School self-evaluation in action:

A case study in the North-West of England

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Copyright Statement

Dedication

To my Mum as an inadequate thank you for all the unconditional love and support she has given me throughout my life.

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Abstract

This research examines the development of a self-evaluation model within a secondary school environment**.** The study investigates the contributing factors that influence the development of a school and suggests an evaluative model that measures pupil performance, encourages school staff to be self-reflective and enables a trustworthy indication of school attainment and improvement.

Data collection included the use of surveys at the beginning and end of the investigation and also in-depth individual semi-structured interviews with school staff and local authority educational advisers.

The outcome of the research provided a self-audit model that enabled judgements to be made on pupil progress across the full range of the curriculum and measured the strengths and weaknesses of the school compared with national standards.

Emerging from the research was the realisation that managing the process of change was fundamental to the success of the model. It is this change process and its management that are the key findings of this research.

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Tables and Diagrams

Chapter 1: Introduction

1.1 The context of the study

This thesis provides an account, broadly within the action research tradition, of the development and introduction of a self-evaluation model of school improvement in a secondary school in the North-West of England. The self-evaluation model that was developed was designed to address the frustrations expressed by the staff at the school where I worked as an Assistant Headteacher. The main frustration expressed by the staff was how the mass of information coming into the school and the mass of information generated within the school could be understood and disseminated. Staff found it more and difficult to ascertain what was available and suitable to support their teaching. It was acknowledged that the purpose of data was to provide a helpful tool to improve learning and describe the school's performance in comparison to national standards. However, the focus of the research changed considerable from the original idea which was to just identify the data, make it accessible, and suggest uses to support learning. It became apparent that an evaluative model was needed to meet the ever changing demands made on the school, which could provide the evidence required by external agencies such as Ofsted. The overall effectiveness judgement, within the Ofsted Inspection Framework, places a particularly strong emphasis on the outcomes for pupils and the school's capacity to improve. The purpose of the model was to develop a framework that provides an evaluation of the schools effectiveness and a diagnosis of what it should do to improve, based upon a range of evidence including that from first-hand observation, external data and internally generated school data. The framework became a policy to evaluate the quality of teaching and its impact on learning. It was therefore necessary to examine the contributing factors that influenced the development of a school and to create a model that provided staff with the facility to measure pupil progress, their own progress and the contribution they make to the improvement of the school.

1.2 Defining Elements

It is important to discuss the terms of reference used within this study. The purpose of a learning institution is to enable learning, teaching and accountability through the effective use of assessment.

Statutory assessment is mandatory. Baseline Assessment, which developed from the 1977 Education Act, takes place as pupils begin their school careers and is based upon the Desirable Outcomes for Children's Learning (SCAR 1996a). The statutory assessment which takes place at the end of a Key Stage is developed from the 1988 Education Reform Act and based upon the National Curriculum. Pupils' attainments are recorded numerically, relating to the scores and levels achieved by the pupils. These scores are reported to those with the right to know.

Schools should aim to have in place an assessment cycle. Such a cycle provides greater detail by extending the planning cycle and relating it to more formalised practice. The assessments made by the teacher are, where appropriate, recorded. The records are analysed and form the basis of reporting and target setting with pupils, parents or other teaching professionals. The targets are then built into future plans which inform teaching and learning. The assessment cycle is formative but may be summative, providing a summation of learning at a given point, for example, when statutory assessment have been undertaken. The assessment cycle developed within the Ridgeway model is outlined in Chapter six and assessment is discussed in detail in the next chapter

A term often used in the process of assessment is monitoring. In the classroom context, monitoring is the skill of being able to have a constant, clear and accurate overview of pupils within a learning situation. The use of monitoring and assessment together helps to establish pupils' needs and will enhance their future learning

experiences. A clarity of purpose, together with systems and structures, enables effective monitoring of learning.

In a school context, professional monitoring systems (Tymms 1999*)* exist in parallel with the monitoring of learning in the classroom. The purpose of these systems is to manage the provision of appropriate teaching, learning and assessment within the school as a whole. Teachers who are year or subject coordinators, or members of the senior management team regularly monitor these areas by discussing progress with individuals and groups of teachers, examining records and observing teaching. The constant, clear and accurate overview enables the provision of additional support, resources and advice when necessary.

Monitoring requires visibility, consequently when monitoring pupils' learning it is important to decide how to record the necessary information so that accurate analysis can occur. “A vital part of assessment is recording as record-keeping is the essential interface between assessment and reporting ...” (Daugherty 1995). Recording is an instrument which assists the teacher to remember significant events and interactions. However it is the analysis of the records kept that allows the teacher to track the progress of individuals and groups to make formative decisions, to build effective summative statements, or provide information for a specific purpose. This would be necessary to move a pupil to another set/group, to another school or when writing a report about a pupil.

Recording should therefore focus upon pupils' learning in relation to the curriculum, both what they learn and how they learn, and gauge progress made. Monitoring provides the teacher with an overview of the learning taking place in the classroom, whereas assessment is a process which enables the teacher to gain a more detailed understanding of the pupils' learning and learning needs. What to record is determined by what is being monitored or assessed.

If records of assessment are to be of value, either formatively or summatively, they must be objective, based upon fact not speculation, and purposeful. Their prime purpose must be to aid the development of teaching or learning. Further, if records of assessment are to be manageable they must be succinct, not occupying a disproportionate amount of time, and they must be well structured, so that they can be analysed easily and effectively.

Black and Wiliam (1998, p. 5) stated “For assessments to function formatively, the results have to be used to adjust teaching and learning.” Recording assessments is only the first part of the process; it is the analysis and interpretation of results which determines the formative adjustments to be made to teaching and learning. The formative use of all recording mechanisms depends upon the ability of the teacher to analyse and interpret the assessments, to note alterations to teaching or learning and then to put these into action. The analysis of data was found to be a major concern of the support and teaching staff and is discussed in detail within chapter five

Teachers are accountable to their pupils. They are responsible for providing work which is interesting and challenging, maintaining pupils' involvement and helping them make progress in their learning. Accountability to pupils occurs on a daily basis, within and beyond lessons. Teachers are also accountable to their fellow professionals, within and beyond the school, through the provision of accurate and appropriate information from which pupils' educational progress can be tracked, measured and compared.

Assessment must provide an effective communication with parents and other partners in the learning enterprise in a way which helps them to support learning. (Harlen et al. 1992). The general public is informed about the quality of schooling through two main sources: OFSTED reports provide details of individual school inspections and collated evidence; and the written information that is published by the school. School

publications are either publicity materials or reports written to parents about pupil's progress

Reporting is an important part of the assessment process which deals with communicating pupils' learning and learning needs to interested parties. It can be formative, providing information about learning which can be developed through further teaching and learning, or it can be summative, providing information about a pupil's learning at a given point.

There are three main audiences for reporting; pupils, parents and others with the right to know. All three audiences require from the teacher information which is based upon evidence of assessment rather than personal views and speculation. The teacher is required to identify from assessments the pupil's strengths and weaknesses and to determine appropriate yet challenging targets. It would be very off putting for parents to receive written reports which they could not understand because the terms used were unfamiliar. Similarly the statements of special educational needs and the numerical levels in National Curriculum can be also very confusing. It is therefore very important to explain the specialist terms used or write them in language that is meaningful to its intended audience.

Reporting to parents or carers pupils' progress helps them to understand the teaching and learning process. It provides a greater understanding of the context and content of the pupils' learning and shows the progress made since the last report. For example parents want to know how well their children are doing and how they can support their children within the learning process.

Hard data has a frightening effect on schools, suddenly they become accountable. Accountability came to the forefront of the education agenda with the introduction and development of the 1988 Education Reform Act. When New Labour became the

government in 1997 their premise was 'Education! Education! Education!'. New Labour aimed to `raise standards', using such techniques as data analysis and target setting. The growth of education data, based mainly upon OFSTED reports and National Curriculum performance. New words began to appear in the educationalists vocabulary ‘value added’, ‘benchmarking’ and ‘target setting’.

Standards became the new driving force of education. The concern that 'standards have fallen' and that 'standards need to improve' has dominated political debate for well over a hundred years. Within this thesis standard is defined as an expected level of performance. Standards are set at the levels considered appropriate at that time. The notion of `raising standards' requires average performance to improve to such an extent that new, higher, standards can be set. To emphasise the importance of standards the initials of my school Ridgeway High School were used to define the school logo ‘Reaching Higher Standards’.

At a macro-level, quantitative data has provided evidence for phenomena which had previously rested in teacher mythology, such as the attainment 'dip' as pupils move into Key Stage 3. At a micro-level, quantitative data has provided evidence of the progress and learning of individual pupils which, with the teacher's personal knowledge of the pupil's circumstances, has been used to help determine individual pupil targets.

The strength of accountability is that it provides a prospect for individuals to develop within a supportive network. Pupils are accountable to themselves, their parents, their peers and teachers. Pupils are able to set themselves challenging realistic personal targets, track their targets and ask for help if required to achieve their targets. Self-assessment and self-evaluation are key skills pupils need to develop and the acquisition of these skills have proved to be an essential element in the success of the framework that describes the Ridgeway Model.

An assessment framework and self- review model for a school relies upon relationships: the relationship between the teachers and the pupil; the relationship between teachers; and the relationship between the school and its local community. A structure within the school has to be in place whereby all members of the school community can contribute to the learning of pupils and the monitoring of that learning. It is through this lens the school framework was developed.

I recognised that the development of such a model could cause considerable upheavals and uncertainties regarding current practice. This would inevitably require the careful implementation of the management of change process. It is through the management of change lens I base this thesis

There are three main areas which have been used to make judgements about schools; these are 'performance indicators', 'valued added measures' and 'self-evaluation'.

1.3 Performance indicators

The advocates of judging schools in the 1980's and 1990's (Woodhouse and Goldstein, 1988; Gray et al 1990; Rowe 2004) considered performance indicators, measures of average school achievement scores, to be the way forward to describe how well a school is performing. However, it became apparent that the application of this model to the school environment presented difficulties. Goldstein (1997), suggested that these difficulties are twofold. Firstly, their use tends to be very narrowly focused on the task of ranking schools rather than on that of establishing factors, which could explain school differences, and secondly, a number of studies have now demonstrated that there are serious and inherent limitations to the usefulness of such performance indicators for providing reliable judgements about institutions (Goldstein and Thomas, 1996). The reasons given for these limitations are that it is very difficult to provide a simple one, or even two dimensional summaries which capture all of the important features of

institutions. By the time information from a particular institution has been analysed it refers to a 'cohort' of students who entered that institution several years previously, hence its usefulness for future students may be dubious. Even when information is analysed on a yearly basis, it may be necessary to make adjustments, which go back two or more years. It has become accepted practice that schools and teachers within those schools should be judged not by a single cohort of pupils but by performance over time such as a key stage. Goldstein (1986, 2008) and Leckie (2009) discuss the need to establish appropriate measures of institutional outcomes and base-line measures and the need to exercise care and sensitivity when interpreting apparent difference.

1.4 Valued added measures

The grade obtained in a public examination by a specific candidate depends upon many contributory factors. At one extreme, some factors are completely random and cannot be influenced by candidates or their schools; for example, the uncertainty in upgrading a candidate's answers in an examination (Nuttall and Willmott, 1992; Mortimore and Mortimore, 1984). At the other extreme, the factors are wholly dependent upon the school; such as whether the teacher actually taught a topic in the syllabus. In between, factors depend partly on candidates and partly on their teachers, parents, peers and other social circumstances (Saunders, 1999, Ballou, Saunders, Wright 2004). There has been much criticism of some performance indicators because they do not take these 'contextual factors' into account (Smith and Tomlinson, 1989; Kendall. 1995; Murphy, 1997), which is the main reason why value added methods have been introduced (Woodhouse and Goldstein 1996).

In the value added method, allowance is made for contextual factors by using the candidate's prior performance in a public examination as a covariate, which then concentrates attention on the 'progress' made by the candidate thereafter. As argued above, value added measures are limited in their validity when used within a single school simply because of the relatively small number of pupils. However, as all

candidates normally make some progress, a more appropriate description would be 'relative progress' as pupils are in this context just being compared with the average of all candidates, (Sparkes 1999). The average progress made by the school's candidates in one particular subject is often called the Value Added indicator of that department and this is "widely regarded as providing more accurate measures of school effectiveness than the raw results" (Thomas et al, 1998. P 91). Some researchers (Fitz-Gibbon, 1995; Jesson, 1996: Thomas and Mortimore, 1996) regard socio-economic factors as of minor importance after 'prior performance' has been taken into account. They argue that these factors are accounted for in prior performance scores gained by the pupils. However, others (Gibson and Asthana, 1998a.1998b) dispute how far these factors compensate for the social context of the school and there does now seem to be some attempt to also include this in the value added indicator (Thomas et al., 1998).

The debate about contextual factors centres on the validity of value added indicators for measuring school effectiveness. While not denying the importance of this argument, the apparent assumption seems to be that, when the examination results for a particular subject in a school are aggregated to form its value added indicator, the random factors cancel one another out and only the 'School Effect' remains.

Sparkes (1999) suggests school performance indicators based on 'raw results' are being superseded by those based on 'value added' methods. However he questions the usefulness of value added indicators when used to differentiate between departments within high schools in Scotland. It was found that the confidence intervals for most subject departments are so wide that it becomes almost impossible to distinguish between them, and concludes that this indicator is an uncertain way of measuring 'effectiveness'.

Value added is measured on a scale -1 to +1. Using this scale an average sized subject department with a value added indicator below -0.34 will not establish whether this is

because they are doing a worse than average job of preparing their pupils for examination or because they happen to have had a bad set of candidates. Smaller departments would require even larger negative values before needing to become concerned with their performance. Furthermore, a department's value added indicator still contains a large proportion of 'contextual factors', so the department could only be identified as 'ineffective' if it was known how the school's social context had affected its value. Other research have used value added to assess the teacher again they warn that value added models can misjudge the effectiveness of teachers (McCaffrey et al, 2004; and Amrein-Beadsley, 2008). Gorard 2008 suggests however appealing the calculation of value-added figures has become, their development is still at the stage where they are not ready to move from being a research tool to an instrument of judgement on schools. He argues that these figures may mislead parents, governors and teachers and, even more importantly, they are being used in England by OFSTED to pre-determine the results of school inspections.

The value-added feedback is valuable for monitoring factors influencing performance, to identify under-performing groups, to assess individual pupil progress and to provide evidence of whether a school is performing above or below expectation in terms of a specific outcome over a particular period. The analysis and the feedback may give slightly different perspectives on schools and some may offer an unexpected insight. However, taken together they can be used to build a more comprehensive picture of overall school performance. Performance data therefore becomes a contributory factor under the over-arching school self-evaluation umbrella. The presentation of results, supporting explanation and training on the use of performance data for school self-evaluation is more important than an understanding of precisely how the results are derived.

1.5 Self-evaluation

Rudd and Davies (2000) report on a project that has mapped out what schools and local education authorities have been doing in terms of school self-evaluation and what the main benefits have been for those involved in such processes. They suggest that the duality of inspection and self-evaluation "makes sense and it is true that a majority of schools view the inspection criteria as being a suitable basis for self-evaluation." However, as their research revealed, "some difficulties still remain, arising from the fact that self-evaluation and school inspection are not the same thing." (Rudd and Davies, 2000; p 20). This research shows that tensions can exist between the external requirement for inspection and internal school-based desires for self-evaluation and improvement. They suggest that this is why a number of schools and Local Education Authorities (LEAs) have made use of frameworks other than that supplied by Ofsted, including quality assurance standards, such as 'Total Quality Management', British Standards Indicator BS 5750, 'Investors in People', 'The Business Excellence Model', and school-driven frameworks such as that suggested by MacBeath (1999).

My own Local Education Authority produced a "Self Evaluation Framework" to help schools with this process, by interpreting the Ofsted requirements and analysing best practice. The introduction to this framework states:

> *"The most impressive educational practice is seen in those schools, which have developed the capacity to think about themselves. At the heart of the school self-evaluation model lies the principle of good practice in school leadership summarized in the Ofsted framework for the Inspection of Schools. These principles focus on raising standards and enhancing pupil progress through high quality teaching and learning in the classroom. School leadership is about making effective use of resources to bring about these principles."*
>
> (Wirral LEA 2001)

School self-evaluation is a means of recognising the quality of provisions made by a school and from this early identification, formulating actions to improve provision and outcomes. The focus of self-evaluation is on all that the school provides, but is primarily concerned with the impact the school has on pupils' attainment while recognising that the school also has a broader function. The view that is supported is that school self-evaluation needs to be undertaken in partnership with the local education authority so that each party can contribute.

> *"If schools are to maintain high standards or secure improvements they need a strategy for appraising their performance which complements the thorough but occasional health check provided by inspectors. Monitoring and evaluating are essential to effective teaching and learning in the classroom and to good management and governance of the school."*
>
> (HMCI forward to School Evaluation Matters 1998).

The effectiveness of a school self-review process will be determined by the process it adopts, to gauge the quality of its provision. As part of this process judgements will have to be made from external and internal generated data.

1.6 External quality control

> *"During the mid-1990s and certainly from 1993, the year in which Ofsted first started to carry out school visits, external inspection was seen as the main driving force in terms of the evaluation of school and pupil performance. Several years on, however, it is apparent that the processes and frameworks used as a basis for inspection have been modified so as to take greater account of a growing drive for internal, self-evaluation, arising from the desire of schools and teachers to assess for themselves how well they are doing. By 1996, for example, an inspection framework was introduced which gave greater emphasis to a school's own evaluation of its strengths and weaknesses."*
>
> (Earley et al.,1996).

Publications emanating from Ofsted such as School Evaluation Matters (1998) have drawn schools attention to this practice and advised schools on self-evaluation processes. It is clear that Ofsted now views external inspection and self-evaluation as complementary activities. The Handbook for Inspecting series, Ofsted Framework 2000 states:

> *"Ofsted is committed to promoting self-evaluation as a key aspect of the work of schools: The school that knows and understands itself is well on the way to solving any problems it has. The school that is ignorant of its weaknesses or will not, or cannot, face up to them is not well managed. Self-evaluation provides the key to improvement. The ability to generate a commitment among staff to appraise their own work critically, and that of others, is a key test of how well a school is managed."*

Ofsted have identified 'inspection' and 'internal evaluation' as key areas within their remit. Both inspection and internal evaluation are concerned with providing an accurate appraisal of the quality and standards of the school and diagnosing what needs to be done to improve them. Inspectors have a duty to report, via the governing body, to parents. Schools are encouraged to do the same with their self-evaluation findings.

Power (2000) is cynical of the need for audit in that he suggests that an audit explosion occurred that was driven by political demands for greater accountability and transparency of service providing organizations such as schools. Quality assurance was taken from an industrial production context and elevated to a 'universal schema' requiring institutions such as schools to provide objectives, performance measures to reflect the objectives, monitor actual performance and then feed the results of monitoring back for management attention. Power (2000) suggests, "The welfare state is increasingly being displaced by the 'regulatory' state, and instruments of audit and inspection are becoming more central to the operational government". He furthers his argument when considering the public sector by saying "…it is plausible to suggest that

the audit explosion is fundamentally an ideologically driven system for disciplining and controlling doctors, teachers, university lecturers and so on, and not an instrument of genuine accountability". The view is put forward that audit processes are not neutral acts of verification but they actively shape the design and interpretation of the auditable performance and provide more or less comforting signals to regulators and politicians. Power argues that "institutionalised pressures exist for audit and inspection systems to produce comfort and reassurance rather than critique". Since audits do not operate neutrally they have effects on those being audited. A change in culture appears for example in schools teachers direct their teaching towards the demands of the inspection process rather than the quality of the learning experience. There is an argument that says audit restores trust between parties however as Power reports many teachers claim that evaluation processes have achieved precisely the opposite by eroding informal goodwill and by making individuals develop new incentives around crude performance measures. It is therefore apparent that work needs to be done when industrial models are applied to public sector organizations. The audit and inspection process to be of value requires sensitivity rather than slavishly adhering to performance measures which serve the audit process and little else. These arguments raised the difficulties with an inspection process that is based on performance measures.

A school is far more than a set of numbers it is a learning society that develops the potential of all pupils, teachers within a complex array of experiences. To identify those things that a school does well an internal process that is respected by all that contribute to the learning experience of pupils within the school is required. It is the teachers and pupils that know their school best and they are in the best position to say which areas of the school need to improve. From this perspective a school self-evaluation model is useful; it can monitor schools thoroughly and provide timely, high quality school performance feedback to serve as a basis for school improvement, (Visscher and Coe 2003a). School self-evaluation is defined by Schildkamp (2007) as "a procedure involving systematic information gathering initiated by the school itself and intended to

assess the functioning of the school and the attainment of its educational goals for purposes of supporting decision-making and learning and for fostering school improvement as a whole" (p. 4). It is these principles that are applied to develop a self-evaluation model for Ridgeway High School.

1.7 Research aims

The overarching aim this research on which this thesis is based was to explore the change process involved in the development of a school-evaluation model. This necessarily involved:

- Identifying the key elements to be included in a school self-evaluation model;
- A self-evaluation model that suited the requirement of Ridgeway High School and met the demands of Ofsted;
- Developing and managing a strategy for the introduction of the model which would optimise the support from colleagues in Ridgeway

The two main foci of a self-evaluation model were identified as 'data' and 'process'. Issues related to data were as follows:

- identifying what data was necessary and useful for the purposes of self-evaluation
- ensuring that the data could be made accessible and 'user friendly' for staff colleagues;
- how the data was to be used particularly in supporting the setting of appropriate school, faculty and pupil targets.

The process of development involved:

- Identifying the required elements to be included within the model;
- the strategies to achieve the elements; and finally
- the review strategy that would feed into and therefore shape the school improvement plan.

1.8 Self-evaluation model

The final tangible outcome of the process was a self-evaluation model for Ridgeway High School. To achieve this, it was necessary to make recommendations regarding how data could be best used in our school to monitor and evaluate the progress made by the pupils and the school. The model developed would collect all relevant information within an efficient process to analyse the practice and assess the quality of provision offered by the school.

The samples used for the investigation were teachers within the school for the case study and teachers within a sample of schools across Wirral Local Education Authority for the survey.

In-depth one-to-one interviews were conducted with senior management teams and selected teaching staff from Ridgeway High School.

Secondary schools in Wirral Local Education Authority and the staff of Ridgeway High School were surveyed using questionnaires.

Other evidence was obtained by the review of key documents and reports relating to school self-reviews and self-evaluations.

1.9 The thesis structure

The research was approached from the belief that there was a need to develop within Ridgeway High School a self-evaluation process to measure pupil attainment, gauge teacher's performance, judge how well the school was performing in comparison to similar schools, and prepare the school for future Ofsted inspections.

This introduction outlines the frustrations of the school staff regarding information overload and the main evaluative areas that have been used to make judgments about

schools. The literature review in the following chapter examines the literature and the arguments in four major influences on school performance: ‘School Effectiveness and School Evaluation’; ‘Assessment’; ‘Ofsted’ and the ‘Management of Change’. Taking what looked like a potentially relevant, desirable, and feasible change idea and making it work in practice was by far the hardest part of the quality improvement and innovation process. Chapter 3 Methodology explains the research approach and the methods I have used to conduct the field work and collect the data using questionnaires and informal interviews. Chapter four presents the results obtained by analysing the questionnaire responses and teacher informal interviews to identify what pupil data was required and how it should be presented. A major difficulty was to select appropriate data that would be useful for staff to use. Within Chapter five I discuss baseline data: the selection of relevant data; the tools needed to interpret the data; presentation of the data and how the baseline data can be used to determine a ‘Class Profile’ and the ‘Learning Preferences’ of pupils. Chapter six presents the findings from a day staff conference that provides the framework for the Ridgeway model. The final chapter, discussion and conclusions, focuses on the objectives identified within the methodology chapter and in particular argues the struggles that emanated from managing the change.

Chapter 2: Literature Review

Whilst developing a proactive research proposal it was critical to examine areas of literature that could offer a background for my investigation and justify the reasons for my enquiry. The literature review began by identifying published papers that had already considered the factors identified as contributing to a self-evaluation process. These were 'school effectiveness', 'school evaluation', 'assessment', 'Ofsted requirements' and the 'changes' that would manifest within a school by engaging in such a project.

Whilst at the inception of this research project there was relatively little material on self-valuation, many schools have now subsequently developed a variety of self-evaluative models. These models of good practice have been more recently reviewed in detail by Ross, and Starling, (2008).

2.1 School effectiveness school evaluation

Over the last half of the twentieth century and into the present century, both the national curriculum and its attendant assessments and the qualifications system have benefited from and been hampered by the governmental pursuit of improving national standards. Isaacs (2010) points out that "criteria and codes of practice for national curriculum assessments and qualifications have been used to promote public confidence about assessment validity, reliability, manageability and standards over time. They have also meant a certain uniformity of assessment, especially in qualifications aimed at 14 to 19 year-olds." There is currently no sign that this political influence will decrease. Recent years have seen a keen interest in both school effectiveness and school improvement by politicians, policy-makers and practitioners. This drive has been the twin purposes of raising standards and to increase accountability through inspection and assessment measures, in the belief that the incentive of accountability and market competition will lead to improvement. From within schools two key questions have

emerged, How do we know what we are doing makes a difference? and What can we do to make sure pupils and students get the best possible education?
Goldstein (1997) suggests the term 'school effectiveness' has become a descriptor for educational research concerned with exploring the differences within a school and between schools. Its prime aim is to obtain knowledge about relationships between 'explanatory' and 'outcome' factors using appropriate models. It involves choosing an outcome, such as examination achievement, and then studying average differences among schools after adjusting for any relevant factors such as the intake achievements of the students. Effectiveness is 'the production of a desired result at outcome' Levine and Lezotte, (1990). School effectiveness researchers aim to ascertain whether differential resources, processes and organisational arrangements affect student outcomes and, if so, how. Ultimately, school effectiveness research searches for appropriate and reliable ways to measure school quality Stoll and Mortimer (1997)

School effectiveness research largely developed in reaction to the view that home background had a far greater influence on a child's development than did the school. This led to studies seeking to distinguish the impact of family background from that of the school, to ascertain whether some schools were more effective than others and, if so, to identify which factors contributed to the positive effects. Hargreaves (2001) suggests earlier studies which were criticised for lack of generalizability and for methodological inadequacies, gave way to more sophisticated designs.

Value added is a measure that has been applied to schools to measure improvement over time and has become a favoured measure, by Ofsted, to make comparisons between schools. Value added is a statistical tool to make fair comparisons between schools estimating the average progress for each school and for each pupil. To calculate a school's value added it is vital that various background factors and prior learning attainment is taken into consideration. Stoll and Mortimer (1997) suggest that schools can only be compared on a 'like with like' basis and draw attention to initial issues

with the concept of value added. The early league tables and many of the available value-added analyses focus on examination and test results and attendance. Even when value-added analyses are used to produce 'adjusted' league tables, they warn results need to be interpreted cautiously because confidence intervals for school 'effects' are wide. This means that many schools cannot be separated reliably and that only extreme schools or departments can be identified as performing much better or worse than predicted, Goldstein and Thomas, (1996). Schagen (2006) emphasised weaknesses in the rationale and methodology of school effectiveness and improvement research using the value added measure. Schagen (2006) points out that the value added measure does have flaws as it only takes account of prior attainment and makes no attempt to control for other factors outside the school's control which may seriously impact on its ability to 'add value', for example deprivation, mix of pupils, ethnicity, gender or English as an additional language. Although flawed the measure gives a much clearer indication of where schools' and pupils are making more than expected progress from one key stage to the next. However this is in not the opinion of Head teachers as they have warned that hundreds of schools face being wrongly marked down by inspectors using this new system of evaluation, TES (2006). Inspectors have been accused of using data, known as contextual value-added (CVA), in a 'woodenheaded way', instead of using a range of information and observation to make their judgements. The concern of the Head teachers is that inspectors arrive at their school having pre-judged their schools on the basis of the data.

More recently Peng, Wen Jung , Thomas, Sally M., Yang, Xijie andLi, Jianzhong (2006), provide an excellent overview of how school effectiveness research has developed over the past two decades. They suggest that progression has taken place from research into the correlates of effective schools to action research into school improvement. They further argue that improved evaluative methodology techniques have fed directly into identifying new approaches to evaluate school performance and subsequently to wide-ranging policy developments in school evaluation in the United Kingdom (see Ofsted,

2004). The key methodological developments included multilevel or hierarchical modelling analysis Goldstein, (1986); Bryk & Raudenbush, (1987). These have been used to calculate educational effectiveness measures within and between schools in terms of the 'value added' by schools to their pupils' academic performance (Saunders, 1999). More specifically, the term 'value added' is commonly used to refer to a quantitative measure of the relative progress made by pupils in a school over a particular period of time from entry to the final examinations in secondary schools, or to compare pupils in other schools in the same sample after adjusting for the varying intake, achievement and other background information. Hence, value added reflects the relative boost that a school gives a pupil's previous level of attainment in comparison to similar pupils in other schools. It also provides a more valid and appropriate measure of a school's 'effectiveness' than raw examination or assessment results (Thomas,1998, 2001).

Many researchers have drawn our attention to methodological innovations that have enabled researchers to scrutinize in more detail the fundamental issues underlying school effectiveness. These include the true size and stability over time of school and classroom effects (Wyatt, 1996; Schagen & Hutchison, 2003; Teddlie & Reynolds, 2005). The methodological developments in school effectiveness research, as well as technological developments in computer software and hardware, have enabled the establishment of large-scale longitudinal pupil databases, such as those collected by local education authorities refer to Thomas, (1998) and by the DFES (Pupil Level Annual Schools' Census-PLASC3).

These databases are vital to further explore the complexity of school effects. However when introduced, their main purpose was to enhance the monitoring and evaluation of individual schools and to provide schools with comparative feedback data for internal school self-evaluation. Since the mid-1990s school self-evaluation has been widely encouraged as a tool for schools to use to evaluate their own improvement and as a

means to enhance quality assurance and accountability Pan, (2006). As we are aware the need for schools to undertake self-evaluation has increased. MacBeath (2005) ranked developed countries on a range of common indicators and partly due to this work, school self-evaluation is a crucial requirement of the new Ofsted inspection framework (Ofsted, 2005). Rudimentary value added measures of school effectiveness are included in the information provided to all English schools to inform their self-evaluation processes and activities DfES,(2006).

As discussed above researchers (Hargreaves 2001, Schagen, 2006) have emphasised weaknesses in the rationale and methodology of school effectiveness and improvement; however others are critical of educational policy-makers' 'cherry picking' school effectiveness research findings to support particular policy initiatives and the government agenda for raising standards (see Slee & Weiner, 1998; Teddlie & Reynolds, 2000). The notion that politicians only introduce new initiatives to suit their own political agenda or to save money rather than in the best interests of schools impacts on driving change forward in schools. School staff become cynical about change and become blasé to the introduction of yet another initiative.

Assessment in its summative and formative modes provides the fulcrum for translating measures of school performance into transformative classroom practice and so it is the literature on assessment I turn to next.

2.2 Assessment

Assessment is an over-arching concept that means different things to different audiences. Conceptions of assessment are of particular importance because it has a significant impact on the quality of learning (Entwistle and Entwistle 1991; Marton and Säljö 1997; Ramsden 1997).

I would argue that assessment is any act of interpreting information about pupil performance. This information can be collected through a multitude of means. Research into the conceptions teachers have about the purposes of assessment has identified the major purposes as: assessment improves teaching and learning; assessment makes students accountable for learning, assessment makes schools and teachers accountable; and assessment is irrelevant to education. (Heaton 1975; Webb 1992; Torrance and Pryor 1998; Warren and Nisbet 1999; Brown 2002).

There is not a great deal of research literature considering students' conceptions of assessment. What is available is largely focused on tertiary or higher education students refer to Struyven et al. (2005) for a review. However review of the empirical literature on students' conceptions of the purposes of assessment has identified four major purposes, some of which can be matched to teachers' conceptions of assessment. Students are reported as thinking of assessment as: improving achievement; a means for making them accountable; irrelevant; and enjoyable

When considering classroom assessment (Tierney, 2006) provides an excellent summary of the relevant research. Black and Wiliam's (1998), substantive review of empirical work has confirmed the pedagogical potential of classroom assessment (e.g., Black & Harrison, 2001; Barootchi & Keshavarez, 2002; Orsmond et al., 2002; Coffey, 2003; Lee & Gavine, 2003; Waddell, 2004). Despite this research evidence Ofsted reports that assessment to promote learning is still not at the forefront of school procedures. As Tierney (2006) reminds us, the summative function is emphasised, and teachers continue to use classroom assessment primarily for grading and reporting (Kehr, 1999; McNair et al., 2003; Uchiyama, 2004). Although the rhetoric for assessment reform is strong, the way in which student learning is assessed in classrooms on a regular basis seems resistant to change.

The combination of technological advancements and political impetus in the later part of the twentieth century has given educational organisations worldwide the ability to collect, store, and analyse vast amounts of data. In the 1990s many national and provincial educational organisations followed the lead of the international assessment organisations, and implemented large-scale assessments of student achievement. The use of data for accountability purposes is well established, but a more potent role exists for low stakes data as a source for educational improvement (Earl, 2001; Simon & Forgette-Giroux, 2002; Earl & Fullan, 2003; Ingram et al, 2004; Sutherland, 2004).

In my opinion, the key issue is how assessment can be used as part of the learning process. Some of the key features of formative assessment are clearer as a result of all the developments that followed Black and Wiliam's 1998 review article. As educators we are learning how complex implementing 'assessment for learning' is in practice. One of the central tensions in this is the relationship between formative and summative assessment. Teachers and policy-makers may regard any classroom assessment as formative however much of it may be better classified as 'mini-summative', Stobart (2006). This is because it is often used for managerial recording and monitoring purposes rather than for directly contributing to learning.

2.2.1 Classroom assessment

Research into classroom assessment is quite extensive. In 1998, Paul Black and Dylan Wiliam published 'Inside the Black Box', which summarised their review and meta-analysis of research into classroom assessment practices (Black and Wiliam 1998b). Their principle findings were that, when teachers implemented formative assessment strategies, the learning gains of the students in these teachers' classes were significantly greater than those of control groups (Black and Wiliam 1998). Distinguishing formative assessment from 'routine classroom assessment' is not straightforward but has been characterised as "a social interaction between teacher and pupil which is intended to have a positive impact on pupil learning, but may not." (Torrance and Pryor 1998, 101).

For some, the term formative assessment is seen to be consistent, in different guises, with both behaviourist and constructivist theories (Tunstall and Gipps 1996) so the approach towards learning will affect the nature and success of formative assessment. For Black et al. (2003), the term 'formative' applies not to the assessments themselves, but to the functions they serve in supporting students' learning and providing evidence that is used to adapt the teaching to meet learning needs. Taking this functional view, successful implementation of formative assessment depends on the learning approach and teachers' knowledge, skills and strategies that they use to carry out complex pedagogical processes. For example, Cowie and Bell (1999) identified two interacting cyclical processes of planning and interacting in which teachers plan, interpret and act to enhance students' learning during the learning activity.

Development of formative assessment in classrooms depended on the development of new tools and changes in classroom practices (Black and Wiliam 2003). Studies in primary schools in the UK showed that, while formative assessment is desirable, it is not easy for teachers to achieve (Torrance and Pryor 2001; Hall and Burke 2003). Research involving secondary teachers identified four aspects of formative assessment that were implemented successfully in classrooms and led to learning gains (Black et al. 2003). These aspects were questioning, feedback, peer and self-assessment and the formative use of summative tests. The development of formative assessment practices with teachers led to the adoption of a new term, Assessment for Learning (AfL), that emphasised the purpose of formative assessment practices and could be used meaningfully by teachers, students and parents: "Assessment for learning is any assessment for which the first priority in its design and practice is to serve the purpose of pupils' learning" (Black et al. 2003, 2). In their professional development work with teachers they found both terms useful: "assessment for learning' focuses attention on learning; 'formative assessment' can encourage teachers to examine their practices by asking: How is the practice formative?"

2.2.2 Formative assessment

Although the research evidence in favour of formative assessment has been well articulated (Black & Wiliam, 1998) classroom implementation remains an on-going challenge. Particular issues are teachers' understandings and interpretations of formative assessment both in schools (Lambert & Lines, 2000) and in higher education (Yorke, 2003).

Formative assessment has been considerably explored (e.g., Wiliam & Black, 1996; Yorke, 2003; Black & Wiliam, 2004). Carless (2007) explains formative assessment as 'a process of eliciting understandings from the learner and using them to enhance teaching and learning.' The student is a key agent in this process (e.g., Cowie, 2005), particularly in terms of taking increased responsibility for the regulation of their own learning (Perrenoud, 1998). Carless (2005) focuses on teacher actions to facilitate formative assessment. He is of the opinion that teachers are a key mediator in enhancing student learning, and improvements in the implementation of formative assessment depend largely on teachers' understandings of principles and practice in formative assessment.

Torrance and Pryor (1998) are of the opinion that "formative assessment is a construct, a name given to what should more accurately be characterized as 'a social interaction between teacher and pupil" (p. 10). In the same manner Shepard (2005) sees formative assessment as similar to instructional scaffolding, in other words it is more about teaching than about what is commonly construed as 'assessment'. In short, formative assessment is based, to a large extent, on articulating 'what good teachers do' (Gardner, 2006, p. 2).

According to Black and Wiliam (1998, p. 20), formative assessment is not well understood by teachers and its implementation is weak, a stance reiterated more recently by Dekker and Feijs (2005). Implementing in the classroom theoretical insights from the literature is a particular challenge. For example, Smith and Gorard (2005)

report on an attempt to carry out formative marking through comments without grades, derived from Butler (1988); this was largely unsuccessful due to lack of teacher understanding or sustained support in the school in which it was implemented (see also Black et al., 2005). Black and Wiliam (2004) note that when teachers take on board the principles of formative assessment and try to implement them with support from academics' experiences, tensions arise: "teachers seemed to be trapped between their new commitment to formative assessment and the different, often contradictory demands of the external test system", (p.45). Broadfoot and Black (2004) advise that if formative assessment is to flourish, initiatives aimed at supporting a positive link between formative and summative are sorely needed.

Formative approaches to assessment may be particularly attractive to teachers and students when they are directed towards aiding performance in high-stakes tests. McDonald and Boud (2003) demonstrate how training in self-assessment was more helpful in enhancing student performance in an examination than traditional test preparation strategies. Alternatively, in contemporary educational cultures where testing seems increasingly frequent the enhancement of formative feedback on summative tests (Black et al., 2003) gives a way forward. Interestingly, and perhaps significantly, this strategy was developed by the participating teachers as a way to enable formative processes to operate alongside summative testing.

Ecclestone (2007) points out that research evidence indicates that formative assessment raises achievement and enhances motivation and autonomy and has influenced policy and practice in schools and universities in the United Kingdom. Formative assessment is also built into the aims and assessment activities of outcome based qualifications in post-compulsory education. Behind these apparently positive developments are important questions about the nature of the motivation, autonomy and achievement that formative assessment fosters.

Eccelestone (2007) continues by stating that influential research on formative assessment has been developed in the context of the United Kingdom's highly prescriptive summative testing system in schools. It has generated sound evidence for principles and practices that encourage students' learning autonomy, whilst highlighting difficulties in translating principles into system-wide practice and in generating a sound understanding of 'learning autonomy' (see Black & Wiliam,1998; Black et al., 2003; Gardner, 2006; Marshall & Drummond, 2006).

Academic research has had a much more marginal role in adult and vocational education. Instead, a series of ad hoc policy-based and professional initiatives has encouraged alternative approaches to both formative and summative assessments, such as outcome and competence based assessment, teacher and workplace assessment, and portfolios of achievement. These have blurred the distinction between summative and formative assessment and emphasised the aims of raising levels of participation, achievement, confidence and motivation amongst young people and adults who have not succeeded in school assessment (see, for example, Otter, 1989; Jessup, 1991; Tomlinson Working Group, 2006).

One effect has been to formalise processes for diagnostic assessment, the setting and reviewing of targets, students' engagement with assessment specifications and criteria, support and feedback to raise grade attainment or improve competence, and recording of achievement.

Formative assessment is sometimes described as 'assessment for learning' as distinct from 'assessment of learning'. Assessment for learning is any assessment for which the first priority in its design and practice is to serve the purpose of promoting students' learning. It therefore differs from assessment designed primarily to serve the purposes of accountability, or of ranking, or of certifying competence. An assessment activity can help learning if it provides information to be used as feedback, by teachers, and by their

students, in assessing themselves and each other, to modify the teaching and learning activities in which they are engaged. “Such assessment becomes ‘formative assessment’ when the evidence is actually used to adapt the teaching work to meet learning needs.” (Black & Wiliam, 1998, p. 2)

The Assessment Reform Group (ARG 2002) has developed principles of formative assessment that encourage teachers to develop the links between information about students’ progress towards learning goals, adaptations to planning and teaching based on feedback and dialogue, and attention to the ways in which students learn.

2.2.3 Summative assessment

Assessment and testing have a strong effect on the lives and careers of young people. Decisions taken within and by schools influence the prospects and opportunities of their pupils and of even greater importance are their results of national tests and examinations.

> *“When the results of tests and examinations are used to pass judgments on teachers and schools, they also affect the ways in which pupils are taught. Given their importance, it is essential that results of summative assessment should reflect and influence school learning in the best possible way.”*

(The Role of Teachers in the Assessment of Learning, Assessment Reform Group, 2003)

It is important that summative assessment procedures are in harmony with the procedures of formative assessment and that they are transparent, with judgments supported by evidence so that all involved can have trust in the results. To avoid the negative consequences of using high stakes summative assessment to evaluate teachers and schools systems of school accountability should not rely solely on the data derived from summative assessment of pupils and that the monitoring of standards of pupils’

achievement should be derived from a wider base of evidence than test results from individual pupils.

Assessment is used in many ways in education. A good deal of attention is now given to its use in helping teaching and learning, described as assessment 'for' learning (AfL) (see Black et al 2004, Brown 2005, Klenowski 2004, William 2011), or formative assessment. Summative assessment is assessment 'of' learning, which summarises what pupils know or can do at certain times in order to report achievement and progress.

Gardner (2006) identifies the purposes of summative assessment as possessing certain qualities:

Validity: the assessment must cover all aspects, and only those aspects, of pupils' achievement relevant to a particular purpose.

Reliability: it should be designed so that users can have confidence that the results are sufficiently accurate and consistent for their purpose.

Impact: it should not only measure performance but have desirable consequences for teaching, learning and pupils' motivation for learning.

Assessment: generally has a strong impact on the curriculum and on pedagogy, so it is vital that any adverse effects are minimised.

Practicability: the resources required to provide it, teachers' time, expertise and cost, and pupils' learning time should be commensurate with the value of the information for its users.

> *"Summative assessment by teachers is the process by which teachers gather evidence in a planned and systematic way in order to draw inferences about their students' learning, based on their professional judgment, and to report at a particular time on their students' achievements."*

(The Role of Teachers in the Assessment of Learning, Assessment Reform Group, 2003)

The pamphlet continues by arguing that the use of teachers' assessment for summative purposes is not without its problems, some of which are shared by any procedure for summative assessment, particularly when the result is used for external high stakes purposes. These problems should be set against those caused by the alternative of depending on tests. A system based on tests is flawed for several reasons. It fails to provide information about the full range of educational outcomes that are needed in a world of rapid social and technological change and therefore does not encourage the development of these skills. These outcomes include higher order thinking skills, the ability to adapt to changing circumstances, the understanding of how to learn, and the ability to work and learn collaboratively in groups as well as independently. Such a system inhibits the development of formative assessment (assessment for learning) that is recognised to raise achievement levels and reduce the gap between higher and lower achieving pupils. The data it provides are less reliable than they are generally thought to be. For example it has been estimated that the key stage tests in England result in the wrong levels for at least a third of pupils at the end of KS2 and up to 40 per cent at the end of KS3. The weak reliability of tests suggests that unfair and incorrect decisions will be made about some pupils, affecting their progress both within and between schools and beyond school. There is no firm evidence to support the claims that testing boosts standards of achievement in fact it reduces some pupils' motivation for learning by foisting stressful conditions that prevent some children from performing as well as they can. Teaching becomes more focussed towards achieving good test score promoting shallow and superficial learning rather than deep conceptual understanding. Testing performance then becomes more highly valued than what is being learned and can reduce the self-esteem of lower achieving pupils making it harder to convince them that they can succeed at other tasks.

To avoid the negative consequences of using high stakes summative assessment to evaluate the performance of teachers and schools systems of school accountability

should not rely solely, or even mainly, on the data derived from summative assessment of pupils. Such data should be reported, and interpreted, in the context of the broad set of indicators of school effectiveness. The monitoring of standards of pupils' achievement should be derived from a wider base of evidence than test results from individual pupils therefore teachers' assessment has a place in a system in which a wide range of evidence is collected for small samples of pupils.

It is also evident that some test and examination results are being used for multiple purposes, including some for which they may only have limited value. The use of individual pupil test results for a range of purposes, from target setting to league tables, is too simplistic. Information gathered for one purpose does not necessarily serve others, nor do the methods used to collect evidence of some types of learning suit all. The negative consequences of summative assessment may be minimised by giving teachers a greater role in assessing individual pupils and using different approaches for evaluating and monitoring teacher and school performance.

2.2.4 Contrast between formative and summative assessment

Newton (2007) gives an excellent account of the historical issues relating to formative and summative assessment. Newton informs us that the contrast between formative and summative assessment was first communicated to a wide audience during the early 1970s by Bloom et al. (1971) in their 'Handbook of Formative and Summative Evaluation of Student Learning'. They attributed the origin of the distinction to Scriven (1967). In fact, Scriven had originally drawn the distinction to highlight different approaches to programme evaluation. He explained the terms in a more recent publication. "Formative evaluation… is typically conducted during the development or improvement of a program… and it is conducted, often more than once, for the in-house staff of the program with the intent to improve." (Scriven, 1991, pp. 168–169)

"Summative evaluation of a program… is conducted after completion of the program… and for the benefit of some external audience or decision-maker…" (Scriven, 1991, p. 340)

Although Bloom et al. (1971) used the term 'evaluation' in the title of their 'Hand-book' they were focusing upon the process of assessment, rather than upon the process of evaluation.

Newton (2007) further explains that Benjamin Bloom, Thomas Hastings and George Madaus, (1971) began their Handbook by noting how, throughout the world and for many centuries, education had emphasized a selective function; that is, it had been concerned primarily with identifying the students to be dropped at each major stage. The authors wished, instead, to promote a view of education in which its primary function was to develop the individual. Reflecting this tension, they explained the distinction between formative and summative as follows:

> *"The main purpose of formative observations… is to determine the degree of mastery of a given learning task and to pinpoint the part of the task not mastered. … The purpose is not to grade or certify the learner; it is to help both the learner and the teacher focus upon the particular learning necessary for movement towards mastery.*
>
> *On the other hand, summative evaluation is directed toward a much more general assessment of the degree to which the larger outcomes have been attained over the entire course or some substantial part of it…..We have chosen the term 'summative evaluation' to indicate the type of evaluation used at the end of a term, course, or program for purposes of grading, certification, evaluation of progress, or research on the effectiveness of a curriculum, course of study, or educational plan…."*
>
> (Bloom et al., 1971, p. 61)

Perhaps the essential characteristic of summative evaluation is that a judgment is made about the student, teacher, or curriculum with regard to the effectiveness of learning or instruction, after the learning or instruction has taken place. "… formative evaluation is for us the use of systematic evaluation in the process of curriculum construction, teaching, and learning for the purpose of improving any of these three processes." (Bloom et al., 1971, p. 117)

2.2.5 Self-assessment

Self-assessment has been reviewed in detail by Ross, and Starling, (2008). They were of the opinion that most teachers include self-assessment in their repertoire (Noonan and Duncan 2005), particularly if they are enacting assessment reform in their classrooms. Self-assessment embodies many of the key features of assessment reform as defined by Aschbacher (1991); (see also Wiggins 1993, 1998; Newman, 1997). For example, interpreting one's performance using explicit criteria meets the reform objective that assessments involve higher-level thinking and disciplined inquiry. Self-assessment that makes visible the procedures, criteria and standards of assessment meets the reform goal of transparency. Negotiating differences between student and teacher appraisals addresses the reform expectation that assessments provide students with opportunities for feedback and revision during the task. A central element of assessment reform is the expectation that assessments will contribute to improved student performance. Klenowski's (1995, 146) defines self-assessment as "the evaluation or judgment of 'the worth' of one's performance and the identification of one's strengths and weaknesses with a view to improving one's learning outcomes."

Self-assessment is an assessment tool that produces consistent results across tasks. For example, Sung et al. (2005) demonstrated consistency in a study of 14-15 year-olds assessing the quality of their web-designs over time. The evidence of the consistency of self-assessments over long periods of time is much weaker. Blatchford (1997) found

little agreement in self-assessments from ages 7 to 11 with slightly greater agreement from ages 11 to 16. The evidence in support of the validity of self-assessment is mainly based on studies of the agreement of student self-assessments with teacher appraisals of the same work. Correlations tend to be moderately positive with considerable variation among individual studies. (see reviews by Boud and Falchikov 1989; S. Ross 1998.)

Student self-assessments tend to be modestly higher than teacher judgments, particularly if the self-assessments contribute to students' grades (Boud and Falchikov 1989). However, researchers report that discrepancies between teacher and student assessments can be reduced by increasing student understanding of the criteria for appraisal (Ross et al. 1999a) and by informing learners that their self-assessments will be compared to peer or supervisor ratings (Fox and Dinur 1988).

Correlations between self-assessments and an external criterion (such as standardised test scores) are influenced by age (older students are more accurate) and by knowledge of the domain measured (see review by Ross 2006). These studies suggest that self-assessment provides a credible representation of student accomplishment, sufficient to provide students with valid and reliable information about their progress on school tasks.

Rolheiser and Ross (2001) suggest that the most challenging shifts in conceptions of assessment is related to the changing role of the teacher and the changing educational environment. The context for educators is ever changing at a considerable pace. It has become more complex and volatile since teachers are in an environment of conflicting and ever-increasing demands and the school is expected to meet all of these pressures. Hargreaves & Fullan (1998) suggest that, "In times of turbulent social change, redefining one's relationship to the environment is crucial" (p. 4). One of the redefinitions relates to our current capacity to build democratic communities within and beyond our schools. If we value "participation, equality, inclusiveness and social justice," (Hargreaves & Fullan,

1998, p. 13), then our classrooms and schools need to be places where students share leadership and responsibility for learning. Hargreaves & Fullan further suggest that "Involving students and parents in decision-making, teaching and learning decisions, parent conferences and assessment of achievement, extend these democratic principles further" (p.13). In such a shifting context our outcomes for students have sufficiently changed and traditional assessment practices are no longer adequate.

The criteria for making judgements about our schools are firmly in the hands of Ofsted. The inspection process Ofsted employs, to make judgements about the quality of pupils learning and the provisions of the school is heavily based on assessment data reviewed by the team of inspectors prior to the school visit. The main conduit for obtaining school information is through the school 'self-evaluation' form that is sent out to schools prior to an inspection. The Ofsted requirement is a major focus and influence on school practices therefore in the next section of my literature review I explore the demands and expectations Ofsted places on schools

2.3 Ofsted

Ofsted was created in 1992 and is the regulating body for monitoring the quality of education in school. It is therefore important that this thesis considers the standards Ofsted requires from schools.

Ofsted tells us that assessment in schools has a history of not been adequate. This was recognised as a major premise at the conception of this thesis. The initial arguments raised are still a major concern. David Bell HMCI within his speech to commemorate the 60th Anniversary of the 1944 Education Act says of assessment: "Assessment needs to be effective for teachers to adequately meet the pupil's individual needs. But assessment is a particular weakness in many schools, which is why I welcome the attention being paid to assessment for learning." (21 April, 2004)

The new model of Inspection places the school 'Self-evaluation Form' (SEF) as a compulsory element within the inspection process. This document is completed by the school before the school inspection takes place. The SEF has evolved since its introduction, however its purpose has stayed essentially the same. That purpose is to give the school and the inspection team an overview of the quality of the school.

Maurice Smith HMCI within the Catholic Association Conference stated:

> *"Inspectors start with the school's own self-evaluation, as recorded in its self-evaluation form (SEF), and with the performance data in its Panda report. They then ask the questions and collect the evidence that enable them to test the school's own view of itself, and arrive at well-founded judgements about its effectiveness." (January 2006)*

Guidance on improving performance through school self-evaluation and improvement planning was produced jointly by the DfES and Ofsted. The guidance suggests ways to manage the self-evaluation process without adding to the bureaucratic burden on schools. The self-evaluation form has been designed to assist schools in their process of self-evaluation and to be used as the basis for school inspection by Ofsted.

Section A of the self-evaluation form concerns 'self-assessment'. This is the evaluative section. This section sets out what the inspectors evaluate; outlines guidance; and identifies grade descriptors for every inspection judgement.

The school is asked to provide a grade on a four-point scale to indicate where they perceive themselves to be at present using the key:

1. Outstanding 2. Good 3. Satisfactory 4. Inadequate.

Schools are asked to support their judgements with carefully chosen evidence that demonstrates the impact of the school's actions on the outcomes of the learners.

'Schools Context'. This is a description of the context in which the school works. In this section schools need to highlight any changed circumstances since the last inspection.

'Outcomes', how well are pupils doing, taking account of variation? Contained within this section are seven prime judgements which when taken together determines the summative judgement. These are: the five Every Child Matters (ECM) outcomes; pupil's behaviour; the extent of the pupil's spiritual moral social and cultural development. The section starts with 'attainment' and 'learning' and 'progress' which are important elements of the first prime judgement 'How do pupils achieve and enjoy their learning?'.

There are two specific sections. These focus on 'How effective is the Early Years Foundation Stage?' and 'How effective is the sixth form?' The outcomes for students in the sixth form are measured against, 'the quality of provision in the sixth form', 'the effectiveness of the leadership and management in the sixth form' and 'the overall effectiveness of the sixth form'.

Section B of the self-evaluation form is a record of statistical and other factual information about the school relevant to the current academic year.

The second main source of information available to schools is the 'Panda Report'. Again, it is a document that has evolved into its present form by taking into consideration feedback from schools. It uses data about the progress of individual pupils between the ends of each key stage to produce a contextualised value added indicator, which shows how the pupils' progress compares with that of similar pupils elsewhere. The Panda report also helps inspectors to judge the significance of the information, and how much allowance to make for small year groups, so that they can use the data in an appropriate and sensitive way. Important though it is, however, the data does not dictate the judgements about a school. It is the inspectors who make judgements by applying their own professional knowledge and skills.

The modified approach to inspection means that dialogue between the inspectors and the school's senior leaders and managers plays a central part. The inspectors' initial agenda, based on their analysis of the SEF and the Panda report, is shared and discussed with the school. Less time is spent observing lessons, however more emphasis is given to gathering pupils' views. Pupils are our most important customers and inspectors want to be able to see the school through their eyes. It is, of course, by talking to pupils that inspectors can get a picture of whether they feel safe, are encouraged to have a healthy lifestyle, are making a positive contribution and enjoy what they do at school. Inspectors also want to know the views of parents, as expressed through the pre-inspection questionnaire and direct contact with them during the inspection; and they need to be able to talk with governors.

Judgements are made on a four point scale: outstanding (grade 1), good (grade 2), satisfactory (grade 3) and inadequate (grade 4). The inspection report is no more than 4-6 pages long, and in most cases it is published three weeks after the end of the inspection. The report is accompanied by the inspection grades and by a letter from the inspectors to the pupils. The latter is a novel feature of the process, which emphasises that it is the pupils who are the point of the exercise.

The inspections are undertaken by HMI and additional inspectors. HMI lead a high proportion of secondary inspections, and a smaller but still significant proportion of inspections of primary and special schools and pupil referral units. They work with additional inspectors employed by our partners, the regional inspection service providers. Additional inspectors have received extensive training and have been assessed by HMI. High standards of competence are expected. Competition for work as an additional inspector has been stiff: there are just 1,100 of them, compared with over 5,000 independent inspectors under the previous system.

It is important to gauge the opinion of schools using the self-evaluation form. The time taken to complete this document is quite considerable consequently if the worth for this document is not recognised the basis for the inspection falls. Maurice Smith comments.

> *"Nearly all Head teachers thought that inspectors used the school's self-evaluation well. This is very important to us. Self-evaluation is a key part of the cycle of development and improvement in every school: it is self-evident that if a school does not know itself, it cannot identify what it needs to do to improve. ……..What makes a SEF effective is the honesty and accuracy of the evaluation, not the length."*
>
> (Ofsted 2006)

As discussed the backbone to inspections is the precursory documentation provided by schools. However many questions need to be answered particularly regarding 'Achievement of Standards' and the 'Quality of Provision'.

'Achievement of Standards' are measured by determining how well learners achieve. Within the inspection model this is judged by: success in achieving challenging targets including qualifications and learning goals, with trends over time and any significant variations between groups of learners; the standards of learners' work in relation to their learning goals; learners' progress relative to their prior attainment and potential, with any significant variations between groups of learners

The 'Quality of Provision' within the inspection model is judged by: how well teaching and training are used to meet individuals' needs and course or programme requirements; the suitability and rigour of assessment in planning and monitoring learners' progress; the diagnosis of, and provision for, additional learning needs and, where appropriate the involvement of parents and carers in their children's learning and development.

The quality of the school provision will depend upon the suitability and rigour of assessment in planning and monitoring learners' progress.

Data is important to both the school and the inspectorate. Prior to 2006 data was made available to schools through the PANDA and PAT reports specific to that school. In an attempt to rationalise the data held centrally on each school, the RAISE online initiative was launched.

'RAISEonline' is an exciting development in the provision of performance data and analyses. It is an online tool developed by Ofsted and the DfES which replaces the Performance and Assessment (PANDA) report and the Pupil Achievement Tracker (PAT). On 12 July 2006 Ofsted wrote to all maintained mainstream primary, middle and secondary schools inviting them to have a look at RAISEonline. The project was launched in the 2006 autumn term to coincide with the availability of the 2006 invalidated National Curriculum test and examination data. The key to success when launching a new initiative is to ensure that the end user understands the purpose and adequate training is provided. To provide users with the opportunity to familiarise themselves with RAISEonline before the launch, a trial version was made available to give schools access to a dummy school dataset. Two datasets, one for primary schools and one for secondary schools were provided so that the functions available within RAISEonline could be probed by schools.

This initiative is a significant step forward in the provision of data analysis for schools, inspectors, governors, LEAs, school improvement partners and all those working to support self-evaluation and school improvement. It has been developed as part of the drive to reduce bureaucracy by providing a single point of access to information. RAISEonline enables school to 'drill-down' from the school level performance information in the current PANDA to see how individual pupils have contributed to overall school performance. This has not been possible before without a great deal of hard work.

The RAISEonline data system is not without problems. Kent (2006), claims that failings in the inspectors online data tool may have caused some schools to lose out in their inspections. Kent expresses the opinion that "It must be a matter of concern that since RAISEonline went live, a number of schools have been ambushed by inspectors……they have found aspects of data within the interactive reports, of which the schools themselves are unaware. The database should be an aid to schools, not a convenient stick with which to beat them." (TES, 2007; p 26). Among the hidden data is information on key stage 3 tests, detailing whether pupils achieved a high, medium or low score in each test level. Data such as this can make a huge difference to the way a school's performance looks. For example, many of a school's pupils achieved high level 4s, just missing a level 5 in their English, maths and science tests, its performance could be quite different from a school where most achieved low level 4s. The system produces a "full report" on the school however this does not live up to its name as the full report does not show two sets of statistics analysing performance by gender. Jesson (2007), who has produced data analysis tools comments "Potentially, RAISEonline is a very useful service for schools. But a degree of prior awareness of what it can offer is needed and that's not easily accessible until you become familiar with it." (TES, 2007; p 26). Jesson advises schools to make the most of other tools available to improve their understanding of pupils' performance, for example Fischer Family Trust data. This could be important in providing an alternative view of a school's achievements to the picture given by RAISEonline. Jesson (2006) raised concerns that Ofsted inspectors were basing their judgments solely on one particular statistical indicator 'Contextual Value Added' (CVA), which only classifies schools into three categories broadly better than average, average and below average making further analysis essential. CVA is central to RAISEonline and is fed into Ofsted's pre-inspection data. Inspectors need to be aware that CVA and RAISEonline present only one view of performance. Different data analysing systems have different strengths. I put this point to the Senior Secondary Inspector for Wirral LEA his response was "The tools offered by Jesson are useful for

GCSE targeting, the Fischer Family Trust analysis is good for key stage 3 and Raiseonline gives the school the ability to review results already achieved." The key message is for schools not to rely on a single method of data analysis.

Schools need to develop a self-evaluation model that is both sensitive to the needs of Ofsted and provides easily accessible information for teachers to make informed decisions about the learning of pupils and for managers to judge how well the school is doing. It is essential that senior managers are fully aware of the data systems available to evaluate their school's effectiveness because their ability to do this is now central to inspection judgments. Kelly and Downey (2010) suggest that value-added measures represent an improvement on threshold measures, both in terms of what is being measured (progress adjusted for prior attainment rather than raw outcomes) and who is being measured (all pupils rather than just those who cross an arbitrary threshold). However, they argue

> *"…it may be that the model in England falls foul of trying to be all things to all people. Despite its complexity, even for an academic audience, it represents in some ways an inappropriate over-simplification of the nature of school performance. If pupil attainment could be measured by academic outcomes alone, and across a narrow range of public examinations, school CVA scores would not capture the differential effectiveness of schools across the range of prior attainment and across the various sub-groups."*
>
> (Kelly & Downey, 2010: 195)

Furthermore they suggest that there are shortcomings for practitioners in terms of timing and accuracy as the measures are fixed on provisional contextual data and schools are not given an opportunity to make valid changes. This means that the final scores and their confidence intervals are not in fact direct outputs from the multilevel model (Ray 2006: 51), but are calculated by external contractors. Subsequently when school value-added scores are published, they have artificial ceilings so that they are not

greater than the theoretical maximum. The shrunken residuals are used for ranking schools, and as reported by (Kreft 1996; Gorard 2007; Hutchison and Schagen 2008) causes new problems as the shrunken scores put into the public domain are ranked by national and local media.

Kelly and Downey (2010) further argue

> *"Whether or not published CVA scores are accompanied by confidence intervals, and whether or not they are published as true residuals, they suggest a degree of precision in the measurement of school performance that is not justified. And despite their complexity, the measures fail to respond adequately to competing legitimate demands: from the public for interpretability; from teachers for usefulness; and from policy-makers for accountability."*
>
> (Kelly & Downey, 2010: 195)

The OFSTED inspection model has impacted on all schools. From my own personal experience, mainly through the proactive school evaluation model I devised for my school, the initial focus was raising the quality of teaching. The task within my school was to strengthen existing systems and establish new systems to raise standards within the school. The spectrum of issues addressed included: auditing teaching and learning within the school; monitoring pupils' work; monitoring and improving the quality of teaching; tracking pupils' progress and attainment; analysing data; and setting targets and reporting these to pupils and parents.

The 'OFSTED Strategic Plan' published May 2007 recognised that the voice of pupils is a key stream of information to see how a school is doing. To see how policy is put into practice. It is therefore vital that a School Review model includes pupil feedback.

School self-evaluation is at the heart of the inspections: although there is some variation in the quality of self-evaluation across schools, the self-evaluation form has proved very

successful in identifying the strengths and weaknesses within the school and the action the school is taking to improve the strengths and remedy the weaknesses.

2.4 Management of change

Taking what looks like a potentially relevant, desirable, and feasible change idea and making it work in practice is by far the hardest part of the quality improvement and innovation process.

When a decision is made to change all or part of an educational practice those who are to deliver these changes will be faced with having to do something new. Each new practice identifies a competence gap that practitioners have to learn therefore teachers within my school would not be party to a change effort unless they see the change as being relevant, desirable, and feasible.

To embark on a major school initiative undoubtedly presents problems. The school needs to move forward as a whole to achieve success. Tensions between staff appear, questions relating to the worth of the project arise, questions relating to the impact it has on teachers time crop up, and how much time is needed to maintain the initiative challenged.

This part of my literature focuses on change models. Three influences are considered the work of Fullan 'Meaning of Educational Change', Rogers' 'Diffusion of Innovations' and Ely's 'Conditions of Change' as potential methods for managing the Ridgeway High School project. Michael Fullan's work focuses on educational change. His main focus is the human participants taking part in the change process (Ellsworth, 2001). Within Fullan's book 'The New Meaning of Educational Change' guidelines are given for resisting, coping, or leading change efforts from perspective ranging from the student to the national government. This is quite different from Rogers, whose work focused more on the characteristics of the innovation and the adopters whereas Fullan (1982, 1991)

emphasises the roles and strategies of various types of change agents. Ellsworth (2001) suggests that there are two elements that Fullan's model helps the change agent to deal with the questions: What are the implications of change for people or organisations promoting or opposing it at particular levels? and What can different stakeholders do to promote change that addresses their needs and priorities?

Fullan (1982, 1991) suggests that researchers accept that there are three broad phases within the change process. The first phase 'initiation' refers to the lead up process, to adopt or proceed with a change. The second phase 'implementation' refers to the initial experiences of attempting to put in place a new practice and the third phase 'continuation' refers to whether the suggested practice is adopted or discarded. A fourth phase 'outcome' was added by Fullan to give a more complete overview of the change process

Each of the four phases, as suggested by Fullan, have their own specific characteristics. The first phase *initiation* considers: 'existence and quality of innovation'; 'access to innovations'; 'advocacy from central administration', 'teacher advocacy' and 'external change agents'. The second phase *implementation*, Fullan and Stigelbauer (1991) identified three contributory factors: 'characteristics of change', 'local characteristics' and 'external factors'. The third phase *continuation* is a decision about institutionalisation of an innovation based on the reaction to the change that can be negative or positive. Continuation depends on whether or not: the change gets embedded/built into the structure (through policy/budget/timetable); the change has generated a critical mass of administrators or teachers who are skilled and committed to the change; or whether the change has established procedures for continuing assistance. The fourth phase *outcome* is reflective to support the achievement of a positive or successful change outcome: 'active initiation and participation'; 'pressure, support and negotiation'; 'changes in skills, thinking, and committed actions'; and 'overriding problem of ownership'.

Although Fullan is quite explicit it is vital to consider the merits of other models. Ellsworth (2000) commented that Rogers' Diffusion of Innovations (1995) is an excellent general practitioner's guide. Rogers' framework provide "a standard classification scheme for describing the perceived attributes on innovations in universal terms" (Rogers, 1995). From Rogers (1996) perspective, a change agent is an individual who influences clients' innovation-decisions in a direction desirable by a change agency. Rogers' Diffusion of Innovation offers a clear distinction between the 'change agent' and its 'client system' whereas Fullan views everyone involved in the educational change as a change agent. Fullan and Stiegerlbauer (1991) in consideration of 'change agent' suggest that "there is enormous potential for true, meaningful change simply in building coalition with other change agents, both within one's own group and across all groups." (Ellsworth, 2001; p 26)

Ellsworth, (2001) suggests that Rogers' model studies diffusion from a change communication framework to examine the effects of all the components involved in the communication process on the rate of adoption. Rogers (1996) recognised the differences both in people and in the innovation. The model provides the guidelines for the change agents about what attributes that they can build into the innovation to facilitate its acceptance by the intended adopter.

Rogers identified the sequence for change:

- To develop a need for change.
- To establish an information-exchange relationship.
- To diagnose problems.
- To create an intent in the client to change.
- To stabilise adoption and prevent discontinuance.
- To achieve a terminal relationship

Ellsworth (2000) points out the most critical benefits of Rogers' model is the innovation attributes.

"Practitioners are likely to find this perspective of the greatest use if they are engaged in the actual development of the innovation or if they are deciding whether (or how) to adapt the innovation to meet local requirements…Rogers' framework can be useful in determining how it is to be presented to its intended adopters."

(Ellsworth 2000: p.40)

Rogers' model has identified the vital aspects in the change system and their characteristics. It is a systematic process as the consequence of the change is defined by a predetermined 'innovation', a predetermined goal.

Ely (1990) referred conditions of changes to the factors in the environment that affects the implementation in the change process. When the implementation plan to launch out innovation is carefully shaped to satisfy every perceived feature that enables the rate of adoption. What else can make the adoption easier or impede the adoption? This is exactly the question that Ely's Conditions of Changes answers.

Ely (1999) listed eight conditions that should exist or be created in the environment where in the innovation is implemented to facilitate its adoption:

1. *Dissatisfaction with the status quo*

   The precondition for people to accept a change is that they perceive a need to change what is there already.

2. *Sufficient knowledge and skills*

   In order to make the implementation succeed the 'team' must have the knowledge and skills required by the initiative**.**

3. *Availability of resources*

   An innovation without resources, such as money, tools and materials, to support its implementation, will not be successful.

4. *Availability of time*

   The development acceptance and implementation of an innovation takes time.

5. *Reward or incentives*

   People need to be encouraged and rewarded with praise for their efforts

6. *Participation*

   Participants in the implementation should be encouraged to be involved in decision-making so that a sense of ownership can develop.

7. *Commitment*

   Since the implementation takes a great deal of hard work and time, the people who are involved need to make a time commitment for development and implementation.

8. *Leadership*

   The leaders' expectations and commitment have a huge impact on the process of development and implementation. It is important for the team leader to give support throughout the process.

It is these principles that were at the back of my mind when I set out on my voyage of discovery to answer the fundamental question: Does the intended change of practice improve the quality of the outcome?

Change is often the precursor to fear when mentioned in schools. This is usually due to the misunderstanding of what is meant by the change process. This fear was evident in the responses from the teachers in Ridgeway High School. A change process in simple terms is a strategy that is embarked upon to bring about a change in school practice for the benefit of all. Often external influences drive change for example the demand for better pupil attainments, improvement in the quality of learning, set targets for pupils teachers and the school, major reforms and the demand for instant success. Unfortunately these often come with a lack of knowledge on how such demands can be achieved and a lack of understanding of the impact such demands can have on the school. To achieve a change of practice there needs to be a realisation that certain processes are necessary to bring about the change for example identifying the change, planning the change, enthusing the change, monitoring the change, evaluating the

change, and time. Some changes can have an immediate impact but those with most value are the changes that improve practices become embedded within the school culture and stand up to the test of time. Understanding how to implement, control and sustain change is an art that requires a great deal of attention but in the end it is well worth the effort. Effective change management inspires confidence in the teaching staff, pupils and the wider community. Successful change management comprises, knowing what you want to achieve, who will benefit from the change, who will deliver the change, what are the likely problems and how are these addressed, and what is the strategy for ensuring the change is a successful and sustained. The concept of sustainability is defined by Fullan as "the capacity of a system to engage in the complexities of continuous improvement consistent with deep values of human purpose." (Fullan 2006, ix)

Stoll and (2009) suggest that the ultimate aim of school improvement is that it needs to make a difference for pupils, although it is about more than just adding value and doing the right thing. School improvement is incredibly complicated and for some time has been viewed as "a distinct approach to educational change that aims to enhances students learning outcomes as well as strengthening the school's capacity for managing change" (Hopkins 2001, p.13). Stoll and (2009) continues by pointing out that the prime focus of school improvement has been how schools develop those conditions and processes that support and enhance learning and schools' capacity to manage change. Stoll acknowledges that school improvement is outcome-orientated however "it is a process: a journey with many subtleties that even the richest of case studies can't capture" (Stoll 2009, p. 115).

Change is not a strict universal concept as no two schools are the same. In some schools implementing change is like "trying to build a structure out of sand" and in others "the soil is fertile and the seed….only needs time, nurturing and protection" (Slavin 1998, p. 1303). The willingness to initiate change or even take on external

change and harness it for their own purposes just isn't there in some schools, but the challenge is it takes capacity to build capacity (Hatch 2001). There are two main types of strategies to bring about change 'prescriptive' and 'informed'. From experience it has become apparent that over time prescriptive strategies have been gradually replaced with informed strategies whereby school leaders and other staff play a greater role in determining how change should occur (Barber 2001: Hopkins 2007). Stoll (2009) argues that prescription can be containing and frustrating for those already with the capacity to bring about change and cites evidence from the evaluations of the National Numeracy and Literacy Strategies (Earl et al. 2002) and the implementation of the Key Stage 3 Strategy Pilot (Stoll and Stobart 2005) as examples of how prescription can lead to teacher dependency. Teachers and school leaders, however find it difficult to devote attention to promoting creativity because of what they describe as "the immense pressure" of focussing on standards or being "very burdened by being driven by targets" (Stoll and Temperley 2009a). Little (2002) suggests capacity building in schools is bolstered by groups of teachers sharing their work. This literal capacity building (Fullan 2006) is collective responsibility and moral purpose…where members learn with one another, from one another 'on behalf of' one another.

The ideas underlying a professional community (Bryck et al. 1999; Louis and Marks 1998; Marks and Louis 1997) placed teachers at the centre of the change process moving the focus from administrative leaders towards all professionals as leaders. Whilst these studies validated the importance of collective teacher leadership in school change (Murphy 2005) the research by Seashore (2009) consistently revealed that principal support and facilitation was required to encourage teachers' ownership of instructional improvement. Principal leadership matters because it provides a firm foundation for teacher leadership (Wahlstrom and Louis 2008). Effective school leaders not only manage the organisation, they also stimulate serious intellectual interaction around issues of school change. In learning organisations, the leader crosses boundaries

to challenge the organisations culture, detect its dysfunctional features, and promote its transformation (Leithwood and Jantzi 2005; Schein 1992)

Sarason (1971) pointed out that the essential impediment to change lies in the culture of the school. The issue that control over change is illusive does not imply that leadership is important rather it can be argued that it is far more powerful if shared by the contributors to the change initiative. It is the notion of collective responsibility that is explored within this research to discover how the staff of Ridgeway High School manage a major school improvement change initiative. The methodology, as discussed in the next chapter, is based on action research to provide evidence for this case study. The issues that are addressed are: defining the purposes of the research; how does the school organise to change; how does the school create the internal and external support required to change and improve; what is the basis and role of different leaders in initiating and sustaining the change; and what are the pivotal and central themes for success.

Chapter 3: Methodology

3.1 An action research approach to self-evaluation

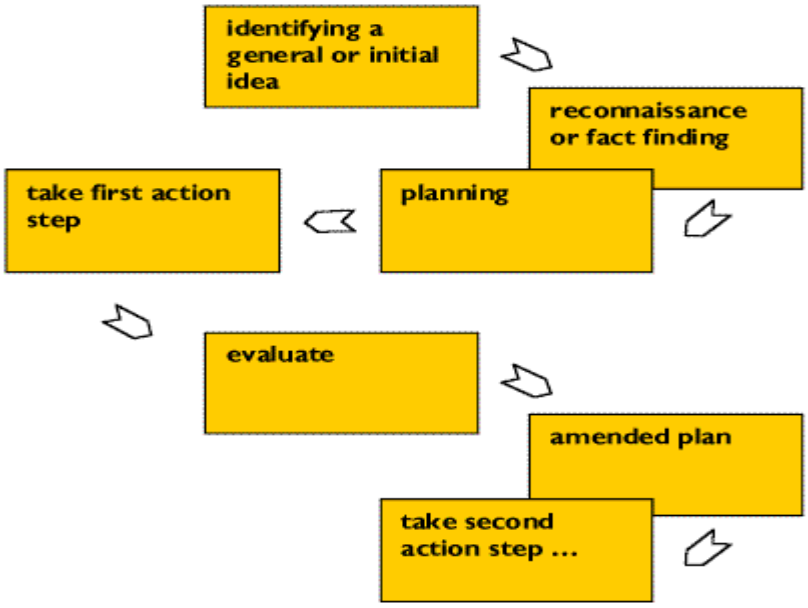
It was noted in the previous chapter that any form of school improvement is a process, and that the key to identifying successful elements of a school effectiveness model is an understanding of the processes involved in this kind of change. The methodology that is clearly indicated is therefore an approach that falls within the broad church of action research.

The action research movement in education was initiated in the United States in the 1940s. However the prerequisites had been laid much earlier in the 1920s with the application of the scientific method to the study of educational problems, growing interest in group interaction and group processes, and the emerging progressive movement. The idea of using research in a 'natural' setting to change the way that the researcher interacts with that setting can be traced back to Kurt Lewin, a social psychologist and educator whose work on action research was developed throughout the 1940s. Lewin is generally accepted as the person who first came up with the notion of 'action research':

> *"The research needed for social practice can best be characterized as research for social management or social engineering. It is a type of action-research, a comparative research on the conditions and effects of various forms of social action, and research leading to social action. Research that produces nothing but books will not suffice."*
>
> (Lewin 1946, reproduced in Lewin 1948: 202-3)

The Lewin approach involves a spiral of steps, "each of which is composed of a circle of planning, action and fact-finding about the result of the action" (op cit). The fundamental cycle comprises

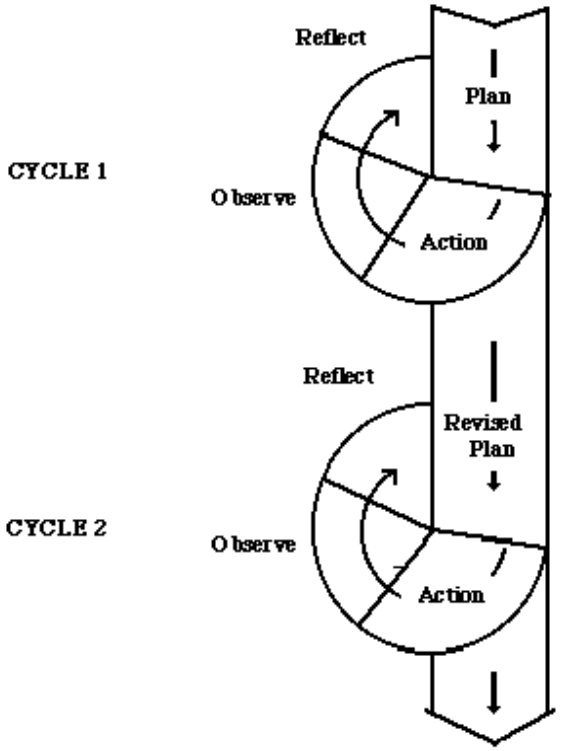
Diagram 1: The Lewin Cycle



The cycle was described as a series of steps. The first step is to examine the idea carefully in the light of the means available. Frequently more fact-finding about the situation is required. If this first period of planning is successful, two items emerge: namely, 'an overall plan' of how to reach the objective and secondly, a 'decision' in regard to the first step of action. Usually this planning has also somewhat modified the original idea. The next step is composed of a circle of planning, executing, and reconnaissance or fact finding for the purpose of evaluating the results of the second step, and preparing the rational basis for planning the third step, and for perhaps modifying again the overall plan.

Kemmis and McTaggart (1982) developed a simplified model of the cyclical nature of the typical action research process as shown below. Within this model each cycle has four stages: 'plan', 'act', 'observe', 'reflect'.

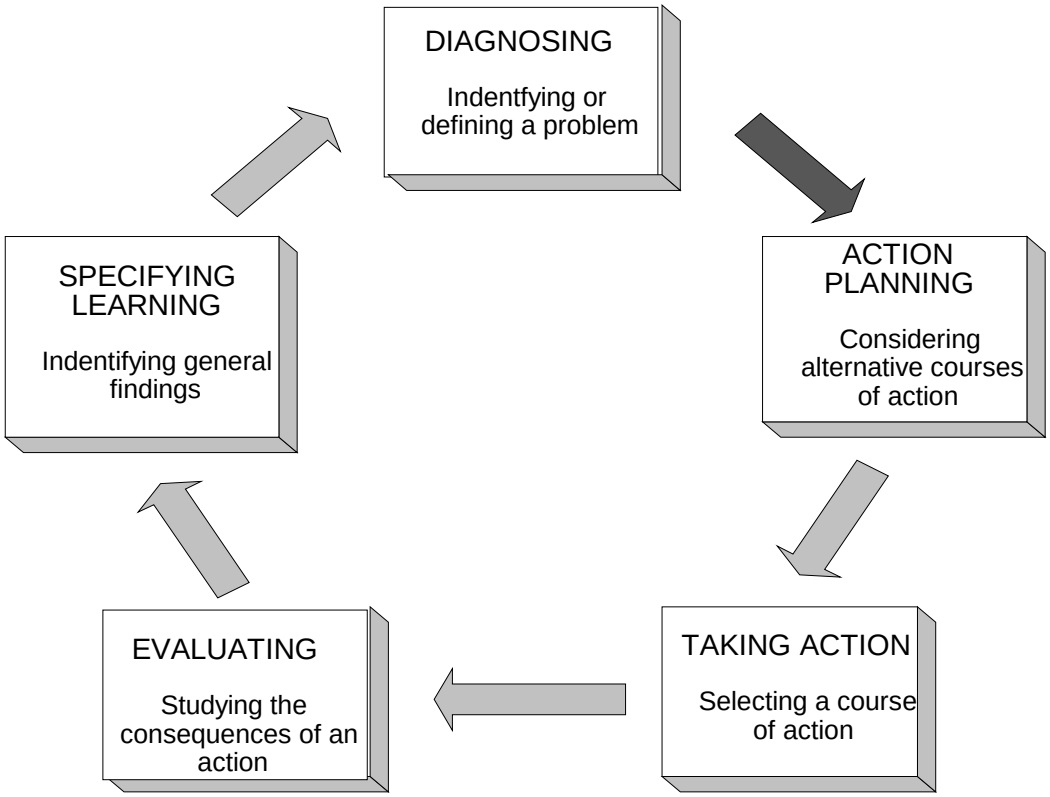
Diagram 2: A Simple Action Research Model



from MacIsaac, (1995)

Gerald Susman (1983) gives a somewhat more elaborate listing. He distinguishes five phases to be conducted within each research cycle.

Diagram 3: A Detailed Action Research Model



Detailed Action Research Model adapted from Susman (1983)

The problem is identified and data is collected for a more detailed diagnosis. The diagnosis is developed by a shared interpretation of several possible solutions, from which a single plan of action emerges and is implemented. Data is collected and analysed, and the findings are interpreted in light of how successful the action has been. The problem is re-assessed and the process begins another cycle. The process continues until the problem is settled.

Stephen Corey was one of the first to use action research in the field of education. He believed that the application of this method to education would bring about change because educators would be involved in both the research and the application of

information. Corey summarised his thoughts as “the consequences of our own teaching is more likely to change and improve our practices than is reading about what someone else has discovered of his teaching.” (Corey, 1953, p. 70).

Corey put forward the view that the value of action research is in the change that occurs in everyday practice rather than the generalisation to a broader audience. He saw the need for teachers and researchers to work together. However, in the mid 1950s, action research was criticised for being unscientific and the work of amateurs (McFarland & Stansell, 1993, p. 15). Consequently, interest in action research started to dwindle being replaced by research that relied on more scientific research design and quantitative data collection. It was not until the 1970s that enthusiasm returned for action research championed particularly by the work of Stenhouse.

It is important to recognise that the emphasis of action research has changed somewhat as it is now considered as a instrument for professional development, bringing a greater focus on the teacher than before (Noffke & Stevenson, 1995). It is increasingly becoming a tool for school reform, as its very individual focus allows for a new engagement in educational change. The key elements of all of the above models are common as they all suggest a cylindrical framework that is on-going. The process is therefore developmental progressive, and gives a real practical solution to a problem.

3.2 Action research methodology

Action Research is a reflective process that allows for inquiry and discussion as components of the research. Ferrance (2000) gives an excellent description:

> *“Often action research is a collaborative activity among colleagues searching for solutions to everyday, real problems experienced in schools, or looking for ways to improve instruction and increase student achievement. Rather than dealing with the theoretical, action research allows practitioners to address those*

concerns that are closest to them, ones over which they can exhibit some influence and make change. Practitioners are responsible for making more and more decisions in the operations of schools, and they are being held publicly accountable for student achievement results. The process of action research assists educators in assessing needs, documenting the steps of inquiry, analysing data, and making informed decisions that can lead to desired outcomes."
(Ferrance 2000: p 63)

Ferrance (2000) suggests action research is based upon four principles: Teachers and principals work best on problems they have identified for themselves; Teachers and principals become more effective when encouraged to examine and assess their own work and then consider ways of working differently; Teachers and principals help each other by working collaboratively; Working with colleagues helps teachers and principals in their professional development. These can be achieved only if teachers are able to change their attitudes and behaviour. One of the best means of bringing about these kinds of changes is pressure from the group with which one works.

The key element of action research is that it specifically refers to a disciplined inquiry carried out by a teacher(s) with the intent that the research will inform and change practices in the future. Crucially action research is the idea that teachers begin a cycle of posing questions, gathering data, reflection, and deciding on a course of action. The process will gradually change the school environment, resulting in a different set of circumstances that in turn produce different problems that need to be addressed.

Cohen and Manion (1998) argue that action research is 'situational' concerned with diagnosing a problem in a specific context and attempting to solve it in that context. It is usually collaborative teams of researchers and practitioners working together on a project with participatory team members themselves taking part directly or indirectly in implementing the research and self-evaluative modifications are continuously evaluated

within the on-going situation, the ultimate objective being to improve practice in some way or other.

Blum (1959) suggests the use of action research in the social sciences can be resolved into two stages: a diagnostic stage in which the problems are analysed and the hypotheses developed; and a therapeutic stage in which the hypotheses are tested by a consciously directed change experiment, preferably in a social life situation. However, as far as educational contexts are concerned Stenhouse is careful to stress that action research should contribute not only to practice but to "a theory of education and teaching which is accessible to other teachers'. The scope of action research as a method is impressive." Stenhouse (1979: p 15)

Cohen and Marion (1999) suggest the purposes of action research in school and classroom fall broadly into five categories. It is:

- a means of remedying problems diagnosed in specific situations, or of improving in some way a given set of circumstances
- a means of in-service training, thereby equipping teachers with new skills and methods, sharpening their analytical powers and heightening their self-awareness
- a means of injecting additional or innovatory approaches to teaching and learning into an on-going system which normally inhibits innovation and change
- a means of improving the normally poor communications between the practising teacher and the academic researcher, and of remedying the failure of traditional research to give clear prescriptions and
- although lacking the rigour of true scientific research, it is a means of providing a preferable alternative to the more subjective, impressionistic approach to problem-solving in the classroom.

The notion of 'collaborative' referred to by Ferrance (2000) was thought of as a key element to the development process of the action research methodology. Hill and Kerber (1967) state:

> *"Action research functions best when it is co-operative action research. This method of research incorporates the ideas and expectations of all persons involved in the situation. Co-operative action research has the concomitants of beneficial affects for workers, and the improvement of the services, conditions, and functions of the situation. In education this activity translates into more practice in research and problem-solving by teachers, administrators, pupils, and certain community personnel, while the quality of teaching and learning is in the process of being improved".*
>
> (Hill and Kerber 1967: p 72)

It is important to recognise that all teachers possess certain skills which can contribute to the research task. It is therefore vital to clarify and identify the set of skills that are available.

Action research relies chiefly on observation and behavioural data. That it is therefore empirical is another distinguishing feature of the method. This implies that over the period of a project information is collected, shared, discussed, recorded in some way, evaluated and acted upon; and that from time to time, this sequence of events forms the basis of reviews of progress. Cohen and Manion consider the empirical nature of the methodology a strength, "That the method should be lacking in scientific rigour, however, is not surprising since the very factors which make it distinctively what it is and therefore of value in certain contexts are the antithesis of true experimental research". (Cohen and Manion 1999: p 188).

Action research is particularly fitting whenever specific knowledge is required for a specific problem in a specific situation; or when a new approach is to be attached onto

an existing system. Consequently it is vital to ensure that suitable mechanisms are available for monitoring progress and for translating feedback into the on-going system.

When considering the essential components of educational research Marris and Rein, (1967) argue:

> *"Research requires a clear and constant purpose, which both defines and precedes the choice of means; that the means be exactly and consistently followed; and that no revision takes place until the sequence of steps is completed. Action is tentative, non-committal and adaptive. It concentrates upon the next step, breaking the sequence into discrete, manageable decisions. It casts events in a fundamentally different perspective, evolving the future out of present opportunities, where research perceives the present in the context of the final outcomes. Research cannot interpret the present until it knows the answers to its ultimate questions. Action cannot foresee what questions to ask until it has interpreted the present. Action attempts to comprehend all the factors relevant to an immediate problem whose nature continually changes as events proceed, where research abstracts one or two factors for attention, and holds to a constant definition of the problem until the experiment is concluded."*

(Marris and Rein, 1967: p 8)

Whereas Carr and Kemmis (1986: p162) offer a more straight forward description: "Action research is simply a form of self-reflective enquiry undertaken by participants in social situations in order to improve the rationality and justice of their own practices, their understanding of these practices, and the situations in which the practices are carried out."

Researchers are drawn to this understanding of action research because it is firmly located in the domain of the practitioner. It is tied to self-reflection. As a way of working it is very close to the notion of 'reflective practice' coined by Donald Schön (1983).

Somekh (2006) a practitioner of action research as a methodology for classroom based research defines eight principles that have evolved from her twenty five years of experience in this field. Action research:

1 integrates research and action
2 is conducted by a collaborative partnership of participants and researchers
3 involves the development of knowledge and understanding of a unique kind
4 starts from a vision of social transformation and aspirations for greater social justice for all.
5 involves a high level of reflexivity
6 involves exploratory engagement with a wide range of existing knowledge
7 engenders powerful learning for participants
8 locates the inquiry in an understanding of broader historical political and ideological contexts.

Somekh (2006: p 6)

3.3 Reflexivity

The term reflexivity is an integral part of action research. It is only in recent years that there has been discussion of the notion that in order to understand ourselves as researchers we must engage with ourselves through thinking about our own thinking, Weick (1999). There are several interpretations of reflexivity, however academics have usually emphasized how it entails noticing, evaluating and being suspicious of the relationship between the researcher and the 'objects' of research. Weick (1999) points out how this has directed some researchers to scrutinize "how potentially diverse yet usually unacknowledged pre-understandings influence how we undertake management research and thereby impact upon the claims advanced by its results" (Weick 1999, p 1279). For example (Alvesson and Deetz, 2000; Chia, 1995; Easterby-Smith and Malina, 1999; Gergen and Gergen, 1991; Hassard, 1993; Holland, 1990; Linstead, 1993, 1994; Newton,1999; Palmer and Dunford, 1996; Watson, 1995). Steier (1991) suggests that if researchers are to take seriously that knowledge is a social and cultural construction,

they must apply this principle to themselves and their work. They co-produce rather than simply 'discover' the worlds of their research. Charmaz possibly offers a more limited definition of reflexivity saying that reflexivity is:

> *"……the researcher's scrutiny of his or her research experience, decisions, and interpretations in ways that bring the researcher into the process and allow the reader to assess how and to what extent the researcher's interests, positions and assumptions influenced inquiry. A reflexive stance informs how the researcher conducts his or her research, relates to the research participants, and represents them in written reports."*
>
> (Charmaz 2006: pp.188-189).

Thus their own assumptions and activities as researchers must become part of the investigation within a process that explicitly tackles the complexities of multiple realities. The identity of the researcher, 'self', develops through social networks with others. It is this behavioural activity that defines action research in that colleagues work together to change practices with the ambition to improve outcomes. An argument can be put forward that the model itself places insufficient emphasis on analysis at key points. Elliott (1991) believed that the basic model allows those who use it to assume that the 'general idea' can be fixed in advance, that 'reconnaissance' is merely fact-finding, and that 'implementation' is a fairly straightforward process. As might be expected there was some questioning as to whether this was 'real' research.

As raised earlier in this discussion, there are questions concerning rigour, and the training of those engaged in the research. However, as Bogdan and Biklen (1993**)** suggests research is a frame of mind, "a perspective that people take toward objects and activities" Bogdan and Birklen (1992: p 212). Smith suggests "Once we have satisfied ourselves that the collection of information is systematic, and that any interpretations made have a proper regard for satisfying truth claims, then much of the critique aimed at action research disappears." (Smith et al 1995: p 77).

Smith (1999) considers the notion of the 'action research spiral'. He points out there is the danger that action research becomes little more than a procedure. It is a mistake, according to McTaggart (1996) to think that following the action research spiral constitutes 'doing action research'. He suggests, action research is not a 'method' or a 'procedure' for research but a series of commitments to observe and problematize through practice a series of principles for conducting social enquiry. Smith (1999) argues that it in his argument that Lewin has been misunderstood or, rather, misused. When set in historical context, while Lewin does talk about action research as a method, he is stressing a contrast between this form of interpretative practice and more traditional empirical-analytic research. The notion of a spiral may be a useful teaching device but it is all too easily to slip into using it as the template for practice.

O'Brien (2001) reminds us that action research is known by other names, including 'participatory research', 'collaborative inquiry', 'emancipatory research', 'action learning', and 'contextural action research'. In simple terms action research is 'learning by doing'. A group of people identify a problem, do something to sort it, evaluate their efforts, and if these were not satisfactory, try again. It is important to realize that action research is not simply problem solving. Gilmore et al (1986) gave a definition as:

> *"Action research...aims to contribute both to the practical concerns of people in an immediate problematic situation and to further the goals of social science simultaneously. Thus, there is a dual commitment in action research to study a system and concurrently to collaborate with members of the system in changing it in what is together regarded as a desirable direction. Accomplishing this twin goal requires the active collaboration of researcher and client, and thus it stresses the importance of co-learning as a primary aspect of the research process."* (Gilmore et al 1986: p 8).

O'Brien (2001) continues by suggesting that what separates this type of research from general professional practices, consulting, or daily problem-solving is the emphasis on scientific study, which is to say the researcher studies the problem systematically and

ensures the intervention is informed by theoretical considerations. A considerable amount of the researcher's time is spent on refining the methodological tools to suit the demands of the situation, and on collecting, analyzing, and presenting data on an ongoing, cyclical basis.

The single most important reason for selecting action research as my research methodology was that 'action research' is used in real situations, rather than in contrived, experimental studies, since its primary focus is on solving real problems. The selection of an action research approach as the methodology for this research project is because of the unique factors that enable research to be carried out in a school.

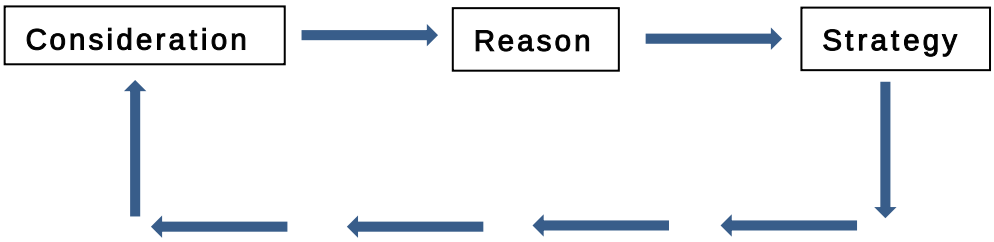
> *"..action research provides a means whereby research can become a systematic intervention, going beyond describing, analysing and theorizing social practices to working in partnership with participants to reconstruct and transform those practices. This presupposes that it is possible to generate actionable knowledge which is trustworthy in providing the foundation for improvement".*
> *(Somekh 2006: 27)*

In my view there are five key elements that distinguish action research from other types of research worthy of note:

1. the methodology focuses on turning the people involved into researchers
2. people learn best when they do it themselves and therefore claim ownership
3. the research takes place in real-world situations
4. the research aims to solve real problems, and
5. from a social context the instigating researcher, makes no attempt to remain objective, but openly acknowledges their bias to the other participants unlike other disciplines.

Smith (1996) offers a summary for the process of action research. Adapting this summary to reflect my own thoughts I have come to the view that there are three fundamental stages: 'Consideration'; 'Reason'; 'Strategy'.

Diagram 4: The Three Fundamental Stages of Action Research



Consideration. Getting a feel of the problem and gathering the necessary information. Within this stage the problem is defined, and the contribution of the participants

Reason. To interpret and explain. Evaluation analysis and interpretation of the position. A time for reflection about what the participants are contributing. Areas of success and any issues or problems are identified.

Strategy. To resolve the issues and problems. A tactic to find solutions or at least a pathway to unravel the complexities of the problem so that if the problem is not solved an incentive is in place to stimulate further inquiry.

3.4 Validity

There are many arguments for validity within qualitative research for example (Moss 2007) argues that a theory of validity represents both a philosophical perspective and a set of conceptual tools that shape our thinking and action whilst Mishler (1990) argues that validity relies on exemplars of scientific practice rather than on abstract rules or categories. This argument is furthered by Brinberg and McGrath's (1985: p.13) who

point out, “validity is like integrity, character, and quality, to be assessed relative to purposes and circumstances”. Based on this argument, Maxwell (1992: p.42) argues that “validity is not an inherent property of a particular method, but relates to the data, accounts, or conclusions reached by using a research method in a particular context for a particular purpose”. The concept emerged of a researcher immersing themselves in a human situation and following it along whatever path it takes as it unfolds through time. Whyte (1991, p. 9) from the 1940s, was doing work in which ‘informants’ in situations he researched became ‘active’ participants in the research, thus blurring the distinction between the researcher and those researched. Probably most ‘interpretive’ action researchers, acting on the assumption that social reality is continuously being created and recreated in a social process, would accept the notion of Argyris et al. (1982) that the crucial elements in a research approach which works within a specific social situation are: a collaborative process between researchers and people in the situation; a process of critical inquiry; a focus on social practice; and a deliberate process of reflective learning. This shows an ideal-type model of positivist research in which a researcher advocates a hypothesis about some part of perceived reality and then tries to test that hypothesis. The action research process accepts that themes have to replace hypotheses. Research in an organization on how to introduce a particular information system, for example, may well evolve into research on what organizational changes are first needed to make it sensible even to contemplate the introduction of a particular system. Themes need to be declared, and a link between them established. Checkland (1997) suggests the potential merging of the roles ‘researcher’ and ‘participant’ in the situation has to be acknowledged. It should, ideally, be discussed so that the roles within the action research process evolve. It is important that all participants take part in a process critical reflection as the research unfolds an axiom that reinforces the ‘consideration’, ‘reason’, ‘strategy’ model described above. Research within this paradigm is unable to match the complete replication of experimental results as within the disciple of natural science. To be valid researchers investigating social phenomena through the action research methodology must at least achieve a situation in which their

research process is recoverable by interested outsiders. In order to do this it is essential to state the epistemology by means of which researchers make sense of their research, and so define what counts for them as acquired knowledge. This gives well-organised action research a 'truth claim' although less strong than that of laboratory experimentation, but one much stronger than that of mere plausibility, which is all that much reputed action research in the literature can claim. I therefore suggest as an extension to Checkland's argument that since systems ideas are a strong component of much methodology which is relevant to qualitative research methods such as action research, it seems appropriate that systems practice should extend its cover to include interventions aimed at both acquiring knowledge and helping to bring about organizational change.

The merit of action research is that it is a reflective process of progressive problem solving led by an individual(s) working with others in teams to improve the way they address issues and solve problems. The methodology can be used by comparatively small institutions such as a school or by larger institutions, with the sole purpose of improving internal strategies, practices, and knowledge of the environments within which they practice. The initiator, as the project designer and a stakeholder, works with others to propose a new course of action to help their institution, in this case study my school, to improve its work practices. Action research is therefore an interactive inquiry process that balances problem solving actions implemented in a collaborative context with data-driven collaborative analysis or research to progress and improve practice. The methodology …"bridges the divide between research and practice. It directly addresses the knotty problems of the persistent failure of research in the social sciences to make a difference in terms of bringing about actual improvements in practice", (Somekh 1995:340)

Action Research is a holistic approach to problem-solving, rather than a single method for collecting and analysing data. The methodology is attractive because it allows for

several different research tools to be used as the project is conducted. These various methods, which are generally common to the qualitative research paradigm, include: keeping a research journal, document collection and analysis, participant observation recordings, questionnaire surveys, structured and unstructured interviews, and case studies. Action research is essentially an on-the-spot procedure designed to deal with a concrete problem located in an immediate situation. This means that ideally, the step-by-step process is constantly monitored over varying periods of time and by a variety of mechanisms, for example questionnaires, diaries, minutes, interviews, impromptu discussions and case studies. The subsequent feedback may be translated into modifications, adjustments, directional changes, redefinitions, as necessary, so as to bring about lasting benefit to the on-going process itself rather than to some future occasion, as is the purpose of more traditionally oriented research.

The main reason for the use of action research in the context of the school was improvement of practice. "Action research can be seen as a potent methodology for educational reform precisely because its core principle of combining *action* with *research* inevitably challenges the routines of the *status quo*. It gives teachers, who carry it out, a means to develop agency to bring about change……."
(Somekh and Zeichner 2009: 19)

3.5 Data collection

An important part of the planning of my research was to choose data gathering methods that gave useful information about the research topic. The research interview and the questionnaire represent a direct method of collecting information. I have used both of these methods to collect my research data. The data collected by these methods are given in the next chapter when reporting on what experience other schools have of self-evaluation and the requirements of teachers in my school.

The main reason for choosing a particular data gathering method in action research is to give useful information about the school practice being researched. It is sometimes thought that methods used in action research are purely qualitative; this does not have to be true. Although the overall analysis of the data generated by any methods used will be qualitative in nature, numerical or statistical information may be of great value to that analysis. For example, a statistical breakdown of examination or SATs passes may be a useful piece of data when exploring the effect of aspects of practice.

3.5.1 Interviews

Polit & Hungler (1991) describe interviews as a method of data collection "in which one person, an interviewer asks questions of another person, a respondent, [and] are conducted either face-to-face or by telephone". In this study initial interviews were by telephone to assess the use of self-evaluation by schools and subsequent interviews were conducted on a one-to-one basis, between researcher and teacher. Collecting data through an interview has advantages. For example, high response rates are common, and this was demonstrated in this study in that all of the teachers approached at the interview stage agreed to participate. Control over the interview process lies with the interviewer who can put the interviewee at ease by the use of effective interpersonal skills and the willingness to reword questions as necessary. Therefore in the interview setting, ambiguous or unclear questions which may be misinterpreted by respondents can be clarified by the interviewer. Throughout the interviews in this research study open questions were used to encourage subjects to expand on their own experiences. The literature also reveals the disadvantages of interviews (Burns & Grove 1987, Cormack 1991, Polit & Hungler 1991) state that hey can be costly and time consuming both in terms of organizing and the length of the interview.

The interviews in this study lasted approximately thirty minutes. The quality of data generated is largely dependent on the skills and expertise of the interviewer (Guba & Lincoln 1981, Chen and Manion 2007, Gill et al 2008, scott et al 2010). For the purposes

of this study two pre-pilot interviews were completed to gain experience of the necessary skills. The process of collecting data through interviews was a learning experience however as the study progressed more confidence and skills in handling the interview process and eliciting the views and perceptions of the teachers was gained. Lastly, as interviews are a form of self-report, it must be assumed that the information given by the interviewee is accurate (Bums & Grove 1987). The data sought in this research concerns teacher subjective perceptions and values and although this is not a threat to validity the nature of the findings must be taken into account within the analytical process.

Within this research project the interview followed a standard albeit loose procedure. As suggested above, the interview involves interaction between the interviewer and the interviewee consequently a completely standardised interview procedure would defeat the point of the interview. However it was necessary to demand a considerable degree of standardisation on the interview without losing spontaneity of participation by the subjects being interviewed

The fundamental principle of the standardised interview used was that a 'wording' was decided in advance for the key questions. The interview schedule was prepared in considerable detail to set the pattern that was followed in the interview. A pilot study was organised to identify evidence of possible ambiguous or inappropriate questions. At the end of the pilot run, the questions and responses were examined to remedy omissions, to revise the order of questions, and principally to identify uncertainties or points where confusion may have arisen. The trial interviews were recorded using a tape recorder to tease out interview style issues for example manner and amount of talk by the interviewer in comparison to the interviewee.

The points explored within the interview were arranged in a sequence which allowed the interview to flow naturally from point to point starting with factual questions and simple

topics, to help establish a rapport. Complex questions were introduced later, and questions which might cause even the slightest embarrassment or hostility were left until near the end. After making decisions on the sequencing the specific questions were framed with the precise wording written out in full. Questions were constructed using words which the subjects would understand, avoiding jargon, and every effort was made not to introduce bias by favouring one form of answer rather than another.

The purpose of my interviews was to glean new insights about a problem from teachers who have a wide range of experiences. As explained above I decided to use a semi-structured approach using open-ended questions. Open-ended questions have several advantages: they are flexible; allow the interviewer to probe or to clarify misunderstandings; encourage co-operation and establish a rapport, and allow the interviewer to gauge the meaning of the respondent more accurately. A sample of the comments given by the teachers of Ridgway High School in response to the interviews is listed in the next chapter, within objective four. A tape recorder was used whilst conducting the interviews so that the interview could be revisited.

3.5.2 Questionnaires

Many books and articles have authored conducting questionnaire research (Belson 1981; De Vaus 1991; Dillman 1978; Kidder & Judd 1986; Schuman & Scott 1987; Shaughnessy, Zechmeister & Zechmeister 2000; Tanur 1992, Gill et al 2008). Structured questionnaires are the principle means used for collecting data by means of a survey of a designated population or sample in which the research is interested (Ary et al 2009, Tang 2007, Scott et al 2010). Marton-Williams (1986) points out that if a question is to be an efficient tool for collecting data it must: maintain the respondents' cooperation and involvement; communicate to the respondent, help the respondent to work out the answers; make the task easy, and provide a basis for data processing. Tull and Hawkins (1987) argue survey research is the systematic gathering of information from respondents for the purposes of understanding and/or predicting some aspect of

the behaviour of the population of interest. The information received will be a function of the respondents' ability to respond.

The questionnaire may be regarded as a form of interview on paper. The procedure for the construction of a questionnaire followed a similar pattern to that of the interview schedule. However, because the questionnaire was impersonal, it was more important to take care over question construction as there was no interviewer to explain ambiguities or to check misunderstandings. The skill of an interviewer can sometimes redeem minor defects in an interview schedule; but one single flaw in a questionnaire may make the respondent disregard it. There are advantages to using a questionnaire rather than an interview; these are time and cost. The fact that questionnaires are impersonal can sometimes be turned to advantage, for example when answers are given anonymously. From my experience as a Head teacher schools receive numerous questionnaires and often view them as an intrusion especially when they are constructed loosely, ambiguous or inappropriately worded. It was therefore important to define the problem precisely identify the sample and test the questionnaire with a pilot run to discover the variety of possible answers or responses.

There are different ways of asking questions: Multiple-choice; Open questions; or a compromise, a multiple choice question that includes the option 'other'. I chose the compromise option starting with simple factual questions to give confidence at the start to the respondent and open questions towards the end to allow the respondent to express their viewpoint**.** On large samples of data it would be necessary to consider coding; in my study this was not necessary.

To reduce the influence of bias it was important to get the wording correct to ensure that the answers were not spurious. The distinction between a leading question and a neutral question is sometimes difficult to decide. For example, Schaughnessy et al (2000) points out that the wording of questions can be a threat to validity, because how a

question is phrased has implications for how that question is answered. Good questionnaire items are short, twenty or fewer words, simple, direct, clear, specific, and familiar to all respondents. Furthermore, they do not involve leading, loaded or double barrelled questions.

Reliability is the ability of measuring something in reproducible terms. An instrument is reliable if individual measurements taken on different occasions, or made by different observers, or by parallel tests, produce the same result. Reliability within this research was addressed by conducting a pilot test. A provisional draft of the questionnaire was prepared and tested on a small sample of staff that would not be part of the final sample. An introductory letter was also prepared to explain the purpose of the questionnaire and say how much I appreciated their help and time they would need to put aside to complete the questionnaire. The idea was to persuade the respondents to complete the questionnaire rather than put it in the bin. The major weakness of using questionnaires is that not all of the selected sample will answer. This was not a problem with my case study as the sample came from local schools and my own school.

Several authors have highlighted the fact that qualitative research methods are often criticized for failing to clearly address issues of validity and reliability in their studies (Le Compte & Goetz 1982, Brink 1989, Cohen and Manion 2007, Scott et al 2010). An essential step is recognizing the different concepts and terminology used in addressing issues of validity and reliability in qualitative work. When applying rigour to their research studies qualitative researchers have traditionally used terms such as establishing 'truth value', 'applicability', 'consistency' and 'neutrality' (Guba & Lincoln 1981, Sandelowski 1986, Marshall & Rossman 1989). Sandelowski stated that “a research instrument is valid when there is confidence that it measures what it was intended to measure”. Sandelowski (1986), Guba & Lincoln(1981) suggest that the 'truth value' of a qualitative study should be evaluated by its credibility rather than internal validity as in quantitative/scientific research method. They state that “the determination

of credibility can be accomplished only by taking data and interpretations to the sources from which they were drawn and asking [people] whether they believe [or] find [the results] plausible" (Guba & Lincoln 1981). A qualitative study is thus deemed credible if it reveals accurate descriptions of individuals' experiences and "that the people having that experience would immediately recognise it from those descriptions or interpretations as their own" Sandelowski 1986. At the end of data analysis the findings were discussed with the teachers. The aim of this exercise was to present the study findings to the teachers to check the credibility of the analysis and to see if the findings reflected the teachers own experiences and perceptions.

3.6 Summary

This case study was underpinned by the paradigm of action research. The action research principles were applied to examine the requirements of a specific change in practice and the consequential effects of the change on a school.
The first objective was to gauge, by conducting a telephone survey of all twenty-one secondary schools in Wirral Local Education Authority, whether they had already implemented a self-evaluation process.

The second objective was to send a questionnaire to all the secondary schools within Wirral Local Education Authority to determine the level of progress they had made, if any.

The third objective was to assess 'data use' and 'data management' in Ridgeway High School. A questionnaire was devised and was given to a representative sample of each personnel group. These were teacher-assistants, class teachers, form teachers, head of faculties, heads of year and the senior management team.

The fourth objective was to gauge the level of expectations the staff in Ridgeway School held regarding the new model, followed up by semi-structured interviews with teacher-

assistants, class teachers, form teachers, head of faculties, heads of year and the senior management team.

The fifth objective was to identify a standardised test to measure a baseline from, which subsequent pupil performance could be predicted, monitored and judged.

The sixth objective was to determine the content of the model, which was decided through a conference.

The first four objectives, are those which focus on the perceived requirements of the model and are discussed in chapter four, the fifth objective addresses the issue of baseline assessment and is discussed in chapter five and the last objective investigates the framework for the school self-evaluation policy and is reported in chapter six.

Documentary evidence within Ridgeway High School such as minutes of meetings, 21departmental policy statements and whole school policies, were scrutinised to establish the extent to which data was being used prior to the practice of school self-evaluation. Governmental and agency policy statements, papers, and circulars were also examined to determine the purposes of the data.

From the wealth of information that entered the school, it was important to consider further underlying questions relating to the key objectives as the informal answers influenced the content of the self-review model. The background question were: What data was perceived to be needed by schools?; Was the same data required by all management levels?; What were the main uses of the data?; Did the data fulfil different needs at different levels of management?; Was the data used simply to meet inspection requirements or was it used to progress the individual departments and the school?; and Did self-review trigger target setting? These questions are explored in the next three chapters.

3.7 Ethical considerations

Action research involves close and open communication amongst the participatory staff, therefore attention to ethical considerations were very important. The principles in this research were adapted from those suggested by Winter (1996). All of the relevant persons, committees and authorities were consulted to ensure that the principles guiding the work were accepted in advance. All the participants within the research were allowed to influence the work and the wishes of those who did not wish to take part were respected. Throughout the development of the work it remained visible and open to suggestions of others. Permission was obtained before making observations or examining documents from the Head teacher and it was agreed that descriptions of others' work and points of view were negotiated with those concerned before they were written down. As the project leader I gave total assurances for maintaining confidentiality.

It was important to inform staff from the beginning about the nature of the research and to make them aware of any personal biases and interests. They needed to be reassured that everyone would have equal access to all of the information produced and that the final outcomes of the research would be shared.

Chapter 4: Exploration

4.1 A journey of discovery

This chapter provides a reflexive account of the strategy I evolved in the process of initiating change. I will briefly outline the principles of which the approach was based which I explore in greater depth in the concluding chapter and then describe key aspects of the way in which the process was enacted, exploring aspects of the nature of my own role as a practitioner-researcher and providing specific examples of the living process of managing change through vignettes of the process. The starting point of the whole process was that, if teachers were to take seriously that knowledge is a social and cultural construction, they must apply this principle to themselves and their work co-producing rather than simply discovering the areas of their research. Therefore their own hypotheses and activities as researchers must become part of the investigation within a process that explicitly tackles the complexities of a multi-faceted educational institution. The discussion below addresses a range of theoretical issues and perspectives about the nature of knowledge and reflexive expression. I aim to show how a reflexive pedagogy might inform research methodologies and practice.

The five principles which formed the basis for my approach were: Enlighten; Identify; Develop; Progress and Provide. These five principles of change were embedded in the research in the following ways: as a change agent, to guide preliminary data collection and planning, and to shape subsequent adaptation of the strategy. The principles also underpinned the complementary aspect of the process, which involved encouraging teachers to reflect upon their personal experiences.

Reflection is a key element in that teachers can describe their own research which has, in various ways, attempted to incorporate reflexivity in its design since, as I argue, teachers model reflexivity when they explain their professional perspectives and reveal

experiences of becoming personally aware and accountable for their own beliefs. I further argue that teachers are illustrating the constructed nature of knowledge and demonstrating how to own and challenge their own understanding by revealing how they respond to specific situations.

Within this chapter I present the findings from the analysis of the one to one staff interviews and questionnaires. In the literature review chapter, it was argued that three perspectives influence the self-evaluation process: 'school effectiveness and school evaluation'; 'assessment' and 'Ofsted'. A fourth perspective which encompassed the 'management of change' was added later as the research unfolded, as this perspective was critical in bringing about the change in practice and ensuring the success of the change. The processes the school went through and the challenges met are discussed together with the identified perspectives that focus on how well the school is doing. As discussed above school effectiveness aims to establish whether differential resources, processes and organisational arrangements affect pupil outcomes and searches for appropriate and reliable ways to measure school quality. The essential characteristic of assessment or an evaluation is that a judgement is made about the effectiveness of school components, such as the pupils, teachers or learning provision, after the event. It is a mechanism for: determining the extent to which the goals of the school are being realized; it focuses the attention of staff, pupils and parents; it informs planning and teaching methods; and it gives a clear message to pupils that teachers are interested in their progress. The process of 'self-evaluation' has developed from these historical processes and has become the main instrument to inform Ofsted regarding the performance of a school. These are the main reasons why a self-evaluation model was developed for Ridgeway High School

In chapter three ontological and epistemological concerns were considered and the project was located within an action research paradigm. It was explained in this chapter that the one to one interviews and questionnaires were used as the main method for

data generation. The results that are reported below were used as a focus to inform and develop the Ridgeway High School model.

The first stage was to find out if any of the schools within Wirral LEA had introduced the notion of self-evaluation. The second stage was to focus on the experience already gained by the schools. The third stage was to ascertain how schools were using the data that was coming into schools and how it was managed. This information provided an important backdrop to the development of the Ridgeway High School Model as it focussed on what aspects were considered to be the most important and why. The next stage was to find out what were the expectations of the Ridgeway staff regarding the 'uses of data'; 'presentation of data'; 'comparative data'; and 'media of data'. The findings and evidence are reported within the first four objectives below. The fifth objective focuses on baseline assessment and how the information can be used and presented in an easily accessible meaningful way. The evidence showed that baseline assessment was a major and urgent concern for staff. For example although staff had heard of the CAT bank of tests they did not know what the tests measured or how to interpret the scores. Objective five in the following chapter discusses how these scores can be interpreted to give meaningful information about the attainments of pupils and how this information can be used to support learning. From discussions within faculty meetings the school staff wanted an overarching policy to substantiate the process of self-evaluation. They thought it was important to underpin the process with a written document that provided a point of reference so that all staff were perfectly clear about the demands of the process and that new staff coming into the school should have a guide to the process. A school conference was held to define the core needs for the framework of the model and establish focus groups to concentrate on key areas. The areas were identified prior to the conference, through group discussions, to ensure that each member knew which group they belonged and was cognisant with the focus and expectations of that group. The predefined areas were: 'Quality Assurance': 'Roles and Responsibilities'; 'Staff Training'; 'Managing the Process'; and 'Evaluating the Process'.

The findings of this conference are reported within objective six and discussed in chapter six.

4.2 The Preliminary telephone survey and questionnaire

The first objective, the starting point of the research, was to gauge by conducting a telephone survey of all twenty-one secondary schools in Wirral Local Education Authority, whether they had already implemented a self-evaluation process. I rang all of the schools in the authority to speak to the Head Teacher asking how far their school was advanced with the process of self-evaluation. This was a brief informal survey using a pre-defined interview schedule to find out whether the school was engaged with self-valuation and if so to ask permission to send a follow up questionnaire to an identified person within their school, refer to appendix I. The information obtained from the telephone survey and the questionnaire was vital to sculpture the vision for the Ridgeway model as detailed in the first principle of change enlighten.

Nine schools out of twenty two schools responded to the questionnaire. All of these schools were either starting or actively engaged in the process of 'self-evaluation'; however not all of these schools were using the basic preliminary framework published by the LEA. The non-responders, the remaining thirteen schools, were telephoned to ask why they had not returned the questionnaire. Without exception the reason was that the school had not started looking at the process of self-evaluation.

Of the nine respondents seven were using the LEA framework. The reasons given were:

'Maintaining high standards of teaching and learning'

'Rooted in Ofsted criteria'

'As it has been developed to reflect the Ofsted framework'.

'Beacon school worked with the LEA to develop faculty self-evaluation system'

'To inform development planning'

'Effective'

‘Clear delineation of areas cohesive overview open to adaption’

One school not using the framework said:

‘To fit in with whole school self-evaluation.'

All of the schools using the framework had introduced it on a phased basis and nominated at least one person to coordinate the framework.

The LEA Framework focussed on seven key areas:

1. Results and Achievement
2. Pupils Attitudes Values and Personal Development
3. Teaching and Learning
4. Curriculum and other Opportunities
5. Care for Pupils
6. Participation with Parents
7. Leadership and Management.

The questionnaire sent out to all schools asked the person with responsibility for self-evaluation to say which of these foci represented their starting point. When analysed the questionnaire results indicated that the main initial focus for each school out of a sample of nine was:

Table 1: Preliminary questionnaire responses

Focus	Responses
Teaching and Learning	7
Results	6
Leadership and Management	6
Curriculum and other Opportunities	4
Care of Pupils	4
Pupil Attitudes Values and Personal Development	3
Participation with Parents	2

The questionnaire responses from the schools indicated that the main reason for starting the self-evaluation process was to improve 'teaching and learning'. The results achieved by the school were the second most favoured starting point and the need for strong leadership and management the third.

The second part of the questionnaire was dedicated to asking the schools to comment on the strengths of the LEA Framework.

The comments recorded were:
'Helps to show staff different judgements on teaching and learning'
'Documentation acts as a focus/starting point. Interpretation of data subject of debate within the school'
'Off the shelf advice'
'The principle of reflection'
'A systematic approach which supports the schools system which is already in place'
'Logical good training, based on Ofsted approach'
'Structured responses. Cohesive overview of process'

Comment were also asked for regarding the weaknesses of the framework. These were:
'Too prescriptive'
'Need to take account of the new developments from central government'
'Sections missing'

The messages taken from this questionnaire were that Ofsted criteria are key to the development of a school model. As discussed in chapter two Ofsted the regulating body for monitoring the quality of education in schools places self-evaluation at the centre of their new inspection model using the self-evaluation form (SEF) as their baseline. Staff thought it was important to know the expectations of Ofsted so that they can understand how judgements about the school are made.

The model should be clear and structured in such a way that all staff know how to access information, and what information is required to display data in the required format within the model.

Individual schools preferred to be guided and advised. They felt more secure following an agreed framework rather than each school reinventing the wheel consequently they would prefer an off the shelf package.

4.3 The use and management of data in Wirral schools

The second objective was to consider the management of data. Data is a vital part of any school self-evaluation model. It was therefore important to gauge the 'use' of data and the 'management' of the data. A second questionnaire was devised to investigate how Wirral schools were dealing with these issues. The questionnaire was sent out to all schools in the authority as the first questionnaire, refer to appendix II.

National standardised data is available for Key Stage 2, Key Stage 3 and Key Stage 4. The survey showed that eight schools used the Key Stage 2 data, ten schools used the Key stage 3 data and six schools used the Key Stage 4 data.

When asked whether their school use standardised tests to benchmark pupils attainment in their school nine out of the ten schools were either using at least one test, and one school was working towards using a standardised test.

The types of standardised tests used were Cognitive Ability Tests (CATs), MIDYIS/YELLIS/ALIS a bank of tests developed by Durham University, SATs, and Reading Ages. Nine schools used CATs. In addition these schools used other tests less frequently to support CATs. Interestingly only two schools said they used SATs. One school did not respond.

The way in which the data is used was the same in all schools. It was distributed hierarchically to all management levels in the school i.e. Senior Management Team to Heads of Faculty and Heads of Year, Heads of Faculty to Heads of Subject, Heads of Year to Form Tutors, Heads of Subject to Subject Teachers.

It is important to understand for what purpose the data is used. The responses from the schools were:

Table 2: The uses of data in Wirral schools

Focus	Responses
As a bench mark to set pupil targets	9
As a tool to analyse a department's performance	6
To analyse how well pupils are doing	7
To analyse my personal performance	5
Other: Setting	1
Other: Identifying Special Educational Needs	1
Other: No relevant data for PE	1

Importantly eight schools compared their data to national standardised data and six schools compared their data to the LEA standardised data. All schools compared their data to either the LEA or national norms. All of the schools except one used CAT tests to assess their pupils on entry to the school and used this data as their benchmark data.

All schools said gaining access to the data was a problem. A computer based system would be advantageous so that the information could be accessed when required. Schools were aware that a secure system must be in place and the data entry must be regular and maintained so that the information is constantly up to date.

When asked: In your present role in the school what data would you like to support your role? The responses were:

'Access all available data through a dedicated network'

'KS3 mock exam results'

'It would be useful to have all KS2/KS3 results as literacy coordinator'

'None, PE'

'All data but collated e.g. by faculty'

'I do not feel I am lacking any particular data'

'National data comparing similar school/catchment area electronic data for easy access and manipulation'

'Comparative data within LEA, PANDA, Autumn Package'

The messages that came from this questionnaire were that the SAT data should provide a baseline and therefore a benchmark for both pupil and school performance. However staff thought that the SAT results were very narrow in that they did not provide sufficient information. The SATs gave an overall level for the three core subjects but did not offer a breakdown of what contributed to the levels nor did they comment on any of the other subjects offered within the school curriculum which raises the question are they suitable as a predictor for non-core subjects such as Drama or History. The SAT results do not provide the school with what they need: "Many critics of Sats say that although they served a useful role in driving up standards in the early years by revealing the huge number of children who had not been reaching a satisfactory level of knowledge, new methods are now needed to boost attainment." (Turner 2009). All but one school reinforced this view as they used CAT tests to provide a more sensitive assessment of their pupils. Schools thought that there should be a facility to analyse specific performances, for example departmental performance and year group performance, and provide evidence of personal performance. It was this evidence that contributed to the development of the Ridgeway self-evaluation model

4.4 In-house questionnaire to establish data use and management

The third objective of the research was to gauge the use of data and how it was managed in Ridgeway High School. From the personal discussions it was evident that the staff appreciated the scale and scope of the required change. There was not an obvious route to a solution, but everyone was clear that change must take place. On one occasion a member of the Maths department said to me: *We are always thrashing around with initiatives. It is like treading water you stay afloat but you do not move forward*. To establish credibility for the initiative and make progress it was crucial to anticipate the concerns and potential problematic barriers to the change. To obtain this information a questionnaire was developed and issued to all members of staff, refer to appendix III. The staff groups identified were 'teacher assistants', 'form teachers', 'heads of faculty', 'heads of year' and 'senior management'. The questionnaire probed four main areas: the 'use of data'; the 'presentation of data'; 'comparative data' and the preferred 'media for data'. Refer to appendix III.

The responses for the 'use of data' section provided an insight into how staff used the current data. Teacher assistants support classes at both Key Stage 3 and Key Stage 4 level. Within their role as a teaching assistant they use the Key Stage 2 SAT data to help with their support teaching. They use the Key Stage 2 data in the three 'core' subjects: English; Maths; Science but they did not use CAT data. The form tutors teach classes at both Key Stage 3 and Key Stage 4 level. They use all Key Stage 2 data to help with their teaching and support the understanding of the progress made by their tutor members. They also use the CAT data to gain a more in-depth understanding of their pupil's achievements and the progress made. However the point was made within the semi-structured interviews that this information was difficult to access. Although the form tutors used the Verbal, Non Verbal, and Quantitative measures they did not use the SAS (Standard Age Score) value quite simply because they did not understand this measure. They felt they needed training in the use of CATs. Heads of subject wanted an overview of all Key Stage 2 data, Key stage 3 data, and Key Stage 4 data and a full

analysis of the CAT data presented in an easily understood format. They requested this because they wanted to provide informed and accurate class sets and make informed decisions about what courses to provide. Heads of year wanted an overview of all Key Stage 2 data, Key stage 3 data, and Key Stage 4 Data. They also wanted a full analysis of the CAT data to provide an accurate overview of all pupils in their year group. The Senior Management Team wanted an overview of all the data that was available particularly summative data. For example to see how well a specific year group was progressing or how well a specific subject was progressing. They also wanted an overview of each key stage to see if the school was meeting its predicted targets, to see if pupils were meeting their targets and also to see if teachers were meeting their expected targets. The consensus was that they felt it important that they could access individual pupil data as and when required.

The second section of the questionnaire concerned the 'presentation of the data'. Teacher assistants indicated that they preferred the data presented in alphabetical order (rather than subject or set order) and in paper format as they could easily refer to the data as they moved from class to class. They also thought that the data referring to an individual pupil should be presented on a single A4 page. They thought that a computer based system was a good idea providing there were sufficient networked computers available to access and print the information. Form tutors on the other hand thought that all the formats of data would be helpful, except for data presented in set order. In the semi-structured interviews form tutors thought that a single sheet summarising data for each pupil in their form would be particularly useful. Heads of subject thought that all the formats on offer would be useful. The point raised in the semi-structured interviews was that ranked pupil data in each year group would be a very useful. Similarly Heads of year and Senior managers wanted the data in as many useful formats as possible to analyse, monitor and evaluate pupil and school progress. They wanted to be able to compare subject performance, teacher performance and pupil performance. Their main interest was in comparative and predictive data; however they

also wanted the facility to access individual pupil data to make judgements on pupil performance across the full range of the curriculum.

The third section of the questionnaire investigated the issue of 'comparative data'. Teacher assistants were very aware of the importance of comparative data and were keen to access the comparisons that were useful to their role. They wanted to see how pupils progressed in the grand scheme of thing and particularly wanted to know how the pupils they were supporting were progressing that is to see whether their support was making a difference. They therefore wanted to be able to access comparative data for all subjects, the classes they support pupils within, the year group for the pupils they support and also the form data for the form to which they were attached. Form tutors wanted assess to all the comparative data relating to their form. The form tutors wanted to know how well their pupils are achieving in all of their subjects and how well they were achieving in comparison to other pupils in the same year group. The form tutors were not interested in other year groups, other tutor groups, and did not want data relating to their teaching groups in their role as form tutor. Heads of subject wanted all of the comparative data. In the semi-structured interviews they asked for copies of the raw data so that they could produce their own comparisons. They also said they were really only interested in data affecting their subjects. They thought the year group data was useful, and on a personal basis data relating to their teaching groups would help them to plan differentiated lessons. As with the heads of subject they wanted access to as much comparative data as possible so long as it was meaningful for their specific year group. The Heads of Year were not particularly interested in other year groups. However within the semi-structured interviews they said it would be good to have access to all other data relating to their key stage. For example if they were head of year for year 9 it would be informative to have the historic data for year 7 and year 8. Likewise if their year group was in key stage 4, either year 10 or year 11, it would be useful to have data relating to the previous year. The Senior Management Team wanted an overview of all data that was perceived useful; consequently they wanted access to all

comparative data. As the person with responsibility for this area within the senior management team the final decision on how the data was to be presented was mine. I obtained my evidence from the semi-structured interviews I carried out with the rest of my team.

The last section 'media of the data' asked the question whether staff preferred access to the data solely through the computer network or in paper form. Except for the teaching assistants all other school staff groups preferred the data to be presented electronically. Within the semi-structured interviews the senior management team preferred the data presented for review to be on paper. They accepted that all other data for personal usage might be printed from their own computer on a need to know basis. This view was echoed by the heads of subject and the heads of year. The teacher assistants thought that a paper copy was crucial in the event of a computer system failure.

4.5 The principles of change

As I noted in chapter two the starting point for the change process was to inform the participants of the reasons for the change in practice, provide a vision for the future and to describe the expected outcomes. The praxis that evolved within this research comprised five principles: enlighten; identify; develop; progress and provide.

4.5.1 Enlighten

It was essential that the school staff were encouraged to express their views, focus their thinking, rid themselves of preconceived assumptions, develop the critical skills to analyse data and raise new questions to explore. The initiative possessed the potential to inform all future practices of the school and therefore demanded a major yet sensitive management of the change process. A good start to the initiative was essential otherwise there was a danger that staff would be lost before it had begun. It was therefore important to outline the benefits of the new initiative and the processes by which these could be achieved. It was also important to place in context the pressures of

external agencies such as Ofsted and show how such demands would influence the outcome of the initiative and as a final point it was crucial to give the staff opportunity for discussion and challenge. The two questionnaires discussed above set out the experience of the other secondary schools in Wirral and provided the impetus to move Ridgeway High School along similar lines. The tricky bit was to sell the project to the staff.

As discussed in chapter two the central methodological models (Fullan Rogers and Ely) identify the starting point for the change process as informing the change agents the reasons for the change in practice and to provide a vision for the future to describe the expected outcomes**.** I therefore introduced the initiative to the whole staff at a pre-designated staff meeting. I felt it was important to tell the staff well in advance so that they could prepare beforehand questions they wanted to raise. I was quite nervous of broaching the subject since up to now the staff's experience of data collection and its use was poor. I knew I was entering a hornet's nest since staff were constantly complaining about the school's disorganised approach to data management. This was evidenced mainly through faculty meeting and year meeting minutes and ad hoc remarks made by staff to me in the staff room. As an exercise I counted how many entries in the curriculum and pastoral minutes referred to data. During the six months prior to my appointment there were eleven separate entries referring to the lack of data or the difficulty obtaining the data. A typical entry from the ICT minutes read: "Staff have expressed concern with the lack of available pupil data. As teachers we are expected to set targets for our pupils without any prior knowledge. We are told the data comes into school each year so why is the data not distributed to staff in time to set requested targets. Action the Head of faculty to make enquiries at the next curriculum management meeting and report back to the next ICT meeting." Other entries referred to the school calendar: "Can senior management review the school calendar so that there is a coherent breakdown of the assessment timetable. It is important to place assessments and report writing at specific times of the year. For example the reports

should follow the annual examinations of a particular year group not before." This again was typical of the entries I found. This particular entry was recorded in the Technology minutes.

Staff comments were numerous; I remember one morning a member of staff knocking on my door almost at his wit's end. A certain member of the senior management team sent out a request to all subject heads for the target grades of all year nine pupils. He showed me several memos written and sent to the administration office requesting the key stage two and key stage three data. Three weeks later he was still without the information. In his true Yorkshire manner he also requested the information verbally from the Head Teacher and Deputy Head curriculum. The Head Teacher referred him to the Deputy Head teacher and the Deputy Head teacher denied all knowledge of receiving the information and referred him to the senior administration officer. I said leave the matter with me until the end of the week. As I was new to my post I rang the LEA to ask about the distribution of the key stage data. They said the data was sent to schools on disc during the summer holidays ready for schools to use the following September. They sent me a copy of the letter and fortunately a copy of the disks within two days. I also checked with a neighbouring school to see if this was normal LEA practice; they assured me it was. This meant the school was in receipt of the key stage two disk for the past eighteen months and the key stage three disk for approximately six months. So what had happened to the disks? During the summer holidays before the release of the key stage two data the administration staff gave each senior manager a diskette box to store their disks. I remembered seeing one of these boxes in the examination cupboard so I went along to investigate. When I opened the box surprise surprise the disks were sat neatly inside still sealed in their plastic wallets. It transpired that when the heads office was refurbished the box was left in the examination cupboard I can only assume by mistake! When I asked the head she said, …."Oh those disks I did not know what they were for so I just put them in the box. They could not have been important as nobody

had asked for them." I duly made a copy of the disks and gave a paper copy to the head of department on the Friday. I smiled and said the disks were unfortunately mislaid.

It was important to appreciate the views of the staff. Their views were considered in two ways: firstly as general discussion after my presentation and secondly as responses to the structured interviews as described in the previous chapter. Quotes from the formative responses of my interviewees included:

Interviewee 1

I do think this project is a very good idea. My concern is that we have experienced a lot of change recently and not all of it has been beneficial to me. I seem to be filling in requests for more and more information but nothing comes back. If this is to work it has to be a two way process. I am quite willing to give you or the school any required information however I would appreciate feedback either about the impact on my department or the benefits to the school. Unfortunately a lot of change is just for the sake of it.

Interviewee 2

I like the idea very much. I can see it being very useful to me and the school. It would be wonderful to be able to press a button and see everything I need to know about a certain pupil or class. My main concern is the time this will take. With all the changes that are going on I do not know whether I am on my rear end or my elbow. The extra sheets we have to fill in that seem to disappear into an abyss, the extra report writing, lesson plans, detention slip, phone calls home there is no time for this on top of everything else.

Interviewee 3

Another initiative when are they going to stop? The trouble is all these initiatives come into the school for whatever reason we all get mad keen about them to find that either

the money runs out or someone has changed their mind. Although I think it is a great idea what's the point it's just another initiative that will soon be forgotten and replaced by something else.

Interviewee 4

I suppose this is another initiative that will be funded to get it going and then the money will run out as usual. We are always expected to produce the goods on next to nothing. I have to spend department resources that are getting tighter and tighter and when I ask for an increase the answer is nearly always no. If you want my honest answer I think the money could be better spent. For instance it would be better if we spent the money on resources to make our job easier.

Interviewee 5

Surely not something else. When will these so called initiatives ever stop? I spend most of my free time and time after school phoning parents I really do not know where I can find the time for this as well.

Interviewee 6

I am worried that I do not have the necessary skills for this project work. There seems to be masses of computer work and I am not very good with a computer. I think there will be many of us with the same problem. If this is to be successful we will need loads of training. I don't mind that because it will improve my skills but where is the time coming from to get trained?

Interviewee 7

I can see that this is a great idea however I do not think it is the most important problem to focus on at present. The behaviour of the pupils is not the best and my classes are far too big. I could use extra help in the classroom is there any money for that?

The staff identified several key problems. They pointed out that all departments were experiencing constant change; not only that the changes introduced were not always seen as beneficial. The teachers were quite cynical about the introduction of a new initiative as they considered them hard work for little reward particularly from past experience they did not have a long shelf-life. Several teachers though that the money used to introduce these initiatives could have been better spent elsewhere; for example providing more everyday bread and butter resources, paying for extra help in the classrooms, reducing class sizes and supporting behavioural issues.. Time was seen as a major problem. Teachers felt that they were asked to do more and more in less time. In particular they thought that the training programme that would have to sit alongside the initiate would take up a considerable amount of personal time.

4.5.2 Identify

The responses from the interviews showed quite clearly that staff were reticent to embark on yet another initiative. The main task was therefore to find strategies to overcome such concerns and show that this 'home-grown' initiative would benefit all staff and the school. A degree of credibility needed to be established to demonstrate the worth of the process and my worth as the team-leader. Opportunities needed to be created for the school staff to begin to analyse what they did well and how these skills contributed to the development of the school and to identify those areas that required improvement. The main aim within this phase was to uncover the issues around introducing the initiative, assess the readiness for change and start to build commitment across the staff.

Managing the change process was not as simple as I first thought. Throughout the whole process challenges constantly arose that threatened the success and adoption of the change of practice. My main challenge was to develop a positive attitude within entrenched staff. To give a flavour of the problems resentments and cynicism I met I

have included below a sample of the staff comments made after the introductory staff meeting.

'A lot of change is just for the sake of it'

'There is no time for this on top of everything else'

'What's the point it's just another initiative that will soon be forgotten and replaced by something else'

'It would be better if we spent the money on resources to make our job easier.'

'Where can I find the time'

'Where is the time coming from to get trained?'

'I could use extra help in the classroom is there any money for that?'

Discontent was certainly the most difficult challenge as I could not afford the views of a minority group to influence the majority. To allay fears I spent a great deal of personal time talking to this disaffected group as individuals. I met staff in their own space for coffee, spent time at lunch times either in the school refectory or off site, and after school with those willing to stay. The ploys I used to bring the entrenched staff onside was varied taxing my ingenuity as a manager to the limit. The vignettes given below describe the tactics used to coax staff.

1. Lunchtime surgeries

These surgeries were the first attempt to engage staff. The aim of these sessions was twofold; firstly to give staff the opportunity to express their views over a cup of coffee in my room and secondly to develop a professional relationship.

To make staff aware of this opportunity I announced an open invitation in morning briefing for staff to join me in my teaching room for either coffee or lunch to discuss the proposed initiative in more informal surrounding. This was disappointing as most staff were either said they were busy doing other stuff or I suspect uncomfortable coming onto my territory. I decided to reverse the process by visiting staff in their comfort zones.

2. Talking to staff in their areas.

For whatever reason staff did not come to my break-time or lunchtime sessions. I spoke informally in the staff room to a number of staff to try and find out the reasons.
Although I could not pinpoint a definitive answer my feeling was that staff did not like coming to a senior manager's room as their past experiences were quite negative. In their view senior managers tended to call people to their rooms to be critical of their performance or generally moan. I therefore needed to change my tactic to make staff more comfortable about discussing the model.

Certain staff were reluctant to attend a formal meeting to discuss the school self-evaluation process. Staff were fearful of coming to a senior managers office and they were afraid that the purpose of the model was to check up on them as teachers. It was evident that some staff misinterpreted the overarching purpose that was to provide teachers with accurate information so that they can make informed professional decisions about pupil's progress. The main tactic I used was to visit staff on their home territory either within their classroom or office usually over a cup of coffee or jam donut for the more resistant. Staff were certainly more relaxed within their comfort zone and welcomed and appreciated the effort I had made to talk to them and put their minds at rest.

When staff do not respond to all your endeavours to comply extraordinary tactics need to be developed. There was a problem with one particular member of staff. Despite my normal guile this staff member resisted all attempts to bring him on board. The tactic I employed to speak to this person became known as the outdoor ploy.

The most unusual tactic I used to gain the confidence of particularly intransigent member of staff who would not make himself available during break or lunchtimes was to meet him on the playing fields. I knew his son played football for a school team that he always supported. I therefore found out when the team was playing at home, when they held their practices and subsequently visited him on the touch line. After a few soakings and frozen fingers the touch line chats worked, I was able to talk to the staff member in school about a common interest albeit a new purposeful interest on my part. After these preliminary chats I was able to ask the member of staff for a meeting in school to talk about the school review he came with all I can describe as renewed vigour.

4. A relaxed location

From the experience gained from my previous tactics it became obvious that staff feel more relaxed and therefore more willing to share their feelings in a non-threatening environment.

The only way I could chat to some members of staff was to join them for a Friday lunchtime drink at the local pub. I talked to individuals or small groups of staff over a pint of beer. In this situation staff were completely relaxed and willing to talk openly of what they thought of the self-evaluation model. The tactic of visiting staff away from the work place proved to be a very successful.

5. Subject-leader Meetings

To place the discussions relating to the model on a professional basis I felt it was important to set up a series of meetings to record formally the outcomes of such discussions within the minutes of the meeting. This record provided an evidence base of staff agreements and concerns from which the model could evolve; a key element within the 'enlighten' and 'identify' stages.

> To reinforce the self-evaluation message I asked to be invited to subject leader meetings and year leader meetings. In due course I attended all of these meetings. The meetings were very mixed some totally supported the new initiate and others were very much split. I personally found the meeting very useful in that they voiced the frustrations of staff and allowed me to identify those staff members that were not in favour. It was important to identify those not in favour so that I could employ other strategies to convince these staff of the initiatives merits. Importantly the minutes of the meetings provided a written record of the discussions.

4.5.3 Develop

It soon became apparent that the initiative was not the problem it was a deep rooted feeling of been let down, having no worth, and being not valued. My brief suddenly became much larger. I needed to explore the personal dynamics within faculties, and the dynamics between the heads of faculty and the senior management team, particularly the Head teacher. There was not an easy fix. I decided that to change the perspective of this group of disaffected staff I needed to identify a role for them, to become key players within the group and therefore contribute positively to the process. My starting point was a simplistic skills audit to explore the skill base for each member of the group identifying their areas of expertise. For example, I used the mathematicians to identify and analyse the data, the good communicators to collect the required information from the different sectors of the school, and those with IT skills to author the

data presentation and power-point presentations. To remove any relationship problems within their department, I made staff personally responsible to me by making them members of the 'lead' working party. This simple ploy had a profound effect on their feeling of self-worth. Suddenly they were a 'major player' and as a direct result their kudos within their own department rose considerably. I informally asked all heads of faculty if they had perceived any change of attitude by these members of staff. Without exception every head of faculty commented on the renewed positivity of the 'lost' members of staff. My favourite comment was *A miracle has occurred within Ridgeway High School - I tried everything I could think of to bring this member of staff on board within the faculty, without success. Now the same member of staff is engaged and contributing positively to all aspects of faculty development. Thank you so much.* To build on this positive feeling of self-worth I nominated on a rotational basis members of the working party to present to the group and to be part of the presentation team that presented to the whole staff.

The makeup of the working party was crucial. As team leader my role was to engender a feeling of togetherness. To foster a healthy working atmosphere I had to develop team commitment; share a clear view of the goals and objectives; make decisions about how they will work together; establish structures and processes to ensure effective and constructive work; leadership to coordinate the efforts of the team and nominate one member of the group to lead each meeting or workshop, the person selected was dependent on the focus of the meeting.

4.5.4 Progress

My central role was to develop possible strategies to implement the proposed change to become part of everyday practice. As the team leader I was required to define a clear vision of the future and to define a change programme that was needed to achieve that vision. To make this process credible I interviewed a cross section of the school staff to determine what their main requirements would be for the school self-evaluation model.

The staff interviewed included Form Tutors, Heads of Faculty, Heads of Year, and Teaching Assistants. I did not include the senior management team as I was a member of the senior management team that met regularly to discuss such issues. The main focus of the senior management team, stemming from discussions at senior management team meetings, was identified as summative data rather than individualistic data. The summative data provided the evidence from which forecasts could be made to determine the short term, middle term, and long term objectives that were subsequently embedded in the School Development/Improvement Plan

The following statements are a selection of those made by the school staff when interviewed and asked if there was anything they wanted to add relating to the data they use or how they would like the data presented. The statements have been grouped together as several of the interviewees made the same points:

- *I am only interested in the years I am teaching*
- *I am only interested in the groups I am teaching*
- *I am only interested in the forms I am teaching*
- *I am very interested in the my own form in terms of pupil progress*
- *It would be good to have easy access*
- *I would like a fool-proof easy access system as I am not a computer wizard*
- *The data must be available when needed*
- *I understand the levelling of the SAT data but I do not understand what the CAT data has to offer*
- *I have looked at the CAT data but I have been totally put off by the amount of it. What do I use?*
- *Most important to see how a child progresses therefore need to see a data timeline*

- *As a head of subject I want as much data as possible so that I can make accurate informed decisions about setting and courses. The data must be simple to access as I do not have the time to wade through reams of paper.*
- *The data has to be accurate*
- *Targets set centrally have to be realistic not just increased by a set amount e.g. Y7-Y9 increase by two levels*
- *Easy to extract data into mark book – not have to keep copying out data that is already there*
- *Pupils and staff need access – pupils should set their own targets as well as staff*
- *The data should be pleasing to look at not just a series of boring columns of numbers*
- *Interesting to see data of previous years to see how a year compares e.g. Y7 with previous Y7 cohorts*
- *A printed alphabetical list of pupils in a year group would be a good idea.*
- *A single summary page referring to the data for each pupil would be useful*
- *Ranked lists for each year group*

The informal interviews were used as a follow up to the questionnaire described above. The comments recorded indicated that the main teaching and support staff were only interested in the groups they were teaching. Form teachers wanted evidence of how members of their form were progressing. They were interested in the SAT data as they understood how the single level reflected pupil attainment at the end of each key stage. They wanted to use CAT data but did not know how to access the data and they did not understand what CAT data could offer. This was a consistent theme throughout all the interview responses. Staff felt it important to have historical data to see how pupils had progressed over time. For example if they were teaching or supporting a key stage three class access to their key stage two data was thought to be beneficial. The overarching need for all staff groups was that they wanted as much data as possible so that they could make accurate informed decisions. Heads of subject wanted accurate information

to help them set groups and provide appropriate courses. However they wanted the data to be simple to access, as they did not want to spend valuable time wading through reams of paper or searching electronically. Staff wanted the information to have ease of access, to be accurate and used for setting realistic pupil targets. They feared the key stage two data would be used to dictate the key stage three data by simply upping the key stage two data by two levels, similarly for setting key stage four targets. A suggestion that came from the interviews was to allow both pupils and staff to set their own targets. A common thread throughout the interviews was that staff thought that a more sensitive baseline measure of a pupil's attainment and capability was required such as CAT tests. It was thought important to make the data easy to access, intuitive and presented in a positive but 'non boring' way. The data needed to be flexible so that it could be extracted easily for other uses, for example class lists and set lists could be slotted into mark books with special need requirements and current levels identified. Comparative data was identified as being important so that informed judgements could be made but staff did not want to calculate or produce these themselves. They thought a bank of comparative data could be set up so that it could be accessed as required particularly at the beginning of each academic year. To be useful the data needed to be current therefore maintained on a regular basis say every half term. Staff wanted to ability to print off the data in any format they required. For example they may need the alphabetical listing of a year group, the members of a form or house, a subject cohort in either key stage three or key stage four, a rank order of pupils studying a subject, or the data of a particular pupil on a single page.

4.5.4 Provide

The last principle examines the process by which the Ridgeway model was produced. The process and final product is discussed in chapter six. The model provides a reference to staff of the process and expectations, a clear presentation of the data and provides an analysis of pupil and school progress. To be of value to the community the model needed to provide pupil information in a clear and meaningful way so that parents and carers

could make accurate judgements about pupil progress. The way in which this information was given was thought to be crucial to improving relationships between parents and the school as the process has the potential to contact each and every parent who has pupils in the school. The information needed to be provided in an accessible and sensitive way to parents; if not all the hard work spent developing the Ridgeway model would be lost. I therefore reflected upon the way in which the school issued this information. The practice I inherited was to send a report to parents and carers and then hold a report evening to discuss progress with the various subject teachers and form tutor. The major problem with this system for my school was that the receipt of the report could not be guaranteed. When I investigated this problem further I found that the attendance at our pupil parent evenings was very poor, usually below fifty per cent. The main reason for this was that the school sat alongside a council estate populated by parents who had failed at school. These parents were very reluctant to return to a school in which they themselves had failed. They found the make-up of the parent evenings daunting; passing from teacher to teacher representing different subjects. They found it hard to remember the facts relating to their child, particularly the process of translating the different grading formats of almost every subject. Parents often became very fed up especially when each teacher gave them a negative message. Such parents often left without getting a true overall picture of their child's progress. Considering the vast amount of work and dedication of the school staff in providing the information for the parents the delivery of the information needed to be reviewed. Although this facet was not a major element of the research, it merits consideration. The experience of giving parents feedback on their child's attainment needed to become more parent sensitive. A pupil review system was put in place instead of the parent evening. A day was set aside for each form tutor to report back to each pupil in fifteen minute appointments. All of the information relating to each subject and an overview of learning progress was given to the form tutor to relate to the parent or carer. If concern was expressed about a particular subject a follow up meeting was arranged with the subject teacher. The attendance of these meetings increased dramatically averaging over ninety per cent for

all year groups. The main reasons were the parents felt more comfortable dealing with a familiar face, i.e. the form tutor, and the daytime meetings suited them better as they were often not at work and free from child care. For the rare parents that were both out at work an evening was set aside similarly for those parents that could not attend their first appointment an alternative was found. At the end of the evening I interviewed parents leaving the school to ask their opinion of the new format. All comments were totally supportive of the change in format. A summary of the feedback comments are listed below:

A great new system I really know how my boy is getting on.

It is really good to see just one person. Since she knows him best I can ask all my questions at once.

No more queuing how great is that.

I am in and out in twenty minutes instead of the usual two hours.

I can now go when the kids are at school. Brilliant that I only see his form tutor who has all the answers.

I feel I can discuss problems more easily. He is not the best behaved so I get loads of letters home. Now I know his form tutor I can keep a constant watch on him.

It is a pleasure to have a chat with someone that has the overall picture of how my daughter is getting on.

If there is a subject problem I can ask the form tutor to get more information or make an appointment with the subject teacher. In the old system I could be waiting half an hour to see one teacher.

I hate coming into school I did not do very well I want my daughter to do better. I can cope with seeing one person I did not come when we had the old system.

A great new system. The only thing I miss about the old system is the tea and biscuits.

Its good having my boy with me when I discuss the report with the form tutor. Before when we had the old system he was more interested in talking to his mates. Now he has to listen and answer questions if there is a problem.

4.6 Summary

The most important issue in developing the Ridgeway model was the creation of a change culture within the school so that the school staff had the confidence and excitement required to maintain continuous improvement into the future. The action plan that was developed needed to form an integral part of the schools improvement plan. The information gained from the three questionnaires and the staff semi-structured and parent informal interviews provided the skeleton upon which the model for Ridgeway High school was developed. Essentially the data needed to be presented in a clear and understandable layout. The data was to comprise SAT data and CAT data. The data was required in different formats by different audiences therefore a facility to access the data in the requested formats would be advantageous. For example subject by subject, year group and teaching group. The main issue that was raised was the use of baseline assessment, particularly CAT data. Staff felt quite uncomfortable about using the data in its current form. This data came in from the LEA as columns of figures with largely indecipherable titles and there were over eighty fields of information. The evidence

showed that CAT data was both a major and urgent problem. Staff needed to know what the CAT data meant, what measures were useful and training in how to access and interpret the data. The CAT data was to become the main baseline assessment for all pupils and become a major concern of staff. This aspect of the research is discussed in the next chapter.

Chapter 5: Baseline Assessment

5.1 Standardised test

The evidence obtained from the objectives discussed previously overwhelmingly agreed that a standardised test should be at the core of a school self-evaluation model. The advantage of a standardised test is that it establishes a baseline to gauge progress made by pupils, teachers and the school. The required test, based on the evidence, was one designed to establish the attainment level of pupils at the end of each of the key stages. The measured performance is regarded as a 'baseline' from which subsequent performance may be predicted, monitored and any relative improvement or deterioration judged. The evidence from objectives one and two revealed that the test that was already used and well established within Wirral LEA schools was the National Foundation for Educational Research (NFER) Cognitive Abilities Test (CAT test). This test was therefore adopted to provide the baseline assessment for the Ridgeway High School model.

The results were sent from the NFER to the school on a disk. Several schools reported that the disk did not promptly reach the person who was looking at the results. This was largely due to the results disk being sent to Head teachers, who were often unfamiliar with the correct course of action to take. I was of the opinion that Head Teachers were reluctant to pass on the data because they did not understand it sufficiently but were reluctant to admit that that was the case. In the case of my school, I was appointed the data manager so this problem, that I believed was prevalent amongst many of our LEA schools, was solved.

The crucial problem was to select appropriate data that would be useful for staff to use. The schools that were using CATs used the results very superficially and this was largely due to the data being presented in such a way that made it very hard for schools to

access meaningful data. Although the CATs were used by several schools, the analysis was very sketchy. From discussions I had with other school personnel, it became clear that to enable this data to be used efficiently and productively, two problems needed to be solved. Firstly, the available data needed to be understood so that appropriately useful information could be made available to staff. Secondly, to encourage staff to use the data it had to be presented in a clear and user friendly way. Both of these issues are discussed below.

5.2 Cognitive Abilities Tests (CATs)

The Cognitive Abilities Test (CAT) assesses a range of reasoning skills. The bank of tests looks at reasoning with three types of symbols: words, numbers and shapes or figures; these are ‘verbal’, ‘quantitative’ and ‘non-verbal’ reasoning.

The verbal reasoning element assesses reasoning processes through the use of the symbol words. Such processes include: identifying relationships between items (e.g. 'big' is the opposite of 'small'); creating correlates of such relationships (e.g. 'big' is to 'small' as 'thick' is to 'thin'); identifying classes ('hat', 'gloves,' ____?': pyjamas, slippers, scarf), and reasoning deductively ('A' is taller than 'B' and 'B' is taller than 'C'; therefore 'A' is taller than 'C'). It is not therefore an assessment of reasoning with words, nor wider language skills such as speaking, listening or writing.

The quantitative tests assess the same processes but use numbers as the symbols. For example, determining rules by analogy and applying these to new cases (2->3, 9->10, 6->_? (7)); determining patterns and relationships in series (1, 4, 7, _? (10)); or combining elements to form number sentences (e.g., by combining the following elements it is possible make one of these answers (2 3 4 + -: 0 2 4 5 7).

The non-verbal tests again assess reasoning processes but use shapes and figures as the symbol. Because these questions do not require knowledge of the English language, or

the number system, they are particularly useful when assessing children with poor English language skills, or disaffected pupils who may have failed to achieve in academic work for motivational reasons. The main reason for using CAT tests was to identify 'underachieving' pupils.

Attainment tests, such as National Curriculum tests, are designed to measure outcomes of specific learning and instruction, and the content is drawn directly from the taught curriculum. In contrast, reasoning tests look at a general set of prior experience by assessing the perception and manipulation of relationships and content that is not generally part of the taught curriculum. Non Verbal Reasoning (NVR) tests, with their relatively low language demands, are least likely to be influenced by the quality of teaching issues. Consequently CAT scores are less likely to be affected by school experience than attainment tests. Comparisons between a pupil's CAT scores and their attainment in school subjects such as English and Mathematics can therefore be helpful. This can identify pupils whose reasoning ability is average or above but whose attainment in curriculum-related subjects is low. Such pupils may be characterised as underachieving, and may benefit from targeted intervention.

To ascertain the progress made by pupils a decision was made to test pupils on entry in year 7 and retest in year 9 at the end of key stage 3. For individual pupils it should be remembered that any test is based on performance on one day and may be affected by a wide range of motivational or other influences. For example, the pupil may have been distressed or upset by an incident at home earlier that day. It is therefore important that the score is placed within a 'confidence interval' so that small changes in standard scores are not over-interpreted It is suggested within the test rubric that there would have to be a change of 10 or more standard score points before a pupil had a 'significant' change in their CAT score.

It is important for teachers to be aware that changes in scores over time represent a significant improvement or decline in CAT scores. In most cases the three standard age scores (verbal, quantitative and non-verbal) are broadly in-line with each other. Scores are rarely exactly equal and there has to be a difference of 10 or more standard age score (SAS) points between a pupil's score on any two tests before the difference would be considered statistically significant. The implications of any score differences depend on the particularly batteries where the differences exist, and whether they indicate relative strengths or relative weaknesses. When considering mean scores it is suggested that in order to be significant, a change would need to be at least 2 standard score points for a group size of 100 or more pupils. For a smaller group the change would obviously need to be larger to be significant. It is important to realize that test scores should feed into a broader assessment, bringing to bear knowledge of the pupil's achievements in school subjects, their personal background and their attitudes, motivation and behaviour. For this reason a pupil's teacher is best placed to interpret the implications, if any, of the CAT scores of any individual pupil. It is for this reason that the data presented to staff within our school evaluation model takes into consideration the 'broader assessment' picture.

A vital aspect of a self-evaluation model is target setting. Targets need to be set for pupils so that judgements can be made about their progress. There is a strong correlation between pupils' scores on CAT and their performance at the end of Key Stage 3 (KS3) and in GCSE examinations at age 16. It is stressed that this does not imply a deterministic relationship between CAT scores and KS3/GCSE results for individual pupils. Pupils with similar CAT scores can achieve a wide range of GCSE outcomes. Clearly a whole range of factors such as the pupil's motivation, behaviour and effort, the extent of parental support, the quality of teaching and learning in the school etc. impact on pupil's level of success in subsequent examinations. However, the CAT scores are helpful to teachers in providing a forecast of potential KS3 or GCSE outcomes. The

teacher can use the CAT scores as one piece of evidence, alongside everything else they know about the pupil, when considering targets for future attainment.

It is important to note that these indicators are not precise. They show the outcomes expected for pupils with a particular CAT score making average progress in the typical secondary school. They come with a margin of error, which reflects the differences in progress that may be made by different pupils in different schools or circumstances. The subject indicators come with a margin of error of at least plus or minus one grade. For example a pupil may have an indicated outcome of 'D' in a particular GCSE subject, but this may for example reflect a 5% chance of an A, 10% chance of a B, 20% chance of a C, 30% chance of a D and 20% chance of an E, 10% chance of an F and 5% chance of a G or below. These outcomes are clearly shown in the 'Progress tables' or 'chances graphs' within the CAT documentation 'Getting the Best from CAT'. I therefore argue that these indicators are a good starting point for considering targets but must only be considered in the context of the confidence intervals.

It has been suggested from the 2003, GCSE Indicators that pupils with a mean CAT3 score of 99 or above have a greater than 50% probability of achieving 5+ GCSE A*-C grades This figure is a rough indicator that teachers can consider when analysing the data. Obviously some pupils with a mean CAT3 score above 99 will not actually achieve 5+A*-C grades, while some pupils with a score below 99 will achieve 5+A*-C passes. The GCSE indicators are derived from an analysis of the progress of all pupils in the national sample, without regard to school membership or any other factors. The GCSE indicators are therefore the outcomes expected for a 'typical' school. However, there is considerable variation in GCSE outcomes across schools. In some schools pupils obtain markedly better results than pupils with the same CAT score in other schools. As an example, we can consider the school variation in the mean CAT score above which pupils are more likely than unlikely to achieve 5+ A*-C passes (i.e. where the probability of achieving 5+ A*-C grades becomes greater than 50%). Less successful schools have

high thresholds; in a school at the lower quartile, pupils need to have a mean CAT scores of 102 before they are likely to achieve 5+A*-C grades. More successful schools have lower thresholds; in a school at the upper quartile, pupils with a mean CAT3 score of 97 are likely to achieve 5+ A*-C passes. Consequently if the CAT indicator looks quite challenging consideration needs to be given to whether the school is adding as much value as it might. On the other hand, if the CAT indicator does not look challenging, you may be adding a lot of value already, and need to consider aiming for the Upper Quartile or a more challenging target.

As previously argued the whole school 5+A*-C indicator needs to be interpreted with a high degree of caution. There is substantial aggregation involved in calculating the 5+ A*-C figure for a school, involving: summarising the eight GCSE grades to a simple pass/fail at the C/D border for each subject; summarising across all the subjects taken by a pupil, again to a simple pass/fail, so that 4 C's represents fail but 5 C's represents a pass, and then; averaging across all the pupils in the year group. For this reason there will be a wide error margin associated with the indicator. Therefore, it is advisable to consider indicators and targets at the individual pupil level. This is the policy that was adopted in developing our school model.

The CAT tests also provide a 'School Level Indicator'. This indicator is calculated by taking the average of pupil level indicators. CAT cite the example, consider a hypothetical school where the year group has three pupils. If the mean CAT scores for these three pupils are 85, 100 and 115 respectively, then the school level indicator for 5+A*-C would be: (10% + 60% + 95%) / 3 = 55%.

5.3 Presentation of CAT data

The bank of data given from the Local Education Authority CAT analysis contained over eighty fields of data that were presented in the most unfriendly way I have ever seen. An example of the format is shown below.

Table 4: CAT results as received from the local authority

?	School_Name	DfE_Num	CAT3 LEVEL	YearGroup	ClassName	FORM	ID	Gender	DOT	DOB	True_Age	Test_Age	DobFlag	Manual_Flag	Verbal_MissingFlag	Verbal_Messy_Flag	Verbal_ChanceLevel_Flag	Verbal_Attempts	Verbal_RawScoreTotal	Verbal_SAS	Verbal_NPR	Verbal_Stanine	Verbal_SubTest_1_Raw_Score	Verbal_SubTest_1_Stanine	Verbal_SubTest_2_Raw_Score	Verbal_SubTest_2_Stanine	Verbal_SubTest_3_Raw_Score	Verbal_SubTest_3_Stanine
CAT3E	Ridgeway High	3444018	F	Y9	9	9S		M	08/09/2004	18/08/1991		13:01			0	0	0	78	25	82	12	3	12	3	9	3	4	2
CAT3E	Ridgeway High	3444018	F	Y9	9	9S		M	08/09/2004	20/07/1991		13:02			0	0	0	78	21	78	7	2	10	3	7	3	4	2
CAT3E	Ridgeway High	3444018	F	Y9	9	9J		F	08/09/2004	09/09/1990		14:00			0	0	0	76	65	113	80	7	22	6	18	5	25	7
CAT3E	Ridgeway High	3444018	F	Y9	9	9G		M	08/09/2004	22/08/1991		13:01			0	0	0	78	34	89	24	4	14	4	10	4	10	4
CAT3E	Ridgeway High	3444018	F	Y9	9	9D		M	08/09/2004	30/12/1990		13:08			0	0	0	78	72	125	95	8	23	8	23	8	26	8
CAT3E	Ridgeway High	3444018	F	Y9	9	9J		F	08/09/2004	30/12/1990		13:08			0	0	0	78	44	94	34	4	16	4	15	5	13	4
CAT3E	Ridgeway High	3444018	F	Y9	9	9C		F	08/09/2004	03/05/1991		13:04			0	0	0	78	34	88	22	3	13	3	12	4	9	4
CAT3E	Ridgeway High	3444018	F	Y9	9	9G		M	08/09/2004	26/03/1991		13:05			0	0	0	78	59	109	72	6	20	6	20	7	19	6
CAT3E	Ridgeway High	3444018	F	Y9	9	9D		F	08/09/2004	29/06/1991		13:02			0	0	0	78	38	92	30	4	18	5	13	4	7	3
CAT3E	Ridgeway High	3444018	F	Y9	9	9R		M	08/09/2004	15/10/1990		13:11			0	0	0	78	50	98	45	5	17	4	16	5	17	5

It was obvious that the information needed to be drastically slimmed down to be useful**.** Further, if the data was distributed in the way in which it was received by the school, it would have had an extremely detrimental effect on staff, particularly those with limited numerate skills**.** As the person responsible for school assessment, I spent a considerable amount of time analysing the sets of data to identify which fields to use for general consumption.

The first task was to collect the data into perceived useful groups. These were:

Verbal

Quantitative

Numeric

Mean

Key Stage 2 Data (KS2)

Key Stage 3 Data (KS3)

Key Stage 4 Data (KS4)

Predictive Data

Each of these groups of data was subdivided to provide further in depth information so that the performance of individual pupils and when aggregated the performance trend of the school can be determined.

The ‘Verbal’, ‘Quantitative’ and ‘Numeric’ groups were sub-divided into the Battery raw score, SAS (Standard Age Score), NPR (National Percentile Rank) and the Battery stanine.

The Battery Raw Score. This score is simply the number of correct answers gained by the pupil. By itself, a raw score does not provide much information about a pupil's test performance. The same raw score means different things for pupils who take different levels of the test, and even for the same pupil on different test batteries within a level.

The Standard Age Score (SAS). This score compares an individual's performance with that of other individuals who are the same age. The Standard Age Score scale is a normalised scale with a standard deviation of 16 and an average score of 100. It is recommended that the SAS scale be used to help identify gifted students and to determine discriminations among students at the highest and lowest levels of performance. The result relates how a pupil is doing compared with other pupils born in the same month. For any age group a given numerical value has the same meaning in terms of standing relative to the group. For example, an eleven year old and a twelve year old, each of whom has a standard age score of 105, have performed equally well in relation to the average for their respective age groups.

The NPR (National Percentile Rank) a percentile rank is the per cent of scale scores for pupils in a national sample of pupils in the same cohort and tested at a comparable time of the school year. The national sample is referred to as the norm group. For example, if a pupil’s scale score converts to the 60th NPR on a particular test, this means that the

pupil scored as well as or better than 60 per cent of the pupils in the national sample (norm group).

The stanine rates scores within a range of 1-9. A stanine of 9 is the best and 1 the lowest. Stanine (STAndard NINE) is a method of scaling test scores on a nine-point standard scale with a mean of 5 and a standard deviation of 2.

To calculate stanines test scores are scaled to stanine scores using the algorithm:

1 Rank results from lowest to highest

2 Give the lowest 4% a stanine of 1, the next 7% a stanine of 2, etc., according to the following table:

Table 5: Stanine ranking

Result Ranking	4%	7%	12%	17%	20%	17%	12%	7%	4%
Stanine	1	2	3	4	5	6	7	8	9

The underlying basis for obtaining stanines is that a normal distribution is divided into nine intervals, each of which has a width of 0.5 standard deviations excluding the first and last. The mean lies at the centre of the fifth interval.

Stanines can be used to convert any test score into a single digit number. However, because all stanines are integers, two scores in a single stanine are sometimes further apart than two scores in adjacent stanines. This reduces their value. Stanines are mostly used in educational assessment such as CAT tests. The stanine was included as an indicator as teachers found this measure particularly useful as it is easy to understand.

Predictive data was also included within the CAT material issued to staff. This included Key Stage 3 levels and Key Stage 4 GCSE predictions. The validity of this data has been discussed above. An example of the agreed final format of the data is shown below:

Table 6: User friendly CAT score table

Ridgeway High School — PROVISIONAL

Key: SAT L3 and below

CATs Class 2009

Stanine: 7 to 9; 4 to 6; 1 to 3

SAS: 110+; 100-109; 90-99; 70-89

Gifted and Talented 115+

Form	V Raw Score Total	V SAS	V NPR	V Stanine	V Sub T 1 Raw Score	V Sub Test 1 Stanine	V Sub T 2 Raw Score	V Sub T 2 Stanine	V SubT 3 Raw Score	V Sub T 3 Stanine	Q Raw ScoreTotal	Q SAS	Q NPR	Q Stanine	Q Sub T 1 Raw Score	Q Sub T 1 Stanine	Q Sub T 2 Raw Score	Q Sub T 2 Stanine	Q Sub T 3 Raw Score	Q Sub T 3 Stanine	NV Raw Score Total	NV SAS	NV NPR	NV Stanine	NV Sub T1 Raw Score	NV Sub T 1 Stanine	NV Sub T 2 Raw Score	NVSub T2 Stanine	NVSub T 3 Raw Score	NV Sub T 3 Stanine	Mean Stanine	Mean SAS	Mean NPR	Prob 5 A* to C GCSE	Prob 5 A* to G GCSE	Performance Score	Best 8 Score
M	50	94	34	4	18	4	12	3	20	5	53	113	80	7	19	7	18	6	16	6	35	92	30	4	14	4	10	3	11	5	5	100	50	56%	97%	43	37
W	34	86	18	3	13	3	9	3	12	3	26	87	20	3	8	3	6	2	12	5	34	92	30	4	7	3	16	5	11	5	3.3	88	22	21%	88%	30	27
B	64	109	72	6	21	5	20	6	23	6	34	94	34	4	11	4	13	4	10	4	53	111	77	6	18	5	21	7	14	7	5.3	105	63	73%	99%	49	41
B	34	88	22	3	12	3	9	4	13	4	21	83	13	3	11	5	4	2	6	3	28	88	22	3	14	4	8	3	6	4	3	86	18	17%	85%	28	25
B	70	118	89	7	21	6	23	8	26	7	45	106	66	6	14	6	15	5	16	7	57	118	89	7	20	6	21	7	16	8	6.7	114	82	93%	100%	59	48
M	53	98	45	5	22	6	14	4	17	4	38	96	40	4	10	4	15	5	13	5	27	87	20	3	13	4	9	3	5	4	4	94	34	36%	94%	37	32
W	66	109	72	6	24	8	16	5	26	7	46	105	63	6	18	6	13	4	15	6	40	96	40	4	16	4	15	4	9	5	5.3	103	58	67%	98%	47	39
B	45	90	26	4	19	4	11	3	15	4	42	99	48	5	19	7	12	4	11	4	30	89	24	4	11	3	12	4	7	4	4.3	93	32	33%	93%	36	31
J	53	98	45	5	14	3	20	6	19	5	33	92	30	4	8	3	13	4	12	5	46	102	55	5	20	6	16	5	10	5	4.7	97	42	45%	96%	40	34
W	66	114	82	7	23	7	20	7	23	6	37	99	48	5	8	3	17	6	12	5	43	100	50	5	19	6	17	5	7	4	5.7	104	60	70%	98%	48	40
W	55	104	60	6	19	5	16	6	20	6	38	100	50	5	12	5	14	5	12	5	38	96	40	4	16	5	16	5	6	4	5	100	50	56%	97%	43	37
W	55	102	58	5	20	6	16	6	19	5	39	100	50	5	10	4	17	6	12	5	46	103	58	5	20	6	15	5	11	6	5	102	55	63%	98%	46	39

5.4 Interpreting CAT data

As mentioned previously, staff training was a major concern. So that staff were conversant with what the CAT tests could offer a series of workshops, a day conference and an explanatory booklet was written**.** Areas covered included administration protocols, selection of data and how to interpret the data. Interpretation of the data was seen as the major concern particularly for non-mathematical inclined staff. This area was thought to be so important that an external consultant Pat O'Brien of P&S Consultancy was commissioned with the task. In collaboration with Pat O'Brien, to establish the credibility and authority of my knowledge and interpretation, the day was organised. The material below represents the evidence of the day and exemplar material given to staff.

5.4.1 How senior managers and middle managers can use CAT data strategically

1. Turn the CAT data available into information about the pupil's strengths and weaknesses and ability to learn.
2. Use the Key Stage Data to determine the next target for the pupil but link it with the CAT data to determine the likelihood of success.
3. Use well planned, highly structured but flexible, teaching programmes related to differing preferences in the pupils learning styles as analysed from the CAT V-NV data.
4. Use on-going diagnostic assessment to determine the subject strengths and weaknesses and reasoning skills as displayed by the CAT Stanine data.
5. Focused teaching in the classroom with an eye on developing reasoning skills in literacy and numeracy and developing thinking skills in the subject.
6. High uses of focused objectives for a range of abilities, written in pupils' language using active verbs so expected outcomes are clear and achievable for the pupils concerned.
7. Talk about learning skills with reference to the CAT V and Q data and how they can be used in differing places to help develop metacognitive skills.
8. High use of focused grouping of pupils (around 70% determined by the teacher using the CAT V-NV plot and information about the class) to ensure high collaboration and cooperation can take place
9. High use of constructive formative marking linked to a positive feedback on performance towards the objectives set.
10. Short summative assessment cycles using a range of assessment techniques to determine markers of learning.
11. Frequent meetings about and INSET for staff based upon examination of the pupils' abilities to learn and teachers range of skills to teach them.

12. Involve parents in a partnership of learning by using the CAT stanine data and probability of KS3 and GCSE outcome as information about the pupils strengths and weaknesses and its effect on the possible success of the pupil.
13. Celebrate all types of success as a collective school not as elite groups.
14. Use the CAT data not as a predictor of actual success but as an indicator of where to make successful intervention and offer effective support so the results are better than the CAT predicts.

5.4.2 An Analysis for a typical class and individual pupils

A typical CAT summary sheet for a form might have a structure like the one below:

Table 7: Typical class summary sheet

No. in Class	30
Class Aggregate Mean	94.4
Standard Deviation	11
Range	74-129
Verbal Mean	93.3
Quantitative Mean	90.8
Non-verbal mean	99.1
Female Verbal mean	95.4
Male Verbal mean	91.2
Female Non-verbal	98.9
Male Non-verbal	99.3

Table 8: CAT score information

	Overall Mean		Verbal						Quantitative						Non-verbal					
Name					Stanine						Stanine						Stanine			
	SAS	PR	SAS	PR	V1	V2	V3	Bat	SAS	PR	Q1	Q2	Q3	Bat	SAS	PR	N1	N2	N3	Bat
AB	100	50	102	55	6	5	5	5	97	42	4	4	4	4	100	50	4	4	4	4
CD	98	45	90	25	3	3	4	3	95	37	4	4	3	4	110	75	6	6	6	6
EF	93	32	88	21	3	2	3	3	95	37	2	5	3	4	96	39	5	2	3	4
GH	113	81	103	58	6	4	6	5	118	88	6	7	7	7	120	91	7	9	8	8
JK	74	4	71	3	2	1	1	1	78	7	1	2	1	2	73	4	1	1	1	1

SAS Standard Age score this is standardised so that 100 = National average

NPR National Percentile Rank which can be interpreted as giving the teacher some indication of where the pupil is placed against their peer group on a national basis.

Stanine The test scores and battery scores translated into a nine point scale, where:

1	Poor
2-3	Below Average
4-6	Average
7-8	Above Average
9	High

Range The full range of scores for the class.

Standard Deviation The score spread for one standard deviation on either side of the mean, the middle 68%.

5.4.3 Changing the Data to Information

- This is a class with a wide range of cognitive ability 75 =bottom 5% of ability and 130 =top 2% of ability.
- The class average is about 94 and this is a significantly low (more than 5 points from the national mean).

- The Standard Deviation is significantly low (more than 3 points from the national score of 15) implies that about 20 of the pupils fall between 83 and 105.
- The verbal means are significantly low and there is a difference between the boys and girls that would indicate a strong need for a whole school literacy programme that goes cross-curricular. There is also a gender difference so some attention must be put to developing the boys' literacy.
- With regard to potential the non-verbal scores are not significantly different from the national. Equally for the boys and girls there is no significant difference. This would imply that the pupils in this class could be successful at gaining GCSE success at the A*-C range but that this might be at risk because of a lack of verbal reasoning skills which could impact upon the pupils ability to access the curriculum.

The conclusion for the teacher is the class requires very careful differentiation and careful attention needs to be given to the individual pupil profiles. It is likely there are some big differences between verbal and non-verbal scores with verbal scores on the low side. This means a high demand for literacy support or intervention.

5.4.4 Determining the individual pupil profile

AB relatively average pupil (Overall SAS = 100 and little significant difference between verbal SAS =102, quantitative SAS =97 and non-verbal SAS =100 scores). This pupil should be able to achieve in line with any average pupil if their motivation and aspirations are high. Developing the learning strategies especially for successful writing and revision would be a priority for this pupil.

CD this pupil, with a non-verbal SAS score of 110 exhibits a high potential to be able to learn but this potential may be severely hampered by poor development of basic literacy skills as shown by the low verbal SAS score = 90. If there is a difference of 8-10 points between the verbal and non-verbal then the verbal can influence the learning

ability of the pupil. In this circumstance the teacher would look to the profile of the pupil as shown by the stanines. This pupil would benefit from support by e.g. word walls (V1=3), intervention with the development of reading skills e.g. paired reading with questioning (V2=3) and support with writing skills by the use of writing frames.

EF this pupil is similar to CD with regard to literacy so the teacher could effectively use the same technique for this pupil. However the quantitative profile is also low in Q1 =2, which could mean the pupil will have a difficulty in dealing with translating numbers into a concrete framework resulting in a poor understanding of number systems and number rules. This would show itself as a lack of understanding in positional notation, fractions, decimals and ratios. This pupil would benefit from support with number lines and any approach that presents number work in a concrete form to help develop a sense of progression in number systems. Likewise Q3 = 3 is low and this could mean the pupil will find mathematical work difficult and will need a good deal of concrete help with algebraic work. This pupil also has a low N SAS score = 96, but this score gives the pupil around a 20% probability of gaining a C in GCSE and with a 1 in 5 chance they would be considered a good bet in any D to C programme. However the low N2 =2 and N3 =3 can mean the pupil will find visualisation work difficult so line diagrams may give the pupil some problems this could be an area of concern in subjects like science, geography, technology and sport. This pupil is likely to need some support from teachers to maintain their targets.

GH a pupil that, with the Overall SAS =113 is in the top percentage of the school and so could well be a gifted pupil. The non-verbal score of 120, which would put the pupil in the top 7%, could support this. However there is a caution, since the verbal SAS is at 103 and this is significantly different from the non-verbal SAS (a difference of 17 points). This pupil is likely to be successful in the curriculum but the relatively low verbal reasoning skills will create some difficulties for this pupil when dealing with higher order verbal reasoning. From the stanines it is clear that V2 =4 is significantly lower than

their other ability areas and that this could be discussed with the pupil and set as a personal target for them to manage with some support from a mentoring process.

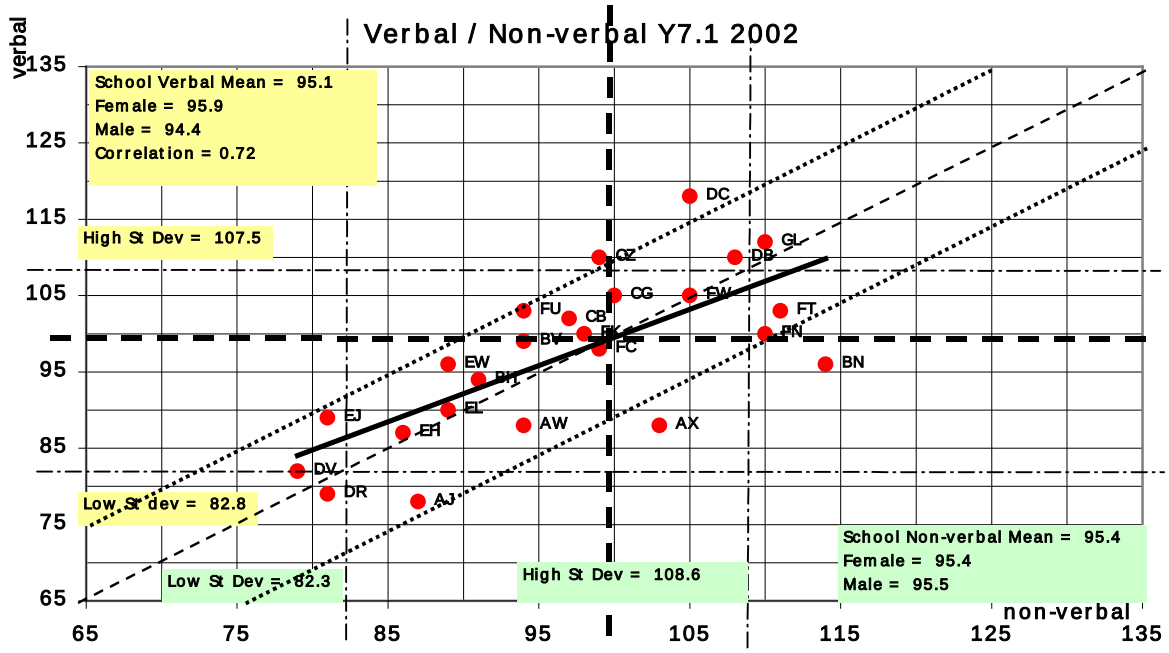
JK a pupil that is likely to be statemented or in need of an individual education plan. The low overall SAS = 74 shows a pupil in the bottom 4% and this repeated in all their abilities. This pupil will require very close support to make the best of their skills and develop more effective learning strategies. It is probable that where there is in-class adult help this pupil will need some of that time for support or else the teacher will need to set up close support programmes requiring specially written materials.

5.4.5 Determining the class profile and learning preferences

A class Verbal-Non-verbal construct can be plotted to give the teacher some idea of learning style preferences in the class of pupils. It is argued that these types of plots can give some indication of how difficult the class might be to teach.

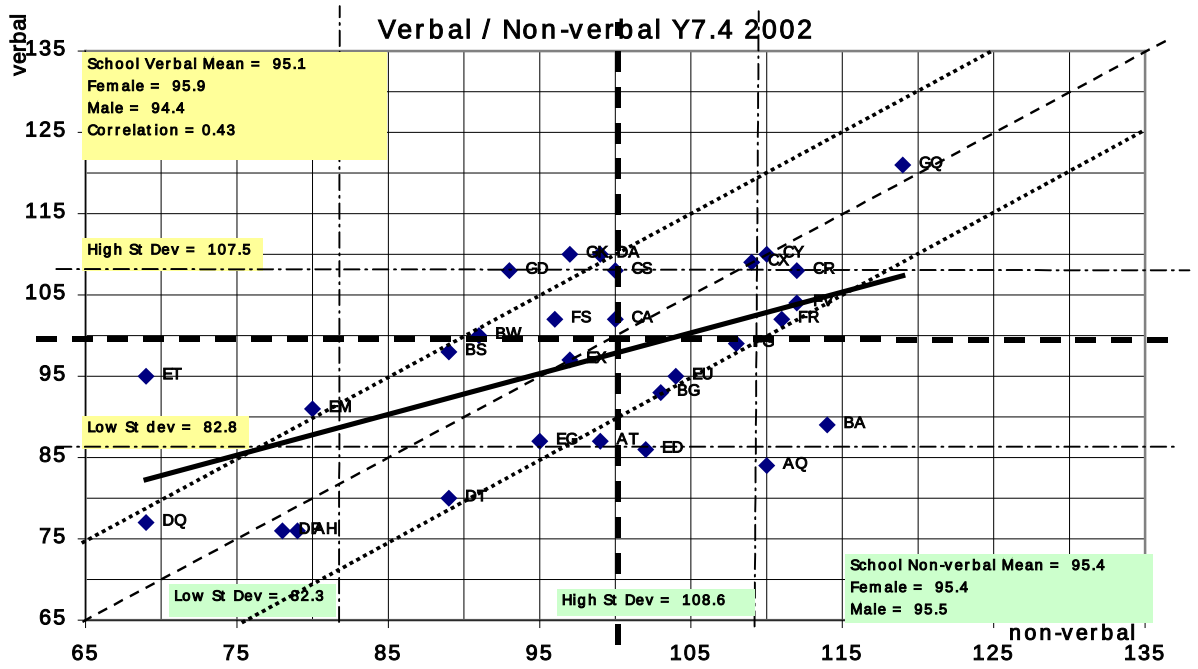
The class plot might look like the following:

Diagram 5: Verbal non-verbal graph for class 7.1



Whilst another form might look like the following:

Diagram 6: Verbal non-verbal graph for class 7.4



It is clear the plots are different and one would expect differences when teaching these two forms but what can the teacher deduce from the plots?

The spread of the pupils in the groups indicate differing skills at using verbal and non-verbal reasoning. This affects the pupil's skill to develop an idea and then embed it into their brain to use for learning.

In 7.1 the pupils are collected about the diagonal running from bottom left to top right and the spread is not very wide. This can be shown by the correlation 0.72 which indicates a large number of pupils have nearly matched verbal and non-verbal reasoning skills. There are 6 pupils outside the +10 or –10 verbal tramlines. These are marker pupils that will need to be carefully accommodated in their learning styles since they are the ones likely to have difficulty with certain activities and could show bias in their learning skills.

In the A quadrant there are 5 pupils clustered close to the 100 cross over there are only two marker pupils CZ and FU with relatively big differences in their abilities.

In B quadrant there are 6 pupils who apart from DC, FT and FM are relatively close to the diagonal line of equal V/NV. These three pupils would require some attention to the stanine profile to develop aspects of their learning. They could be made aware of this and set their own targets.

In the C quadrant there are 11 pupils who are widely spread so they will require careful attention when using language and models to explain. The use of a Key-word board and concept maps for mapping the relationships between ideas would be an advantage and useful tool for developing metacognition. The use of writing and thinking frameworks would also be a general requirement but the use of a common model across the curriculum would help re-enforce ideas and thinking processes.
In quadrant D there are two marker pupils, BN and AX. These could be the focus of the teachers targeting for high improvement since there is all to gain here for these pupils. They have relatively high potential but lack the basic literacy skills to develop that potential. Many of the techniques for the C quadrant pupils would work but set in a high cognitive demand with high use of visuals and active learning approaches.

For the teacher this group has a high degree of similarity in the pupils' learning preferences so the teaching experience, if the learning attitudes are relatively positive, is pleasant.

With reference to the planning, the spread above and below the horizontal verbal mean (at 100) is overall depressed towards the lower ranges so those pupils above the line will require some help to develop higher order thinking skills particularly the ability to comprehend and synthesis.

Those below the line will require high level of structuring in the work, probably 10 minute tasks followed by 5 minutes of reflection on the progress towards the target. This refection is an act of formative assessment and the feedback is immediate for the pupil ensuring security in their ability to learn. For the teacher it is giving information about the pupil's progress towards a target and ensuring quick intervention before frustration sets in.

Differentiation will be by the use of learning objectives, language and time:
Longer tasks with reflective tasks for those with reasonable to good verbal skills. Language of the learning objectives encompasses active verbs relating to higher level thinking skills. Models and analogies are sought from these pupils so they develop their own understanding. This also reflects the misconceptions they might have. A series of shorter tasks with teacher directed reflection for those with less than well-developed verbal skills. Language of the learning objectives will encompass active verbs relating to thinking skills that encompass the range of thinking skills but in a contextual setting to allow the pupils to use the context as an analogy or concrete model means to support the learning.

Differentiation will also be style and setting of task:
Those on the longer tasks will be working in a different and often slightly unfamiliar context with a high usage of exemplar material and glossaries of explanation to support the development of skills but linked to higher level thinking skills for problem solving. The layout of the worksheet would be both verbal and visual but direct linking between both aspects to allow easy flow of understanding from both. Outcome is linked with the outcome from the shorter task group to prepare a whole class summary

Those on the shorter tasks will be working on complimentary but familiar contexts with key word glossaries and concept map plans linking prior learning to present learning. This is to allow the pupil to secure the new material alongside already known material

and in a context that helps the understanding. Problems set here will be analytical and application with simple synthesis by linking new ideas to explain an event.

Differentiation will be in the degree of intervention and support:
Longer task pupils are encouraged to use the support material in the texts, on ICT and their own group's strengths that will be pointed out to them by the type of individual objective. Teacher intervention will be to extend ideas for these pupils. Shorter task pupils will have frequent teacher intervention and support to encourage success and the material used will have support programmes from both ICT and text.

The approaches for 7.4 would be the same but the problem here is that the spread of abilities is wide, the correlation is 0.43. There are 9 pupils with verbal reasoning abilities much higher than non-verbal reasoning abilities and 12 in the reverse situation.

The regression lines show a distinct difference in the range of bias in the balance of verbal and non-verbal skills in both classes. In 7.1 the regression line is close to the equivalence line showing a relatively good homogeneity in the balance of scores so potential to be successful is balanced by the ability to access the curriculum. If anything it indicates the more able have a bigger problem with access than the least able.

7.4 present a different picture. The regression line is very much at odds with the equivalence line and re-enforces the view that there is a great deal of difference in verbal and non-verbal scores so potential is challenged by the inability to access the curriculum. There are 14 pupils outside the +10 or –10 verbal tramlines. These are marker pupils that will need to be carefully accommodated in their learning styles since they are the ones likely to have difficulty with certain activities and could show bias in their learning skills.

Grouping is going to be a problem and the teacher would increase the level of directed grouping and individual targets within the group. This would allow cooperative learning with direct active objectives related to peer teaching so one pupil is helping another with verbal or visual abilities and this is made explicit to the pupils to secure some responsibility for each other's learning.

The spread of pupils is highly uneven with 12 above the verbal mean line and 17 below. This would mean the teacher intervention is more on a whole class basis than with 7.1 to ensure some sanity for the teacher in formative assessment and progress towards pupil targets.

This group would also benefit from high use of ICT to support the development of both visual and verbal skills. The use of whole class teaching with models and simulation software packages would help to develop thinking in the subjects. The use of writing and thinking frameworks on an individual basis would lessen the demand for actual writing and promote higher output of writing.

This group would benefit from the use of a thinking skills package to help develop language and metacognitive skills.

5.5 Summary

The Cat results as discussed previously have proved to be a powerful source of knowledge to describe pupils' abilities. I have shown how the scores could be used to look at the overall trends by using the selected statistical tools, defining the individual pupil profile**,** and how a class profile and learning preferences could be constructed. It is important to stress that CAT tests make a contribution to understanding the abilities and progress made by pupils. There are internal school measures that should be used alongside the CAT scores, for example tests; examinations; course grades; course targets; homework. As discussed above there are also the externally provided

measures, for example PANDA and PAT reports, Fischer Family Trust data, RAISEonline and the value added measures. I would argue that the essence of using the data to show progress is to examine three key positions. There is a need to establish the 'starting point', prior attainment; the 'finishing point', outcomes; and a 'regression line', average progress. As explained previously a regression line, average progress, provides a useful way for a school to compare its pupils' results with those of similar pupils achieved in other schools. A regression line is considered to be one of the most powerful tools for investigating the effectiveness of a school (Koenker and Hallock, 2001; Mahimuang, 2005; Rangvid, 2007).

The use of CATs as a baseline assessment tool worked well with the staff. Although many were initially 'data illiterate' their attitudes changed considerably after attending a series of explanatory meetings. The measure they found particularly user friendly and therefore useful was the stanine as this measure showed very clearly the performance of their pupils over a nine point scale ranging from poor (1) to high (9). The staff easily understood this measure because it related directly to their pupils to show their progress rather than comparing to the national norm. The staff reported that it was interesting to see how their pupils compared to the national average as described by the Standard Age Score (SAS) measure in particularly when making judgements about the needs of a new year 7 group. They found this measure easy to use as they were simply looking at the scores to see if pupils were above or below the 100 score that represented the national average. Faculty heads and subject leaders were encouraged by this measure as it showed clearly the spread of pupil ability therefore gave weight to their arguments for extra staffing, smaller teaching groups and extra resources. In general staff found the National Percentile Rank measure challenging. The percentile rank of a score is the percentage of scores in its frequency distribution that are the same or lower than it. For example, a test score that is greater than 75% of the scores of people taking the test is said to be at the 75th percentile. Staff found this concept confusing as they were more familiar with using percentage as a finite score awarded to a pupil taking an

examination. Staff began to glaze over when I spoke of the 25th percentile as also being known as the first quartile (Q_1), the 50th percentile as the median or second quartile (Q_2), and the 75th percentile as the third quartile (Q_3). However they did accept that the percentile rank measure can be interpreted as giving an indication of where pupils are placed against their peer group on a national basis. They thought that this measure showed potential however they would need to practise using the measure in their own context to become more familiar and therefore more confident in its use.

The interpretation of the data has to be clear so that its meaning is precise. I gave the staff the example cited above to illustrate how a pupil profile can be produced; however although staff thought the interpretation very useful many said they were not confident in making their own interpretations. Several of the staff found numbers scary in that they did not know what to do with them as the concept of interpreting scores and trends was outside their comfort zone. It was plainly obvious that staff needed far more help to boost their confidence therefore a series of workshops were put in place at lunch times and after school. The 'class profiles' were surprisingly well received. I thought that the amount of data on each graph may appear daunting. Staff though that the visual representation in the form of a graph made the data easier to understand rather than just having tables of data. They thought that the plotting of a class verbal-non-verbal construct to give the teacher an idea of learning style preferences very enlightening and appreciated that these types of plots can give some indication of how difficult the class might be to teach.

It is these factors and others that were considered when developing a school self-evaluation model. Two key questions required an answer. What measures do we really want to look at? and, What measures best show pupil attainment and progress? The factors identified for the Ridgeway Model came to fruition through a series of structured meetings at all levels of management and delivery. I was able to manage the inevitable changes by liaising with individual staff to ascertain their requirements, talking to pupils

to determine their needs, considering the requirements of external agencies and finally distilling the requirements into a framework at a staff day conference. The policy for action that was created for this management of change is presented in the next chapter.

Chapter 6: Policy for Action

6.1 Establishing the content of the overarching policy

I considered it to be of the upmost importance that all my staff were given the opportunity to freely offer and discuss their ideas on how to shape and develop the self-evaluation process. Therefore I organised a one day conference to finalise the content of the reference material for the model. This was most successful because by the end of the day a series of headings were agreed to outline the skeleton of the model. Five key areas were identified and subsequently subdivided into elements that were felt necessary to be included within that key area.

Table 9: Key areas and elements

Key Area	Elements
1.Quality Assurance	Departmental Planning Expectations Learning Objectives Resources Planning Continuity Teaching Strategies Pace of the Lesson Appropriate Content Support where necessary Appropriate Tasks Physical Resources Responsibility for Learning Learner's Outcomes Assessment Attainment Progress Feedback Learning Environment Lesson Observation Agreed Practice Lesson Observation Schedule

2. Roles and Responsibilities	**School Managers** Role of the Head teacher Role of the Deputy Head teacher Role of the School Self-evaluation Manager Role of the Senior Management Team Role of the Head of Faculty **Governors** How will we involve Governors in maintaining an overview of the process**?** How will we involve Governors in setting the priorities for school self-evaluation? How will the Governors demonstrate accountability for continuing school improvement? **Parents and Pupils** How do parents contribute to the process of S.S.E.? In which ways are pupils encouraged to contribute to the process?
3. Staff Training	What arrangements are in place to ensure that all staff have a thorough understanding of the principles and processes of school self-evaluation? How will we ensure that all staff are equipped with the skills and knowledge to enable them to play an active part in school self-evaluation What arrangements will we make to ensure that all new staff are inducted into the school's school self-evaluation procedures? What arrangements are in place to ensure that all staff have a thorough understanding of the principles and processes of school self-evaluation? How will we ensure that all staff are equipped with the skills and knowledge to enable them to play an active part in school self-evaluation What arrangements will we make to ensure that all new staff are inducted into the school's school self-evaluation procedures?

4.	**Managing the Change**	How will evaluation tasks be delegated? How will the involvement of staff be linked to the budget? What strategies will be used to collect evidence? How will evidence be recorded and reported? What opportunities will staff have to contribute through reflection and debate, to the evaluation of teaching and learning? What systems are in place for regular monitoring of the evaluation process?
5.	**Evaluating the Change**	How will the success of an evaluation exercise be measured? What structures are in place for reporting findings? What systems will be in place to carry out a review of the process at the end of the academic year? How will we link the outcomes of S.S.E. to our school's Development Planning and Performance Management processes?

During the next twelve months the working groups met regularly to develop the elements identified within their area to produce an understandable, prescriptive and practical off the shelf self-evaluation framework of the school model. The evidence gained from the questionnaires, informal interviews and meetings, and the insight gained from the in-depth analysis of the CAT results focussed attention on the aspects that were included in the final documentation.

The overarching sections to the model became: 'The Challenge of Self-Evaluation'; 'Planning a School Strategy'; 'The Cycle of Self-Evaluation'; 'A Suggested Timing'; and most importantly putting 'Policy into Practice'.

The putting 'Policy into Practice' section is sub-divided into five key components as identified above:

1. Quality Assurance
2. Roles and Responsibility
3. Staff Training
4. Managing the Process
5. Evaluation and Monitoring the Process

These sections and components are discussed and defined in this chapter.

6.2 The challenge of self-evaluation

I would argue that a school that knows and understands itself is well on the way to solving any problems it has. The school that is ignorant of its weaknesses or will not, or cannot, face up to them is not well-managed. Self-evaluation provides the key to improvement. The ability to generate a commitment among staff to appraise their own work critically, and that of others, is the key test of how well a school is managed.

"Effective change and self-evaluation are characterised by openness and consultation and are a regular part of the good school's working life in which everyone is encouraged to participate. Self-evaluation compliments inspection with a constant process of identifying priorities for improvement, monitoring provision and evaluating outcomes." (Handbook for Inspecting Secondary Schools 2000)

6.2.2 Planning a school strategy

A school strategy can start from any agreed point these may include areas identified by senior management, staff, the governing body, parents or the wider school community. They may arise from the appraisal performance of teachers, the monitoring and analysis of pupil performance, evidence of problems, a survey of parents and staff, issues identified within a school inspection report, or any other justifiable reason.

Good practice should be helped and encouraged; such work could be used as a pilot that may at a later date become embedded within school practice. Areas can be evaluated to establish the reasons for success, or lack of success. Monitoring and analysing performance has the advantage of identifying foci for evaluation.

6.2.2 Cycle of self-evaluation

The cycle of self-evaluation is determined to some extent by a calendar of events. For example, the release of data to the school, the dates of the statutory tests, the examination and testing cycle of the school, the reporting cycle of the school and the appraisal cycle of the school. Self-evaluation is not simply reliant on the hard data entering the school it is also dependent on the information generated by the internal audit of the school, for example, progress made by individual pupils, groups of pupils, teachers, subjects and faculties. There are therefore three distinct parts to the cycle: 'managing the internal process' to 'collect internal information' and 'presenting external data' in a clear and meaningful way. Each of these processes have to be embedded within an overarching school policy for self-evaluation as failure to do so would lead to confusion, lack of purpose, lack of ownership and mediocrity.

The use of the external data answers the four questions set by the DfEE within their document 'Getting the most from your Data' (2006): How well are we doing? How do we compare with others? What more should we aim to achieve? What must we do to make it happen? The answers to these questions provide the information to take action, review progress and provide a firm basis for assessing the standards reached and the quality of education and provision within Ridgeway High School.

The focus must be on maximising performance. Therefore a framework for the planning, delivery and continuous improvement of the school by managing performance indicators, delivering performance plans conducting reviews and obtaining the right solution must

be in place. The outcomes feed into the school's development and improvement plan and contributes to the long-term strategic plan to improve the school.

The cycle of evaluation covers all key areas of the school, over a suggested cycle of four years. These areas have been identified as: the school results and achievements; pupils' attitudes, values and personal development; teaching and learning; curriculum and other opportunities; care for pupils; partnership with parents and leadership and management.

There has to be a starting point for the cycle; a typical timing for the first year cycle might be:

Table 10: A typical timing for the first year of the cycle

Summer Term	**Autumn Term**	**Late Autumn/SpringTerm**
Whole school initial review	Departmental review Whole school detailed review	Action Plans Financial Plans Staff development plan

6.3 Putting policy into practice

The Framework for the self-evaluation model for Ridgeway High School was developed around the areas identified within the dedicated school conference and developed further over a period of approximately twelve months. The conference was held in June and the framework was introduced in the September of the following year as a working document. The framework was divided into five identified sections: 'Quality Assurance'; 'Roles and Responsibilities'; 'Staff Training'; 'Managing the Process'; and 'Evaluating the Process' as described below.

6.3.1 The over-arching policy

1. Quality Assurance

This process occurs at different levels, but contributes to improving standards

throughout the school.

The fundamental principle is to ensure a consistent standard of 'Teaching and Learning', by monitoring the teaching, and learning outcomes. For example the aim for the school is for all teaching to be judged satisfactory or better. To achieve this standard monitoring strategies needed to be embedded within the framework; these may include: Snapshots of pupils' experiences across a teaching period, day or week. To be performed regularly, say at least once every half-term; Lesson observations; Inspection of departmental and teacher planning; Inspection of the teaching environment; Inspection of the prepared materials used for teaching, quality, appropriateness and level of differentiation; and to Provide written feedback to all levels on how the school, department, member of staff, or pupil is achieving.

Visible quality assurance ensures that appropriate high standards are maintained, allows for the pre-empting of difficult situations, for example parents evening, complaints or difficult situations and provides a structure for teachers to grow.

Departmental Planning

To facilitate teaching and learning to become well established departments must be consistent in their planning. The basic requirements are:

Learning objectives:	To be clearly stated and set within a time frame for pupils to achieve. It is important that these are linked to previous lessons and act as a 'springboard' for future work.
Planning:	To be effective planning needs to be consistent across the whole department. Schemes of work must be developed to reflect the demands of a subject within each key stage. The schemes of work are expected to comprise lesson plans and assessment methods.
Resources:	To be kept up to date and to be utilised efficiently across a department

Environment:	Departments need to examine their teaching bases and ensure that all displays are relevant to the curriculum area and up to date
Homework:	To be set on a weekly basis and monitored carefully. When set it must be relevant and achievable within the time set.
Expectations:	Department to set targets for all pupils using the available internal and external data.
Teaching strategies:	Whenever possible a variety of teaching strategies are to be used. These might include: teacher-led activities including exposition and questions; practical work and experiential learning; resource-based learning; investigative learning; problem solving; role play; simulations; pupil presentations; supported self-study. It is important that pupils experience a variety of teaching strategies within each lesson.

School Standards

Expectations

It is essential that staff have the highest expectations for all of their pupils. Pupils deserve a high standard of teaching therefore clear learning objectives that provide continuity and progression must be set for all lessons

Learning Objectives

The objective of the lesson must be made clear at the beginning of a lesson. Pupils must understand why they are working on the subject set by the teacher, and understand the expected outcomes for the lesson.

Equipment

Staff and pupils must come to the lesson equipped with all the relevant materials needed for each lesson. These are to include a lesson planner describing the lesson to be taught, a laptop, a stationery resource box, and all other materials that are necessary to

teach the lesson. If 'practical' lessons are to be taught all materials must be ordered and prepared well in advance of the lesson.

Pupils should have their planner, a pen, pencil and ruler. Other equipment requested by the teacher in advance of the lesson must be brought unless there is a genuine problem. If a pupil does have a problem supplying the materials it is the responsibility of the teacher to make sure extra materials are available so that pupils are not disadvantaged. Where possible the materials are to be set out for the pupils, as they arrive.

Planning

Planning of work is done in advance of lessons and reflects the part of a Scheme of Work written by the Department.

All staff must show evidence of lesson planning.

Lessons must be challenging to pupils regardless of their level of ability.

The pace of lessons must be such that it constantly challenges pupils to work at their level and therefore achieve the aims of the lesson. It is helpful to provide pupils a time scale for each task so they are aware of how much time each task is expected to take. Lessons may be modified where appropriate. Extension activities should be available so that there is always work available for pupils to be engaged.

Continuity

Lessons to follow a logical progression, as set out in the department handbook.

The teacher must recap the previous lesson at the beginning of each session.

Sufficient time must be left at the end of each lesson for a plenary session. This allows the teacher to draw together the main concepts, skills and knowledge that the pupils have gained.

When pupils are absent, staff must make sure that appropriate materials are available for them on their return so that they are able to catch-back missed work. It may be

necessary for staff to spend some extra time with these pupils to provide additional help or explanation.

Teaching Strategies

Pupils requiring learning support must be recorded on the class register

Teachers need to be aware of how pupils learn and retain information.

Teachers must be aware of gender differences in their subject discipline. They should be aware of different teaching approaches and modify the activities within a specific scheme of work accordingly. Teachers must also be aware of gender issues in relation to setting and classroom management.

Teachers must be aware of learning problems within their classes and notify the learning support department of pupils with a persistent problem.

Teachers must recognise pupil achievement and effort through the school's award system. Praise is a wonderful motivator.

Teachers must be aware of the possible wide range of teaching approaches so that the lesson will appeal to the diverse learning ability of the pupils. Teachers should consider the following approaches to differentiation in their planning.

Lesson management

Pace of the Lesson

Pupils learn and tackle different tasks at different speeds. Within the lesson time needs to be set aside so that all pupils have the opportunity to complete the set task to their satisfaction.

Appropriate Content

Learners have individual strengths and abilities. Programmes of work must reflect individual needs and present appropriate opportunities for access at different levels.

Support where necessary

Learning support has to be made available when it is considered to be appropriate. Teacher support can be reinforced by ancillary help, specialist support or peer support.

Appropriate Tasks

Tasks are set that are appropriate to the ability of the individual to enable learners to achieve whilst still being challenged and extended. The tasks must be relevant to the interests, needs and experiences of the learner making use of a variety of approaches. When the task inspires learner to achieve more opportunities must be made available for learners to pursue the task in greater depth, with appropriate additional time and resources.

Physical Resources

Resources, which are appropriate interesting and attractive must be provided where ever possible. The resources must remain readily available for as long as they are required.

Responsibility for Learning

Opportunities must be offered to learners to take increasing responsibility for their own learning. It is important to recognise that learners can be at different stages along a learning route.

Learner's Outcomes

Provision needs to be made for varied and flexible outcomes relating to the interests, skills and abilities of the learners. By differentiation it is possible to achieve the same fundamental outcome for all learners.

The key to a successful differentiated curriculum lies in the flexible use of a wide range of activities and teaching approaches, within an atmosphere of encouragement, acceptance, respect for achievements and sensitivity to individual learners needs.

The learning outcomes need to be given considerable thought. It is good practice for all departments to record the learning outcomes on the schemes of work. They must be clearly defined and easily measurable. The assessment of the learning outcomes can be measured by a variety of methods for example formal testing; question and answer sessions; completion of a piece of homework; completion of a piece of coursework. The methods used must be clearly defined.

Assessment

Assessment can be diagnostic, formative, summative or evaluative therefore learning outcomes can be measured by a variety of methods. However to make an assessment effective assessment procedures must be in place. These must include: regular marking of books and homework, giving verbal feedback, setting tests and writing reports.

The timing of assessments needs to be carefully planned. The departmental assessment procedures must reflect the reporting dates of the school. Therefore plans must be in place to make formal assessments at regular and appropriate times, for example unit tests and examinations. Examinations must be set to assess the achievement of learners at the end of each academic year.

Tests and assessment linked to National Curriculum levels where possible are to be positive and designed to promote and encourage learning.

All information related to the tests or assessments must be recorded in individual staff planners and entered into the school computer assessment package. Marks and comments must be given to the learner and reported to those with the right to know as soon as possible. Assessment results are reported to parents and carers through written reports and interviews.

SAT data is also reported to parents and carers. This data provides a measure of the present level of achievement for each learner and a projected level of attainment at the end of the appropriate key stage. The predicted grade is determined by adding one and a half levels to the achieved level as a pupil is expected to progress by one and a half grades within a key stage.

Cognitive ability tests (CATs) are taken in years 7, 8 and 9. This data has the capacity to define the learning needs of pupils in far greater detail. Scores can be used to pinpoint underlying problems that affect learning. The CAT score are distributed to staff in the first half term of each academic year. This information obviously helps to ensure learners are placed in the correct learning group so they can access learning commensurate with their abilities and needs.

Staff must be clear about the terms, attainment, progress and feedback. Attainment describes the achievements of learners on an individual basis and in comparison to others. Attainment is usually linked to national standards to determine progress and expectation. Progress is a measure of how pupils have moved in relation to their attainment. A comparison can be made between the entry level and the level reached at any point in time. The progress made by pupils within a particular teaching group or a subject area is indicative of the quality of teaching and management received by the learners. Whenever assessment takes place it is vital to give feedback. The feedback may simply be a ‘well done’ a written comment on a piece of work or an in-depth interview with the pupil to discuss progress. It is important to praise pupils for their achievement

Learning Environment

Each classroom should provide a warm and welcoming environment within which pupils can work to the best of their ability. The minimum standard is that the classroom is in a good state of repair and it is an interesting place to be. Displays must be current and contain recent pupils’ work that is clearly labelled.

Relationships between staff and pupils must be positive and supported by classroom routines. Staff must express clear expectations of pupils, for example how they enter and leave a classroom. Where possible, work must be on the desks as pupils arrive, and any relevant material already on the board, including the learning objectives for the session. The register must be taken as near to the beginning of the lesson as possible. Pupils listen silently when the teacher is speaking and/or when another member of the class is speaking. They must raise their hand if they want to ask a question or make a comment. Pupils must avoid calling out. At the end of the lesson pupils must be dismissed in an orderly manner.

Lesson Observation

The whole purpose of lesson observation is to enable staff within school to assess consistently the quality of 'Teaching and Learning' that occurs within a particular lesson, year group or department.

The agreed practice is:

Prepare thoroughly; check timetable, arrange cover, and where possible be familiar with the lesson plan before the lesson starts

Wait outside the classroom with the class prior to the lesson, arrange beforehand where to sit, preferably next to a pupil.

During the lesson complete the agreed observation form.

At the end of a lesson or possibly before let the teacher know that you are leaving the class.

Arrange a time and venue for feedback with the teacher. Ideally this should be within 24 hours. Celebrate good practice and highlight areas for improvement. Give support such as model lessons and an opportunity to observe good practice in other subject areas. All agreed written information is forwarded to the appropriate line manager.

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The lesson observation form is a document designed to record the quality of a lesson. It is not threatening as the structure and content has been agreed by due process. By

agreement individual lesson elements can be the prime focus that may have come about from the feedback given from a previous lesson or simply a request by the teacher to observe a particular lesson aspect.

During the lesson observation the opportunity can be taken to interact with the pupils in the class. This must only be done at times when the teacher is not talking to the class. It may be necessary to ask some basic questions, for example: What do you think the lesson is about? Have you done any of this work before? Do you find the work challenging? Do you feel that you are making progress? If you have problems with your work or understanding what do you need to do? What level are you at? Do you think the work is at the right level for you?

If the teacher is having difficulties with the group or an individual leave and continue with the observation at a more appropriate time.

When feedback is given ask the teacher 'How do you think it went?' Always highlight the strengths of the lesson and offer constructive suggestions for areas that need improvement. All feedback should be clear, positive, relevant and constructive

2. Roles and Responsibilities

The management of the self-evaluation process is essential to its success. It is therefore necessary to be clear of the roles and responsibilities of the key people who manage the process.

Head teacher and staff

1. The 'Key Questions' identified at the conference were:
2. How will the Head teacher lead the process?

3. What will be the role of other members of staff? For example the Deputy Head teacher, the self-evaluation manager, other senior staff, the class teachers and the support staff.

Role of the Head teacher

- To ensure an efficient and effective process for school self-evaluation is in place to drive forward school improvement
- To develop a process cycle that informs the school improvement plan
- To ensure all members of the school are aware and part of a rigorous process of self-evaluation
- To consult and discuss with staff to determine the most suitable processes and practices that meet the identified needs of the school
- To review and evaluate the practices of the school regularly
- To discuss the process and findings with the Governing Body and the Link Inspector

Role of the Deputy Head teacher

- As a key player within the school SMT support the Head teacher and school self-evaluation manger to implement an efficient and effective school self-evaluation policy
- To be a key player within the monitoring team
- To develop positive attitudes and a commitment to high standards

Role of the School Self-evaluation Manager

- In consultation with the Head teacher ensure that there is an efficient and effective school self-evaluation process is in place
- Ensure that monitoring and review are key elements within the strategy and that the processes and outcomes are evaluated each term
- Report to the 'senior management team' at the end of each term

Role of the Senior Management Team

- To identify whole school priorities for development
- To be key players within the monitoring team
- To liaise with faculties to discuss the progress of agreed areas

Role of the Head of Faculty

- To be fully cognisant with the school self-evaluation procedures
- To monitor teaching and learning in their subject area
- To use the self-evaluation process to conduct an annual audit, identifying areas for development and mirror these in the faculty improvement plan
- To meet with the 'senior management team' to evaluate provision using evidence from the monitoring procedures

Governors

It is recognised that governors will ultimately be responsible for the process. Therefore the key question are:

1. How are the governors involved in setting the priorities for school self-evaluation?
2. How can the governors demonstrate accountability for continuing school improvement?

Role of Governors

- To make sure that high standards are set for the school
- To monitor the processes that ensure high standards are achieved by the school
- To monitor policies, standards and prioritise school needs
- To offer advice, support and ideas
- To make sure a strategy for accountability is in place

How are Governors involved in maintaining an overview of the process?

- Through the agreed cycle of meetings
- By scrutiny of the School Improvement Plan
- Reports to governors by the Head teacher and the School Self-Evaluation Manager
- Reports to governors by other staff that are responsible for specific initiatives

How are Governors involved in setting the priorities for school self-evaluation?

- The committee structure supports the priorities set within the School Improvement Plan, for example finance committee, personnel committee, and curriculum committee
- The annual planning cycle embeds the priorities and process which are shared with the governors. Opportunity is given to challenge their appropriateness and effectiveness and thereby instil confidence in the self-evaluation process.
- An agenda is set for all meetings and minutes written for each meeting. The minutes are made available to appropriate audiences.

How do the Governors demonstrate accountability for continuing school improvement?

- Discuss and agree the School Improvement Plan and therefore identify the school's strengths and weaknesses
- Set an appropriate budget to reflect the needs identified within the School Improvement Plan
- Review data and relevant information to orchestrate the school's identified priorities
- Report annually to parents

Parents and Pupils

Parents and pupils are a crucial part of the self-evaluation process as they are the stakeholders.

How do parents contribute to the process of self-evaluation?

- Feedback from the annual report to parents
- Information gained from a questionnaire specifically designed to gain feedback from parents. To be introduced at the start of the 2004/05 cycle.

In which ways are parents and pupils encouraged to contribute to the process?

- Parent representatives on the governing body
- Governors report to parents
- Regular newsletters
- Parent questionnaires
- Issues raised by parents are discussed at the senior management team.
- Pupil school council
- Pupil questionnaires KS3

3. Staff Training

For the self-evaluation process to be successful all staff must have the appropriate skills base. A skills audit is required to find out what skills staff possess and by default determine which skills are lacking. Therefore:

What arrangements are in place to ensure that staff have a thorough understanding of the principles and processes of school self-evaluation?

What are the processes to ensure that staff are equipped with the skills and knowledge to enable them to play an active part in school self-evaluation? e.g. classroom observations data analysis, scrutiny of pupils' work.

What arrangements are made to ensure that new staff are inducted into the school's self-evaluation procedures?

What arrangements are in place to ensure that all staff have a thorough understanding of the principles and processes of school self-evaluation?

- Areas impacting on standards, for example target setting, are identified within the schools meeting cycle. These meetings include: Curriculum Management Group, Heads of Faculty; Heads of Year; Faculty Meeting; Form Tutor Meetings; Subject Meetings and KS3 Strategy Meetings. SMT meetings occur daily and an additional weekly meeting
- progress made towards the objectives identified within the School Improvement Plan is reviewed through the Faculty structure. Objectives are embedded within the Faculty Improvement Plans and linked to Performance Management.
- Staff meetings to discuss 'standards' issues and therefore develop strategies, practices and policies on whole school issues
- Feedback is given through their Head of Faculty and Head of Year. Written feedback is given via respective minutes and the daily bulletin.
- Staff are given KS2 and KS3 SAT data, CAT data, Reading Age Data, and SEN data relating to pupils on the SEN register. They are encouraged to compare performance of their teaching groups against: prior attainment; other teaching groups and national standards.

How is it ensured that all staff are equipped with the skills and knowledge to enable them to play an active part in school self-evaluation?

- A programme of in-school INSET covering a range of whole school issues that staff can attend.
- School self-evaluation issues are discussed regularly within the meeting cycle of the school. For example senior management team meetings, curriculum meeting group, pastoral and welfare meeting group, key stage meeting groups, faculty meetings, subject meetings and year group meetings
- Middle managers have been trained to monitor and evaluate good practice

- To complement the distribution of data a booklet “An Introduction to CAT Scores” has been written and distributed to staff.
- All staff have been discussed in their faculty meeting the components of a good lesson. Through the KS3 strategy lesson planning has been reviewed to take on board the three part and five part lesson
- Proformas for monitoring have been developed within the self-evaluation process and distributed to all faculties
- All staff have first-hand experience of evaluating their practice as part of the school performance management process. Training this area was a first priority.

What arrangements are made to ensure that all new staff are inducted into the school’s school self-evaluation procedures?

- New staff have an induction programme led by a member of the SMT team and the school NQT coordinator. Meetings are held on a regular basis.
- All information is given and discussed within the school meeting cycle
- New staff receive an induction pack that includes the staff handbook, a school prospectus, and faculty documentation containing school policies.
- New staff are monitored and their progress reviewed on a regular basis.

4. Managing the Process

How are the evaluation tasks to be delegated?

- The school self-evaluation manager
- Senior Management Team
- Heads of Faculty and Heads of Subject
- Heads of Year
- All staff with a whole school responsibility

How is the involvement of staff linked to the budget?

- Heads of Faculty within their Faculty Development Plan produce a financial analysis of their perceived costs
- Heads of Faculty discuss with the Head teacher the cost implication of their plans
- Curriculum planning is discussed at Heads of Faculty and Curriculum Management Group and costed.

What strategies are used to collect evidence?

The collection method will depend upon the issue and the agreed monitoring procedure. These may include teaching observations, performance management reviews, discussions with colleagues or external agencies

How is evidence recorded and reported?

- Reports written to Governors
- Reports written to the Head teacher and the Senior Management team
- In the minutes of meetings
- Self-evaluation manager reports findings to Curriculum Management Group
- Annual meeting between the Head teacher and Heads of Faculty to discuss subject examination results
- On agreed summary sheets, for example lesson observation sheets and performance management target shee

What opportunities do staff have to contribute through reflection and debate, to the evaluation of teaching and learning?

- To participate within INSET sessions specifically designed to evaluate teaching and learning practice, for example the school's positive management of behaviour initiative
- To discuss in a frank and honest way with their team leader lesson observation reviews and performance management target reviews
- To contribute within the school meeting cycle

What systems are in there place for regular monitoring of the evaluation process?

- The Head teacher monitors the process
- The School Self-Evaluation Manager reports regularly to the senior management team
- The Head teacher attends the Curriculum Management Group meeting and reports together with the School Self Evaluation manager on the process
- All staff evaluate annually their own targets and practices

5. Evaluating the Process

How is the success of an evaluation exercise be measured?

- By matching the outcomes against the identified targets within the School Improvement Plan
- By identifying the success criteria and the time frame for completion
- By asking all staff whether the process is fair and equitable

What structures are in place for reporting findings?

- Minutes of meetings
- Daily bulletin
- Written reports and verbal reports to the Head teacher
- Forums to discuss future improvement plans

What systems are in place to carry out a review of the process at the end of the academic year?

- School Self-Evaluation Manager to author a report for the senior management team

- School Self-Evaluation Manager and the senior management team to review the process in terms of efficiency, effectiveness and manageability annually. Amendments to the process made to improve the process for subsequent years

How are the outcomes of Self-evaluation linked to the school's Development Planning and Performance Management processes?

- The identified objectives for improvement become the objectives within the School Improvement Plan
- The school self-evaluation outcomes provide the focus for middle management to develop their faculty improvement plans
- The outcomes of the performance management process link directly to Faculty Improvement Plan and underpin the School Improvement Plan

Table 11: A Typical Planning Cycle

ANNUAL PLANNING CYCLE	
September	Review of examination results SMT Heads of Faculty discuss subject performance with HT Whole School priorities identified for SIP and SSE process reviewed School numbers confirmed
October	Governors Finance Committee
November	Governors Finance Committee
December	Full Governors Committee Governors Finance Committee Governors Pa y Committee
January	Form 7 numbers Full Governors Committee
February	Governors Curriculum Committee
March	Governors Pupil Welfare Committee

April	Preliminary Y7 numbers
May	Governors Pupil Welfare Committee
June	Governors Finance Committee

Table 12: An internal planning cycle

INTERNAL PLANNING CYCLE	
September	Faculty Review of examination results HOF Interview with HT SSE manager prepares a summary for SMT Review of Performance management Targets Implementation of School Improvement Plan Ongoing monitoring by HOF/SMT (LIG initiative) Staff Meeting for whole staff Y7 CATs Pupil Targets Issued
October	KS3 monitoring cycle determined Y7 parent review meeting Y7 Y10 Y11 targets reviewed KS3 manager analyses CAT data and reports to SMT
November	Y11 targets reviewed at mentor evening
December	Y7 “Take your Work Home” SSE manager reports to SMT KS3 manager reports to SMT Y8 Y9 Targets Reviewed
January	Y11 mock exam results analysed by HOF and SMT Y11 targets
February	School Improvement Plan reviewed Y7 Y10 Targets Reviewed

March	Y8 Targets Reviewed
April	Finance plan reviewed for new financial year Decisions regarding KS3 budget plans for intervention – appointment of support staff Y9 Targets Reviewed Y9 Options – Curriculum Review Draft School Improvement Plan produced for following year
May	KS3 Intervention Plan written for LEA Y7 SATs Y10 targets set and reviewed by all staff
June	Key Stage 3 SATs Y7 Y8 Y9 Y19 Targets Reviewed SSE manager reviews current year KS3 manager reviews current year Pupil Targets issued

Table 13: A typical self-evaluation timetable

SELF EVALUATION TIMETABLE
YEAR 1 2003 – 2004
Review of KS3 provision Quality of teaching and Learning Staffing accommodation and resources Evaluation of provision for Business Enterprise bid Monitoring and evaluation (LIG) Extra-curricula study support
YEAR 2 2004 – 2005
Whole school implementation of KS3 Strategy Monitoring and Evaluation KS3 Assessment for Learning 14-19 Curriculum The parent's view Links with the community Review of Behaviour Management Policy Implementation of Business and Enterprise College Status (Year 1)
YEARS 3 and 4 2005 – 2007
Teaching and Learning Strategies wit focus on Enterprise Implementation of E- Learning Strategy Plan for Personalised Learning Future Implementation of Work Force Reform Review of Job Descriptions Staffing and Management Structure Implementation of International Links Focus on ICT Training for Staff and ICT Policy

A School Self-Evaluation Strategy

The current thinking of Ofsted (2001) is that evaluation should:

- take place within a rolling programme over a four year period
- be initiated by consideration of national test results
- follow an Ofsted inspection
- follow the introduction of a new strategy or scheme of work, and
- be based on a forma/informal observation over time

Sequence of Evaluation

There are three stages. Each stage identifies the factors that have to be addressed

Stage 1 How are we doing?

This stage establishes where we as a school are at present. To establish how we are doing the following steps need to be addressed:

1. identify the expectations within the school aims
2. analyse performance data to identify areas for improvement
3. use the most recent Ofsted report and action plan
4. consider progress towards Ridgway's targets
5. define the area of activity to improve focussing on teaching and learning

Stage 2 How do we know?

This stage identifies how to collect the evidence needed to answer the set questions. The questions will relate to the development plan of the school and reflect the four year cycle.

1. select the appropriate key questions
2. identify features to look for, referring to the LEA quality indicators, national and other local advice
3. decide how to find out if these are present and effective
   (e.g. observation, scrutiny of books, staff discussion etc.)

Stage 3 What are we going to do now?

This stage sets the strategy for improvement. The school is required to assess present standards, set achievable targets for maintenance and improvement and put in place a time frame for completion. A report is written that includes

1. reporting on the standards and quality observed
2. setting targets for maintenance and improvement
3. plan what action is needed, who will be responsible and the time frame for completion

Monitoring and Evaluation

The key role of the senior management team is to monitor the standards of the school and evaluate their findings.

Key areas to monitor:

1. Lessons
2. Teachers' planning and schemes of work
3. A representative sample of pupil's work from low, middle and high ability groups
4. Homework planners
5. Pupils attitudes to tasks and subjects
6. Pupil curriculum progress
7. Examinations and end of phase or module tests
8. Extra-curricular activities

Systems and Processes

The systems and processes were identified as:

1. Lesson observation forms
2. School based designed lesson observation criteria
3. Ofsted pro-forma for reviewing pupils work (Departmental Work Survey Audit Form)
4. Analysis of departmental spending on learning resources – books, equipment, reprographics etc.

5. Application of Information Communication Technology
6. Pupil attitudinal surveys
7. Staff and pupil surveys
8. Parental questionnaires

The outcomes from the working groups allowed me to incorporate the key elements of the findings into what was proved to be a very successful self-evaluation model for our school.

6.4 Summary

The objective researched in this chapter was to determine the content of the model and formulate an overarching policy. This aspect of the research was timely for a number of reasons. As argued in chapter four the staff wanted a policy to substantiate the process of self-evaluation that provided a reference point for all staff so that expectation were clear. It recognises that the school staff expectations were variable and a large proportion of the staff were fearful that their understanding of the process would play a major role in pupil learning, development and achievement. The research appreciates that this variation and differing experience levels of staff would mean that there are different starting points and motivations for the staff to embark on the process of school self-evaluation. For example access to training and user confidence were key staff concerns and these issues are discussed in detail within the last chapter of the thesis. The sole aim of this aspect of the research was to help remove the barriers by providing an overarching policy that provided the support needed by the users.

Development of the framework sought to set the school securely within the educational evaluation context to address Ofsted requirements. The findings of the pre-research consultations: a series of structured meetings at all levels of management and delivery; liaising with individual staff to ascertain their requirements; talking to pupils to determine their needs; and considering the requirements of external agencies identified the factors to be included in the Ridgeway Model

.

It was important to discover how far this approach embedded the policy into the wider planning of the school, how it supported whole school development planning and how the policy linked to key evaluative foci. Equally it was important to capture the extent to which attitudes of senior management and teachers were influenced by engagement in this self-evaluation process.

The research identified the structure of the policy and the framework to underpin the policy. Likewise the policy enabled staff to develop their understanding more effectively and to build better partnerships with other teaching staff. The staff consulted more regularly with each other and developed patterns of use. Questions relating to areas of strength and weaknesses emerged for individuals positively indicating that this approach suited the school in this given phase of development. Through the overarching policy the intention was that educators and policy-makers have access to exemplar material that provides a form of benchmarking, offers a model for achieving self-evaluation and be useful in advocacy. A limitation to be considered may be obtaining sufficient examples during the research period to populate the framework with a good range of exemplar material; however it is intended that population continues to be built on and so refine the framework. The research contributes to a better understanding of the issues involved in using such self-evaluation processes and the nature of the difference they achieve for the school. It is recognised that similar future investigation into the impact of any potential other self-evaluation toolkits would also enhance this research. Finally, although this research in no way seeks to demonstrate the impact of self-valuation on pupil learning, it is hoped that better understanding of the impact of self-evaluation on school priorities and teaching and learning might contribute helpfully towards any such future studies. The success of the framework was noted in the 2001 Ofsted report as an example of excellent practice and claim can be made that the policy contributed to the progressive improvement of the school.

Chapter 7: A summary of the findings and the interpretation

7.1 Concluding Discussion: A Model for self-evaluation

The findings and interpretation of this study have concerned the need to rethink the simplistic use of baseline assessment in schools and how to manage a major change in practice. This thesis has described an action research approach to examining the development of a self-evaluation model of school improvement in the North-West of England. The analysis of the process has been simultaneously concerned with the effectiveness of the self-evaluation model, and additionally, the factors that facilitated its introduction. I have attempted to provide a reflexive account of the following aspects of the process:

- firstly, the exploration of models of self-evaluation that were already present in Wirral schools;
- secondly, the demands placed on Ridgeway High School staff;
- thirdly, the selection of a baseline assessment test and explore the ways in which the scores could be applied to describe pupils learning and identify their future needs,
- fourthly, the development with staff of a school self-evaluation framework and
- finally, an examination of the change process the school went through and how this process was managed.

This chapter will summarize the research findings first, and then discuss the management of change process, and finally give my suggestions as an aide memoire for other schools facing a similar change based on a comparison of the current study and the Fullan (1995), Rogerson (1995) and Ely(1996) research. A reflection on the whole study will be presented at the end of this thesis.

The reasons why many educational change initiatives have little impact is because they are often framed in terms of either a poorly designed process on the part of the change

initiator, or in terms of problems with the attitudes, skills and/or knowledge of those responsible for implementation (Timperley and Parr 2005: 1). The problems that occur with how some change initiators go about their tasks are documented by Hargreaves (2002.

"The goals of the change may be unrealistic or unclear so teachers cannot achieve what is expected of them. The perpetrators of change may have low credibility; their reasons may be politically suspect; the intentions regarding real improvement for students may be in doubt." (p.189)

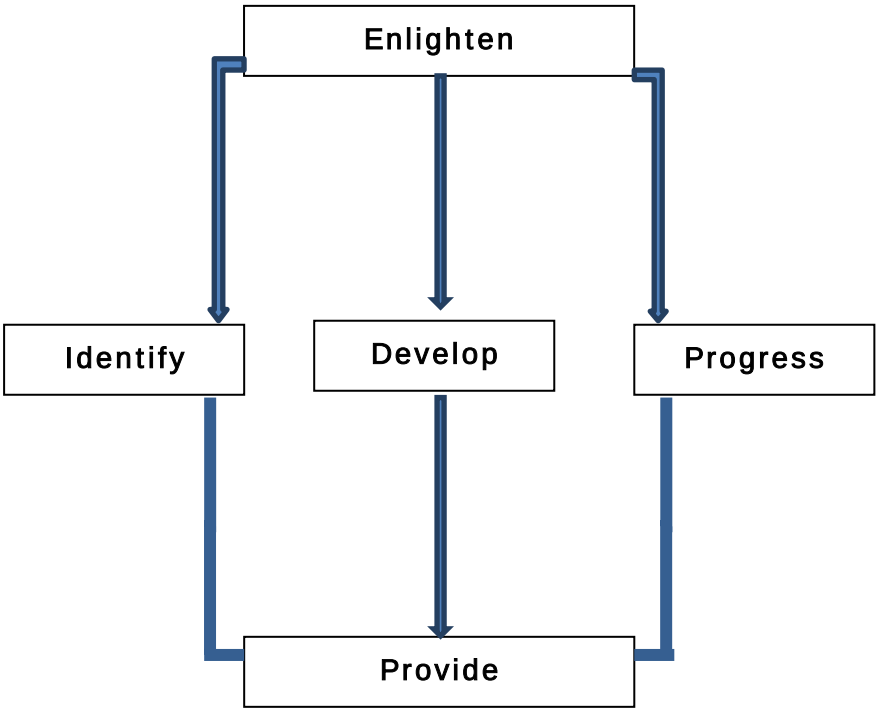
Timperley and Parr (2005) suggest that these critiques focus particularly on change initiatives that involve high-pressure reforms targeting poorly performing schools. Consequently the change is imposed on, rather than owned by, those responsible for implementation. It is argued that these options would straightjacket teachers into a de-professionalised work force with an inadequate resource and support base, Mintrop (2003). To extend this argument the development of partnerships and respecting the expertise of those responsible for implementation is seen as an attractive alternative to this type of change process (Borman, Hewes and Overman 2002).

The alternative perspective is to concentrate on those responsible for implementing the change and the reasons for failure. Problems with the capacity of schools to implement the desired change are suggested as reasons for failure. As argued previously the school, as an institution, and the individual personnel within it may lack the knowledge, skills and personnel to work in ways consistent with the change agenda (Fullan, 1991; McLaughlin, 1990). However, the positive outcomes following on from such analyses result in the provision of clearer messages, improved resources, together with the prospect to access the skills and knowledge necessary to understand what is required. The understanding is powerfully influenced by the social and professional context in which teachers work, consequently utilizing school-based professional communities with

access to appropriate knowledge resources is often suggested as the ideal context for achieving the relevant understandings (Coburn, 2001; Stokes, 1997; Toole & Louis, 2001). Both of these positions suggest that many of the difficulties occur at the interface between the changes proposed by the initiator(s) and those responsible for implementation.

The central methodological models (Fullan Rogers and Ely) identify the starting point for the change process as informing the change agents the reasons for the change in practice and to provide a vision for the future to describe the expected outcomes. The praxis that evolved within this research to introduce the initiative to the staff of Ridgeway High School comprised five principles.

Diagram 7: Five principles of change



Enlighten: The whole school staff was told about the proposed new initiative. The pressures of external agencies such as Ofsted, were described. Opportunity was given for discussion and challenge. The benefits of the new initiative and the processes by which these were achieved were outlined.

Identify: The school staff began to analyse what they did well as a school and identify the areas where some aspects could be improved. The main aim was to uncover the issues around introducing the initiative, assess the readiness for change and start to build commitment across the staff.

Develop: The staff and school appreciated the scale and scope of the required change. There may not have been any obvious route to a solution, but everybody was clear that change had to take place. It was crucial to anticipate concerns and problematic barriers to the change before progress could be made.

Progress: The team leader began to develop possible strategies to implement the proposed change to become part of everyday practice. As the team leader I was required to define a clear vision of the future and to define a change programme that was needed to achieve that vision.

Provide: The strategy was developed and the vision of the future shared. The most important issue at this stage was the creation of a change culture within the school so that the school staff gained the confidence and excitement to maintain continuous improvement into the future. The action plan that was developed must form an integral part of the schools improvement plan.

This model supports the Rogers (2003) contentions summarised within his book, 'Diffusion of Innovations' whereby he provides a model for understanding the adoption decision process from the point of view of an individual. In his model, Rogers asserts that adopters pass through five stages: 'Knowledge' the individual learns about the innovation; 'Persuasion' the individual decides mentally what his/her position is in regards to the innovation; 'Decision' the individual decides to adopt the innovation; 'Implementation' the individual actually adopts the innovation; 'Confirmation' the

individual seeks reinforcement for the decision to adopt, or decides to discontinue using the innovation. The notion of the individual as suggested by Rogers I argue can be developed and extended to apply to a group such as the staff of a school. The sole purpose of an initiative is to improve practice by moving from the initial stage of informing, 'Knowledge' as described by Rogers to the final stage of accepted practice, 'Confirmation' as again described by Rogers. To achieve confirmation the findings of this research were that certain perquisites were necessary:

Vision: The need for strong leadership to provide the initial vision and impetus for change was apparent. This was a fundamental requirement to drive whole school change.

Staffing: Key personnel with specifically defined roles within the project are vital to sustain the planned developments. Whilst strong leadership is important to initiate change, delegated leadership is vital in maintaining change.

Staff Commitment: Commitment and staff involvement is an important factor in the success of the process to promote school change, especially in terms of ensuring that change permeates all levels of the school. Resistance to new ideas was met by 'established' staff. To prevent a barrier to the adoption of the proposed new, practices designed to meet the needs of all teachers and pupils, a great deal of time was invested on a one to one basis with identified staff. Generally staff commitment was enhanced by involving them in the initial planning and reinforced by the continued involvement of the staff in on-going processes of evaluation, including sharing evidence of impact.

Designation of roles: It was important to identify with a team leader and the membership of the development team. The reasons for this were two-fold. Firstly a person with overall responsibility was identified and secondly the development team was

structured to consist of representatives of each curriculum group within the school. Through this mechanism the staff claimed ownership of the initiative.

Monitoring and evaluation of practice: Two threads evolved after the initiative was introduced. Firstly the increased ability of teachers to improve their capacity to self-evaluate, and secondly a development at school level of greater awareness regarding the importance of monitoring and reflection in shaping practice. Staff who participated in interviews reported an evolving culture of reflection and research use that has informed school policy and practice. It also became apparent that staff had become increasingly aware of the usefulness of routine monitoring procedures for developing their own practice.

Evaluation skills: There was a need to build capacity for professional enquiry and evaluation amongst the teachers. Such developments would attend to processes of learning, as well as more established approaches to performance tracking. Such knowledge was gained through the promotion of professional enquiry that looked inside classrooms as well as those that examine aggregated performance data.

Developing evaluation systems*:* Where data monitoring systems were used, there was a need to provide further support to assist school leaders and the wider school staff. This ensured that they made effective use of the data to inform decision making within school evaluation systems. The data was seen to serve a more explicit summative role, as well as providing evidence of end-point impact.

Monitoring: It was crucial to monitor the implementation and make changes as required. The model became alive and continued to breathe life into the school as the model's soul was proactive, progressive and adaptive to future needs.

7.2 Main Findings

The development of the self-evaluation model continually signalled the importance of the 'assessment process'. As the model grew key principles that underpinned the process were identified

1. An essential component of an effective self-evaluation model is a school assessment policy that identifies all modes of assessment and the purpose of each. For example this could include peer assessment, self-assessment and collaborative assessment between teacher and pupil.

2. Assessment techniques need to match the demands of external examining bodies as previously defined by QCA, namely to probe higher-order thinking skills, creativity and understanding rather than simply the memorisation of facts need to be in place.

3. The policy should aim to ensure that teaching staff share with pupils the expectations of their learning, so they are aware of the standards required.

4. Although valuable the policy should rely less on tests and written examinations, rather these modes of assessment should be seen as contributors to the overarching policy.

5. Regular feedback helps pupils understand how they are progressing and their areas of strengths and weaknesses. A strategy to tackle areas of weakness is generated from this process.

6. All of the internal and external data must be available for scrutiny as each data set contributes invaluable information when establishing the progress being made by the school.

The model that has developed was a solution to a specific problem identified from within the school. The argument was developed within the literature review chapter that

conceptions of assessment are of particular importance because it has a significant impact on the quality of learning (Entwistle and Entwistle 1991; Marton and Säljö 1997; Ramsden 1997. Formative assessment has been considerably explored (e.g., Wiliam & Black, 1996; Yorke, 2003; Black & Wiliam, 2004) and the The Role of Teachers in the Assessment of Learning, Assessment Reform Group, 2003 explored extensively the role of summative assessment and self-assessment reviewed in detail by Ross and Starling, (2008). Rolheiser and Ross (2001) suggest that the most challenging shifts in conceptions of assessment is related to the changing role of the teacher and the changing educational environment. I argue that the major change role for the teacher at this time was accepting data and learning how to interpret such data. The deluge of data coming into the school from external sources PANDA, PAT, Fischer, SATs and Ofsted originally and later RAISEonline together with data generated within the school from internal assessments and baseline assessments such as CATs changed the educational environment and culture of the school forever. These principles have led to the self-assessment of schools through the self-evaluation form that has impacted on all schools through Ofsted inspection and monitoring processes. The key message is for schools not to rely on a single method of data analysis as different methods have different strengths, (Kreft 1996; Gorard 2007; Hutchison and Schagen 2008). A regression line is considered to be one of the most powerful tools for investigating the effectiveness of a school (Koenker and Hallock, 2001; Mahimuang, 2005; Rangvid, 2007). I have explored the use of this tool within Chapter five Baseline Assessment to show how a 'Class Profile' and 'Learning Preferences' can be determined.

The data sources provided teachers with the information they needed to make professional decisions about pupil attainment within lessons, within their subject areas, within year groups, within forms and also provided the senior management team with an overview of how the school was progressing. The model further allowed comparisons to be made, for example, from year to year, across subjects, across year groups and most importantly the model provided the information demanded by Ofsted. This in itself was

important because the model rid teachers of the worry and associated tensions as they were confident that all data and profiles relating to the pupils and the school were available. Those teachers or staff members with a fear of data were reassured by algorithms constructed to analyse and compare data and subsequently present the data in a clear format. Surgeries were held on a voluntary basis to explain the trends and anomalies and therefore secure an understanding or at least an appreciation of the data. The model in itself is no longer revolutionary as many schools have developed similar models over the years but at the time it was quite different and was commented on as a model of excellence by Ofsted (Ofsted report Ridgeway High School 2001). The evidence to support this claim manifested in Ridgeway High School receiving three consecutive DfES curriculum awards and the 5 A*-C pass rate increased from 17% to 61%. Although many problems presented themselves throughout the development and implementation of the self-evaluation model it became obvious to me that the greatest challenge to the success of the entire process would be managing the essential changes involved.

Throughout the study I was aware that there was an undercurrent of fear. Staff were constantly asking why we were suddenly collecting data as evidenced in the staff interviews. Most were convinced that there was an insidious purpose to judge them as teachers and that the self-evaluation process was the vehicle to provide the necessary information. It soon became clear that the management of the change process was key to the successful introduction of the model. As argued in the literature review chapter Sarason (1971) indicated that the essential weakness to change lies in the culture of the school. The issue that control over change is illusive does not imply that leadership is important rather it can be argued that it is far more powerful if shared by the contributors to the change initiative. To remove the element of fear it is crucial to develop the notion of collective responsibility. Ely (1999) contributes to this argument with the view that participants in the implementation should be encouraged to be involved in decision-making so that a sense of ownership can develop. Anxieties between

the staff were experienced, for example questions relating to the purpose of the project, the bearing it has on teacher's time and how much time is needed to sustain the initiative. To instigate a key initiative unquestionably presents problems. To limit these problems as far as possible it is important to identify a strategy that endeavours to orchestrate successful change management. I argue that successful change management is underlain by certain key values: knowing what you want to achieve; who is to benefit from the change; who is required to deliver the change; what are the likely problems and how are these addressed; and what is the strategy for ensuring the change is successful and sustained. The concept of sustainability is defined by Fullan as, "the capacity of a system to engage in the complexities of continuous improvement consistent with deep values of human purpose." (Fullan 2006, ix). Applying this definition to the Ridgeway project success came from the belief of the teachers, shared responsibility and collective decision making to create a feeling of this is good I contributed to this and I am going to make sure it works, ownership.

7.3 Leadership challenges

Managing the change process was not as simple as I first thought. Throughout the whole process challenges constantly arose that threatened the success and adoption of the change of practice. I describe below the difficulties that I met and how these were dealt with. Arising from these difficulties three key elements evolved to manage the change: a strategy; prerequisites; and a core structure that can be applied in principle to manage any change.

The school improvement process takes place in three stages: initiation, implementation, and institutionalisation (Louis & Miles, 1990). Knowing about the challenges and problems as well as the success factors associated with each stage of the change process can increase the likelihood of success (Fullan, 1993).

As the team leader the challenges I encountered were quite specific. They fell into five main areas: staff perception; fragmentation; resources; training; and the challenge of external agencies:

Staff perceptions

Initially, some members of the school community were reluctant to change. I argue that school leaders, through their actions and words, can overcome such reluctance by rewarding and encouraging school community members to offer new ideas and strategies.

Fragmentation

Without a focused effort to align and integrate school improvement initiatives, the result is a fragmented, uncoordinated activity that results in conflicting objectives. It was therefore down to my leadership to create a shared vision and mission for the school improvement initiative and to coordinate various change efforts so that the team members worked together rather than against one another.

Resources

Most of the staff were concerned that the initiative would be under-resourced which sadly was the usual practice. To allay this fear, as team leader I needed to ensure adequate time, money, and support was available to give the initiative credibility.

Training

As discussed above, I carried out a simplistic audit to determine the skill level of the staff. In addition to identifying the specialist skills the working group members could offer I had to establish which staff needed computer training and data interpretation training. Staff must be trained to ensure they have the required skills for the task as lack of training has a demotivation effect. The fear of 'lack of competence' was a serious concern when this initiative was introduced.

The challenges posed by the shifting goals of the LEA, Ofsted and central government were a major concern to staff. The requirement of these agencies particularly Ofsted needed to be identified and made clear at the onset of the project.

Change in schools is often managed in an informal, implicit manner. However, managing change and making it happen requires a purposeful strategy. My role within the project was to take control of the initiative and shape its direction by influencing the outcome of the change. It is this change process and its management that are the key findings of this research.

A continuum evolved that defined the stages of the process.

Diagram 8: Continuum of the process

Appreciate the need to change, not change for change sake

Diagnose the current position. Where are we and where do we want to be after the change?

Activate commitment to the change making sure to include all staff that have shown an excitement or interest to progress the change.

Define a plan to achieve the aim of the initiative by taking decisions as to appropriate courses of action, implementing plans, monitoring results and give regular feedback to the whole staff.

7.4 Reflection and reflexive practice

Reflexivity requires honesty and openness about how where and by whom the data were collected and locates the researcher as a participant in the dynamic interrelationship of the research process. Reflexivity changes the focus from outcome-led approaches to an emphasis on learning processes. A reflexive pedagogical approach enables participants to revisit the processes involved in development to evaluate and build on their experiences and positions as learners. In emphasizing process rather than outcome, the approach involves the participants devising their own lines of enquiry, examining the

social nature of learning and knowledge and encourages collaborative methods of working.

Burke and Dunn (2006) argue reflexivity encourages reflection but shifts the focus from the decontextualized individual learner to the fluid and situated identifications that shape learning and complex pedagogical relations. “Reflexive pedagogies involve participants in a critical consideration of their subjective relation to knowledge by positioning them as knowing subjects and drawing on, and challenging, their experiences, understandings, values and identities.” (Burke, 2002).

As discussed in chapter four Boud et al. (2006a) suggest that valuable learning takes place within a learning setting; and that critical reflection and reflexivity are means to unlock this wisdom. Reflection and reflective practice as a result of the Ridgeway model have become common conversations among the teachers and support at the school. Boud and Middleton (2003) outline the importance of learning from others at work within the context of communities of practice (Wenger et al., 2002). Communities of practice are: “groups of people who share a concern, a set of problems, or a passion about a topic, and who deepen their knowledge and expertise in this area by interacting on an on-going basis. Communities of practice spend time together and share a common goal”. (Wenger et al., 2002, p. 3).

Communities of practice grow naturally and can be sustained locally with good leadership. They:

“..ponder common issues, explore ideas, and act as sounding boards. They may create tools, standards, generic designs, manuals, and other documents- or they may simply develop tacit understanding that they share. However they accumulate knowledge, they become informally bound by the value that they find in learning together.”

(Wenger et al., 2002, p. 5).

Murphy and Timmings (2009) suggest that organisations can try to cultivate communities by bringing together carefully selected members with expertise or by linking people in connected activities. They point out that the type of communities can differ. They may be large or small, long-lived or short lived, homogenous or heterogeneous and may be within or across organisational units. They may or may not be recognised formally. Wenger et al. (2002) describe a structural model of a community of practice, suggesting that regardless of the form; all communities of practice share a basic structure. This comprises a domain of knowledge, a community of people who are concerned with this domain and shared practice within the domain. As the project unfolded it became apparent that a school can cultivate communities within the school by bringing together selected members with expertise or by linking people in connected activities. It is this principle that was a major contributor to the success of our developed self-evaluation model. One interviewee stated:

> *"It was so lovely to be seen as a useful part of the schools development. Before this project we were quite separate in our department carrying on in our own way. The project gave a common purpose to everyone. We could all contribute our specialist knowledge in a non-threatening way to support the learning of the pupils and remarkably to the development of the school. Before the project it was very difficult to work out what effect I was having, or my department was having on the school. Suddenly all teaching staff, departments and senior management were talking together to develop the school in an open and honest environment. Long may it last."*

It can be argued that it is the domain of knowledge that brings people together as knowledge is an evolving set of circumstances where there is a shared understanding. The school community shared a passion and interest in an area and its membership was voluntary. The shared practice established a baseline of common knowledge and also developed the body of knowledge necessary to advance the understanding. "variety of knowledge types: cases and stories, theories, rules, frameworks, models, principles, tools, experts, articles, lessons learned, best practices and heuristics. They include both

tacit and the explicit aspects of the communities knowledge" (Wenger et al., 2002, p. 39).

Boud et al argue "reflection must be re-thought and re-contextualised so that it can fit more appropriately within group settings. It must also shift from its origins in concerns about individuals to learning within organisations" (Boud et al., 2006a, p. 3), "….taking it beyond the individual" (Boud et al., 2006b, p. 29).

As reflective professionals, teachers use action research methods to investigate questions about their practice and to develop workable solutions aimed at improving student learning (McNiff et al., 1996). Action research is a method of reflection that can be used to facilitate teacher learning in a specific area of their practice.
Knowledge is social as well as individual. A body of knowledge can develop through a process of communal involvement (Wenger et al., 2002). Teachers accumulate tacit knowledge through experience, through developing communities of practice and using frameworks for reflection and this tacit knowledge may pass directly from expert to others (Baumard, 1999).Wodlinger (1996) maintains that exploring one's own practice gives novice teachers a crucial head start in taking responsibility for professional growth and for accountability. It can facilitate aspirant teachers to make the move from thinking like students to thinking like teachers, by increasing their sense of autonomy and control of their own educational agenda.

There are many challenges facing teachers and this study has attempted to address some of these issues through the use of action research. Action research can provide a way of methodically examining lessons, courses, introducing changes, and evaluating their effectiveness within teaching (Hendry and Farley, 1996). Teaching involves a lifetime process of learning. Therefore all teachers whether newly qualified or expert should question and explore their teaching methods to identify ways of improving these within their local communities of practice. Ultimately teaching results in imparting quality

teaching to pupils to enable the delivery of high quality learning. In accordance with the general impetus of current practice, teaching needs to occur within the context of whole school, departmental and individual reflection on practice to ensure continuous knowledge development and skill improvement.

Participants within this research were encouraged to examine the assumptions they brought to their learning situation that are not usually made explicit. In these ways, the reflexive approach helped the participants to develop critical thinking, to challenge dominant assumptions, to raise new questions for exploration, to critically analyse data, to interrogate notions of objective and universal knowledge and to locate their premise within social contexts.

7.5 Conclusions

I have outlined ways in which I believe our collaborative action research project has served as a catalyst for change in a secondary school. Alongside other researches (Hill and Kerber, 1967; Carr and Kemmis, 1986; Fullan. 1995; Ferrance, 2000) I would argue that teachers work best and become more effective when encouraged to examine and assess their own work, help each other by working collaboratively and as a direct consequence boost their professional development. Acton research functions best when it is cooperative as this research method incorporates the ideas and expectations of all that are involved with the innovation. As argued previously, the research became a form of self-reflective inquiry to improve practice as people learn best when they do it for themselves and claim ownership. These features permeated our collaborative effort; their importance is evidenced by the success of the model and the staff interview comments. The benefits to the school were considerable:

- Teaching and support staff talked openly about pupil and their own performance without fear of judgement
- Faculties and subject departments collaborated with each other.

- Staff recognised that working for the greater good was positive and in every ones interest
- Sharing brought with it an improvement in working practises
- A more skilled workforce
- Collaboration invited negotiation that led to ownership
- Openness frees the mind

Although problems presented themselves throughout the development and implementation of the school model it became obvious to me that the greatest challenge to the success of the entire process would be managing the essential changes involved. Frameworks summarising the management of change (Ely (1995), Fullan 1990, 1995, Rogers 1996, 2003) support the management of change paradigm by offering 'conditions' to elicit change

Fullan (1995) within his 'six secrets' cites 'capacity building prevails' (getting things done collectively) and 'transparency' (learning in context and easy access to information) these secrets were supported by my research as key components to the success of the model, as discussed below. Both Ely (1995) and Rogers (1996) argue that there must be a need for change that usually originates from dissatisfaction with the present practise from as Rogers (1996) suggests a diagnosis of the problem. Rogers further suggests that it is important to create an intent to change and Ely purports commitment as there must be "firm and visible evidence that there is endorsement and continuing support for implementation". Rogers' model has identified the critical components in the change system and their characteristics. The model is relatively systematic because the consequence of the change is confined with a predetermined 'innovation', a predetermined goal. The interrelationship and dynamic exchange between the components in the change system is not expected to contribute to the continuous shaping of the vision, but to be controlled to adopt a desirable idea, object, or program. The vision within this research did change; starting off as an unrefined notion that was

crafted through discussion into a firm belief and a subsequent focus for the school. This was a critical stage in my research; it was important that the school went through this process to develop a corporate ownership for the project.

As stated above Fullan (2009) filtered and refined his experience into six secrets of change. He argued that "By putting the secrets into action, you will inspire effective action from others". The first secret discusses 'love your employers' by creating the conditions for them to succeed. "The quality of the education system cannot exceed the quality of its teachers" (Barber and Mourshed, 2007). Fullan explains that loving your employees means helping them all find meaning, develop their skills, and derive personal satisfaction from making contributions that simultaneously fulfil their own goals and the goals of the organisation. The second secret Fullan suggests is to 'connect peers with purpose' by leaders creating the conditions for effective interaction and intervene when necessary but otherwise let the group find its own balance. Peer interaction is much more than mere collaboration; "it is the social and intellectual glue of an organization" in which teachers work with and learn from each other. The third secret 'capacity building prevails' Problems are solved when participants believe that they will not be penalised for being part of a risky project, Individuals and groups are high in capacity if they are developing knowledge and skills; if they attract and use resources wisely; and if they are committed to getting important things done collectively and continuously. The fourth secret 'learning is the work' Fullan believes that institutions must consistently address their core tasks, whilst at the same time learning to improve what they do. Learning on the job, day after day, is the work. Its goal is to define the best practices for those few elements that are crucial to success. The answer is to identify those aspects and to take special care that everyone does those tasks well using the known best method of doing so. The fifth secret is 'transparency' consistency and innovation can only be achieved through learning in context. Easy access to information means that the public demand an accountability for performance. An effective organisation embraces transparency and develops a culture in which it is normal to

experience problems and solve them as they occur. “When data are precise, presented in a non-judgmental way, considered by peers, and used for improvement as well as for external accountability, they serve to balance pressure and support”. The sixth secret ‘systems learn’ considers how systems gain knowledge. There are two main reasons firstly they focus on developing many leaders working in concert and secondly, systems learn when they are led by people who approach complexity with both humility and conviction that effectiveness can be maximized under any circumstances. Leaders must be self-assured that they have considered all possibilities and they have made the right choice under the circumstances, even though something may go wrong.

Criteria for success can be considered in various ways. Whilst an obvious criterion is changes in pupil achievement, changes in leaders’ and teachers’ knowledge and skills can also be considered to be important mediators in that success. Change is complex and successful change is particularly complex. As Berman (1981) warns, ‘‘there are many ways to fail, but few to succeed’’ (p. 255). A theory competition approach does not offer simple solutions to succeeding, but rather places particular demands on both change initiators and those responsible for implementation. Although complex by nature the final purpose of this research was to identify the contributor factors to manage the change. The model was successful; however there was a great deal of heartache throughout the project. Through critical reflection of the experience it became apparent that there were key contributing factors to the successful introduction of the model. These contributing factors are summarised below to offer an aide memoire to schools facing similar changes in practice.

7.6 The Key Messages

The key messages and ‘considerations’ from the management of change in Ridgeway High School are:

- The change must be necessary and desirable
- Change will always be stressful to some of the participants

- Attention needs to be paid to the requirements of the staff.
- The project leader needs to reflect upon what might be the consequences of the change.
- The project leader needs to think through how much change staff can cope with. If it is judged to be overbearing it may need to be broken down into subtasks to avoid negative ramifications. A huge task can appear daunting.
- Certain staff can feel threatened and insecure. It is important to give comfort, support and show sympathy to such individuals so that they can identify with the purpose of the initiative and therefore develop a sense of ownership.
- Staff should only be required to make difficult changes for good cause.
- Staff should be encouraged to work and learn in whatever ways best suit them to achieve their potential and therefore give of their best. It is important to remember that different people react in different ways.
- A simple solution is often the route to go. It is not necessary to over complicate issues. As the project leader it was important to anticipate problems and have a considered solution ready. This might not be the only solution but at least it provides a springboard for discussion.
- The project leader needs to be proactive and maintain control. However they should expect setbacks. It is important to value constructive criticisms, stay confident, persevere, and learn from all experiences
- Achieving change is often exciting and usually it is far more satisfying than contemplating failure.
- It was important to recognise that throughout the project staff skill level will progressively rise consequently they will become more confident and assured in their everyday role and therefore become more marketable.

As a successful project change manager I felt it important to provide a persuasive rationale for change, set challenging goals and provide visible leadership and commitment.

7.7 Limitations of the research

Like any other research, there are limitations in the current study, which come from the research design and the researcher. The first limitation of the research design is that the size of the sample used for the study. The case study was based on one school so the results may not be representative of a larger sample, say all secondary schools in Wirral Local education Authority, or a sample from each different type of school for example a grammar school, a high school and a secondary school. As previously discussed the study was school specific to solve a problem in Ridgeway High School to meet the demands of Ofsted. The results from the first two questionnaires audited the current experience of self-evaluation within the local education authority and the analysis showed that all schools that had started the self-evaluative process were at different points which would make coordination difficult. A second limitation was the time spent talking informally to staff and making notes about their concerns for the new school practice. At the time I did not realise the importance of this aspect of the research. In hindsight the data could have been more rigidly quantified by distributing a questionnaire before the start of the research to determine the fears and distributing a further questionnaire at the completion of the research to determine whether the concerns had been absolved.

Although the current study has these limitations the research design and the correct use of questionnaire and interview research tools and analysis ensures the reliability of this research. The findings can help schools to focus on the process to bring about a change of practice in their schools and use the ‘considerations’ to plan an effective strategy for that change.

7.8 Further research

As discussed within the literature review Rogers' model has identified the vital aspects in the change system and their characteristics. Ellsworth (2000) commented that Rogers'

Diffusion of Innovations (1995) is an excellent general practitioner's guide. Rogers' framework provide "a standard classification scheme for describing the perceived attributes on innovations in universal terms" (Rogers, 1995). It is a systematic process as the consequence of the change is defined by a predetermined ‘innovation’, a predetermined goal. Rogers’ research on the diffusion of innovations has given a valuable basis for understanding the factors and process involved in the adoption of innovations in a wide range of areas (Rogers, 2003). Rogers considered the diffusion of an innovation as “a process whereby an innovation is communicated through certain channels over time among members of a social system” (Rogers, 1995, p. 10).Rogers says that: “in spite of the importance of consequences, they have received relatively little study by diffusion researchers” (Rogers, 2003, p. 436). I therefore suggest that a focus for future research could be to investigate the effects of adopting innovations.

7.9 A Final Thought

In the fifth century BC, Lao Tzu wrote:

‘As for the best leaders, people do not
notice their existence.
The next best the people honour and praise.
The next, the people fear.
And the next, the people hate.
But when the best leader’s work is done, the
people say, ‘‘We did it ourselves’’.’

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Appendices

Appendix 1 Telephone survey questionnaire:

University of Huddersfield: School Self-evaluation Questionnaire

School: _____ **Type:** _____

Person Responsible for Self-evaluation: Position _____

1. Has you school taken on board the process of self-evaluation?
   Y ____ N ____

2. When did your school introduce the process? _____

3. Does your school use the “Wirral Secondary School’s Self-evaluation Framework?”
   Y ____ N ____

4. How long has your school been using this framework?_____

5. What are your main reason(s) for using the framework?
   _____
   _____
   _____

6. Has any member of your staff attended any of the training sessions for this framework?
   Y ____ N ____

7. How many of the trained people are in the senior management team? ___

8. Have any of your school’s training days been dedicated to school self-evaluation?
   Y ____ N ____

9. How many days? ____

10. Has your school introduced the whole process at:
    a) once ____ or b) phased ____ ?

11. The LEA model focuses on 7 key areas. If phased which elements have you started?

Results and Achievement	____
Pupils Attitudes Values and Personal Development	____
Teaching and Learning	____
Curriculum and other Opportunities	____
Care for Pupils	____
Participation with Parents	____
Leadership and Management	____

12. The LEA recommends a four year cycle to complete this process. Will your school meet this deadline?
Y ____ N ____

13. Have you found the LEA framework a helpful document?
Y ____ N ____

14. If YES what are the main strengths of the framework?
_____
_____
_____
_____
_____
_____

15. If NO what are the main weaknesses of the framework?
_____
_____
_____
_____
_____
_____

Appendix II School Information Questionnaire

University of Huddersfield

School Information Questionnaire

Type of School: Comprehensive/Grammar/High School/Secondary

The focus of this questionnaire is data use and data management in schools. Please answer the questions to the best of your ability.

Please tick (√) as appropriate

I am

senior management _____
head of faculty _____
head of year _____
head of subject _____
form teacher _____
classroom teacher _____

1. To your knowledge does your school use national standardised data to assess pupil progress?

Y _____ N _____ Unsure _____

2. If yes what national standardised data do you use?

KS2 _____
KS3 _____
KS4 _____

3. Does your school use standardised tests to benchmark pupils attainment in your school?

Y _____ N _____ Working towards _____ Unsure _____

4. What tests are used? Please tick as many as appropriate.

CATS _____
MIDYIS _____
YELLIS _____
ALIS _____
Other (Please list) _____

5. Is this data usually given to you by:

Senior Management Team _____
Head of Faculty/Head of Subject _____
Not issued as normal practice _____
I find it for myself _____

6. For what purpose is pupil data used?

As a bench mark to set pupil targets _____
To analyse my departments performance _____
To analyse how well pupils are doing _____
To analyse my performance by setting personal targets _____
Any other (please list)
_____
_____
_____
_____
_____
_____

7. Is the data you receive compared to

National Data Y _____ N _____ I don't know _____
LEA Data Y _____ N _____ I don't know _____

8. Is the information you receive in paper or electronic form?

Paper _____ Electronic _____

9. At present do you have any means within your school for accessing information electronically?

Y _____ N ____ Unsure _____

10. If your information is not given to you electronically is it because the school does not have an administration network?

Y _____ N _____

11. If your school does have an administrative network are there adequate machines for you to gain easy access?

Y ____ N _____ Not Applicable _____

12 Is there a Performance Management policy in your school?

Y _____ N_____ Unsure _____

13. Is the data used as part of the Performance Management policy of the school to make judgements about your performance.

Y _____ N _____

14. Have you been given training in the use of data?

Y _____ N _____

15. Training received, please tick as many as appropriate.

A dedicated course I attended given by an external provider _____
Dedicated training received from the senior management team as part of the school INSET provision _____
Attended an LEA training day _____
I have trained myself _____
I do not use key stage data in my job _____
Any other please list

_____
_____
_____
_____
_____
_____

16. In your present role in the school what data would you like to support you role?

_____
_____
_____
_____
_____
_____

Thank you for your time and help.

Appendix III In-house questionnaire

University of Huddersfield: School Data Use Questionnaire

Position Held in School: DH; SMT; HoF; HoY; HoS; FT; SW/TA

The focus of this questionnaire is data use and data management in schools. Please answer the questions to the best of your ability.

The questionnaire is in 2 parts Key Stage 3 and Key Stage 4. I expect you to answer all questions

Key Stage 3

This series of questions asks you about the uses you make of Key Stage 2 data at Key stage 3

UP1	Do you teach or support Key Stage 3 pupils	☐
UP2	Do you teach or support a Key Stage 3 core subject (English Maths or Science)	☐
UP3	Do you use KS2 SAT data to help with your teaching	☐
UP4	Do you use KS2 SAT data to organise your teaching groups	☐
UP5	Do you use the English KS2 SAT test score	☐
UP6	Do you use the Math KS2 SAT test score	☐
UP7	Do you use the Science KS2 SAT test score	☐
UP8	Do you use the average KS2 SAT test score for all 3 subjects	☐
UP9	Do you use Y7 CAT data to help with your teaching groups	☐
UP10	Do you use Y7 CAT data to organise your teaching or support groups	☐
UP11	Do you use the Verbal Y7 CAT test score	☐
UP12	Do you use the Non Verbal Y7 CAT test score	☐
UP13	Do you use the Quantitative Y7 CAT test score	☐
UP14	Do you use the average Y7 CAT test score for the main 3 data streams	☐
UP15	Do you use the SAS score	☐
UP16	Do you use the stanine statistical measure	☐
UP17	Do you use the given KS3 predictors as targets	☐
UP18	Do you use the given KS4 predictors as targets	☐

Presentation of Pupil Data Key Stage 3

The next series of questions ask about how you would like data presented so that it is useful for your teaching and pastoral care. Please consider the following options

For a particular year cohort

P1 Would you prefer to see the pupil data arranged alphabetically ☐

P2 Would you prefer to see the pupil data arranged alphabetically in form order ☐

P3 Would you prefer to see the pupil data arranged alphabetically in subject order ☐

P4 Would you prefer to see the pupil data arranged alphabetically in set order ☐

P5 Would you prefer to see a pupil profile containing all the data for Key Stage 3 on one page ☐

Comparative Data

Please consider the following options.

C1 Would you find comparative data useful to see how a pupil has progressed ☐

C2 Would you find comparative data useful to see how pupils have performed in all subjects ☐

C3 Would you find comparative data useful to see how pupils have performed in your teaching class ☐

C4 Would you find comparative data useful to see how pupils have performed in your faculty ☐

C5 Would you find comparative data useful to see how pupils have performed in your year group ☐

C6 Would you find comparative data useful to see how pupils have performed in each year group ☐

C7 Would you find comparative data useful to see how pupils have performed in your form ☐

C8 Would you find comparative data useful to see how pupils have performed in each form ☐

Media for Data

Please consider the following options.

M1 Would you prefer to have the data available electronically ☐

M2 Would you prefer to have the data presented on paper ☐

Is there anything you wish to add about the data you use or how you would like the data presented.

Key Stage 4

This series of questions asks you about the uses you make of Key Stage 3 data at Key stage 4

U1	Do you teach or support Key Stage 4 pupils	☐
U2	Do you use KS3 SAT data to help with your teaching or support	☐
U3	Do you use KS3 SAT data to organise your teaching groups	☐
U4	Do you use the English KS3 SAT test score	☐
U5	Do you use the Math KS3 SAT test score	☐
U6	Do you use the Science KS3 SAT test score	☐
U9	Do you use the average KS3 SAT test score for all 3 subjects	☐
U10	Do you use Y9 CAT data to help with your teaching or support	☐
U11	Do you use Y9 CAT data to organise your teaching groups	☐
U12	Do you use the Verbal Y9 CAT test score	☐
U13	Do you use the Non Verbal Y9 CAT test score	☐
Y14	Do you use the Quantitative Y9 CAT test score	☐
U15	Do you use the average Y9 CAT test score for the main 3 data streams	☐
U16	Do you use the SAS score	☐
U17	Do you use the stanine statistical measure	☐
U18	Do you use the KS4 predictors as targets	☐

Presentation of Pupil Data Key Stage 4

The next series of questions ask about how you would like data presented so that it is useful for your teaching and pastoral care. Please consider the following options.

For a particular year cohort

P1 Would you prefer to see the pupil data arranged alphabetically ☐

P2 Would you prefer to see the pupil data arranged alphabetically in form order ☐

P3 Would you prefer to see the pupil data arranged alphabetically in subject order ☐

P4 Would you prefer to see the pupil data arranged alphabetically in set order ☐

P5 Would you prefer to see a pupil profile containing all the data for Key Stage 3 on one page ☐

Comparative Data

Please consider the following options.

C1 Would you find comparative data useful to see how a pupil has progressed ☐

C2 Would you find comparative data useful to see how pupils have performed in your teaching class ☐

C3 Would you find comparative data useful to see how pupils have performed in all subjects ☐

C4 Would you find comparative data useful to see how pupils have performed in your faculty ☐

C5 Would you find comparative data useful to see how pupils have performed in your year group ☐

C6 Would you find comparative data useful to see how pupils have performed in each year group ☐

C7 Would you find comparative data useful to see how pupils have performed in your form ☐

C8 Would you find comparative data useful to see how pupils have performed in each form ☐

Media for Data

Please consider the following options.

M1 Would you prefer to have the data available electronically ☐

M2 Would you prefer to have the data presented on paper ☐

Is there anything you wish to add about the data you use or how you would like the data presented.