comparable number of non-researchers who are from the same classes;
- Pupil view templates and focus group interviews led by an independent researcher with a different sample of researchers and a comparable number of non-researchers who are from the same classes;
- Field notes and documents collected by the KTP associate;
- Interview data and observations from project teachers.

Two questions addressed are:

1. In what ways are the identities and self theories of students researchers changing?
2. What are the formative influences in that process?

Thus the data analysis will probe the way in which classroom innovations and the broader researcher experience (for some pupils) have provided catalytic experiences, language and new relationships which have helped forge new self theories and ambitions.

Results

1. Students can be grouped according to their comments about enquiry: positives, negatives, neutrals. Some students are positive about enquiry although there are tensions about some other students. In general, they state that behaviour has improved. There are some small signs that they see learning as a more general endeavour and therefore there is some marginal erosion of subject silos, thus classification of knowledge has weakened slightly. A stronger outcome however is that framing has weakened considerably - the control of choice of subject matter and the rules governing relationships between teachers and pupils is changing
2. They have an emerging view of what is different about lessons; questioning, group work and discussion, not one right answer
3. Evidence of change and of talking to others (changing identity), strategies, trial and error, people making choices (work or coast)
4. Starting to use a language for learning based on ‘habits of mind’ (Costa & Kallick, 2000)

anna.reid@newcastle.ac.uk
D.J.K. Leat@newcastle.ac.uk
5. They can know about the enquiry KTP, which teachers have a significant involvement and also those that are round the edges.

6. Aware of project, teachers tensions and dissonance and struggle and have a sense of their role

Figure 1: Students’ own perceptions, views of perceptions of classmates and views of perceptions of teachers on enquiry and non-enquiry lessons

<table>
<thead>
<tr>
<th></th>
<th>Non-Enquiry Lesson</th>
<th>Enquiry Lesson</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Positive</td>
<td>Negative</td>
</tr>
<tr>
<td>Classmate - Speech</td>
<td>0</td>
<td>9</td>
</tr>
<tr>
<td>Classmate - Thought</td>
<td>0</td>
<td>13</td>
</tr>
<tr>
<td>Self - Speech</td>
<td>1</td>
<td>8</td>
</tr>
<tr>
<td>Self - Thought</td>
<td>0</td>
<td>7</td>
</tr>
<tr>
<td>Teacher - Speech</td>
<td>0</td>
<td>9</td>
</tr>
<tr>
<td>Teacher - Thought</td>
<td>0</td>
<td>7</td>
</tr>
</tbody>
</table>

Below are the pupil view template responses from one Year 9 student. It has nice contrasts and has the sense of the wider change in the curriculum/school. The pupil view template data is stronger in some ways than the focus groups.

<table>
<thead>
<tr>
<th>Speech bubble for a friend</th>
<th>Non-Enquiry Lesson</th>
<th>Enquiry Lesson</th>
</tr>
</thead>
<tbody>
<tr>
<td>I was really bored in that lesson. We weren’t doing anything – the teacher was too busy shouting at people to teach us. I have a headache now. I want to go home. I don’t want another lesson with the teacher getting annoyed at the students.</td>
<td>This is really interesting. I like these lessons because they enquiry in them. I don’t like copying out of textbooks so I’m glad lessons are changing. I actually enjoy the lessons in school now.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Thought bubble for a friend</th>
<th>Non-Enquiry Lesson</th>
<th>Enquiry Lesson</th>
</tr>
</thead>
<tbody>
<tr>
<td>I really wish we could have some interesting lessons, then people would pay attention, the teacher wouldn’t shout and then we would actually get some work done and learn something. Why can’t school be interesting?</td>
<td>I’m learning a lot more. Enquiry has helped me with my studies. My grades are improving and I want to come into school now as I like the lessons. I wish all of the lessons were like this. School is much better now because we have enquiry</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Speech bubble for self</th>
<th>Non-Enquiry Lesson</th>
<th>Enquiry Lesson</th>
</tr>
</thead>
<tbody>
<tr>
<td>We are copying out of textbooks again. I couldn’t learn anything because I couldn’t hear what the teacher was saying because most people were misbehaving. They need to be interested in what they are doing and then they behave.</td>
<td>Enquiry is used in most of our lessons now. We learn by ourselves and it is more interesting so we learn more. Enquiry is all about asking questions, refining them, choosing a question, investigating, looking at your findings until you eventually find an answer to your question.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Thought bubble for self</th>
<th>Non-Enquiry Lesson</th>
<th>Enquiry Lesson</th>
</tr>
</thead>
<tbody>
<tr>
<td>I wish everyone would pay attention to what the teacher was saying. I know they may not like copying out of textbooks and learning in those types of ways. I want to learn, why doesn’t everybody else?</td>
<td>I’m glad that our students are paying much more attention. They are less disruptive and I can now learn more. I’m also pleased because they are happy with the lessons and they are also learning more.</td>
<td></td>
</tr>
</tbody>
</table>
Discussion

We have been surprised by the results of this study. We were expecting that the student researchers would show evidence of some developing self conceptions and shifts in identity as a response to the exposure to classroom innovation in assessment underpinned by a move towards enquiry based pedagogy. It is reassuring that this has occurred. Many of students talk of the impact that it has made on them. In personal conversations or interviews they have revealed for example:

Yeah – it has made me think about what I can do and want to do when I leave, it has given me more confidence.

I didn’t know learning was like this – it’s really good because I know what I can do more – to get better at things

I talk to my mum and dad about it all the time because they’re quite interested in what I do at school

I have explained to my little cousin who is in primary and my mum about the meetings and the cards and what we do with them and my mum says it will be good in the long run … (another student) My mum says she never used to do anything like that when she was at school and she wishes she was at school now

Whilst this has occurred, something more profound has developed. The students have become aware of the efforts of the teachers and the school to change and have developed a meta-view of the classroom activity set against this larger backdrop. They are conscious of a planned and demanding reform effort on the part of the teachers and they are also aware of their part and importance in it – they are partners.

Nearly all the students who provided data are positive about enquiry, although they themselves point to some students who take advantage of the context and let others take the strain of responsibility in collaborative work, or who just mess about.

Some say it’s boring

… if it’s all the time people feel they’ve got more opportunity to mess around

Yeah there are some who don’t pay interest. They don’t give them (the lessons) a chance to see how they will go
However overall the students see the overall impact on motivation and behaviour of enquiry lessons as positive:

*In teaching we do more enquiries and the behaviour is better because people are more interested in what they are doing.*

The limited negative response is not unexpected as Miller and Lavin report that in Scottish primaries it takes students time to engage with formative assessment. The respondents also have a clear notion of what characterises enquiry as they experience it – they ask questions, there is more talk and discussion.

*You know it’s definitely not enquiry if you’re working by yourself*

Many are also adamant that they don’t want to do it all the time. Interestingly these points are echoed by the teacher data. Referring back to Bernstein’s concept of classification there is only marginal evidence that students are transcending the walls between subjects. Presently they are still seen as the pillars of learning experiences, although the use of the ‘habits of mind’ is making small inroads.

*They are up in every room*

*We spent about half a lesson having a conversation about them and asking people who were in the KTP project to help explain what they meant to others in the class. I think he asked me to explain what ‘thinking interdependently’ was.*

*We do training and we take pictures (with mobile phones or digital cameras) when we see something with the Habits of Mind … You upload your photos off the phone and say where you have had enquiry.*

However the framing of the students’ educational experience is changing. The student researchers meet once or twice a week, they have done research training sessions, they have participated in community of enquiry sessions and many have been out of school as part of the project. Some have presented to staff and most have been involved in guiding visitors round the school whilst many have heard the project described at the school award’s evening. The social rules reflecting the emerging discourse of the enquiry framework are metamorphosing. Bernstein described two discourses - the instructional discourse which represents the selection of knowledge for teaching and the regulative discourse which governs social relations in the classroom and corresponding expectations of manner and conduct. The students are realising that there are occasions when they do have influence or even control on what is studied and that a key behaviour being expected is asking questions.

*… he gave us equipment to make an electric magnet and he goes ‘right I want you to go and experiment with it and we’ll come back and have a discussion about what we found out … who’s done it the right way and other possible ways to do it … Well we didn’t really understand it that much because we’d never done it before and we were thinking ‘why haven’t we been told what to do?’ Why are we being sent off to do something we’ve never done …

*We could pick our own experiment, what we wanted to do and find the science behind it as long as it was safe. Mr X just set us off and watched and gave us help if we needed it*

*Mr Y said it was the first time that he actually saw someone go up to him in a lesson and ask him a question (about science) and he was actually quite happy.*

As indicated in Torrance & Pryor’s formulation of divergent assessment such a shift has implications for relationships as teachers are no longer the arbiters of content and so not derive their authority or respect from gatekeepers of subject knowledge. More interesting still is the acute awareness they have of the teachers’ struggles and tensions. So when asked about what teachers are feeling when teaching enquiry one group revealed telling sensitivity:

*They are used to their old teaching methods so they don’t enjoy enquiry as much as they enjoy doing lessons they used to do …

anna.reid@newcastle.ac.uk
d.j.k.leat@newcastle.ac.uk
They have been teaching one way for so many years so they’ve got used to it and it could take a while for them …

But when pressed on whether they look like they are enjoying it, the acuity continues:

They enjoy it because everyone is getting better

However the changes enacted by the enquiry pedagogy have accelerated changes in relationships between teachers and students, which create the space or potential for the assessment change to consolidate in the wake. Crucially there is teacher data which strongly reflects the changes in both instructional and regulative discourse and also to the current limits to such change. In the following extract Sadie describes how her relationship with her project class has changed, no longer being dominated by the reluctant students and also how she appreciates them more for what they bring to the classroom. She also reflects on how her identity has changed and in particular her realisation (secret smiles) that the student researchers share her wider knowledge of the project

As a result of the project the students now see me as a bit more approachable, and I can still have awful times with them, but I have far more good times and I do feel that the students in there who have always wanted to learn are feeling now they are learning.

I am not as rigid a teacher as I was – it has pushed me into doing things in new ways. I am more of a risk taker.

It has opened my eyes to the abilities of the students that I hadn’t recognised and to value other skills, not just linguistic skills. I love seeing the light bulbs going off in the student researchers. I think people see me as someone who will help them out and I am more open than I was. With the student researchers you almost have these secret smiles – ‘I know why you are doing this’ and that’s really good, because it does build up this mutual support within the lesson.

Another teacher, Bill, relates how he can take the pupils completely into his confidence

There was also a session where some of the student researchers took the session and I thought that was quite a moment, and some being so competent and this gives you more of an impetus to go and create more students who can be like that,

One lesson went horribly wrong. I gave them a practical lesson. Normally you demo it and give a structured instruction sheet and they follow the instructions. This time I demoed it the lesson before but didn’t give them an instruction sheet. I just gave them the equipment and this is what I want you to get out of it, and they didn’t know what to do. At the end of the lesson I stopped them, but I was very depressed about it … At the beginning of the next lesson we talked about it and I said how could we make sure it didn’t happen next time? They came up with ideas, how to improve – “give us some instructions, but not all, give the demo closer to the lesson – not a gap of a week.” I have tried that since and it works really well.

When my Year 8 did that enquiry project – they asked their peers who were taking the lesson when they needed help and not me, that’s when I started to think yes this could work really well.

A third teacher, Andrew, who perhaps has the most advanced practice in the teacher cohort, exhibited a very critical view of the change in discourse around assessment and pedagogy. By referring to atmosphere he is indicating what Bernstein would recognise as regulative discourse. The greater complexity of language offered through the ‘habits of mind’ framework has not only dented the classification system eroding subject walls to a degree it has also helped develop a more elaborate code which makes attributes of learning more explicit for both teachers and students.

When you include the ‘habits of mind’ it becomes easier for the students and teachers to have a learning dialogue. When that culture is set up it changes the atmosphere in the school.

However he also recognises that there are clear limits to the spread of this code as the beliefs and pedagogical knowledge of some teachers currently preclude such communication:

anna.reid@newcastle.ac.uk
d.j.k.leat@newcastle.ac.uk
But a lot of teachers can't talk to students as equals, or as learning partners. I think the senior management think that this dialogue would cut down on a lot of the discipline issues.

James & Pedder (2006) refer to the gap between values and practice in the work of teachers and practice lags behind. Classroom change is complex and the teachers at the KTP school have made faster progress in developing enquiry based teaching than in developing the use of the enquiry framework – which is not unexpected. Pryor & Crossouard (2008) in their penetrating conceptual analysis of formative assessment use Cultural Historical Activity Theory (Engestrom, 1987) to position the renegotiation of identity as the outcome of formative assessment, and like Bernstein, such analysis highlights the importance of roles, rules and power in change. It would seem necessary on the basis of this study to redraw the boundaries of the system in focus in their work. In the KTP while the classroom remains a key fulcrum, choices, relationships and experiences beyond the classroom at the institutional level are also vital providing an extra dimension to the student researchers’ development.

For the present, this shift could be reversed or contained. In the school it is seen as a legitimate and useful form of tension. The senior leaders are content that all staff should be exposed to the ambitions and aspirations of students in a variety of forms – student presentations, visitors’ reflections, publicity via professional journals and awards, repeated reference to ‘habits of mind’. Broadly they see this as motivation to change, a continuing ‘bubbling under’ which dampens the power of conservative elements. If the school goes much further, it will become much harder to contain the impetus for change, as it is being observed from a variety of perspectives that some students now need to be given freer rein to use their dispositions, tools and skills with greater autonomy. If an enquiry-based curriculum and assessment framework develops much further then serious consideration needs to be given to such weighty matters as timetabling, curriculum progression and professional development.

In discussions of school change affecting students it is usual to think in terms of their learning outcomes in relation to subjects, more generic knowledge bases or indeed about themselves (as we did initially). We have been made to rethink, as we have encountered strong evidence that student researchers in particular have engaged with the schools efforts at change and the tribulations and thought processes of the teachers in the vanguard. This does indeed change their identity and they do tell stories about their experiences – in lessons, off-site, receiving visitors, in their heads and in talking to their families. We should not forget that this is learning too, and with potential for greater leverage on lifetime outcomes than more moderate approaches to formative assessment. Therefore we have to reframe our thinking. The students are developing generalisable concepts about their school as a place to learn and how it is endeavouring to change and thus we believe they are going through a knowledge-related transformation, which extends well beyond subjects. Are they crossing a threshold? Meyer & Land’s (2003) work on threshold concepts has focused on subject disciplines and higher education but there is no reason why such thresholds should only exist for students operating at high cognitive levels.

Threshold concepts are purported to be:

a) **Transformative**, in that, once gained, the potential effect on student learning and behaviour is to occasion a significant shift in perception of a subject. The conversations with friends and family and the richer language about assessment and learning are promising in this regard.

b) Probably **irreversible**, in that the change of perspective occasioned by acquisition of a threshold concept is unlikely to be forgotten, or will be unlearned only by considerable effort. The meta-contextual awareness being evidenced by these students is unlikely to be forgotten as it is based on experience and

c) **Integrative**; that is, it exposes the previously hidden interrelatedness of something. The students make interesting comments on their primary school experience and they can rationalise both the differences between some teachers and between enquiry and non-enquiry teaching

d) Possibly often (though not necessarily always) **bounded** in that any conceptual space will have terminal frontiers, bordering with thresholds into new conceptual areas. We believe that they are still aware of their own relative strengths and are realistic about their potential

e) Potentially (and possibly inherently) **troublesome**. We regard this as exciting in that a certain degree of frisson and unease will be healthy in maintaining the assessment framework in continuous development for a considerable time to come.
The student researchers experience in the KTP school should remind us of several things:
1. Formative assessment cannot be considered outside of the pedagogies within which it can sit and in more progressive pedagogies, divergent assessment needs to be developed;
2. That formative assessment that accords with its own ‘spirit’ has profound impact on relationships between teachers and pupils, and pupils and knowledge;
3. That the consequences of such assessment pose considerable challenges for any school that enters such uncharted waters.

Fig. 2: The influence of classroom experience and school level reform experience.
References


anna.reid@newcastle.ac.uk
d.j.k.leat@newcastle.ac.uk


*This paper was added to the Education-line collection on 15 January 2010*