Assessment through the use of Personal Records

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ABSTRACT: This research addresses an area of personal and professional concern where my values were being denied in my practice. In educational terms, I had been paying too much attention to a small portion of the abilities of students, the quantitative and verbal skills, and I had overlooked their capacities in other areas. I had been using an academic method of testing to assess the learning of students and through my study of the theory of Multiple Intelligences (Gardner, 1983) I became worried about the inadequacies of such an academic method. This research not only explores issues relating to assessment but it also traces the development in my own thinking in the course of the research. I developed a new method of assessment using personal records. The word assessment comes from the Latin word "assidere" meaning "to sit beside". Such a meaning suggests a sharing of experience which to me is exactly what personal records can offer - to sit beside a student and share in their experiences, in the story of their learning, in their attempts at improvement, in their accomplishments as they also set possible goals for the future. Systematic collections of student work selected to provide information about students' attitudes and motivation, level of development and growth over time. (p. 2). The methodology of action research encouraged me to ask questions about my own practice and to work out the answers for myself. It allowed me to conduct my study within a framework that was compatible with my own professional integrity and values system. It was important to me that my students and their parents, and teaching colleagues are collaborative participants in my research and that I would be at its centre. I believe I can claim that my research has led to increased knowledge for myself and the students and to an improvement in the quality of education in the classroom. I hope I have shown how I learned about my values and practice, revised my concerns, responded to students' personal and social needs and came to understand my own educational development. Here I was maintaining personal records of each student in their different skills, which is improved students learning. The personal records consist of students' reading, writing, speaking, drawing, sports and games etc. These students' personal record helps to develop students' all personal skills.

KEY WORDS: Assessment, Personal records, Teaching, Learning, Evaluation, Action research

I. INTRODUCTION

This study is a description and explanation of my professional life over the past 18year as I introduced student personal records as a form of assessment. It is the story of my own learning and how my ideas change as I live through my experiences. It is the story of my own educational development as a teacher in private schools and government Tamil and English medium schools in Chennai, Tiruvallur, and Tiruchirappalli districts of Tamil Nadu state, India. I aimed to improve the quality of educational experience of my students. I chose the area of assessment for my research because I believe I had denied my educational values of justice and equity in that I tended to rank, label and classify learners according to their results in standardised tests. I came to realise that there need be ways other than paper and pencil tests which I had been using to assess the process as well as the product of a child's learning and understanding. For us adults, I tend to be assessed on our work performances and our accomplishments over time, not on the result of a standardised test. I certainly would consider myself therefore a "living contradiction" (Whitehead, 1993:56), holding educational values while at the same time neglecting and negating them. Because education is a value-laden practical activity I cannot say that a process is educational without making a value-judgement. Holding values such as democracy, justice and freedom are the reasons why I am aiming for change, aiming for a better assessment practice. As the methodology of action research is a self-reflective process where one is constantly evaluating what one is doing with a view to improve the quality of life through taking time to reflect honestly and critically on what is happening and to change it if necessary, I chose action research as my research approach. At parent/teacher meetings in October I provided a report to parents on their children based only on results of standardised tests in English, Tamil and science.

On reflecting critically on this I believe I was doing an injustice to all my students. Why was I doing this? I had spent seventeen years of my teaching career providing information to parents on their children based solely on results of written tests. Written tests that often told more about students' failures, errors and inadequacies, than about their successes and did not take into consideration factors such as stress, anxiety and tiredness which can influence outcomes. I was not giving an overall picture of my students' abilities and what's even worse I was reinforcing the idea in parents' minds that to me, the senior class teacher, this was what mattered, this was what was important and their children's other abilities were of no importance. I came to realise that it was time for me to move away from the traditional form of assessment I had been using and to find a more authentic method which would embrace learning experiences and provide evidence of performance beyond the acquisition of factual knowledge. I needed an assessment procedure that was comprehensive enough to allow for the full range of abilities across all the subjects of the curriculum. So for my research I chose the use of personal records as a means of assessment which can be defined as Systematic collections of student work selected to provide information about Students' attitudes and motivation, level of development and growth over time Therefore, I believe that my intervention was justified and that personal might offer a more equitable form of assessment that honoured students' abilities other than excellence in language or numeracy. I felt morally committed to act. It is ironic that acknowledging my mistakes and understanding the nature of these mistakes through my values and beliefs have helped me to move forward.

This research is a continuation of an ongoing research project which began in July 2002. At that time I was involved in a district action research co-ordinator in Chennai district under Sarva Shiksha Abhian (SSA) that is education for all. Prior to that action research I tended to use the more traditional didactic approach to teaching which involved a large core of class teaching and recognisably planned and sequenced teacher direction and paid little heed to aesthetic values, a teaching method that was geared towards dominant epistemologies. In my subsequent module "Teaching for Learning" (Ní Mhurchú: 1999) I was introduced to Gardner's (1983) theory of Multiple Intelligences and as I embraced his theory, I attempted to apply it gradually in my classroom. I became aware of the wider picture which involved recognising student capabilities across a wide range, the benefits of using a variety of teaching styles and of the importance of non-academic subjects as well as academic subjects. I came to realise that I needed to extend the parameters of the educational experience that I, as a teacher, was offering to my students. I had previously held the view that "intelligence" was a "singular, unified entity which people possess in varying quantities" (Lynch: 1992:135) which influenced my methods of teaching. It was while reflecting on the outcome of those previous assignments that I realised it was inevitable that I had to critically reflect on my method of assessment as it did not reflect my new values.

Aims and Objectives: There has been much talk of alternative assessment in schools particularly in the New Curriculum. Personal records seem to be gaining credibility as a legitimate form of assessment. Through personal records, I believe students themselves can be given the opportunity to monitor their performance and a personal record gives students an opportunity for self-reflection. Understanding that children have strengths and weaknesses I hoped personal records could be invaluable as one looks at the whole child and that they would provide a more visible link between learning and its assessment, as well as acknowledging the wider range of student competencies. In this research study I hope to show the developmental process of my own thinking and my own work while I introduced personal records into my classroom as an alternative form of assessment and I believe that this research is my educational response to my realisation of having negated my values. I hope to show how I learned about my values and practice, how I revised and evaluated my concerns and came to understand my own professional and educational development. I believe that this research is an educational response to the injustice I have done in not assessing fairly and honestly the abilities of the students in my care. I believe I can show in this research that a student's personal records is a purposeful collection of student work that shows growth, strengths and turning points and is aimed at reporting on a child's development in all the intelligences. I believe that assessment needs to be ongoing and the student should be provided with feedback about their own performance.

I decided that this would be my new supplementary method of assessment in my classroom. I believed that by introducing students to personal records as a means of assessment in the classroom and by including a wide range of subjects, intelligences and talents among the contents of the personal records, I would be moving away from the idea that one's success in all subjects in my classroom.

II. METHODOLOGY

The paradigm within which we work determines what we look for, the way in which we understand and construe what we observe, and how we solve emerging problems. It constitutes the framework in which observations are made and interpreted, and directs which aspects we attend to. A research paradigm is according to Bassey (1990) a network of coherent ideas about the nature of the world and of the functions of researchers which, adhered to by a group of researchers, conditions the patterns of their thinking and underpins their research actions (p. 13). Each paradigm supplies a set of concepts or ideas, and preferred tools and techniques for the conduct of the research. I needed to place my research within one of the above frameworks which complies with the way I see the world. As my study in this research is in the area of assessment I initially had to get to grips with the language of intelligence. I believe I can locate my understanding of intelligence and assessment against different research paradigms and that I can show my awareness of the epistemological, ontological and methodological base of each paradigm. In the empirical/positivist research paradigm the purpose of research is to observe, describe, interpret and explain events without making value judgements about them. To the positivist researcher the world is a rational reality existing 'out there' irrespective of people so the researcher is not a significant variable in this paradigm which suggests that the epistemology of this technical and rational paradigm is external and objective. My previous methods of teaching and assessing students belong to the empirical paradigm, also known as the scientific paradigm. As its methodology tends to be quantitative I measured students' abilities solely on right or wrong answers on standardised tests, which give little, or no consideration or credit to strategies and processes. As Melrose observes Positivists value concrete and factual bodies of technical knowledge and generalisations, arrived at by repeated experimentation and observation (1996:50) so discoveries are expressed as factual information.

On reflecting on the validity or the usefulness of standardised tests to me, as a teacher with limitations in the way in which I could explain tasks to students; my inability to intervene or help; where issues such as the social factors which affect a child's attainment were ignored; where problems in teaching and curriculum were ignored I came to realise that issues of validity or usefulness to me were over-ridden or ignored. Researchers in the empirical paradigm also believe that they can use the results of their research to control or predict the outcome in similar situations and they expect others to come to the same conclusions. With standardised tests there is an assumption of universality where a particular test score has essentially the same meaning for all individuals. While looking critically at the norm referenced reading test I usually administer, I came to realise that these tests assessed only some material and only certain tasks were amenable to this method of testing. The Micra T I had been using assessed only one aspect of the reading skill i.e. comprehension. It did not assess

- a) The accuracy and fluency of students' reading
- b) Their ability to understand or recognise words
- c) The student's interest in reading.

Therefore these results did not honestly represent the individual's ability to read in the widest sense and therefore the meaning of the score could not be universally understood, since the user of the score would need to know which aspect of reading has been tested. As it does not measure what it purports to measure then its use is misleading. Therefore this paradigm is no longer adequate for me as a basis for my theories of assessment. I came to doubt the use value of this approach. When I was worked as a Block Resource Teacher Educator in Tiruchirappalli and Chennai district I have attended and conducted many seminars and courses with the aim to improve government, corporation and government aided school teachers teaching skills. Many of these "experts" who gave the courses were far removed from the classroom situation and even though their ideas may have seemed theoretically sound, I found it difficult to apply them to my situation. Many of these interpretive researchers aim to describe, interpret and explain events in an attempt to get shared meanings with others because they believe that people understand and interpret the world in ways which are often similar but not necessarily the same, as there can be different interpretations of what is real. Colleagues who attended the same courses often came away with a different interpretation to mine, which therefore made the ideas all the more difficult to apply. Usher (1996) acknowledges that while empirical knowledge is linked with prediction and control and interpretive knowledge is linked with enlightenment, understanding and communication, neither however has an interest in research that changes the world in the direction of freedom, justice and democracy. Both the empiricist and the interpretive traditions are grounded in subjects other than educational practice.

Action research: In my ontological perspectives in relation to education I regard the students in my care as individual identities. They each have their own personalities, their own backgrounds, their own abilities and interests and their own ways of knowing and learning. I respect each child in my care, and I value and wonder at the limitless capacity of their minds.

My aim as their teacher is to provide the best possible opportunities to them in their learning in a classroom situation. I wanted to make a shift in my assessment practices from a testing culture to an assessment culture as my underlying conceptions of learning, of evaluation and of what counts as achievement are now radically different from those which are underpinned by the empirical paradigm. I am now shifting my knowledge base to creating my own knowledge as I work. I want to develop my own theory on how it is I work within the area of assessment. I would like to create my own theory because I am living this theory while I am living a particular experience, which I believe is making a difference in that, the assessment procedure I am now using is better than the previous one.

Action research has given me the opportunity to be involved in my own research, addressing issues of concern to me which have arisen within my practice, with the intention to improve my practice. It requires a commitment from "me" the practitioner, to investigate and reflect honestly and critically on my own practice. My research offers a description of and an explanation for my own professional learning. It has given me the opportunity to address issues while drawing on my own experience. The methodology of action research is a self-reflective process where one is constantly evaluating what one is doing, evaluating solutions and self evaluation with a view to improve the quality of life through taking time to reflect on what is happening and to change it. This constant evaluation helps me make sense of how I am living my life. Once I identify an appropriate form of action, I implement it, and if the intervention is successful, a change in my practice may be necessary. This in turn may raise new problems which need to be solved and so on. If the answer does not work, then another way forward needs to be explored. These recursive processes make up what is known as the "action-research cycle". According to Hitchcock and Hughes (1995), the principal features of an action research approach are change (action) or Collaboration between researchers and researched. Action researchers are concerned to improve a situation through active intervention and in collaboration with the parties involved (p.27). Action research is carried out "on-the-job", unlike more traditional forms of educational and classroom research and the most important question that action researchers ask is "How do I improve what I am doing?" This common-sense problem-solving approach encouraged me to develop my own personal theories of education from my practice. Action research has allowed me to investigate, reflect honestly and critically on and to question my practice and change it while I learn. The reflection and questioning have come about because I realised my practice did not reflect fully my values and I felt unhappy within myself. I needed to rethink my values and to develop new concepts of teaching and I also needed to explore my experiences of my professional life in order to understand it better. I set about changing myself and my practice for the better - better in living more consistently the set of values that I hold. It is educational because I act to change myself according to the educational values to which I am committed.

Ethical Issues: I had hoped that by involving a teaching colleague he/she would see the value of using personal records as a means of assessment and that he/she might consider using portfolios to begin within his/her own classrooms and would see their benefits for a whole school approach to assessment. I involved six parents as I was also interested in their views of personal records work and I believe that parental involvement in their child's education is extremely important. To improve the area of assessment in my classroom I could not do so without the willingness of students, parents and a colleague to participate. I encountered no difficulties in gaining their support and I assured them my intentions were to observe good ethical practice throughout my research. I distributed the ethics statement to the participants (students, parents, a colleague) informing them of my project and requesting their participation, guaranteeing confidentiality and allowing them the right to withdraw (copy of Ethics Statement in Appendix B). I informed them of my aims, my methods of data collection and my objectives as in my research proposal (Ní Mhurchú: 2000) and assured them that my research would not threaten school policy, management styles or individual personalities. My intentions were to uphold and respect students' values in the classroom by encouraging democracy, deliberation and reflective equilibrium. I involved all fifty five of the students in my classroom in the research as I believed it would be unethical of me to pick and choose among them. I believed that the use of personal records would be of benefit to all my students, and I was willing to commit my time so that the experience of personal records would be a very positive one for them. I included all my students as I value equally all of them and if I had only involved some of the students I felt I would be using examples of "good, average and poor" work which goes back once more to the idea of grading students which I would like very much to move away from. Obviously this notion presented research problems as it involved monitoring and rigorous sifting through considerable amounts of data to produce evidence, but I was happier doing it this way and I believed that personal records would benefit them all. As I was using standardised tests as my previous method of assessment, the students' performances were judged with reference to the performance of others.

To make the results of a standardised test valid, each student in the country should have equal access to schooling, equal access to learning and equal access to curriculum which in reality is impossible. I used the scores the students achieved in these standardised tests to grade and label them which were unethical and unfair. Gipps (1994) comments that Assessment is a powerful tool: it can shape curriculum, teaching and learning; it can affect how pupils come to see themselves both as learners and in a more general sense as competent or not; through labelling and sorting pupils it affects how pupils are viewed by others;

it controls access to further education and high status careers. On taking all this into consideration, a consideration of ethical issues and equity is highly pertinent.

To improve the area of assessment in my classroom I have chosen personal records. Through the medium of personal records work the students have had an opportunity to celebrate their abilities and achievements, to realise their weaknesses but yet believing that they can always aim to improve. They have shown great pride and ownership in their work which has provided its own stimulation for constant improvement It has involved them in their own assessment and their skills of self-assessment are improving all the time By introducing my students to portfolios as a means of assessment I believe I have given them an opportunity to identify their strengths, that I have minimised comparisons and that I have allowed room for student learning styles, aptitudes and interests which I believe supports fairness and equity. I began by introducing the notion of personal records work to the students in late July. I observed and monitored the process as students began systematically to collect samples of their work under many different categories. I observed them engaging in their learning content, guided them in learning the skills of reflection and self-evaluation, helped them in planning goals for the future and facilitated communication with parents. It was a great learning opportunity for me and for the students. We encountered difficulties in some areas but the methodology of action research lends itself to seeking and exploring new channels through which I could deal with these difficulties.

"How can I improve my practice in the area of assessment through the use of personal records?" I will show this process to be a series of "action-reflection steps" as I will describe an enquiry into my own professional practice. I am seeking to improve my practice based on Jack Whitehead's ideas (1989) on the value of the action reflection cycle, which educators use to present "their claims to know their own educational development as they investigate questions of the kind 'How can I improve my practice?'. I have used Whitehead's question-orientated approach I identify a problem when some of my educational values are denied in my practice; I imagine ways of overcoming my problems; I act on a chosen solution; I evaluate the outcomes of my actions; I modify my problems, ideas and actions in the light of my evaluation. (Whitehead, 1993:69) but I followed the action plan of McNiff, Lomax and Whitehead (1996:137-139) in my writing. What was your concern? Why were you concerned? How could you show the evidence around your felt need to undertake the research? What could you do about it? What did you do? What evidence did you produce to show your actions and their impact? What conclusions did you draw from your evidence? How could you judge your own effectiveness? How could you show that you took care that your judgements were reasonably fair and accurate? How did you modify your practice?

My concern was that I had denied my educational values in the area of assessment in my classroom in that I had been using norm-referenced tests or standardised tests to assess the process and product of the children's learning and also I tended to rank, label and classify these children according to the results they achieved in these tests. I used these scientific results to provide me with information about the students' performance in relation to the performance of other students of the same age in the areas of English and mathematics. I believed I was doing a great job. I worked hard providing books that were of interest to students to help bring up their reading abilities and I worked hard ensuring that each child could understand and apply each mathematical concept. But I was forgetting to look at the individual as an individual. I did not include recognition of the uniqueness of each child and the importance of their holistic development. I was paying too much attention to only a small portion of the abilities of my students. I was doing an injustice to them because instead of using assessment to enhance their learning I was instead being too judgemental. I was paying far too much attention to the linguistic and logical-mathematical skills of my students and allocating little importance to their abilities, individual talents and also I was promoting linguistic and mathematical skills as being the most important skills in my classroom. I was also concerned that the children were not actively involved in their own assessment. At parent teacher meetings in 1998 I used the results of norm-referenced tests in English and mathematics, results of Tamil, science, social science, and spelling tests to inform parents of their child's progress in school. I informed them of the position their children held in class in order of success in accordance with their results in these tests. I included no information on their child's ability in areas of physical education, art/crafts,

music and I made no reference to their interpersonal and intrapersonal skills. In October 1998 I undertook an action research project to promote art in my classroom (Ní Mhurchú: 1999) which introduced me to Gardner's theory of Multiple Intelligences (1983). Gardner (1983) asserts the existence of a number of definable categories of human intelligence, different ways of knowing the world. These are the linguistic, logical-mathematical, musical, spatial, bodily kinaesthetic, intrapersonal and interpersonal and more recently, Gardner has added to the list the intelligence of the natural scientist and spiritual intelligence. He suggested that people differed in the strength of any one intelligence. The idea of these intelligences challenged my previous methods of teaching where I assumed that everyone could learn the same material in the same way. It also challenged the education system because that system assumed that everyone can learn the same materials in the same way and that a uniform, universal measure was sufficient to test student learning I began to reflect critically on my teaching styles and realised that I was doing a grave injustice to the students in my care. On engaging with the literature I began to study different teaching styles and proceeded to put them in action in my classroom. I began to try to improve the situation in my classroom at first by attempting to move away from the more traditional didactic approach to teaching I tended to use, which involved a large core of class teaching, recognisably planned and sequenced teacher direction, to allowing students to participate in their own learning. I then began to put more of an emphasis particularly on art and craft, then music, dance and physical education as I had previously overlooked their importance not just as subjects but as methods of learning.

During parent / teacher meetings on October 21st 1999, I realised that while I had put a great effort into involving the theory of Multiple Intelligences in my work I was still determining the students' abilities in terms of linguistic and science skills and choosing to consider their abilities in all other aspects of the curriculum being of lesser importance. I did not take into account their abilities in areas such as music, visual-spatial and interpersonal understanding even though I did include the students' artwork in addition to the test results. I went home from those parent/teacher meetings with mixed emotions. I was disappointed with my efforts of portraying my students' abilities in terms of scores on standardised tests. I had been working so hard to try and move away from the traditional styles of learning and teaching yet here I was assessing my students by focusing on a narrow interpretation of intellectual capacity. I was assessing and labelling children according to their abilities in academic subjects and their results in norm-referenced tests which ask specific questions and require a specific answer whereby the result is a score. But I had hope I was in the very early stages of introducing portfolios as a means of assessment and I knew in my heart that my feedback to parents at parent/teacher meetings would never again be as limited. While the Tamil curriculum is broad and balanced and includes emphasis on social, emotional, creative, aesthetic, physical and cognitive development and across all areas of the same curriculum the learner is encouraged to become actively involved in the process of learning, I chose mechanical activities of measurement like norm-referenced tests which provided me with information about the children's performances in relation to the performance of others of the same age in the area of English and science to inform me of their learning. My assessment methods lacked democracy, justice, respect for others, freedom and individual integrity - all of the values that mean so much to me in my personal and professional life. I had denied these educational values in that I tended to rank, label and classify learners according to their results in standardised tests and I was not looking at the child as a whole. I was condemning those who were not strong in the linguistic and mathematical but who may be very strong in other intelligences. I was not giving them equal opportunities or rights. I had unjustly penalised the children while reinforcing empirical forms of assessment. I have records which I used to inform parents at the parent / teacher meeting in October on the abilities of their children. Some of these tests show how I had ranked the students in accordance with their results. I have included two types of assessment 1. Summative Assessment 2. Formative Assessment

Summative assessment serves a summative function, that is, summing up what the student has learned at the end of a given period, which is what the term "examination" is concerned mainly with, which I had previously been committed to. Formative assessment involves using assessment information to feed back into the teaching / learning process - finding out what and how children know, which helps the teacher to decide what and how to teach next. I discussed with my teacher colleagues my intentions of searching for another method of assessment as I was unhappy with the system of assessment in the school which emphasised linguistic and logical-mathematical skills alone. They agreed with my thinking but did not have any ideas for me, but were very willing to help in any way they could. During my preparation for a previous module "Teaching for Learning" I had listened to a colleague speak in great depth on his use of portfolios with transition year students in a second level school (see above).

As I listened to him speak on the subject I felt - "here's a system that recognises students' experiences and honours their strengths. This could be the way forward for me". I searched the literature for information on teaching through the use of portfolios and how I could go about implementing them in my classroom.

What are Personal records?: I read Airasian (1996), Danielson and Abrutyn (1997), Kingore (1993), Lyons (1998), Pollard (1997), Stenmark (1991), Veenema (1997) and I learned that a personal records is a purposeful and systematic collection of students' work that could tell the story of a child's learning, progress and achievements (Danielson and Abrutyn, 1997: vi) and it could also monitor the growth and developed understanding of each child as an individual. Personal records deal with "the individual's achievements relative to themselves rather than to others and it looks for "best" rather than "typical" performances" (Gipps, 1994:8). This method of assessment takes place in relatively uncontrolled conditions and the rules are very flexible. According to Pollard (1997) to maximise the educational value, each child should be closely involved in the selection of evidence for inclusion in his or her portfolio, and in review of the contents (p.303). I believe the process of portfolio assessment could help to identify the all-round potential of pupils and to consider how well the curriculum, teaching and organisation enable pupils to develop. The questions were endless and at this stage I did not know the answers to many, but I felt it was manageable for me in my classroom situation and I knew that it would be a great learning experience for me, and I hoped that the use of portfolios would be of great benefit to my students.

I involved the twenty-two students in fifth and sixth class in my research as I believed it would be unethical of me to involve only some of the students in my care, as I believed I would be spending extra time with those involved. I wanted them all to reap the benefits of what I believed was a very worthwhile initiative. I wanted to show them that I valued all their opinions from "personal records work is not like doing school work" (see appendix D) to "our tests were put in the filing cabinet and we never again saw them" (personal diary; 13/3/2000) to "my personal records is the story of my learning" (personal diary; 13/3/2000). It involved monitoring and sifting data from a large range of people and rigorous sifting through considerable amounts of data to produce evidence. By including the whole class in my research I believed it was an honest, fair, democratic and ethical way.

I introduced the idea of personal records into my classroom on September 21st 1999. I explained to the students that from then on I would like them to collect a sample of their work and achievements. I believed that in time they would come to understand what can be learned from saving and reviewing their work. I did not mention the idea of assessment as I did not want them to see this as an examination or a test. I sent a letter to the parents (appendix E) on Monday September providing them with general information about personal records, informing them of my objectives and explaining the process of data collection and asking them to encourage their children to include samples of their work or achievements outside of school. While engaging with the literature of personal records I considered four basic steps in the implementation of a personal records development process.

- 1. Collection and Displays
- 2. Selection and Elections
- 3.Reflection and Rewards
- 4. Projection and promotions

Collection: The students and I discussed what these personal records might contain and these were their suggestions :- art/craft work, projects, tests, computer printouts, poems they knew or composed, a list of the books they had read, book reviews, things they made, school reports, certificates of achievement, medals, songs/music on tape that they had learned or composed, letters from pen pals, photos, scrapbook, video recordings of events such as Christmas play, involvement in television programmes, involvement in concerts. I recall on noting their suggestions that we would need large containers to hold their enthusiastic plan of contents, so I then decided that if we reflected on and reviewed our work and achievements on a weekly basis we would not be including all our work, we would have to be selective. I informed them that it was important that the products they might choose for their portfolios should demonstrate some form of learning or understanding. I asked them to choose a day in the week which we could make our collection for the week and they believed Friday to be a suitable day. We discussed our methods of collection and talked about our method of storage. They chose cereal boxes as their personal records container on a trial basis and on the students enthusiastically decorated their personal records containers in their art class. Even though I believed that the type of container used was of little importance in comparison to what it contained the reality of storage in my classroom was still a small worry. But as cereal boxes were the option of the moment, they were of no additional expense and they could be readily accessible to the students in the classroom I agreed to give it a try.

While the students worked decorating their personal records they continued to discuss what they could put in their personal records from that week. I was apprehensive about finding classroom space for these personal records I was keen to keep them in the classroom so that the students would have access to them at will, to add items or to remove pieces to work with. I spoke with the principal and she was willing to allow extra shelving to be constructed in the classroom in September and she approached me in February to find out if I needed more. I accepted the offer and I now have plenty of room to hold the containers from one year to the next. It was great to have such co-operation.

Selection: They wanted to begin the selection process straight away. "Can I put this medal which I won last week in my personal records?" asked student E. on Monday morning. "I think this is the best writing I have done in a long time, can I put it in my personal records?" Never let it be said that I would dampen the enthusiasm of my students. I asked them to record the date on any item that they would include in the personal records so that later review of the personal records would allow the "examiner" to see the changes in students. I also felt it would be beneficial in establishing the developmental progression of each student over time. On the following Friday afternoon we collected some more products and discussed different successes or achievements from that week. Under the different topics we discussed what may be considered good according to the students themselves. Looking back on the students' selection process their first reaction was to select their best pieces with little regard for established learning objectives. They chose items which represented their best work. The atmosphere was positive and they were so proud of the items they had selected and were quick to show it to others.

We encountered a few difficulties during the first week. On reflecting at the end of the first week on their successes or achievements their samples seemed to contain a great deal of "written" products. This portrayed my previous methods of assessment and I began to feel a tad uneasy at this stage. I needed to change the focus somewhat. So I read through their list of ideas. Even though there was little movement away from "written" products it caused them to plan ahead for the following week's collection. The students had purchased tapes on which to record their musical abilities but due to the modern music centres in their homes these modern pieces of technology could not record from outside the system. So I made the classroom tape recorder available to them to take home with permission from the principal.

Reflection: A huge difficulty we encountered here was that students found it difficult to reflect on and evaluate their own work. I should have been expecting this as the notion of self-assessment was something they were unused to and they struggled to make sense of the notion of self-reflection. They were constantly coming to me asking me if I thought this was "good" or "which do you think is better?" They wanted to rely on my opinion as they found it difficult to judge their own work. How could I help them to trust their own instincts? As an initial guideline I told them that they should ask themselves when choosing different items "Why did I choose this?" I also told them that I would question them on why they chose different items and not others. I wanted them to increase their awareness of their own strengths and abilities and I wanted them to become aware of hopefully an improvement in their work but if not an improvement they needed to find the items that we needed to work harder at, to achieve an improvement.

I recommended to them to work with a partner or in a group so that they would not feel isolated or inadequate in their work. They still found the notion of reflection and evaluation difficult as they were unsure as to why they had chosen particular items so I then began to worry as to whether I had done the right thing. I presumed it would be easier to make my students believe that their opinions were valued by me and that I could show them that their opinions were valuable. Despite having made good progress, I began to feel very uneasy about the students' ability to judge their own work. My students were enjoying the process so much and their enthusiasm was superb and I did not want to destroy these positive feelings. I did not want the work to become a chore. "What am I going to do? - this is not working - maybe portfolios and self-assessment are too difficult for primary school students?"

On going home from school the panic had subsided and I kept telling myself there has to be a way to do this. On reflecting on the situation that night and on reading more material and many thanks to Kingore (1993) I realised that I needed to provide "meaningful and appropriate guidance". I needed to establish a list of criteria to help them review their work and to analyse its merits. For Friday November 12th I had prepared some key questions for discussion with the students, to help us establish a list of criteria. The following (in translation, to remind you, all our work is conducted through the medium of Irish) are the list of questions we intended to discuss.

- What makes something your best work?
- What samples did you want to hold in your portfolios to show what you had learned?
- How is this piece of work different from others?
- How does this item show something important that you think or feel?
- How does this product show something that you have learned?

I realised on going about it that I needed to deal with one key question per day as it was a time-consuming task but a worthwhile one.

Teacher: "What makes something your best work?"

Their suggestions were

- "Work we received a good grade in"
- "Work that was neat"
- "Something without mistakes"

(Personal diary; 12/11/1999)

On asking them if their best work could involve mistakes they found the notion difficult to accept but on looking at some students' work and having picked out some mistakes in the work that they had chosen, they began to think and provided answers like, I was very pleased with these answers as I felt that their reflection on what is "good" had moved on from believing that perfection was the only thing that was "good". I felt that their ability to evaluate and make judgements on their work with these ideas in mind were also of benefit to weaker students as they felt that they had little "perfect" work to put in their portfolios but had a great deal of work that had improved even if it still contained some errors. But now the pressure was off and they felt more at ease. With this better understanding of self-evaluation they tended to use more time when sifting through their work to reflect on it.

At later stages we discussed the following questions.

- What samples did they want to hold in their personal records to show what they had learned?
- How is this piece of work different from others?
- How does this item show something important that you think or feel?
- How does this product show something that you have learned?

Some of the suggestions from the above questions are included in appendix F in translation, and the remainder are in my personal diary in my data archive. As time progressed they learned to chose products which best represented their abilities, interests and accomplishments and during this time I came to know more about each student. I encouraged children during the selection process to include their best work at all times which motivated them to try harder all the time.

The inclusion of out of school achievements: By late November children began to produce some unexpected or different products, as on Sunday October 31st 1999 one of the students was chosen to partake in a children's television programme. This student's personal records was particularly light as he does not excel in the academic subjects so you can imagine the pride and happiness in this child returning to school on Monday November 1st with a video recording of his debut on television for his personal records. At the end of each month we had a good variety of work which the students, initially with some guidance from me, sifted through to pick and choose their best efforts from. On returning to school after the Christmas holidays in January we put together their efforts from the previous three months and I hoped that the students would be able to see an improvement in their work. I recommended to them to work in groups of three or four so as to have an opportunity to share, discuss, comment, help and choose. I noted the following points in my personal diary as they sifted through the material collected in three months. As I walked among the students while they reviewed the contents from the previous three months, even though I believed that the level of achievement of each student was excellent I felt it was important to look for quality of work, to listen to their opinions and attitudes towards learning and interests in specific topics. I felt it was important for me to talk with each student about their portfolio at different intervals during the school year but in reality it was difficult to find the time in an already busy classroom. So I scheduled two ten minute slots per day within eleven days in January, giving the student the date of their presentation. During these times the remainder of the class were completing independent work or listened in. They loved the idea of being the expert regarding their own portfolio where I was the listener, learner and questioner. I have included some of the questions I asked as I listened to each child's presentation.

The involvement of parents: I gave the students the option in February to take home their personal records and to share them with their parents. The students and I decided that Thursday night would probably be a good night so that they would have the portfolio back in school on Friday for the end of the week review. I informed the parents by letter two days in advance of the personal records going home (Appendix P). In the same letter I

asked the parents to spend fifteen minutes with their child on a particular night and I asked them to complete the review form which I included as I felt it would increase their understanding of their role as parents (Appendix H). By involving them in their child's learning I hoped they would praise and encourage their children, that they would concentrate on their child's strengths and encourage them to try harder in areas they found difficult. Children presented the contents of their portfolios to the parents so they could see first-hand the growth that their child had made from the beginning of the school year in September 1999. They got to see their child as someone who has talent and interest in other subjects and not just someone who scores on a standardised test. It involved parents in the assessment process and it increased their awareness of the talents and abilities of their children. Sharing their personal records with their parents gave the children a feeling of ownership of their personal records and I believe it increases their responsibility for the quality of the work. The schedule was designed to allow five or six families per week to see their child's personal records.

Projection: While sharing their personal records I wanted the students to look ahead and set possible goals for the future. In this part I asked the children if there were areas that they may need to work harder at on seeing the improvement that had come about in another aspect of their personal records, if they had realised that they were quite good at something that they had not realised before. I believed that my students could have great input into what should or could be included in their systematic collection and that in time that they would be able to select their own work independently. I collected a great deal of data which enabled me to assess the educational value of personal records.

III. RESULTS

Before introducing personal records into my classroom, there was a gulf separating the daily practice in my classroom and the method of assessment I had been subjecting my students to. These tests did not reveal what my students knew, what they could do and what they were learning on a daily basis in school. I had been teaching a wide range of subjects but I was assessing their abilities in terms of results in standardised tests in English and Mathematics. These tests had been judging the individual performance of each of my students with reference to the performance of others on the same tests. By engaging in the process of personal records my students participated actively in selecting the contents of their own personal which showed evidence of their own learning and development across a wide range of subjects and they also included out of school products. They gauged the quality of their work against criteria which had been chosen by them. They were involved in assessing their own work across a wide range of subjects and monitored their progress towards instructional goals. Because they were actively involved in their own learning and assessment they worked hard, setting their own goals which may have been challenging but were also achievable and because they were achievable the end result was always success. Sometimes the success may have been small but they had evidence to show improvement. As Reason and Boothe (1994) maintain nothing succeeds like success. Pupils who make good progress take pride in their efforts. Their confidences in being able to complete a task bring them half-way towards doing so (p.20).

Through the medium of personal records the students were highly engaged in their own learning and assessment through the steps of selection and reflection, and assuming considerable responsibility for their own learning. Through my observations, conversations and the presentations made by the students, I was able to evaluate the learning and understanding that had taken place and I believe that the students also came to appreciate their learning. By involving them in their own assessment I believe I gave them a sense of ownership and gave them a new purpose for completing and improving their assignments. They liked the idea of being involved in the process of assessing or the evaluation of their own work and they did not look at the process as an examination. I think I am justified in saying that the personal records encouraged student motivation, they encouraged attention to work of high quality, they encouraged the development of the essential skills of reflection and self assessment and they developed a different relationship between student and teacher, all combined with pride in a job well done. The children came to me with great enthusiasm, showing me their progress, informing me of their achievements, secure in their opinions. The child who was doing well had an opportunity for private moments of recognition and encouragement. The child who was unsure of her/his progress could with my guidance compare earlier works with present work to validate improvement or growth. Reassurance helped to keep them motivated to keep trying. Personal records have instilled in the pupils a feeling of self-worth while showing that their opinions are valued and that they are valued as persons.

My previous role as a teacher in assessment had been one of a tester or a technician and I have now moved forward to taking on a role of a facilitator. I now work to support pupils' learning, encouraging them in their work and I have provided the students with an opportunity to show their learning. Personal records enhanced my awareness of the student as an individual. Through discussing their products I saw their hopes,

their dreams, their fears and anxieties, their deep interests and sentiments. They revealed things that could have remained hidden from me in the course of everyday classroom life or they previously didn't get the opportunity to bring into the classroom. By including elements from the world outside of school allowed me to witness some things that are most important to the students.

By actively and collaboratively involving teachers, parents and students in the collection of work and the evaluation of achievement and growth, portfolios offered an opportunity to increase mutual understanding between teacher, parent and student. I as their teacher came to learn about strengths my students had that I was unaware of. Parents also came to learn things about their own child that they had been unaware of such as creative skills, and they were also made aware of the wide range of work that is covered in school. The personal records served as a vehicle to focus the attention of students, parents and teachers on what students are learning, how well they are learning it and how they demonstrate that learning. Also the addition of a larger audience appeared to raise the stakes for many of the students which inspired them to work harder and to produce work of higher quality. By involving parents more in their child's education, the parents were given an opportunity to discuss their child's work with them, to learn and understand what their child is learning and what they need to learn. They had an opportunity to recognise, acknowledge and give credit for what their children had achieved. The feedback from parents after the presentations in the home was very positive and I was glad to see more communication with families. Tony Humphreys (1993) believes that how parents and other significant adults in the child's life respond to the child determines how the child will view himself/herself. Parental responses to the child are the looking glass through which the child evaluates himself/herself in terms of his/her lovability and capability. If the child is frequently scolded, ridiculed, criticised, compared, physically abused, has unfair expectations put on him/her then she/he will be convinced of unworthiness. Within the family a child's awareness of his/her psychological, social and physical characteristics emerges through his/her family experiences of either being loved/not loved and being seen as capable/not capable or clever/stupid etc.(p.110) The advantages of personal records in this sense is that the child's work is not being compared to anybody else's work. When doing work initially, the students tended to take more care to ensure that the work was "good" as it may have been chosen in time for the personal records. I believe they came to realise that whatever the level of their achievement and their efforts, they had the ability to make constant improvements even though these improvements may be small. I received important feedback on my work as a teacher and made adjustments to ensure the success of each student. This project made huge demands on my time, energy and commitment, but on reflection the benefits were clear particularly as the practice engaged students in their own learning, resulting in increased motivation and commitment allowing classroom time to be used far more productively than before.

The validation group which I initially set up involved the research participants (the students in my classroom), a colleague and a critical friend. But as the process of personal records work progressed in my classroom, my principal and two other colleagues became very interested in my new method of assessment and asked if I would keep them informed on the development of the process of implementing personal records work as a means of assessment as they liked the idea and were interested in promoting personal records in their classrooms. My colleagues have been superb. They have a continued interest in my project; they visit the classroom to have a quick look in the personal records from time to time. I hadn't considered at the beginning inviting the parents to validate my claims but as the process progressed in my classroom I came to see the opportunity provided by personal records to take the students' learning into the home where the child's work, interest and achievements would be acknowledged and praised. I became very interested in feedback from parents. The response sheets that the parents completed on the night that each student took their personal records home gave me the reassurance that I had done something positive. They were grateful for involving them in their children's learning, they had come to know of talents that their own children had that they as parents were unaware of, they recommended that personal records would be worthwhile as a whole school approach to assessment.

I introduced to children a method of assessment which gave them an opportunity to show what they know, to show what they have learned, to show what they can do and to show what they understand. I believe it is a more humane method and it is an alternative way of assessing children's rights to claim that they are worthwhile and it is a more effective method of assessment than my previous method which only served to reinforce their self-concepts as being poor/average/good learners. I gave them an opportunity to celebrate their successes as opposed to highlighting errors, failures and inadequacies. I involved them in their own learning and assessment requiring them to select work that was evidence of their learning and requiring them to reflect on the strengths and challenges of their work. I introduced a collaborative assessment approach involving students, teachers and parents and I am particularly pleased to see parents more involved in their child's learning. I explained the process of personal records, emphasising the benefits and then making a presentation of a personal

records. The staffs were very impressed with the process. One teacher commented, "Very few educational innovations could make such broad claims".

IV. CONCLUSION

This research studies reflects the changing nature of my work in school and my role as a teacher researcher. It offers an understanding of professional development that took place in a school and is directly related to the learning of the pupils and the people within it. It shows how I have worked with students, colleagues, parents and a critical friend to improve the area of assessment in my classroom. I can make a claim to knowledge because with the support of these people I can show that I have improved my work. Through the medium of personal records I have involved students more in their own learning and assessment as they select work that is evidence of their learning and to reflect upon the strengths and challenges of their work. Through the processes of thinking, acting and making sense of my work, the narration of those processes and the changes that have taken place in my actions and understanding, show how knowledge can assume a living form because it is always being reformulated and reworked.

It tells the story of how I came to understand more fully my educational values and explains my educational development as I account for myself and my work. To carry out a piece of research as this, one that is my own, about an issue that concerns me has been a very positive experience and a superb learning opportunity. It has inspired a living process towards better educative relationships and a way of bringing my values to life into my classroom. It has uplifted and enhanced my work and my students' experiences and it has had a very uplifting effect on the quality of educational experience. This particular research has contributed to pupils' personal development and progress by improving their motivation, providing encouragement and increased awareness of strengths, weaknesses and opportunities. When children are motivated to find out more, to produce quality work because, it seems genuinely worthwhile to them to do so is to me a wholly educative undertaking.

I introduced my students to the notion of self-reflection and self-evaluation which I believe are fundamental skills to excellence in any walk of life - be it analysing problems, proposing solutions, trouble-shooting, repairing equipment, communicating with others, managing resources of time and materials. Their portfolios will provide positive information for successive teachers which will hopefully help facilitate continuity and progression. Portfolios allow a sharing of the responsibility and accountability for student learning with the students themselves. Because they assume some of the responsibility for their learning the teacher's time can be used more beneficially towards the instructional process and towards ensuring that the learning difficulties the students have are dealt with. The portfolio does not fulfil all the purposes of assessment nor is it claimed that it can do so and undoubtedly this more holistic assessment of a child's attainment will be of limited value if it is subsequently viewed through the lens of academic achievement only. The research has raised new interesting questions for me. These include

- Can one form of assessment be relied upon or should a judicious balance of approaches be employed over time?
- If personal records work cannot tell where the student stands in relation to a class average, or to a national norm, will standardised tests still are required for that purpose?
- If the public is demanding accountability are standardised tests here to stay?
- Is it possible that no one approach gives a complete picture of a child' knowledge, skills, understanding, ability or aptitude?

These questions will now become the beginning of new action enquiries.

Significance: In undertaking this research I believe that I achieved what I intended which was to bring about an improvement in my educational practice in the area of assessment in my classroom. It has been important in my professional development to focus on my values and examine my classroom practice in the light of those values. I have also revealed the nature of my values as the living standards of judgement I used in making sense of and explaining my educational development. The reflective nature of action research makes me constantly consider "What I am doing here?" and "How can I improve?".

The process is ongoing and I can honestly say that this is how I am living my personal and professional life. I believe this action research which involved keeping an account of the action and reflection I undertook to improve a situation, has contributed to the development of my professional competence and to my sense of professional well-being. It has given me the opportunity to explain my developing educational values, practice and knowledge. In writing this research I believe I am developing a research-based professionalism in

education. I have learned a great deal about my assessment practices. I had believed prior to this action research project that I should be the person who could and should judge the abilities of my students but I now realise that by involving them in their own assessment they can see what and where they are at and what they need to do to improve. It's as if they are conducting their own action research. It has given me the confidence to accept that I was being unaware in my previous method of assessment and to believe that by working it through that I could improve the situation.

Action research has tapped into my life and it has empowered me to see the potential within myself, the positive power of assurance that there is nothing I cannot do if I believe in myself. I believe I have transferred this assurance onto the students and by involving them in their own assessment I gave them an opportunity to see the potential within themselves which motivated them, making them more responsible for their own learning and giving them an opportunity to see that there is nothing they cannot do if they believe in themselves. I have learned that making time to celebrate their strengths and working on their weaknesses has been invaluable to the self-esteem of the students. It has raised my awareness that I need to constantly remind myself of the uniqueness of each student and that my approach should be person-centred as far as possible. By being aware of their needs helps, me to understand better how to teach them and what to teach. I have watched my students sifting enthusiastically through their work, seeking something good, something better, something they worked hard at, something they had achieved, something that was important to them or meant a lot to them as opposed to nervously scrambling through a standardised test. I have watched them develop in their interpersonal relationships, sharing their work with friends, trusting them to reflect critically and honestly on each other's work, which has introduced them to the notion of collaboration. I have watched my students trusting in their own ability to evaluate their work even if they still do have to look for guidance and help from me and from others now and again. But they are now less dependent on me and are more capable of reflecting critically on their work when evaluating it. Carrying out this piece of research on an issue, that concerned me has been a most exciting and worthwhile opportunity for me.

Significance of Writing-Up the Research: It is only now I realise what I have achieved in two years. I have brought new life into my classroom where achievements are celebrated and weaknesses are seen as a challenge. The writing-up has been significant for me in coming to understand my educational development. I believe I have developed my own living educational theory and I have moved beyond depending on the theories of others. I am now beginning to value the freedom I am experiencing in being able to stop and reflect, question and explore my own responses. I became a student again, learning to assess my practice, taking stock of my achievements and weaknesses, working on ways of improving assessment and teaching styles and standards in a coherent and systematic way.

Significance to my Work Place Context: I assured them that I was continuing with the art but I was also in search of another means of assessing students other than the system we had in the school involving standardised tests so I would be dealing with this recent concern through the action research framework. They willingly offered any help that they could and were keen to be kept informed during the year. I told them that I needed to do quite a bit of reading before I could attempt anything. Giving credit where credit is due, they kept a constant eye on my introduction of personal records as a means of assessment in the senior classes and regularly visited the classroom to watch the process progress. They were very interested in my views as regards the practicality of the portfolios and the amount of work involved. On January 20th and 21st 2000 the staff in my school attended a two day conference on the Introduction of the New Curriculum. Also considering that we had gained a learning Support Teacher on staff since September 1999 who dealt largely with children who had difficulties in the areas of mathematics and English, as a staff we recognised that we needed to tackle the area of assessment as an issue for our school planning day on February 14th. I asked to teachers make a presentation on the use of personal records as a means of assessment to inform all staff members on the research I was undertaking. To begin the presentation I asked the staff to contribute to the aims and objectives of assessment and in relation to those aims and objectives I explained my shortcomings on the traditional method we had been using and the benefits of personal records. But I did assure them that personal records would not inform teachers where the students stand in relation to a class average, or to a national norm and that we should consider continuing also with standardised tests.

They appreciated my knowledge and honesty and it was decided among the staff that they would like to involve portfolios in our reviewed whole school policy on assessment. It was agreed that they would start immediately in all classrooms on a lesser scale so as to introduce the notion of portfolios gradually to themselves and to the students and I offered to give them any help or advice as they progressed. It was also decided that the standardised tests would also be continued in each classroom in late September of each school

year. Personally I was very pleased with the interest and support from my colleagues and I am delighted that action research has been instrumental once more in our school in breaking down the barriers that keep teachers isolated from their colleagues and giving us a sense of community. This research has provided a great opportunity for teacher collaboration and undoubtedly the whole must be better than the sum of the parts. By working as a team, as a whole school community we are sharing the collective expertise of all our staff. We are fostering and building on qualities of support, trust and openness between teachers and their colleagues and we are moving away from the "culture of individualism" (Hargreaves, 1992, quoted in Pollard, 1996) which isolates teachers from colleagues. I personally believe that if you can give people hope when dealing with a particular problem, if you can show them a practical method, the problem can be overcome. It is interesting that teachers like to see something tried and tested on a practical level before they are willing to attempt it themselves. Believe this research project has helped to inform my future practice in a positive way.

V. CONTRIBUTION TO EDUCATIONAL THEORY

As a teacher, I have attended many courses and seminars in the area of professional development. I have listened and learned and enjoyed but I soon realise that the ideas that impressed me seemed to fizzle out because they lacked a practical method of implementation, whereas with action research it involves me as a teacher in my own classroom dealing with my own particular concerns. If action research as a form of professional development was supported on a national level teachers' own self-perceptions would rise and we would be looking at an invigorated workforce that had the confidence to take a pro-active role in improving society. I believe that action research might be a much more viable option for the Department of Education in supporting professional development as it taps into a source of energy and goodwill that would enable people to innovate and manage change in their own educational environments. Now is the time for schools in Ireland to look seriously at action research. A new curriculum is being introduced and teachers are feeling the effects of a changing society. The traditional structured classroom or the traditional didactic style of teaching and assessing students no longer works effectively. Even though I think personal records as a means of assessment would be highly appropriate and attractive for primary schools nationwide it was not my initial aim to find a means of assessment which would be beneficial nationwide. It suited my situation and it has been a great learning experience for me, my students and their parents. I would like to make my research available so that the general workforce could see the effectiveness of doing this kind of person-centred work. I have contributed to new forms of educational research and theory. I believe I have made a claim to knowledge, with the support of others, that I have improved the quality of educational experience for myself and my students. I have come to understand that I can contribute to a much wider body of knowledge. Within the wider educational community I hope to share my learning with others who are interested in improving the area of assessment in their classrooms. Through the use of personal records I believe the possibilities of whole school assessment could be continued in a new and creative way.

REFERENCE

- [1] Airasian, P.W. (1996) Assessment in the Classroom, New York, McGraw-Hill, Inc.
- [2] Bassey, M. (1990) 'On the Nature of Research in Education', Research Intelligence, Parts 1-3
- [3] Broadfoot, P. (1979) Assessment Schools and Society, London, Methuen Carr, W. and Kemmis, S. (1986) Becoming Critical: Education, Knowledge and Action Research, London, Falmer.
- [4] Elliott, J. (1991) Action Research for Educational Change, Milton Keynes: Open University Press.
- [5] Ernest, P. (1994) An Introduction to Research Methodology and Paradigms, Educational Monograph Series, University of Exeter: Research Support Unit.
- [6] Gardner, H. (1983) Frames of Mind: The Theory of Multiple Intelligences, New York: Basic Books.
- [7] Government of Ireland, (1995),. Charting Our Education Future (White Paper on Education), Dublin, Stationery Office
- [8] .Hanafin, J. (1997)(ed.) Towards New Understandings: Assessment and the Theory of Multiple Intelligences. Cork, Multiple Intelligences, Curriculum and Assessment Research Project, University College Cork, Ireland
- [9] Hargreaves, A. (1989) Curriculum and Assessment Reform, Milton Keynes, Open University Press.
- [10] Hitchcock, G. and Hughes, D. (1995 second edition) Research and the Teacher, London, Rout ledge.
- [11] Hopkins, D. (1983) A Teacher's Guide to Classroom Research, Milton Keynes, Open University Press.
- [12] Humphreys, T. (1993) A Different Kind of Teacher, Cork, Dr. Tony Humphreys
- [13] Ignore, B. (1993) Enriching and Assessing All Students Identifying the Gifted Grades K-6, Iowa, Leadership Publishers Inc.
- [14] Lynch, K. (1988) 'Developing abilities: What are we Doing in Second Level Education at Present?', Compass 17 (2)
- [15] Lynch, K. (1992) 'Intelligence, Ability and Education: Challenging Traditional Views' Deptartment of Education Oideas 38, Dublin, and Stationery Office
- [16] Lyons, N. (1998) With Portfolio in Hand, New York and London, Teacher's College Press.
- [17] McNiff, J. (1988) Action Research: Principles and Practice, London, Rout ledge.
- [18] McNiff, J. (1992) Creating a Good Social Order through Action Research, Bournemouth, Hyde Publications.
- [19] Melrose M. J. (1996) 'Got a philosophical match? Does it matter?' New Directions in Action Research, ed. Ortrun Zuber-Skerriff, London, Falmer
- [20] Murphy, R. and Torrance, H. (1988) The Changing Face of Educational Assessment, Milton Keynes, Open University Press.
- [21] New City School (1995) Celebrating Multiple Intelligences. Teaching for Success, the New City School, Inc., and St. Louis, Missouri
- [22] Piaget, J. (1970), Science of Education and the Psychology of the Child London, Longman

- [23] Reason, R. and Boothe, R. (1994) Helping Children with Reading and Spelling, London, Rout ledge
- [24] Usher, R. (1996) 'A critique of the neglected epistemological assumptions of records.