

# IMPLICIT THEORIES OF ABILITY: TEACHER CONSTRUCTS AND CLASSROOM CONSEQUENCES

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## ABSTRACT

In this paper it will be argued that teacher constructs of ability play a particularly significant role in teacher judgements of children's achievements and potential and consequently on children's learning experiences. In particular, consideration is given to the implicit (personal) theories of ability which individuals draw upon to inform their thinking, beliefs and attitudes within contrasting school contexts. Drawing on a broader study containing multiple perspectives in four case study schools, emphasis is placed on teacher constructs. Findings focus on the nature of teacher definitions and the expectations they have of pupils.

## INTRODUCTION

The importance of teacher beliefs is recognised and yet it is difficult to capture and examine them (Bullough and Baughman, 1997; Mcvee, 2004). Here, an attempt is made to explore teacher beliefs about pupil potential and teacher expectations, through constructions of ability. In focusing on a particular aspect of teacher beliefs, it is possible to begin to discuss the complexities of teacher values and the importance of these in shaping teaching and learning experiences. Implicit theories (personal theories) about ability are inherent in teacher judgements and decisions made about pupils and the teaching and learning taking place and it is for this very reason that ability was chosen as the focus for this work.

Ability is not an uncontested concept but within policy documents, school systems, structures and teacher judgements, it often becomes a taken for granted assumption. Our own educational experiences have helped to inculcate us with notions of ability as an entity which not only exists objectively but can also be measured. Despite the issues surrounding this concept, use is made of the word 'ability' throughout the research and in my findings because it forms part of the common currency of educational language in schools and policies.

Drawing on a broader study (Hamilton, 2001) consisting of in depth case studies which looked at the views of high school head teachers, principal teachers (head of subject), class teachers, pupils and parents, this paper focuses on the teacher group. The aim of the original study was to explore the ways in which individuals in contrasting school contexts, interpreted ability; their beliefs and perceptions with regard to children with different perceived abilities; and to consider the nature of individual's beliefs and values concerning ability. This is achieved through building a picture of contextualised constructs. In order to do this the study focuses on individual interviews and classroom observations. Through the lens of institution, department and subject area as well as year group, pupil and teacher behaviour, judgements and classroom events are explored and analysed. Here, I wish to highlight the significance of teacher constructs of ability for teaching and learning experiences.

## THEORETICAL FRAMEWORK: TEACHER BELIEFS AND IMPLICIT THEORIES

Teacher beliefs form an integral aspect of their professional persona and practice (Pajares, 1992; Grossman and Stodolsky, 1994; Bullough and Baughman, 1997). As beliefs are often implied but seldom made explicit, it can be challenging to try to explore the nature of such ideas, their impact on practice and equally the reinforcement or challenges made to such beliefs by practice. This research project

works from the premise that teacher implicit theories of ability form the basis for teacher beliefs (Clark, et al., 1999) which in turn affect teacher interactions and judgements within the classroom.

In order to establish, the potential nature of teacher implicit theories of ability, it is also necessary to look at intelligence research since in creating any useful definition of intelligence, ability is used to describe the quality and nature of intelligence (Sternberg, 1990; Gardner, 1985). It can be argued that intelligence research is the primary theoretical base for any work on ability, presenting an abstract term which is then developed and defined in relation to the ability to carry out certain tasks or work or think in a specific way in particular contexts. If we work from the view that ability is a fundamental part of intelligence definition, any research or theoretical work on intelligence must impinge upon ability as a construable subject.

Research into intelligence falls into three categories: first, theorising about the nature of intelligence, secondly, measuring operations carried out in relation to potential intelligence and thirdly attempting to understand the nature of an individual's implicit theories of intelligence (Sternberg, 1990). While Sternberg places the first two of these within the realms of explicit theories about the nature of intelligence, individual constructions are seen as presenting implicit theories about intelligence.

[They] reside in the minds of these individuals, whether as definitions or otherwise. Such theories need to be discovered rather than invented because they already exist, in some form, in people's heads. (Sternberg, 1990: 54)

Sternberg argues that people's informal theories of intelligence derive from their articulation of ideas about the nature of intelligence and that such work is useful in helping us to understand behaviour motivated by these theories in their, 'everyday lives.' However this view is perhaps limited in its notion of the potential ramifications for society of implicit theories of intelligence. Judgements made by individuals in their everyday lives can impact upon the lives of others in many different ways. An extreme example might be the effect of implicit theories of intelligence on the judgements made by politicians. The development of educational policy carries within it the effects of ability constructs and these in turn affect the ways in which individuals experience schooling, develop their own constructs and interact with others. The cascade effect of such implicit theories from individual to society and vice versa, means that implicit theories are, at times, much more than helpful and interesting definitions affecting minor aspects of life but instead are capable of substantial impact at micro and macro levels.

Sternberg (1981) came to the conclusion that the use of implicit theories of intelligence is used to evaluate our own and others' intelligence. This has particular significance in the classroom, where teachers' utilisation of implicit theories is likely to have an important impact upon decisions made concerning teaching and learning (Fenstermacher, 1978; Clark, *et al.*, 1988; Zahorik, 1990; Pajares, 1992; Bullough and Baughman, 1997). Teachers attempt to make judgements about pupil achievement and future attainment, drawing upon implicit theories in conjunction with observation (Bullough and Baughman, 1997). Sternberg, et al. (1999) went on to develop the idea of implicit theories further through work on the tacit knowledge of professionals. As with implicit theories of ability, this tacit knowledge is bound up in the previous experiences and knowledge acquired by individuals and forms an intuitive base for professional judgements and behaviour but is obviously broader in scope. In this edited volume, Bruce Torff, refers to the conceptions, preconceptions and assumptions which persist powerfully in teacher actions and suggests these form a kind of 'folk pedagogy' (*op cit*, p196) deeply rooted in individual identity. Through exploring the behaviour, judgement and responses of teachers in specific classrooms and institutions in relation to specific concepts, teachers' implicit or tacit

theories of ability can to some extent be uncovered and examined.

The significance of teacher implicit theories of ability in the classroom and within specific systems is considered in the next section.

#### TEACHERS AND CONSTRUCTIONS OF ABILITY

Located within the seemingly contradictory contexts of comprehensive (state funded) and independent (privately funded) systems, classroom teachers provide a perspective on ability which may reflect simple mediation of institutional modelling of ability (Rosenholtz and Simpson, 1984). Or instead there may be a more complex mediation of ability tempered by individual teacher identity, notions of self efficacy within the classroom, responses to wider societal and political views as well as those perpetuated or negotiated within each institution and system. Certainly, attempts to look at teachers 'identifying ability' have tended to focus on the decision and its degree of correctness rather than on the decision-maker and her contexts and the nature of her conceptualisation e.g. whether teacher judgements coincide with researcher-administered tests.

In Scotland, within the context of an ostensibly egalitarian state system of education (maintained), where comprehensive, all-comer high schools deal with more than 96% of secondary school age children, previous work by Hamilton (1999) noted contextualised high confidence in teacher judgement, leading to a reinforcement of particular assumptions about the nature of different kinds of ability and subsequent provision and classroom interaction judgements resulting from these.

Through this work it is hoped that an understanding of teaching and in particular teachers and their concepts of ability will help to illuminate a fundamental aspect of teacher thinking. Teachers' implicit theories of ability are to be explored through teacher constructions of ability within contrasting contexts in relation to:

- The qualities perceived to be present in pupils of 'high' and 'average' ability
- Expectations of specific ability profiles (limited/fixed)
- Nature of any conflict or consensus with regard to implicit theories of ability.

#### METHOD

Respondents in previous research were often making decisions about their potential implicit theories based on choices from researcher lists or highly structured questionnaire type interview schedules. The view taken in this research into teachers' implicit theories of ability was that participants were to be encouraged to articulate their notions of intelligence without unnecessary researcher input.

In seeking to avoid the imposition of structured behaviours or attributes within the research instruments, this empirical work did not seek to create the foundations of individual theories in any highly prescriptive way. This, then, is not making assumptions about possible intelligences and attempting to define attributes or skills to each (Sternberg, 1981) nor does it begin to encourage respondents to consider intelligence with regard to current issues such as qualities and visible signs of intelligence, malleability and durability (Yussen and Kane, 1985). Instead, teachers were encouraged to articulate their own implicit theories in relation to their teaching practice with first year (12 years old) and fourth year (16 years old) high school pupils within two state funded comprehensives and two independent schools.

#### *Aim of this research*

This project was concerned with multiple perspectives on ability within four case study schools: headteachers, subject heads, class teachers, pupils and parents.

In this paper consideration is given to teacher and subject head of department constructs. This involved an investigation through interviews and observations of the following:

- Identifying the qualities indicating high and average ability pupils
- Teacher expectations of pupils in terms of ability
- The nature of any conflict or consensus with regard to implicit theories of ability.

#### *A case study approach*

In order to begin to address the nature of teacher implicit theories within schools a case study approach was selected. In choosing this tradition, a conscious attempt was made to avoid the simplistic comparative nature of political and media rhetoric which reduced ability in schools within each system to results on competitive league tables. Underpinning case study research is a belief in the complexities of the social units under investigation, that there is not a single objective reality but instead multiple interpretations of reality (Merriam, 1988). In this project, the unity of focus i.e. an institutional case was maintained while at the same time attention was confined to a particular research problem (Stake, 1988). Stake has variously described this as a delimited (1988) or instrumental case study (Stake, 1995) where the issues are dominant and it is not simply an understanding of the case for its own sake which is undertaken.

#### *Triangulation*

This Case study research relies upon multiple sources of information (Yin, 1989; Cresswell, 1998) in terms of perspectives on ability (headteachers, principal teachers, teachers, parents and pupils) as well as techniques of data collection (analysis of institutional literature, semi-structured interviews and observation). The Case studies themselves comprised 2 comprehensive and 2 independent schools that were chosen in order to provide varied institutional profiles. The case study schools were given pseudonyms to provide anonymity.

#### *Comprehensive*

- one serving mainly high socio-economic areas with public 'success' in exam league tables (MacDonald High School)
- one serving very mixed socio-economic areas with seeming lack of 'success' in exam league tables (St Thomas' High School)

#### *Independent*

- one long established school with selection by ability (Merchant School)
- one school using only informal selection by interview (Longhurst School)

#### *Interviews and non participant t observations*

Within each school a range of semi structured interviews took place as well as classroom observations connected to four subject areas: English, Maths, Art and Music. Four principal teachers were interviewed for around 45 minutes in each school. Subsequently, four classes in first year (S1 = around 12 years old) and four in fourth year (S4 = around 16 years old and preparing for external exams) were chosen by the school for researcher observations and interviews with the proviso that where any setting or streaming occurred, the top set should be chosen. Eight teachers and eight classes covering two year groups and four subject areas formed

the basis for interviews and observations in each school.

Semi structured interviews with teachers took place in 3 stages. A preliminary interview established the pupils nominated by teachers as 'very able' and 'average' and the teacher's description of his/her approach to teaching that particular class as well as their reflections on being asked to categorise pupils in this way. Non participant observations then took place during visits to schools over a combined period of roughly two months in each institution and two to three hours of lessons were observed for each class in each subject area and year group. These then formed the basis for an additional perspective on classroom experiences and were subsequently used to inform interviews. After each observation teachers were interviewed briefly for 10–15 minutes about what went well in the lesson and any comments they wanted to make about nominated pupils. Subsequently, they took part in a final interview of around 45 minutes dealing with further details concerning:

- the qualities of nominated pupils
- teaching approaches
- pupil responses
- teacher support for learning ('very able' 'average' pupils)
- teacher expectations
- ability of nominated pupils fixed/limited etc

### *Analysis*

Using the threefold structure for an iterative analysis of data suggested by Miles and Huberman (1994) of data reduction, data display and conclusion drawing and verification, the initial approach to the data was a holistic one in which tapes of interviews were listened to and fieldwork notes read and some initial notes made. Transcripts were made as a way of beginning to deal with the raw data but in the spirit of an iterative analysis, as a part of a cyclical and reflexive process in which the original tapes would be visited again as categorisation of data proceeded to verify or otherwise emerging themes. This allowed categories to be defined and tested through a return to the data. The approach to research and analysis is rooted in grounded theory originally established by Glaser and Strauss (1967) where theory emerges from the data.

## FINDINGS

### *Teacher constructs – a summary*

Drawing on interviews with teachers and observations in classrooms, teachers tended to visualise a hierarchical ability continuum moving from 'low' to 'high' ability where the 'very able' were rarely perceived to exist in some schools. Teacher constructs helped to highlight belief in the distinctive natures of 'high' and 'average' ability and consequently affected teacher expectations of pupils. This also affected the nature of teacher response to pupils exhibiting the qualities associated with different levels of ability. Since ability is a contested concept, an important aspect of the interview process involved reflection on the initial task of pupil nomination according to ability and the challenges if any that this created for teachers. Most teachers saw the task as an extension of what they did from day to day in their classrooms. Where there was a problem, it became very difficult for the teacher to talk about pupils without the construct of ability and in doing so the teacher denied that there was any difference in output and achievement for pupils. In the following pages these main themes are considered in greater detail.

### *Constructing 'high' and 'average' ability*

Teachers' perceptions of ability were affected by a belief in a hierarchical ability continuum on which pupils' ability could be located (MacDonald and St Thomas' high schools and Longhurst independent school). This led to notions of rarity (infrequent identification of the 'very able') and a deficit model of 'averageness.' In addition, the quality of interaction that the 'very able' enjoyed within subject areas, was considered unattainable for other pupils although it was believed that all pupils could make considerable progress.

### *Positioning and the Rarity of the 'very able'*

**Positioning** is used to describe teachers' placement of pupils, according to ability, on a **global** (general) or **local** (comparison within the classroom) scale or continuum. The 'very able' pupil was at times a very rare entity (MacDonald and St Thomas' high schools and Longhurst independent school) and in three of the schools teachers commented on the relative high ability of nominated pupils while suggesting that a 'very able' child could not be found. This occurred in both comprehensive schools and in Longhurst. It was possible for teachers to deal with comparative notions of ability by use of an ability continuum providing notional placement in regard to ability (MacDonald and St Thomas'). On the other hand, in Longhurst ability was perceived in terms of a general measurable quality such as IQ and subsequently in subject specific terms where it was regarded as part of a continuum. It is possible to suggest that these continua which teachers used, consisted of past experiences used as a 'model of reality' (Geertz cited by Cohen, 1985) which Cohen argues helps us to orient ourselves to the phenomenon requiring interpretation (*op cit*, p.99).

The use of positioning to locate pupils in terms of ability difference could lead to the very limitations subsequently to be found when teachers described their expectations of particular 'average' pupils. Although teachers believed that they had similar high expectations for all pupils, their own personal beliefs about the nature of ability led them to the conclusion that distinctions had to be made. Only in Merchant School, a highly selective independent institution, was positioning scarcely evident. This might have been because positioning in relation to measured ability was occurring explicitly at an administrative level but was actively discouraged by staff in conversations between pupils. The avoidance of an explicit discussion of attainment was important as teachers focused on the skills and attributes of individuals in order to bring about progress and an improvement in performance within the classroom.

### *The 'very able' and the 'average' pupil*

However, across all schools, when teachers observed the 'very able,' there was a belief in an unusual process of interaction with the subject. A similarity of description was observed across subject areas. The intangible nature of this process and its distinctiveness meant that it provided evidence for teachers of difference between the 'very able' and the 'average' pupil and reinforced the gap which was perceived to exist between improved 'average' performance and high ability. For the 'average' pupil the deficit model of 'averageness' provided a kind of anonymity (Waterhouse, 1995). In the perceptions of teachers the ability identity of 'average' pupils consisted of a lack or absence of those skills and attributes which 'very able' pupils possessed. Where 'average' pupils were seen to possess a positive attribute such as motivation, it was observed that they exhibited this enthusiasm and work ethic despite their lack of ability.

### *Implicit and explicit identification of ability*

Ability was an integral part of comprehensive school experience. The 'very able'

pupil was implicitly identified through personal teacher constructs of ability. The implicit nature of ability judgement was necessary because of teachers' interpretation of a system, which was perceived to require an avoidance of ability recognition. This was highlighted in the discourses of headteachers and principal teachers where discussion of the organisation of learning focused on attempts to ensure that explicit acknowledgement or judgement of ability should not be used to limit potential attainment through setting. However, there was also the potential for consideration of a limited use of this organisation when arguments concerning subject specific ability were used to support the implementation of setted classes.

Ability within both independent schools was explicitly constructed at an administrative and organisational level. Entry to such schools involved the need for an overt declaration to families of institutional character and purpose which in turn, entailed making explicit, notions of ability, the organisation of learning and the nature of teaching.

#### *Teacher expectations of ability*

Within teacher expectations of perceived ability, dissonance within individuals began to appear in comprehensive schools. Teacher perceptions of the obligations of system ideology tended to focus on minimisation of difference but their perceptions of the 'average' pupil meant that they brought to bear the idea of limitation of potential. Consensus within independent schools in terms of a willingness to recognise ability difference meant that varied expectations were acceptable and instead of limitation, individual target setting was used to explain differences in attainment.

Teacher Expectations of children was initially distinctive because of the perceived focus of all teachers in the two comprehensive schools on a similarity of expectation irrespective of ability. However, this was always qualified in some way to maintain a distinction between expectations of 'very able' pupils and those nominated as 'average.' Similarity of expectation was seen as a way of suggesting that a teacher was obliged to hold high expectations of all children and by doing so could avoid to some extent the imposition of limitations. Nonetheless, in the ensuing discourse teachers outlined varying degrees of limitation for the 'average' pupil. This could be in the form of 'upper' limits or 'closer' targets for such children. Even those teachers who felt strongly that 'average' pupils could achieve similar progress to that of 'very able' pupils would qualify in some way.

In St Thomas' High School (Art S4) this took the form of the improvement of technical skills to achieve some form of parity. However some pupils were considered unable to achieve the 'sensitivity' as an artist that the 'very able' possessed. 'Very able' pupils on the other hand faced 'the sky's the limit' or the limitation of grading. The former included predictive elements in the form of future exam grades or at fourth year level even potential career paths. The latter was encapsulated by a Music teacher at St Thomas' who pointed out that children in her 4th year class could only go so far: 'you can't get better than an A.' Another teacher highlighted the need for an added grade to provide children with a next step which involved aiming for an A+ in English (Macdonald High). It is noticeable that expectations were highly contextualised and related to attainment markers such as exam grades/performance and so confined to achievement within a syllabus and exam schedule.

Teachers in both independent schools once again reflected those in comprehensive schools in the way in which they considered their expectations of 'very able' and 'average' pupils. Here, they used the notion of similar high standards for all children but with qualifications. These qualifications, however, were not presented as limited progression for the 'average' pupil. Instead those in Merchant independent school highlighted personal or individual targets or goals as well as different forms of progress irrespective of goals achieved.

### *Teacher responses to perceived ability difference*

Teacher actions formed into two categories of tactical and strategic. The reliance placed, in teacher discourse, on the strategic elements as a response to ability difference perhaps underlines the nature of much policy and development work on the subject of differentiation which has originated from a strategic intervention stance i.e. the use of differentiated exercises within textbooks and across textbooks as well as worksheets. In S1 (first year high school), there was little evidence in the observed classrooms of this form of differentiation strategy except in St Thomas' (comprehensive) Mathematics department where the highly structured nature of the principal teacher's organisation meant that this strategic response to ability was strongly in place. By S4 in a setted grouping, both strategic and tactical teaching of ability was noted by the teacher but it was a tactical teacher-pupil interaction which formed the basis for ability responses during lessons observed. In fourth year classes, across schools, while strategic responses were posited by all but one English teacher (MacDonald High - comprehensive) who spoke of the near homogeneity of the class, tactical teaching was very much to the fore during observation. It's interesting to note that in fact, pupils interviewed and asked about potential differentiation in the form of worksheets etc. were generally unlikely to have experienced it and were not enthusiastic about it, preferring to avoid what was seen as yet more work.

A distinction made by a small number of teachers in the two maintained schools was the nature of tactical intervention for 'very able' and 'average' pupils. For the very able, tactical intervention was usually for the purpose of a more sophisticated kind of interaction involving helping them to discover their ways forward to a deeper understanding of ideas or techniques and were usually generated by the teacher because such children didn't usually ask for help. On the other hand, tactical intervention with 'average' pupils was usually instigated by the pupils themselves and came about because of the need for the simplification of instructions or a need to see where corrections might be needed.

### *Reflecting on the research task*

**Reflecting** on the task of categorisation, teachers in Maintained schools either implicitly or explicitly spoke of a form of 'balancing act' which entailed reconciling at times contradictory elements of a philosophical, professional and personal system of beliefs in terms of the nature of beliefs about society and educational provision, professional contexts and subsequent obligations and personal beliefs about the nature of ability. This led to most teachers in the two maintained system feeling uncomfortable with an exercise which they saw as at odds with the 'system' philosophy of equal treatment for all children. She was, she said, trying:

To make them all feel equal while very obviously differentiating yet we're obliged to differentiate and it just feels like none of it makes sense. (St Thomas' high school, S1 English teacher)

The S4 (4th year high school) English teacher emphasised the flexible nature of ability and maintained that the rigid stratification of ability was an artificial one. However, he then went on to insist on a view of ability which suggested a lack of flexibility.

Ability is either there or not there, there are always things you can teach a child to become more able at, you can teach a child to become more able at punctuating a sentence but there's no big movement in terms of ability. I think it's impossible to improve ability.

He maintained that it was possible to change attitudes and aspects of performance but not ability. A first year Maths teacher (St Thomas') suggested 'I'm much happier talking about my expectations than the ability issue.' He then went on to make use



of the idea of similar progress for all pupils through having high expectations for pupils irrespective of perceived ability. However, he also made use of an image of limited capability: 'I push kids into levels which are the very upper limit of what they are capable.' This was echoed again and again as teachers tussled with a need to believe that all children were capable of achieving a high standard.

Any child's abilities can be built up and they can develop language skills. Being absolutely honest with you, you are going to find it harder, the development is going to be less in less able pupils. (S4 English teacher, St Thomas' high school)

Nonetheless, there was an acceptance of a professional need to utilise assessment with its ability implications and exam syllabuses with their subsequent stratifying of achievement and linkage with ability.

For almost all teachers across both independent schools the use of categorisation was seen as a necessary part of the job and a natural way of considering pupil ability. However, it was felt that any use of categorisation had to be flexible in order to ensure that pupils were not defined and confined within it but could be seen to move within and across categories. Those teachers in the independent school Longhurst also noted that while there was an acknowledgement of the need for flexibility, there was also an acceptance of limitations for this flexibility. These limitations took the form of a 'ceiling' for individuals in Maths beyond which it would be difficult for them to move.

Some kids reach their ceiling and that's it, for some the ceiling is very low, there are some people in this world for whom the ceiling is very very low. (S4 teacher, Longhurst independent school)

In English, Music and Art there was a distinction made between improvement for different children and the distinction was made between making some improvement and actually gaining parity of achievement with a 'very able' pupil, the latter being considered highly unlikely.

I think I want them all to progress but they will never all come out equal at the end. They're not all going to go over the finishing line as it were but I think as far as my expectations are concerned, I think I want them all to progress to quite a high standard. (S4 Art teacher, Longhurst independent school)

As well as most teachers retaining a need for flexibility in Merchant High School, two teachers (S1 English and S4 Art) were hostile to the need for any form of explicit categorisation especially of the tripartite division of ability given in the categorisation task which was seen as highly simplistic by the English teacher. In Art (S4) labelling of any kind was highly divisive according to the teacher, although it was evident that while explicit categorisation was unwelcome, there was a degree of judgement of worth taking place at an implicit level in the classroom itself.

I'm not going to answer directly. I hate this idea of labels. I actually feel incredibly uncomfortable talking about labels. (S4 Art teacher, Merchant)

She also suggested a uniformity of performance from pupils (top grade in exam) but within her own discourse, she made distinctions of performance and suggested that part of her difficulty was in allowing pupils to see that she had collaborated in a categorisation activity.

There might have been pupils who continually do something that might get a 'wow.' So if I pick out that child to give you and it's a constant 'wow' child, they'd know that Miss had only picked out so and so and I'd rather that wasn't the case. (S4 Art teacher, Merchant)

This then reinforced the pervasive nature of teacher implicit theories despite the teacher's explicit need to deny the presence of differing abilities. Her attempts to avoid explicit ability judgements were confirmed by pupils:

She talks about everyone the same. She would never acknowledge anyone if they're not good or if they're good. (Pupil 15 Art, Merchant)

However, it is still evident that judgements are deemed to be made, albeit subtly. This left one pupil wondering:

I'm not sure she's quite honest about what she thinks about what you do. (Pupil 14 Art, Merchant)

Despite this teacher's best efforts to suggest an absence of ability beliefs in order to minimise the impact of her beliefs about ability in the art classroom, young people's perception of the teacher's distinction between 'good' and 'not so good' was still perceived to exist and they questioned the 'honesty' of her ability judgements and interactions.

#### *Classroom consequences*

Despite the desire of comprehensive school teachers to have similar expectations of all pupils, their implicit theories of ability reflected a persistent belief in ability as hierarchical and that placement within this hierarchical view inevitably linked to limitation of performance and attainment. Limitations were reinforced by teacher perceptions of the unique way in which 'very able' pupils interacted with their subject and the deficit model applied to average pupils. This led in turn to a view that 'very able' pupils faced little or no limit on what they could achieve while 'average' pupils were faced with closer targets and limits on where their learning journey might take them. Teacher expectations of pupils also affect their teaching and the nature of any support given. Consequently, teachers described their interactions with 'very able' pupils as often initiated by them and involving support for enhanced understanding. By contrast, 'average' pupils would only receive one to one attention if they sought help and so interactions tended to focus on clarification of instruction or understanding of material.

This emphasis on limited expectation despite support for a system ethos encouraging similarity of expectation, highlights the powerful nature of teachers' implicit theories of ability. Sternberg's work (1990) on implicit theories and subsequently on the tacit knowledge of professionals (Sternberg and Horvath, 1999) supports the tenacious nature of personal theories. The classroom consequences of these persistent beliefs about ability are that teacher judgements about current and future attainment of pupils, lead to limitations imposed by teacher expectations and interactions and result in a more restricted engagement with the curriculum.

The Scottish Executive's support for a new approach to curriculum (A Curriculum for Excellence, 2004) and for an enhanced assessment process (Condie, *et al.*, 2005) which are to enhance pupil learning experiences will rely on teachers examining their practice and approaches to pedagogy. However, without an exploration of the teacher beliefs which will mediate any attempt at educational reform, change in education may be perpetually strived for but never quite attained. The significance of teacher implicit theories of ability is both perennial and immediate. Lying at the heart of teaching practice, they affect teaching and learning experiences and as the filter for any policy shifts, they may hinder or stop attempts to modernise the curriculum and assessment practices.

## CONCLUSION

Understanding teacher implicit theories of ability is essential in order to begin to articulate and discuss the nature of teacher beliefs and their impact upon teachers' professional identities, and the teaching and learning occurring within institutions. In this study, teachers within Maintained schools were likely to engage with conflicting ideas concerning ability and although consenting to participate in an education system which seemed to present specific and coherent values, there was uncertainty over the nature of ability. A belief in a system which was perceived to minimise difference meant that ability construction was a covert aspect of decision making and led to dissonance within individual constructs where professional and personal perspectives clashed. In independent schools, the explicit nature of the consensus with regard to ability and the responses to be made to perceived ability difference, meant that teachers actively consented to participate in this construction of ability.

The importance of teacher judgements of ability in affecting the teaching and learning process are well-documented (Ball, 1981; Prawat, 1992; Pajares, 1992; Skeggs, 1997; Gillborn and Youdell, 2000) but the nature of those ability constructions brought to bear in different institutional contexts needed to be explored (Freeman, 1998). The particular problem faced by teachers in comprehensives is seen in the paradox of such a system, the striving after commonality and difference (Clark, *et al.*, 1999). Here, teachers found that they had to cope with dissonant experiences as they attempted to deal with beliefs and values about educational principles and personal constructs of ability. The difficulty of dealing with ability construction as located in personal continuums (Macdonald High School and St Thomas' High School) or as located on a measured continuum (IQ in Longhurst independent school) creates problems when attempting to improve performance, as ability location has the potential to constrain perceptions of progress.

Dissonant beliefs in Comprehensive schoolteachers were particularly significant in relation to their expectations of individual pupils. Their perceptions of differentiated potential, as dependent on perceived ability had major implications for subsequent learning experiences for pupils. Sternberg (1993) argues that it is perceived potential rather than attainment which can affect judgements of children. Teachers' tendency to seek confirmation of their beliefs about pupil potential might influence their teaching and this, in turn, might lead to a reinforcement of their original beliefs (Pajares, 1992: 317).

A fuller understanding of the nature of such contradictions and compromises needs to be explored as well as the ramifications for teacher education and teacher professional development. This is particularly pertinent in an age of renewed focus on competence based teacher education models where an emphasis is often placed on the skills and knowledge base being developed and drawn upon. However, teaching is a moral endeavour (McVee, 2004; Willemse, *et al.*, 2005) which is value laden and driven. Fundamental to any teacher education programme needs to be a rigorous and reflective process of self evaluation in relation to teacher beliefs and values, their significance for practice and consequently for learners. The hidden nature of teacher implicit theories needs to be constructively challenged and investigated. It is only through challenging assumptions and understandings about ability that teachers can attempt to reflect on and deal with their conceptions and preconceptions more effectively.

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