

**Evaluation of the Gorton Mount
Primary School Montessori project
(September 2005-July 2006)**

FINAL REPORT

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Montessori
St Nicholas Charity
Working for the Montessori movement across the UK

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Executive Summary

The Gorton Mount Montessori project was evaluated using a range of qualitative and quantitative measures administered at intervals over a period of more than twelve months; some measures were administered up to six times in an effort to identify change processes, while others were more summative, and identify outcomes of the project

Changes to the physical environment

Changes to the physical environment of the classrooms (structure, décor, furnishing and learning resources) were judged to be a sound investment, although the very minimalist Montessori style does not comply with current evidence on the contribution of the environment to young children's learning. Individual members of staff have made modifications to the classrooms over the year, in accordance with their personal and professional preferences.

Judged by standardised environmental rating scales, the classrooms were not offering an improved context for learning after a year of the intervention, but the generally low average scores reflect – at least in part - different intentions in the Montessori approach than those enshrined in a traditional developmental model of early learning.

Staff training

Staff training offered as part of the project was judged to be generally effective in so far as it has given staff an understanding of Montessori approaches and the skills to offer Montessori materials and activities to children. Teaching assistants in particular appear to be more knowledgeable and confident as a result of the training, although the evidence from teachers is less clear. On the one hand, in their own self-assessments, they report very little if any difference in their professional skills and understanding, or in their relationships with children and families. On the other hand, some of them when interviewed confirm the head teacher's view that their knowledge and skills are improved. All staff believe that the project would have been less stressful to implement if they had been offered more comprehensive Montessori training before the start of the intervention

Staff attitudes

Staff attitudes to the Montessori approach and materials are positive overall, and there is general approval of the literacy and numeracy materials in particular. Most staff felt they had 'modified' or adapted the Montessori methods they were shown, in keeping with their own preferences and beliefs about children's learning needs, by the end of the year. Teaching assistants expressed some dissatisfaction with the repetitive nature of their activities with children, in comparison with their duties in previous years.

Parental perspectives

With some exceptions, parental perspectives on the changes experienced by themselves and their children were not generally found to be favourable. Parents of new entrants, who were surveyed at the end of the first term, were far more positive than those who had experienced the previous nursery and reception provision. Those parents who responded to surveys or focus groups were not persuaded that their children were learning better, behaving better, or having a better experience. Their own exclusion from the classrooms, and the appearance of the classrooms, contributed to this view, as did poor understanding of the intended benefits of the approach.

Children's classroom experiences

Children's classroom experiences, judged by observational instruments, showed no gain in their 'involvement' in learning activities over the year of the intervention, although an early decline in scores was made up by the end of the year. Their sociability and self-esteem, which appeared to be very low during the first term of the intervention, improved a great deal by the end of the summer term. This aspect reflects whole-school practice and may not be related to the Montessori provision.

Children's outcomes, judged by the limited measures of the Foundation Stage profile and the LARR test of emergent literacy, showed good progress made over the year but no outstanding or significant gains. Children in a nearby control school made greater gains than the children at Gorton Mount in a 6-month test-retest procedure to measure concepts of print. It is expected that the longer-term beneficial effects of learning in a Montessori environment will be more evident in subsequent years

Head teacher and head of the Foundation Stage

The head teacher and head of the Foundation Stage are entirely positive in their views of the value of Montessori materials and methods, although the 'adaptations' and modifications they made during the third term of the project, after the departure of the Montessori trainer and volunteers, have produced a rather hybrid version of the approach. They believe that the quality of staff training, the physical environment and the materials are well matched to the needs of local children, and to the school's overall ethos

Project management

Despite careful advance planning, including detailed job descriptions, a number of disagreements and differences emerged as to the management and implementation of the intervention. As a result there was a good deal of bad feeling among participants over the first two terms, especially between the Montessori trainer and the school. These disagreements, and the difficulty some participants in the project found in working together, threatened to jeopardise the project at times. The relatively short preparation period which remained after final approval for the project was received, and before its implementation, may have contributed to the prevailing sense among the staff that more time for preparation was needed. Future replications of the project should ensure that all participants are very clear about their respective roles and responsibilities.

Value for money

Value for money can not be realistically assessed at this point since the investment in the project is expected to show longer-term benefits which should be greater than any immediate effects on the children in the first cohort, 2005-6. The quality of the environment and resources suggest that this aspect of the investment was worthwhile, and the investment in training also appears to have produced appropriate results.

1 Introduction

Background to the evaluation

In May 2005, a meeting was arranged between Philip Bujak of MSN, and researchers from the Institute of Education, University of London, at which Philip presented the Gorton Mount Montessori Project and invited a proposal for its evaluation. A draft proposal was submitted following visits to the school in June, and a revised version was accepted by the charity (Montessori St Nicholas) by the end of the school term in July. By this time the bench-marking phase of the evaluation process had been undertaken, and the full evaluation continued throughout the school year September 2005-July 2006.

Summary of the Gorton Mount Montessori Project

In 2004, the head teacher at Gorton Mount Primary School (Carol Powell), with the support of her governing body and staff, and with the approval of the Department for Education and Skills (DfES), took the decision to introduce a Montessori approach into the 3-11, two-form entry primary school – possibly with the eventual outcome of ‘converting’ the school into a Montessori school. The school, which had been ‘failing’ at the time of Ms Powell’s appointment, had demonstrated rapid improvement on all measures during the previous three years, but Ms Powell wished to continue this upward trend with a more radical shift of approach. The most recent OfSTED report (2003) confirmed that levels of academic achievement, attendance and behaviour, as well as the overall ethos of the school, were extremely encouraging. Ms Powell however believed that the rate of improvement could be accelerated, and made more durable, by the adoption of a Montessori approach throughout the school. A proposal was drawn up in January 2005 and approved by the DfES in March. The aims and objectives of this proposal addressed both improvements in academic outcomes, and transformations in children’s holistic development: their dispositions and self-esteem, creativity and aspirations, and their levels of cultural, spiritual and social awareness.

The decision was taken to implement the new approach first of all in the Foundation Stage (with children aged 3 to 5 years), after this in Key Stage One (with children aged 5 to 7 years) and finally in key Stage 2 (with children aged 7 to 11 years). This progression was to be consolidated as each cohort of children ‘moved up’ through the Key Stages.

Detailed plans for the first phase were made during visits to the school by Montessori experts (both teachers, and trustees of the charity) during the spring and summer terms 2005, and the implementation of the project began formally in late July, when the induction of the existing staff to the new approach commenced. With the support of the MSN charity, the DfES and other charitable sources, the school was funded for:

- Expert training and support from four experienced Montessori teachers (one full-time and three on an occasional and voluntary basis) from July 2005 to April 2006.
- The re-modelling of the ground floor classrooms and cloakrooms during the summer of 2005.
- The re-furnishing of four classroom areas, in preparation for September 2005.
- The purchase of Montessori instructional materials for around 80 children aged 3-5.

The DfES requested an evaluation of the progress of the project in April 2006, after two terms, and the trust requested an extended evaluation following the end of the school year. By this time the project was to be fully implemented in the Foundation Stage, with an expectation that it would be extended into Key Stage 1 during the following academic year.

2 How the project was evaluated

Evaluations of interventions include two principal approaches: one is to examine and describe the process of the intervention – the daily experiences of children in the classrooms – while the other is to assess and record the outcomes which ensue. The proposal for the current evaluation placed a strong focus on the former, believing that children’s involvement in their activities, and their learning and social behaviours, would be the surest indicator of changes brought about by a Montessori approach. However an attempt was also required – despite the short time-span involved – to assess the outcomes of the intervention. The evaluation therefore used a variety of methods to monitor both the children’s experience and their progress towards academic goals.

Monitoring processes

This aspect of the evaluation aimed to depict children’s experience in the school environment in the pre-Montessori period, and over the first year of the intervention. Two widely-used measures were selected. The first was an environmental rating scale which describes the quality of the setting on a range of criteria: physical, psychological, pedagogical and curricular (ECERS-R, Harms & Clifford; ECERS-E, Sylva *et al*, 2003). This instrument has been shown to correlate with other measures of quality and with child outcomes. The other is an observational schedule (the Leuven LIS-YC, Laevers 1995) which records the extent of children’s involvement in their learning activities. Research shows that in high-quality early years’ settings, children’s involvement level is high: they select tasks, persist with them and are not easily distracted from them. These attributes seem well-matched to the Montessori goals for children.

While children’s experiences were viewed as key to the success of the project, the experiences of teachers as they re-trained for a quite different mode of interacting with children and materials was also seen to be highly significant. Staff views on their own developing understanding, skills and competencies, and on the project as a whole, were elicited through interviews and questionnaires.

Parents’ understanding and views of the provision offered to their children was elicited both prior to and during the project implementation, by means of interviews, questionnaires and focus groups.

Identifying outcomes

Evaluations of outcomes from interventions normally adopt one of two different designs. In order to measure progress or gains attributable to the intervention, a comparison has to be made between the children currently experiencing the intervention and another sample of children. The usual options are either (i) a cohort study: a comparison of two cohorts of children (for instance, the 2004-5 intake, and the 2005-6 intake) or (ii) a control study: a comparison of the current cohort in the ‘experimental’ school with a similar cohort in another ‘control’ school. A third possible option is a comparison of the gains made by the experimental cohort (at Gorton Mount Primary School) with the gains typically made by either a national sample, or another large sample taken from standardised assessments of the age group.

The original intention at Gorton Mount was to adopt the first option, and assess the children from two cohorts, of which one would be ‘pre-Montessori’ and one would be Montessori. The design however required a great deal of assessment to be undertaken in the summer of 2005, before the start of the intervention, and it was not possible for all these data to be collected during a very busy period for the school. The study therefore adopted a mixed design, incorporating several forms of comparison:

- As a cohort study it compared the outcomes of the 2005-6 reception intake (children aged 4-5) with those of the previous, 2004-5, reception cohort. Evidence from the Foundation Stage profile formed the basis for this comparison
- As a control study it compared the progress made, over a 6-month period, by the Gorton Mount children with the progress made by children in a local school selected by the head teacher as having a similar intake
- As a comparison with a national sample, the progress made by children over a 6-month period was assessed against the predicted progress established by national and standardised tests.

Data collection methods

A timetable for data collection was agreed in July 2005. It divided the year into eight 'times' or assessment points, and identified different measures to be undertaken at each time. The revised version of this timetable reduced the number of 'times' to six, a more manageable number given the time-consuming nature of observational measures (Figure 1).

	1	2	3	4	5	6
	July 05	Sept 05	Dec 05	Feb-Mar 05	Apr 06	Jul 06
A: ECERS	●		●			●
B: Leuven	●	●	●	●	●	●
C: Mini-skills	●		●		●	●
D: Teacher self-eval		●			●	
E: Teacher diaries		●	●		●	●
F: Parent focus groups		●	●	●		
G: Parent surveys	●	●	●			
H: FS profile	●					●
I: Reading/literacy test		●			●	

Figure 1: Revised timetable for measurements on different criteria

Key to data collection instruments:

- A:** Early Childhood Environment Rating Scale (ECERS-R) and extension focusing on curriculum and equality (ECERS-E) administered in the 2004-5 FS classrooms, and repeated in December 2005 and July 2006 in the Montessori classrooms.
- B:** Leuven Involvement Scales for Young Children (LIS-YC) measure the quality of individual children's involvement in activities which is strongly related to learning outcomes; used with 2004-5 Nursery and Reception children, then with a sample of 2005-6 Foundation Stage children at several points during the year.
- C:** Mini skills continuum, devised by the school to measure children's progress towards learning outcomes and emotional literacy indicators; completed for 2004-5 only as the school wished to revise it rather than repeat it.
- D:** Teacher self-evaluation questionnaire: rating scale, jointly designed by school and evaluator, self-completed in Autumn and Spring by teachers and teaching assistants in FS classrooms.
- E:** Teacher video diaries: undertaken twice during the Autumn term, but the tapes were withheld from the evaluator and are the subject of an ongoing disagreement between the school and the charity.
- F:** Parent focus groups: evaluating the strengths of the school; what helps children learn, what still impedes their learning; undertaken on three occasions by a non-teaching staff member who provided meticulous notes.
- G:** Parent surveys: interviews with prospective parents in July 2005; questionnaires for current FS parents in September and December 2005.
- H:** Foundation Stage profile, applied to 2004-5 and 2005-6 cohorts of Reception children and externally moderated.
- I:** Reading/emergent literacy test, administered to all the children aged 4 in Gorton Mount and a comparable local school in October and April.

The range of measures undertaken was deliberately broad in order to create the most trustworthy picture possible of children's experiences and outcomes during the year, and of the changes in knowledge, skills and understanding demonstrated by the school staff. Several of the assessment measures, including the Leuven involvement scale which was administered at six different points in the year, were designed to show progressive changes during the project. The combination of nine different forms of assessment was planned to build a rounded picture of the evolution of the Montessori environment. Unfortunately, however, some data are missing from the analysis: they were either not collected as planned, or were collected by the school or the Montessori team but withheld from the evaluator.

3 How the project was implemented

3.1 Autumn Term 2005

Physical environment

Extensive changes to the built environment took place in August 2005. A suite of classrooms was re-designed to form large learning environments for three separate groups of children, and each classroom was fully equipped with Montessori materials and high-quality furnishings. Cloakrooms and washrooms were re-sited and re-built. All the old fixtures, fittings, toys and equipment were removed with a small number of exceptions so that children returned to a completely transformed environment in September. The head teacher and staff team spent considerable periods of their summer vacation on this work, supported by some visits from the Montessori team.

Children entering the classrooms found a quite restricted range of resources available to them and were not able to discover intuitively what use they should make of these resources, with some exceptions (jigsaw puzzles, books) so a good deal of adult direction and instruction was required.

Staffing

MSN provided a full-time trainer for the school for two terms, and arranged for four volunteer teachers including a trustee to visit periodically to lend additional support. Training was offered to the head of the FS and to two other full-time teachers and a part-time teacher, as well as to three full-time and one part-time teaching assistant. Initial training of the staff was restricted to short periods in July and September but continued in the afternoons throughout the two terms when the trainer was present.

Each of the three groups (one group of 'young' 3 year old children, and two groups of older 3 year olds mixed with 4-5 year olds) was staffed with a teacher and two assistants, with the trainer as a supernumary in all three areas. The trainer modelled Montessori practice and observed the staff as they endeavoured to implement the same approach.

Parents

Parents and younger siblings were excluded from the classrooms as the trainer wished children to experience an uninterrupted three-hour 'work cycle', which required them to settle straight in to activities on arrival, and to remain in the classroom for the whole morning.

Progression

In the second half of the Autumn term, an intensive programme of work was undertaken, in order both to build up the resources of the classroom, and to train the Foundation Stage staff in the appropriate methods for presenting and working with the new resources. Staff absence through illness, and the very tight timetable, impeded the completion of this programme but the resources were steadily enhanced and more activities were offered to children as a result. At the same time, increased numbers of children in the classes, a high turnover of pupils, and rather poor staff-pupil ratios, appeared to impede the smooth transition to Montessori that was intended.

Partnership arrangements

Planning for the project year was undertaken by the Senior Management Team, Foundation Stage Team and a team composed of Montessori experts (CEO, teachers and a trustee) prior to the summer holiday, and training was provided as described above. Overall control of the project remained with the head teacher and governing body but weekly planning and organisational matters were negotiated with the trainer and the head of the Foundation Stage. Trustees from the charity visited the classrooms for the first time during December and held meetings with the Senior Management team and governing body.

3.2 Spring term 2006

Environment

Increased intakes of children from January required some re-distribution of children and staff across the three learning areas. Additional resources were purchased and small modifications made to the rooms, but the overall provision (bare walls, uncluttered surfaces and an absence of environmental print) remained as before.

Staffing

Ratios in the three groups were now much higher, with over 40 children enrolled in each of the mixed-age groups, and only two members of staff present on occasion. This structural matter was the outcome of decisions made by the head teacher and the Foundation Stage head, and in the view of the evaluator breached the statutory requirements for Foundation Stage settings. There was some disagreement between the head teacher and the trainer on the strategy for re-organisation, and the trainer was asked to work outside the classrooms from January. She continued to undertake one-to-one training with all staff as the new equipment required specific modes of presentation and language.

From January, two-weekly meetings of groups of Foundation Stage staff with the school counsellor were facilitated, to enable staff to share and reflect on their own and the children's experience and progress. No information on these meetings was made available.

Parents

Parents continued to be excluded from the classrooms and expressed their unhappiness with this aspect of the arrangements, but a new parent group was offered and met occasionally, although only three to five parents attended on each occasion.

Progression

A one-day Ofsted inspection of the Foundation Stage took place in January and the overall effectiveness of the provision for mathematical development and personal, social and emotional development was described as 'good'. The inspector commented on the calm and purposeful atmosphere in the classrooms and on children's confidence with numbers, but pointed to parents' anxieties about some of the arrangements, and the need for careful monitoring of progress in some curriculum areas. Additional staff members were drafted in to the classrooms for the duration of this visit, so the staff-pupil ratios were more acceptable.

By the end of this term a wider range of resources had been introduced into the classrooms, including more experiential 'cultural' activities (science, geography) and early literacy and numeracy resources which considerably challenged and interested some of the children. The children's behaviour now appeared more settled and purposeful than during earlier periods.

Partnership arrangements

Relationships between the Montessori trainer and others from the charity, and the school head and team, were more problematic in this period. The trainer left the school as planned at the end of term, and did not return subsequently. Visits from Montessori volunteer teachers also ceased during this period, and no further communication was maintained between the various stakeholder groups. By the Easter break, the project had passed entirely into the hands of the school, although contacts with the charity were to be resumed during the following academic year (after the end of the evaluation).

3.3 Summer term 2006

Physical environment

After the departure of the trainer some quite rapid changes in the environment and provision occurred. The classrooms, which had been uniform and somewhat austere in their Montessorian style, became more differentiated as each teacher introduced her own preferred arrangements: one room in particular re-introduced colourful wall displays, environmental print and a role play area, and groups of children were allowed to use the outside area on occasion instead of remaining in their own classroom all day.

Staffing

Neither the trainer nor any of the Montessori volunteers returned to the school during the term, but the staff and children settled and adjusted to the still unfavourable adult-child ratios. The Foundation Stage team as a whole, and the mini-teams for each room (including part-timers), worked well together and children's absences resulted in groups of 29-32 children being present on average, with at least 2 and sometimes 3 adults available. No further training was available but by now staff had the confidence and independence to work with resources in the way they felt worked best, and to adapt their 'new' knowledge to their previously acquired professional skills.

Parents

With the departure of the trainer, it was agreed that parents should be re-admitted to the classrooms, and the atmosphere at the start of the day changed markedly with far more interchange of information and a more relaxed settling-in period. No further parent consultations were held in this period, but some parents attended an open evening in which presentations of the Montessori materials and approach were offered.

Progression

As the term progressed it became clear that the Montessori approach implemented by the trainer was being adapted in a number of respects to suit the head teacher's, and the staff's, preferred mode of working with the children and families they serve. Children were offered a greater range of learning opportunities including (in the final weeks of the term) access to computers and to dance and gymnastics lessons; traditional 'topics' had been introduced and were visible in role play provision and wall displays; and children spent more time in the outdoor area.

At the same time a strong focus on the use of the Montessori literacy and numeracy materials was evident: teachers and assistants spent much of their day in direct instruction with individual children, and were pleased with the progress being made. It appeared that the staff had decided which of the Montessori resources worked well for them, and utilised those intensively rather than adopting a Montessori approach across the curriculum. It is not clear whether this hybrid pedagogy falls within the boundaries of 'approved' Montessori methods but it has enabled the staff team to work with confidence towards the academic goals which they, and the school, prioritise.

Partnership arrangements

No further communication was maintained between the school and the charity from the start of the summer term, although some personal exchanges were reported, largely over the ownership of information and data collected during the project. The head teacher reported that she and her governors intended to avoid further collaboration with the charity and to source additional Montessori support from other organisations. This decision was later overturned.

3.4 Future of the project

The head teacher plans to retain the use of Montessori materials for core curriculum areas, and to extend their use to the end of Key Stage 1. For this purpose she hopes to be able to recruit a Montessori-trained teacher to be a full-time permanent member of staff, so that the staff team's existing knowledge can be supported and extended throughout the team responsible for 3 to 7 year olds. Staff who have undertaken the first stage of training this year, along with some Key Stage 1 staff who are new to the approach, will be supported in continuing their professional development towards achieving a Montessori diploma.

In other respects the staff will be encouraged to teach in accordance with their own professional judgement, experience and preferences. This may mean offering a quite different environment to the children from the classrooms created in 2005-6, and a much wider variety of teaching approaches including whole-class and group-teaching, one-to-one instruction and child-directed learning. It is hoped that children's knowledge and skills in the core curriculum areas by the end of Key Stage 1 will be such that they can achieve at appropriate levels through to the end of Key Stage 2, in a more mixed environment.

The school and the MSN charity agreed, after the evaluation was completed, to maintain some degree of collaboration until a suitable number of staff have been trained in the Montessori approach, and are able to take the method on into key Stage 1 classrooms.

4 Research data on Foundation Stage provision

4.1 ECERS ratings (Summer 2005-Summer 2006)

The Early Childhood Environment Rating Scale (ECERS-R, Harms & Clifford, 1998) is the most widely used assessment tool for early childhood settings offering education and care to children aged 2 ½ to 5 years. The instrument has seven sub-scales, each of which is scored by means of up to ten different items. The 'environment' includes staffing, routines and interactions as well as buildings and resources. A new scale, the ECERS-E (Sylva *et al*, 2003) was introduced to assess more specific aspects of the curriculum and pedagogy of a classroom: provision for Literacy, Mathematics, Science and Diversity. Both instruments were administered in two classrooms in June and December 2005 and in July 2006: a nursery and a reception room in 2004-5, and the two main 3-5 classrooms in 2005-6.

Scores on each item range from 1 ('inadequate') to 7 ('excellent'), and the score is calculated by the researcher observing a series of items, hierarchically arranged. The items reflect a consensus, 'expert' view of the nature of quality in early childhood educational provision – a view that may not be shared by any particular group of practitioners, such as Montessori teachers. Nevertheless, they give a global view of the 'quality' of classrooms, and have been found to correlate very closely with other assessment instruments.

ECERS-R

Six of the seven sub-scales of the ECERS-R were utilised in the analysis as one scale (Parents and Staff) was more appropriate to a pre-school setting than a primary school. Average scores for the Foundation Stage settings at each 'time' are shown in Figures 2 and 3 (for full scores see Appendix 1)

Subscale	Average Scores		
	Nursery and reception (June 2005)	Rooms 1 and 2 (December 2005)	Rooms 1 and 2 (July 2006)
Space and furnishings	4.55	4.33	4.25
Personal care	5.15	3.62	3.62
Language - reasoning	4.65	3.00	4.25
Activities	3.65	2.40	3.25
Interaction	5.40	5.20	6.40
Programme structure	4.15	2.60	3.00

Figure 2: Scores on ECERS-R – June and December 2005 and July 2006

Given the huge investment in the physical environment of the rooms, and the care and attention paid to some aspects of the provision, the dip in scores during the first half of the year merits some comment. A more detailed scrutiny of the subscales suggests the following explanations of the ways in which the Montessori environment as offered at Gorton Mount fails to meet expectations for a traditional, high-quality Foundation Stage setting with indoor and outdoor provision. These examples could be replicated on other items and other subscales.

- **Space and furnishings:** Item 3 (Furnishings for relaxation) is scored as 'inadequate' in 2005-6 because the item specifies cushions, rugs, comfortable furniture and soft toys as evidence of provision that enables children to rest, relax and even possibly nap. The Montessori classrooms do

not conform to this descriptor. Item 6 (Child-related display) specifies that children’s own work is displayed, along with pictorial learning materials such as posters and displays. The Montessori classrooms had bare walls and no children’s work was displayed until much later in the year.

- **Personal care:** item 9 (Greeting and departing) was scored as ‘inadequate’ in December because it specifies that parents are welcomed into the classroom and invited to become involved in their child’s learning. This was not the case in the Montessori classrooms until the summer term. Item 10 (Meals and snacks) was scored as inadequate because children do not wash their hands before handling food, and wander the classroom with food in their hands while eating.
- **Language-Reasoning:** scores were lower in 2005-6 on Item 15 (Books and pictures) because the large groups made regular story-times unmanageable, and the sharing of books and stories became infrequent.
- **Activities:** some scores are lower in 2005-6 because of the absence of provision for Items 23 (Sand and water), 24 (Dramatic play), and 25 (Nature/science). Provision for art (item 20) and music (item 21) was also on a reduced scale in the Montessori environment.
- **Programme structure:** lower ratings in 2005-6 result from fewer opportunities for ‘free play’ and fewer satisfactory group times, due to the unfavourable ratios and the difficulty of managing the group behaviour.

Summary

In summary (ECERS-R) changes in the environment according to this measure showed a disappointing trend in the first half of the year but significantly improved scores by the end of the year. Some of the descriptors do not accord with Montessori methods as introduced at Gorton Mount, and staff will make their own decisions in time over the re-introduction of role play areas, sand and water areas and computer access. But an encouraging sign is the improved end-of-year score for ‘interactions’ between adults and children, which reflects the good relationships and positive atmosphere achieved by staff during the last part of the year. Adult-child relationships, which are a key component of the school’s ethos, appear to have improved in the 12 months of the project.

ECERS-E

With ECERS-E too, the variation in the quality of curriculum provision since the pre-project benchmarking is rather surprising, given the systematic coverage which is claimed for the materials and methods. Explanations for the ratings can be found in a detailed analysis of the individual items in the subscales.

Subscale	Average Scores		
	Nursery and reception (June 2005)	Rooms 1 and 2 (December 2005)	Rooms 1 and 2 (July 2006)
Literacy	4.40	2.60	3.05
Maths	3.75	2.50	2.75
Science	2.60	1.10	1.40
Individual needs	2.50	1.00	3.00
Gender equity	1.00	1.00	3.00
Race equality	1.50	1.50	2.00

Figure 3: Scores on ECERS-E – June and December 2005 and July 2006

- Provision for **Literacy**, for instance, includes ‘Environmental print’ (Item 1) and draws attention to the presence of printed labels and other text on walls, furniture, displays, posters, storage etc – none of this exists in the Montessori rooms, which are therefore rated ‘inadequate’ on this item.

Item 3 in this subscale ('Adult reading with the children') was infrequently observed especially in the first half of the year, while Item 5 ('Emergent writing/ mark making') requires that children dictate to adults and see their words being written down, which is also not a feature of the Montessori provision for writing. The quality and display of books for children improved in 2005-6, but by no means all the children were observed to browse in books. The book corners in each classroom were frequently used for rough and tumble play, and the condition of books deteriorated as the year went on.

- Provision for **Mathematics** in the Montessori approach does not have a good 'fit' with the traditional prescription embodied by ECERS. Children were not encouraged to refer to number posters or to write numbers themselves, although they learned to identify and name numbers; nor was the learning of numbers associated with 'practical activities' such as role play and cooking, which were not offered to children. Provision for acquiring concepts of 'shape and space' was similarly abstract and dependent on the children working individually with materials, rather than being associated with conversations about the environment and group activities. 'Sorting, matching and comparing' mathematical attributes on the other hand were well provided for.
- Items in the **Science** subscale also reflect a traditional early years setting – full of living and growing things, natural objects, hands-on experiences and adult-led scientific activities – which is markedly different from the Montessori provision offered in the school. The classrooms rarely contained anything that was living or growing, or natural objects. Over time the children had access to magnets, torches and similar Foundation Stage equipment, and at one point in the year some seeds were planted. But there was no regular provision for cooking, exploring substances or participating in experiments. Provision for children's knowledge and understanding of the world consisted of a range of instructional materials (jigsaw puzzles, sandpaper globes, packs of informative cards and flags of different nations) rather than opportunities for 'everyday' experiences or for the acquisition of local /environmental knowledge.
- The ECERS **Diversity** subscales have three divisions, focusing on Planning for individual learning needs, Gender Equity and Awareness, and Race Equality. The first of these became more prominent as the year progressed, and children's individual accomplishments were assessed and planned for, although the observational schedules which would be expected in the Foundation Stage were never introduced, and only specific learning tasks like counting and letter-recognition were assessed. Provision for Gender Equity and Race Equality remained at a 'satisfactory' level, although staff are committed to supporting children in all three aspects of diversity, and work hard to be fair to each individual child. Very few anti-sexist or 'multicultural' books were provided, and children's attention was not drawn to differences in ethnicity, language or culture. There were no 'positive images' (posters and displays) or role-play equipment (dolls, cooking items, dress-up clothes) which might be used as vehicles for such messages. As with the science provision, a small number of packs featuring Hindu or Jewish families were provided, but no links were made with children's own cultural experiences, and no dual-text books were available despite the range of languages spoken in children's homes. Staff were not always able to identify children's country of origin or home language when asked for information.

4.2 Leuven observations (Summer 2005-Summer 2006)

Leuven (LIS-YC) observation instrument

This instrument for the observation of young children in educational settings, devised in Belgium in 1976, has been used internationally since 1990 and was adopted (in a slightly revised format) as the main tool for the evaluation of settings in the Effective Early Learning (EEL) Project (Pascal and Bertram, 1994). The EEL project itself has been adopted in thousand of classrooms in the UK during

the last ten years and is widely regarded as an effective tool for quality evaluation and improvement. The quality of education is inferred from two aspects of the child's behaviour (involvement, and well-being) and equivalent characteristics on the part of teachers (sensitivity, stimulation, and fostering autonomy). These characteristics appear to match the aims and intentions of both mainstream settings and Montessori classrooms. They focus on children's individual experiences at school - interactions with resources, activities, adults, peers and the environment - rather than on resources, group management, organisation, routines and so on.

The implementation of the tool is straightforward. A sample of children is selected and the children are observed systematically and regularly. The observer notes the structural context for the observation (number of adults and children present) and then observes the child for a few minutes, using specified criteria for involvement. The narrative of the child's activity is coded by the level of involvement displayed during the whole observation (a two-minute observation is sufficient for these purposes).

At Gorton Mount, the sample of twelve children for 2005-6 (6 from each of the groups with four-year-olds) included 6 boys and 6 girls identified in consultation with the class teachers. Judged by their ability scores on the standardised assessments from October, they include the lowest- and the highest-achieving children in the Foundation Stage, as shown in Figure 4.

Registration group	Child identity	LARR score	Rhyme test
Class 2	Boy Y	118 (A)	10
Class 2	Girl C	100 (C)	4
Class 2	Boy D	94 (D)	10
Class 3	Girl E	<i>[absent for test]</i>	-
Class 3	Boy N	<i>[absent for test]</i>	-
Class 3	Girl S	80 (E)	<i>[not tested]</i>
Class 3	Girl Sh	<i>[not tested]</i>	<i>[not tested]</i>
Class 4	Boy J	0 (unranked)	<i>[not tested]</i>
Class 4	Boy O	107 (B)	9
Class 4	Girl Em	87 (E)	3
Class 4	Boy F	0 (unranked)	<i>[not tested]</i>
Class 4	Girl K	90 (D)	7

Figure 4: Sample of children included in Leuven observations, with indicated achievement band

Each child was observed 3 times on up to six occasions between July 2005 and July 2006. Some children had long-term absences or left the school, and these children were substituted, again by consultation with the class teachers, to maintain a broadly typical sample. The child's level of involvement was coded on the observation schedule (see Appendix 2 for samples), thus reducing descriptive data to numerical data, while retaining the narrative of the activity.

Figure 5 shows the results of the three observations carried out for each child at different times in the project. Levels of involvement are rated from 1 ('No activity') to 5 ('Continuous intense activity'), while 3 represents 'More or less continuous activity'.

Despite the individual variations between children and between observations, there was no significant dip in the average level of involvement of children in the sample, before and after the Montessori intervention. The lowest level (2.4) was found in December 2005, when the classrooms were perceived to be very stressful and the children very difficult to manage, and the return to an average level of 2.9 in March was also predictable from the overall classroom climate.

The surprise in these scores is the final downturn in involvement to a level of 2.4, at a time in July when the classrooms appeared relaxed and children appeared busy. Scrutiny of the narratives

however showed that children's 'activity' was often 'social' during this final phase of observation: children were chatting and pottering in an entirely comfortable and natural way but could not be identified as 'involved' in an activity of their choosing. The narratives could be described as demonstrating good levels of 'wellbeing' (the other focus for the Leuven project) despite rather average levels of involvement in learning activities.

Child identity	Time 1 (June 2005)	Time 2 (Sept 2005)	Time 3 (Nov-Dec 2005)	Time 4 (March 2006)	Time 5 (April 2006)	Time 6 (July 2006)
Boy Y	—	3,4,4	3,3,4	3,2,4	4,4,3	2,2,2
Girl C	—	3,3,2	3,1,1	3,3,3	5,4,4	—
Boy D	2,3,5	1,1,2	2,2,2	5,3,2	2,2,1	2, 2, 5
Girl E	3,3,5	2,3,2	1,2,2	4,5,2	3,3,3*	5,5,3
Boy N	—	—	4,3,4	4,3,2	3,3,3	2, 1, 1
Girl S	2,4,1	—	3,3,3	3,3,3	3,2,3	2, 2, 2
Girl Sh	—	5,5,5	3,1,3	4,4,3	4,2,2	3, 2, 4
Boy J	—	2,2,1	3,1,1	2,1,1	3,2,1 *	2,2,2*
Boy O	2,2,4	4,2,2	3,3,2	2,3,2	3,3,3	3,2,3
Girl Em	—	4,3,1	3,3,2	3,3,3	2,2,2	2, 2, 2
Boy F	3,3,1	—	2,4,4	3,3,4	2,2,2	3,1,3
Girl K	3,1,3	3,2,2	1,2,1	2,2,2	2,2,2	2, 2, 2
TOTAL no. obs	18	27	36	36	36	33
Average	2.9	2.7	2.4	2.9	2.7	2.4

* Substitute chosen for missing child in consultation with class teacher

Figure 5: Children's (Leuven) involvement scores from 1 to 5, based on 3 observations on each of 6 occasions

Figure 6 presents all the totals as percentages, and shows the unusually high figure for 'level 2' activity (indicating some activity but intermittent and interrupted) in July, as well as the significant fall in Level 1 ('uninvolved') behaviour as the year progresses.

Level	1	2	3	4	5	Total
June 2005	17%	22%	39%	11%	11%	100%
September 2005	15%	37%	22%	15%	11%	100%
Nov-Dec 2005	22%	25%	39%	14%	0%	100%
March 2006	6%	28%	44%	17%	6%	100%
April 2006	6%	42%	36%	14%	3%	100%
July 2006	9%	61%	18%	3%	9%	100%

Figure 6: Percentages for each level of involvement at each 'time'

While no conclusions about the impact of the Montessori intervention can be drawn from the overall scores, the narratives which describe the activities are very informative. They demonstrate both the learning style or interaction style of individual children, and the types of activity that involve the majority of the children. Some examples of these are:

Boy D: achieves higher levels of involvement in outdoor activity (June) and appears reluctant or disaffected in September and December, although many observations show him turning briefly to browsing in books. He finally achieves a rating of 5 when involved in an adult-directed bookmaking activity.

Girl Sh: is most frequently involved while attempting jigsaw puzzles (September, December) and shows great persistence for her age as well as collaborative and co-operative skills. As the year goes

on she spends increasing amounts of time chatting and socialising, as well as role-playing 'teacher' behaviour

Girl E: is most involved during role-play activities (June) and improvises her own role-play scenario (without props or support, but collaboratively) in December

Boy Y: is equally involved in colouring and in building brick towers; his concentration is high during a direct teaching session in March, but low in July when he appears to look for activities which interest him, with limited success.

Girl S: is only really involved while helping an adult with cleaning (June) but also becomes involved in drawing and colouring on occasion

Overall, these observations show children persisting for longer at colouring activities, and at jigsaw puzzles, than at any other single activity. They also provide snapshots of the children's self-initiated dramatic play, which is revealed more fully in the classroom narratives.

Summary

Evidence from the Leuven observations is inconclusive and demonstrates neither increased nor decreased involvement in learning for the pre-and post-intervention phases, although it does support the evidence of classroom climate gained from narrative observations.

4.3 Classroom observations (Summer 2005-Spring 2006)

Running records of the activity in the classrooms were made intermittently at the request of the Montessori team, who wished for a record of the flow of activity over a session. Though valuable in combination with systematic records, they are more liable to 'selective' focusing in which the observer is more alert to the aspects of the classroom or the children's behaviour which are of particular interest to him/her than to other aspects which are of less interest or may be less noteworthy ('bad' behaviour can seem more noteworthy than 'good' behaviour in a crowded classroom, for instance). Nevertheless these narratives record the overall shape and structure of the session, from the children's entry into the room until some natural break in the session. Structural elements include here the number of adults and children present, as well as the population in each 'half' of each double classroom.

In an effort to present a reasonably systematic overview of the session, notes were taken in 5-minute segments, and at each 5-minute marker the position or activity of each of the children present or in view was recorded. Continuous observations were recorded for a total of 3 hours in June 2005; 5 hours in the Autumn term 2005; and 4 hours in the Spring term 2006.

Autumn Term observations

The ebb and flow of groups and individual children was the most salient feature to emerge during the first half of the year. Since the observer could only view one half of the classroom at any given time, the numbers in view fluctuated dramatically and it was never possible to head-count all children at one 5-minute marker.

Although children acted as individuals for the most part, there were frequent surges backwards and forwards from room to room in the classrooms, so that a room which held 14 children at 10.00 am might hold 28 by 10.05 (see Figure 7 below for an example, a short extract from a longer observation).

8.50am	Teacher (T), Teaching Assistants (TAs): door opened to waiting parents and children
8.55am	T, 2 TAs, 16 children [arriving, welcomed, encouraged to select work]
9.00am	TA, 16 children [T has led move into next room to select activities]
9.05am	7 children [all others have moved into next room]
9.10am	2TAs, 26 children [some have returned, new children have arrived]
9.15am	2TAs, 9 children [T returns briefly to sort out incident]
9.20am	TA, 23 children

Figure 7: Sample numbers in one room of Class 2 (1 December 2005, 8.50am-9.20am)

The reasons for this were not always clear but the tendency seemed to be for children to keep an eye open for what others were doing, and to follow any other child who appeared intent on an interesting or inviting activity. This sometimes resulted in unacceptable levels of running, crowding round, climbing on pipes and furniture, or rough-and-tumble play, which impeded other children's efforts at concentration.

Analysis of the final 5-minute segment in this observation demonstrates how quickly the well-prepared, calm, caring introduction to the session which was evident from 8.50am to 9.00am could disintegrate. After half an hour, few children could be described as engaging in a Montessori work-cycle as intended. Although none were misbehaving, and many were having fun, they were not meeting the expectations of staff, or benefiting from the learning opportunities provided. This episode is presented unedited in Figure 8, except to anonymise the children present (G = girl, B = boy).

9.20am	2G + G	Girl C + Girl N have taken off their shoes and socks and are tiptoeing around barefoot (game?); Girl K comes and joins them
	4B + G	Boys and Girl E are at cylinders table still chatting but ignoring the cylinders
	G + G	Girl F sits on the floor drawing on a piece of paper while Girl A walks around with a mat under her arm looking for a space to lay it down
	TA + 2B	TA has abandoned number presentation apparently; sits at table with boys working on Europe map jigsaw together
	G	Girl H still lying on floor; puffs and blows out her cheeks for amusement; waiting for TA to return?
	8 children	Climb in book corner (on pipes, on book racks) and someone starts throwing screwed up balls of paper, which the others soon join in
	2 B	Boy F and Boy I are practising runs and skids, shoes off, on the carpet

Figure 8: extract from narrative observation record (1 December 2005, 9.20am-9.25am)

The twenty-three children observed in this segment were occupying themselves quite contentedly at activities of their own devising, but it was clear that the looked-for process of settling into a working disposition had not occurred, and that only a highly motivated child could sustain a solitary or seated activity once this level of noise and movement was established. By mid-morning the noise levels, and the physicality of children's play, frequently impeded the concentration that was required for the benefits of the instructional materials to take effect. In consequence, the clearing-up period sometime dissolved into apparent anarchy, with children cheerfully climbing on to furniture and window-ledges, and a great deal of the tidying and cleaning left to the classroom assistants. More importantly still, group times at the end of the morning were difficult, focused on behaviour management, rather than a pleasurable experience for both teachers and children.

The three adults in charge of the 38 children in this room on this particular day were not able to monitor children's movements, and manage their behaviour, at the same time as presenting materials and assessing children's use of them. Their experience was proving very stressful for the staff, and high levels of staff absence were recorded in these weeks.

Spring Term

Morning sessions

As each class consists of a large double-room containing up to 40 children, the strategy adopted in March 2006 was to spend alternate periods of five minutes looking towards each end of the room, and record for those five minutes all the activities that children were seen to engage in. These activities and the number of children engaged in each were to be categorised, as well as the flow of children within the room.

At this time a more relaxed atmosphere was identifiable in the classrooms, in comparison to previous observations. Adults were more involved in teaching individuals and small groups, although behaviour management remained a priority, and children who were not supported by an adult were engaged quite contentedly in activities of their own devising.

Most of the systematic recording took place in the mornings, which were viewed as the main 'work-cycle', in which children should settle into self-directed learning activities and sustain them for long periods. Coding and quantification of the observations described above yields the following 178 episodes (five-minute slots) identified during a 3-hour 'work cycle' one morning:

	Number of episodes
Drawing, colouring and cutting out	46
Playing dominoes with an adult	15
Playing with puppets	18
Playing at being teacher (holding up a picture book)	14
Playing with a torch	18
Playing (fighting games) with plastic dinosaurs	12
Jigsaws	13
Playing with pictures of food	11
Playing / working with letters	8
Looking at books	7
Looking at seedlings	4
Building a tower	3
Using a water dropper	3
Manipulating cylinders	2
Playing with cloth bags	1
Spooning	1
Whisking	1
Pouring	1

As against these 'occupations' there are some 81 'unoccupied' episodes, as follows:

Wandering around the room unoccupied	17
Sitting, or lying on floor, unoccupied and immobile	15
Rolling on the floor	12
Running and chasing	5
Climbing on furniture or water pipes	9
Chatting, otherwise unoccupied	10
Fighting	9
Swinging on the gate between the classrooms	4

Several children were unoccupied for considerable periods because they had 'time out' for bad behaviour imposed by an adult, but these episodes were not counted as they did not represent children's own choice of activity.

Although most of the activities observed were constructive and agreeable for the children, few of them were specifically Montessori activities or used Montessori equipment. Almost one-third of all the activity episodes noted were some form of drawing, colouring or cutting, and could be found in a non-Montessori setting. Only a handful of children selected cylinders, pouring, sorting or categorising activities which might not be found in every mainstream classroom. At the same time, almost one-third of all episodes noted were of inactivity or non-approved activity, and this particular morning ended with a lengthy 'telling-off' from the class teacher instead of a story, discussing both fighting and misuse of equipment.

Afternoon sessions

Afternoon sessions were frequently used to introduce adult-led one-off activities, which broadened the curriculum offer to children; as a result the adult leading the activity was almost mobbed by 16 or more children around her table rather than the designated group of 8. Activities included planting cress seeds and drawing the cress once grown; completing worksheets on living things and creatures; cutting up and tasting tropical fruit; and working with playdough. Group work with musical instruments, and small-group games, were sometimes led, very skilfully, by teaching assistants.

Summary

Systematic observational narratives in the classroom showed a significant shift in the social and emotional climate of the classrooms, and in children's behaviour towards each other, over these two terms. By the end of the Autumn term the atmosphere was often tense and conflictual, whereas the end of the Spring term saw children relating to each other, and responding to adults, more equably.

The low levels of involvement in 'Montessori' activities remain puzzling, since there were few areas of the room which were not fully equipped with these resources. Adults conscientiously worked in turn with the literacy and numeracy materials with each child, and children responded with some interest on these occasions. However, only a small number of children regularly chose to use the resources by themselves, or to sustain their use for more than a couple of minutes. The vast majority of children did the things that children also do in mainstream classrooms, and the principal activities were drawing/colouring /cutting/sticking; jigsaws; looking at books; or simply chatting. **If children are intended to learn through their engagement with the Montessori resources, this is an unsatisfactory situation.**

4.4 Standardised test scores (Autumn 2005-Spring 2006)

Evidence from re-test and comparison with control school

The LARR (Linguistic Awareness in Reading Readiness) test was first administered to all 4-year-olds in the Gorton Mount Foundation Stage cohort who were present in late October 2005 (n=47) and to all 4-year-olds present in a reception class in a nearby school (n=20), in the same week. It was re-administered six months later (early or late April) to all children from the October cohort who were present on the relevant days (Gorton Mount, n= 40; control school, n=16).

The test is standardised by age (year and month) so that, regardless of children's raw scores on the test items, their standardised score and band is indicative of their age-related achievements. Thus, a child scoring in the lowest band (Band E) in October may plausibly be expected to be placed in Band E again six months later, and any 'gains' in band represent a rate of learning ahead of the child's anticipated rate of development. Such gains may be attributed to non-school causes in some cases,

but it can be assumed that ‘school’ factors have a large overall effect on progress. The children in both schools made good gains at the six month re-test. (Full results are in Appendix 3).

In October, the control school achieved a better overall profile than Gorton Mount, although none of their children were placed in Band A. Figure 9 shows the percentages of children in each band in each school at the time of the first test. What is striking here is that, even though many of the Gorton Mount children had already experienced three terms of nursery, one in five of them scored too low to be placed in any band, and an average score was Band E. At the control school, by comparison, one child in ten was unranked, and the average placement was in Band D.

School	Band A	Band B	Band C	Band D	Band E	Unplaced
Gorton Mount	2	6	13	19	38	21
Control	0	15	20	30	25	10

Figure 9: percentage of children achieving each band of the LARR test at two schools in October 2005

In April, as Figure 10 shows, the profiles of both schools had changed. Only one child in twenty was now unranked in Gorton Mount, and the average score for all children was in Band D, while the median score was in Band C. At the control school however, even greater gains were demonstrated: no child was unplaced, and the average placement for all children was in Band C, while the median was in Band A. In other words, children in the control school made greater gains on this measure of emergent literacy, despite a higher base line, than children at Gorton Mount who started from a rather low baseline.

School	Band A	Band B	Band C	Band D	Band E	Unplaced
Gorton Mount	2	15	32	22	24	5
Control	31	25	12.5	19	12.5	0

Figure 10: percentage of children achieving each band of the LARR test at two schools in April 2006

Suitability of the measure

These results prompt a re-examination of the measure itself. The booklet asks children to ‘circle’ items in pictures which are associated with reading and writing, and later to identify letters, numbers, words, sentences, capital letters and punctuation. These ‘concepts about print’ are an essential constituent of early reading progress and are uncontroversial. It is therefore no accident that the child who has made the most impressive progress in reading at Gorton Mount has also made the most impressive gain in the LARR test, adding 22 points to her standardised score and moving up three whole bands to be placed in Band A.

A review of the completed test booklets shows that many other children, despite regular input on letters and numbers, failed to distinguish between letters and numbers, and circled both types of symbol when instructed to circle either one or the other, on a particular page. Unlike children in the control school, the Gorton Mount children were also generally unable to identify a word, sentence or capital letter when asked. These concepts tend to be acquired very easily when children experience group sessions with ‘Big Books’ as recommended in Foundation Stage guidelines. They are also reinforced by a print-rich environment, which was not offered in the Montessori classrooms.

Suitability of the control school

The control school was selected by the head teacher because it was the nearest school to Gorton Mount (a short walk away) and had a relatively similar intake. There were however some differences in the immediate neighbourhoods of the two schools (the control school was located among streets with slightly better housing), while the intake of pupils showed Gorton Mount to have a slightly higher number of families eligible for free school meals.

These differences however do not affect the validity of the comparison, since the test instrument is standardised for 'all children', and what is being compared is the 'gain' made by the two groups of children from Time 1 to Time 2, rather than the raw or standardised scores on a single occasion. Since the Gorton Mount children achieved lower scores than the control school pupils at Time 1 (October), it might be predicted that they would make much greater gains by Time 2 (April). The fact that this did not occur was counter-intuitive and the only explanation seems to be that the control school's teaching was particularly effective.

Summary

While no standardised assessment is infallible, the results obtained in these tests appeared to reflect the early literacy skills of the children reasonably well, and suggested that the children at Gorton Mount had gained a great deal of expertise in this area in six months, although the control school children, in a mainstream environment, had made greater gains. This finding is rather counter-intuitive since children starting school with lower levels of emergent literacy skills would typically make greater gains than those who started with better skills, in a literacy-rich environment.

4.5 Foundation Stage profile results (Summer 2005 – Summer 2006)

The Foundation Stage Profile is the externally moderated statutory assessment for the end of the Foundation Stage (children leaving reception for year 1) and is based on teacher observations of children, evidence collected from their learning activities, and parental input. It documents children's learning in the six areas of the FS curriculum, with the three core areas (personal, social and emotional development; Communication, language and literacy; Mathematical development) further broken down into component strands.

Data are available for both the 2004-5 cohort of Reception children, and the 2005-6 cohort. For the previous year fully audited data were provided by the LEA, showing the percentages of children who had achieved different levels on each of the profile sub-scales (for instance, those children who were 'working within the Early learning Goals', those who had 'Exactly reached the Early Learning Goals' and those who had 'exceeded the Early Learning Goals'). For the current year more global figures are available, giving simple percentages for the number of children in the cohort who are working 'at or above' the national average, ie the Early Learning Goals. The school has undertaken its own analysis of the year-on-year comparison. (All available results are in Appendix 4).

2004-5 cohort

The interesting aspect of these LEA data is that they show that Gorton Mount children, far from under-achieving, considerably outperformed other Manchester children in many curriculum areas.

- For the 'dispositions and attitudes' sub-component of PSE, the school had 75% children 'at or above' expectations while Manchester schools as a whole had 58.7% at this level; other sub-components were below average, but by a smaller margin
- For the 'reading' sub-component of Communication, language and literacy the Gorton Mount children achieved 52.5% as against other Manchester schools' 34.3%; other sub-components were below average
- For the 'numbers as labels for counting' and 'calculating' sub-components of Mathematical Development, Gorton Mount children achieved 55% at this level for both strands as against Manchester schools' 51.8% and 38%, although the other sub-component was scored lower
- In both Knowledge and Understanding of the World and Physical Development, Gorton Mount children outperformed 'all Manchester children', and their Creative Development scores were only slightly lower.

2005-6 (Montessori) cohort

The year-on-year analysis shows that achievements for the Montessori cohort are similar in most respects to those of the previous cohort, with a few interesting exceptions.

- Of 13 components assessed, seven show an insignificant positive or negative variation of between 2 and 8 per cent (three of these scores increased while four of them decreased)
- Three further components showed medium-sized variations: 'linking sounds and letters' up 14%, 'numbers and labels for counting' up 18%, and 'physical development', up 13%
- The final three components showed large and unusual variations: both 'reading' and 'writing' scores have dropped by 27%, while the score for 'shape, space and measure' has gone up by 25%

The head of the Foundation Stage has offered an explanation for these variations (referred to again in section 5.2) and the school has plans to address the most serious weaknesses: reading and writing are core components of parents' concerns as well as of the school's own target-setting, and there is no doubt that these areas will be targeted and monitored in the future.

Summary

A fair summary of the impact of the Montessori approach in the short term would conclude that there has been very little impact overall on children's outcomes, and indeed that the two significant areas of strength in Mathematical Development (+18, +25) may have been achieved at the expense of significant weaknesses in reading and writing (-27, -27).

This summary in no way disregards the potential longer-term impact of the intervention: any effect on children's learning dispositions is known to have long-term positive consequences for their school progress, and this will only show up as children progress through the school. Meanwhile however around 50% of the children entering Year 1 in September 2006 will have some catching up to do in their early literacy learning.

5 Perspectives of adult participants

5.1 Parents of Foundation Stage children

Summer 2006

Twelve 'new' parents (of prospective nursery children) were interviewed during the nursery induction session held in July. Their view of the school was unanimously good – they had heard 'nothing but good things' about the academic progress and behaviour of pupils at Gorton Mount. This information showed both the success of the initiatives previously undertaken by the head and staff to turn a 'failing' into an 'effective' school, and the difficulty there would be in identifying the difference a Montessori approach makes to children's learning, in parents' estimation. Very few parents had any previous experience of the school with which to compare their current experience. (Results are in Appendix 5a).

Autumn 2005

Parents' views were sampled by the following means:

1. Ofsted-style questionnaire distributed in September [n = 21]
2. Focus group discussions in October and November [n = 7 , n = 7] (results in Appendix 5b)
3. Montessori-oriented questionnaire in December [n = 31]
4. Informal conversations with parents bringing and collecting children

The problem with each of these measures was that the small number of respondents made any general conclusions problematic. The findings were sometimes quite contradictory, as individual parents held strong views which could not be viewed as representative.

Parent participants

Of the four measures undertaken in the Autumn term, and of approximately 95 parents:

- Parents of 21 children completed September questionnaires
- Parents of 7 children attended the October focus group, and 3 had also completed questionnaires
- Parents of 7 children attended the November focus group, of whom 3 had completed questionnaires and 2 had also participated in the October group
- Parents of 31 children completed December questionnaires, of whom only 6 had participated previously: the majority were parents of 'new' children who were not comparing their current experience with any previous experience

Only 53 parents appeared to have participated in any of the measures offered, which may reflect the lack of English proficiency indicated by some parents.

Focus groups

These groups were selected by the head teacher and convened by a school counsellor, whose notes were submitted for the evaluation. Both groups were small and can not be considered representative of parents in general, but their views indicate some areas where the school has to work harder to win hearts and minds to the project. Responses are summarised below:

What does your child enjoy about school?

Positive responses focused on socialising, making friends and playing; negative responses asserted that the child was not enjoying school and was bored. In October, the facilitator reports a consensus view that children were more resistant to being brought in to school and more distressed at being left than in the previous year. The response in November is described as 'very similar to last time'.

How is your child being taught to read?

On both occasions, parents expressed concern that children wanted to read and write but were not being taught. Several made adverse comparisons with their experience in previous years.

What is your child learning?

Some parents (October) believed children were learning to write their name and to be more moral and sociable. A consensus in November was that they were 'confused... not learning... they do whatever they want'.

How are you welcomed?

Parents were unanimous that they felt excluded from the classroom and that this increased their child's distress in some cases.

How well does your child get on with the teacher?

There was unanimous praise for the staff and their relationships with children.

How well behaved is your child at school?

All parents assume their child behaves well as they have not been told otherwise, but some feel there is a lack of feedback which is 'unsettling'; most say their child behaves worse at home now (eg swearing) which they attribute to the mixed age groups in the classrooms.

How does this year compare with last?

Some improvements were noted but most parents were less happy with the new provision than with the old. They comment on: the 'bleak' and 'bland' environment; the lack of 'toys, sand, playhouse, colours' in comparison with the rest of the school; the mixing of age groups, which was believed to lead to bullying and distress; the lack of involvement and information. Exceptions were one parent whose child was new and liked everything, and one parent who felt by November that she could now see the benefits of the intervention.

Unsolicited comments (December)

Parents returning their questionnaires to the researcher in December often stopped to ask for information or to chat. Many made appreciative comments about their children's teachers, but these were outweighed by negative comments about the project ('I don't like the bare walls... She's not keen to come, not really... Why don't they have any reading books, and why don't they show the children's work like they used to? ... You used to be able to bring the younger children in and they could play as well, and it helped them settle in, now we're not allowed in... He loses all his things and they don't look for them...'). One mother added rather sadly that 'the only time we like is home time.'

It is possible that these views were untypical of parents' views in general, which the evaluation was not able to ascertain. It appeared that the parents concerned simply identified an opportunity to express their views without giving offence to the teachers, whom they like and respect. The comments are reported here because they represent the views of a larger sample of parents than those who participated in the focus groups, and therefore is as reliable an indicator as any of the other attempts to survey parents' feelings.

December questionnaires (full results are in Appendix 5c)

The December questionnaire to parents was designed to identify the specifically 'Montessori' aspects of parents' perspectives on their children's progress. The questions asked whether children displayed 'more', 'less' or 'about the same' of 15 different characteristics, and asked three open questions. The

characteristics identified were those targeted by mainstream provision, but were also intended to discern the particular Montessori emphasis.

Two strategies were adopted for the administration of the survey. The researcher administered almost 30 questionnaires in person to parents entering and leaving the classroom used by the youngest children (ie those who had not experienced the pre-Montessori environment). Some of these parents pointed out that they were not comparing their child's current attitudes and experience with pre-Montessori experience in the school, but with the child's pre-nursery behaviour and experiences. The remaining 70+ questionnaires were addressed individually to parents of the older children, and their class teachers were asked to distribute them. Only 3 or 4 of these questionnaires were returned, giving an overall response rate of around 30%. It is not clear whether the questionnaires were actually distributed, or whether parents were encouraged to return them.

The responses from participating parents were generally favourable: 18 of the 31 report that their child is more keen to come to school; 5 report that their child tidies toys away more (but 24 have seen no difference); 10 believe their child helps to set and clear away at mealtimes more than before (but 17 see no change and 3 see less help than before); 8 feel their child gets ready for school more independently (but 19 see no change and 2 see less independence); and 15 identify better manners (14 children are about the same, and one is worse than before).

On most items, most parents either feel there has been no change in their child's development, or have seen progress: 23 parents believe their child is developing new skills, and 20 state that their child talks about her/his friends and playmates more, while 19 perceive their child as keen to 'find out about things at home'. The final items (14: children's keenness to 'learn new things' and 15: their enjoyment of challenge) are overwhelmingly positive, with 21 affirmatives each, a total of 70% of all respondents.

Parents' identification of their child's favourite activities could be viewed as more 'mainstream' than 'Montessori'. They are, in order of preference: painting (10), drawing (8), singing (6), friends (5) and playing (4). Other items are only nominated by one or two parents (riding bikes, 2; playing outdoor, 1; reading, 2; dancing, 1; and so on). One parent names 'maths and reading' on his child's behalf.

Parents were finally invited to name what they liked best about the classrooms, and to identify any dissatisfaction. The high level of satisfaction focuses almost entirely on the teachers and the classroom atmosphere. Where parents are unhappy the focus of their complaint is the perceived lack of reading books, book bags and instruction in literacy; mention is also made of bullying, high noise levels and the loss of gloves, hats and coats (two parents).

Spring 2006

A third parent focus group was convened to which seven parents were invited. Of these, one had attended all three focus groups and another had attended two groups. This group includes more 'new' (nursery) parents than reception parents.

Parents reported that their children generally enjoy school, and explain that this is because of 'other children, the playground, toys and activities... singing, story-time and friends'. They were still unsure of how children learn or are taught to read under the Montessori system: they knew that children hear stories and learn the letters of the alphabet as well as their colours and numbers, but were vague as to children's acquisition of literacy skills in the classroom. They reported that in addition to numbers and colours, children learned 'singing, painting, pouring, measuring and socialising', as well as 'playing'. One parent was still doubtful about the mix of age groups in the classrooms.

Parents remained dissatisfied with their own lack of access to the classroom, and disliked being required to wait outside the room, describing the physical environment as unwelcoming although the teachers are welcoming. All parents reported that their children have good relationships with their teachers, but that their behaviour was typically much worse at home than at school. Those who had

attended a presentation were more confident about the benefits of the curriculum being offered, while some parents still had little idea of what their child was learning, and how. No parents felt entirely confident about the methods.

No further focus groups were held, and no more surveys were administered, as the low response rate made findings so hard to generalise.

5.2 Staff involved with Foundation Stage provision

Autumn 2005

Data were collected by the school using a questionnaire with a rating scale, and video diaries; the latter were withheld from the evaluator despite repeated requests. Individual questionnaires completed by 4 teachers and 3 teaching assistants (at the start of the intervention) demonstrated quite high levels of confidence among teachers about their knowledge, skills and effectiveness in supporting children's learning – most evaluate their practice as 'good to very good'. Teachers believed that they understood the nature of the task of supporting children's learning, and felt they were successful in their strategies to achieve this, through motivating and engaging them. They held high expectations of their pupils, while recognising that some children had difficulties in managing their behaviour and learning. The two teaching assistants were slightly less confident but also understood the nature of good practice.

From conversations with staff and observations in classrooms it was clear that:

- All team members had responded positively to the opportunity to re-skill themselves, and were committed to the project despite stressful working conditions.
- Staff with little prior training felt that they had gained a good deal of knowledge, skills and confidence as a result of the Montessori training, and felt a sense of common purpose with the qualified staff.
- The negative aspect to teachers' professional commitment was that difficulties and anxieties were not discussed or shared. Staff cleared away and left the building shortly after the children had departed. This dogged professional reticence did not seem to be constructive or productive.
- Some staff admitted reservations about the Montessori approach as implemented at the school, which they compared unfavourably with practice elsewhere. They were uncomfortable with the minimalist environment and the prescribed activities, and wished for a more 'mixed' approach.

Spring 2006

There was still a paucity of research evidence from teachers, despite efforts to capture their views. Only 6 from a possible 9 questionnaires were returned in April (3 teachers and 3 assistants). The data from the two sets of questionnaires were compared, as follows:

A. Questions about learning processes

Asked 'what do you believe promotes learning' in the Foundation Stage, the groups generated a long list of qualities on each occasion, with very little duplication but no obvious progression or 'direction of travel' in the suggestions. For instance, 'independence' was named twice in October but not in April, while 'accessibility' was named twice in April but not in October. The two aspects which occurred at both times of administration were 'motivation' and 'curiosity'; two aspects emphasised in October were 'encouraging self-worth' and 'relevance to children's own lives', but these were replaced in April by 'hands-on activities' and 'role modelling'. These answers resemble those of mainstream practitioners.

Asked to rate their own understanding of learning on a scale from 1 (poor) to 5 (good), all respondents opted for 3 or 4 on both occasions. Asked to evaluate their trust that a child would know her own learning needs, respondents showed slightly less trust in April.

B. Questions about effective teaching

Teachers were asked to rate their own confidence in what they were teaching, and their own subject knowledge, and there was little change although teaching assistants expressed more confidence in April. There was an improved sense of 'teaching with a clear purpose', of providing for SEN children, and of 'progression in lessons' by April, but little change in any of the techniques for teaching such as role-modelling, whole-class teaching and group-work.

Asked about differentiation, teachers gave similar answers on both occasions, describing the need to differentiate for all children. Teaching assistants confidently answered that three levels of provision (easy, medium, hard) were required in October, but only one responded in April, giving a more teacher-like reply.

C. Questions about assessing children's learning

Very similar responses were generated to an open question about assessing children's learning, by both groups and on both occasions. Questions about practitioners' confidence in their own assessments, about their feedback to children and about their expectations for children produced very similar responses on both occasions.

D. Questions about the classroom environment

Most of these questions produced similar, and confident, answers from both groups on both occasions. Staff generally believed that they used the environment effectively, promoted independence, and allowed children to access child-centred resources with ease.

E. Questions about communication skills and relationships

All staff gave similar answers to a question about the types of questioning they use with children, and almost all reported using closed as well as open questions. Questioning featured significantly in their accounts of how they promoted dialogue in the classroom, although some teachers describe a broader range of strategies by April: interestingly these included use of the role play area and of small-world equipment, although neither of these activities were included in the Montessori approach as originally set out in the classrooms, while both feature prominently in mainstream settings. All rated the quality of the dialogue as above average, and claimed that their relationships with children were good, consistent and equitable.

F. Questions about pupil behaviour

There was no change over six months in responses to questions about pupil behaviour and staff behaviour management strategies. Most respondents felt they were successful in modelling appropriate behaviour, using praise for management, and promoting independence and autonomy. There was a greater inconsistency in respondents' views on how frequently they have to 'ask children to listen' in a day – from almost constantly to quite occasionally.

Summary of questionnaire data

These responses give little evidence of any impact on teachers' approaches, skills and confidence as a result of the intervention, except that the teaching assistants displayed greater confidence later in the year. (Extracts from the full findings are in Appendix 6a)

Summer 2006

Staff interviews were conducted in July, to elicit a fuller overview of the year. The sample was of two senior managers (head teacher and FS head), two teachers and two teaching assistants, and

responses are summarised below. Some questions were put to all staff, and some to different categories of staff. The interviews were tape-recorded and transcribed in full.

1. Staff were asked to rate the current experience and environment, and that of the previous year, on a scale of 1 to 10.

The teaching assistants both felt that the quality of children's experience had declined (in one case, from 7 to 5; in the other, from 9 to 6) whereas the teachers offered a rating of 8 to 9 for the current year and would not comment on the previous year. The FS head felt that, since the full potential of the project had not been attained, a current rating of 7 was fair, but would not rate the previous year; the head teacher, who initially opted for 9, reflected that this was aspirational and the current rating was probably about 7, whereas the previous year was 'more of a 4 or 5'.

Both FS head and head teacher elaborated on the great potential offered by the Montessori materials and the benefits for children, who could become confident learners and risk-takers with these carefully structured and self-correcting resources.

2. Staff were asked (i) what in their view were the 'best' aspects of Montessori, and also (ii) whether all children benefited equally from them? They were also invited to point out (iii) anything they or the children 'missed'

(i) The teaching assistants named some quite specific items: that the classrooms are now tidier; that an adult can know where children are 'up to'; that fine motor skills are developed; and that children may be more independent than before. At the same time they confessed that they were 'sick of doing the same things everyday... you do get sick of it sometimes, you have to do it so many times'. Both felt that their work in previous years had been more varied and interesting.

The teachers they work with felt that the main benefits were for children with special educational needs – including gifted and talented children – but that all children benefited from the support and from 'learning at your own pace – it all teaches them something'.

The head teacher named mathematical development, and oral communication skills:

'To go into the classroom and see how confidently children handle numbers, for very young children that is something that I have never seen... The other thing that I am very pleased with is the increase in speaking – the amount of communication that children are engaging with adults and with each other - the level of conversations is very good, and previously it had been very poor.'

The improvement in children's mathematical competence is supported by the Foundation Stage profile scores, but the last remark contradicts the profile results, which show a decline of 8 points in children's achievement of age-appropriate 'language for communication and thinking'. The FS stage head broadly agreed that 'basic building blocks for literacy and numeracy' were fundamental to children's improved opportunities.

(ii) The teaching assistants were adamant that 'brighter' children were held back by the current regime: 'they don't write their name, they don't do handwriting...the cleverer ones have got left behind, they're bored'. They recalled working with 'ability groups' under the old system, and seeing children's writing improve dramatically. The teachers however disagreed, claiming that 'no-one's lost out. The teacher support gets them all involved'.

The head teacher and FS head certainly did not feel that 'clever children had lost out':

'I would say that I think the girls have always been interested in those kind of things and it's the boys, particularly the most intelligent boys, who have benefited because they've been allowed to develop in their own way...' [HT]

Both also believed that children with SEN were monitored and taught more appropriately.

(iii) The teachers were not willing to identify anything they 'missed' from the former regime, but the teaching assistants did: one named the range and variety of curriculum activities:

'The role play... The computer room, we used to do computers with them. The gym, they've only just started doing that again... Really, they've stayed in, in the room, all year until now...'

The other referred to the way learning was organised:

'Working with groups: you're supposed to work with one child at a time but it's so slow you end up where you've got a group sitting waiting anyway.'

3. Staff were asked about children's behaviour:

The teaching assistants agreed that they had 'brought their own behaviour rules' to the Montessori context, but that this meant 'we're constantly telling them...'

Class teachers also admitted to abandoning 'the Montessori language you're supposed to use' and reverting to the school's behaviour policy although one referred to the 'grace and courtesy exercises' of the Montessori approach.

These two groups were asked specifically about tidying up, a key quality for a Montessori setting: all agreed that 'it's improved... more of them are willing to help now', but this was said in comparison with earlier in the current school year rather than in comparison with the pre-Montessori era.

Of the senior management team, the head teacher felt that – on 'good days' – children were confident, independent and calm in their behaviour, but that on other days there was 'a frenetic atmosphere'. The FS stage head felt that 'on the whole' more children had developed self-control, but a minority had not.

4. Questions about the involvement with parents, and the relationship with parents:

Both teaching assistants felt there were fewer opportunities for parents to be involved in their children's learning than before the intervention:

'They used to take books home, their handwriting books, to practise. And they used to have a reading bag; the parents wonder why there's no reading bag now. Some of them take the pink strips home, or the pink word-lists – it's just if parents ask for it. But they don't get involved, no.'

'We did try to involve them: coffee mornings, posters in every window... We told them about Montessori but they didn't really get told about their own child.'

Teachers reported simply that 'we always make a thing of greeting them', but felt that there was more contact with parents than earlier in the year. The head teacher and FS head were not asked about this aspect.

5. Comments on the way the project was implemented:

Teaching assistants felt that they had been unprepared for their role:

'We should have had the training first, we were that nervous, we needed more training but we just went straight in...'

'We should have looked at more Montessori schools, we only went to one and it was nothing like our school, and we just thought, well... And we needed more training, we only had two days and then we had to do it, and we thought '[the trainer]'s watching us' – it was nerve-wracking, I was so nervous.'

The teachers concurred with these views, although they expressed their own anxieties with greater reticence.

The senior management team reflected more broadly on their own relationship with the project, the Montessori charity, and the personnel involved. Their reflections constitute a scrutiny of 'what went wrong' in the relationship with MSN, and there were few positive comments:

'The relationship between us and the charity has always been uncomfortable: so I think there were always kind of doubts about their cultural understanding of our culture in the school...' [HT]

'My relationship personally, with the charity, is dismal and it's over.' [FS Head]

In seeking explanations for this regrettable outcome, they reached for differences in 'culture', particularly between the state sector and the fee-paying sector:

'I'm afraid there was a massive conflict of principles and there was a complete lack of understanding of how local authorities work, and of the kind of social deprivation that my school is set in... I've got a third of parents who are living very chaotic lives, and unfortunately what the charity's view of that was, was pejorative, was judgmental, the kids are dirty, the kids are underfed, the kids don't get properly nurtured, and there was too much judgement that got in the way of what the charity were actually trying to do with us.' [HT]

'It's a completely different world...the expectations that went with private sector working that clashed dramatically with our expectations...' [FS Head]

6. Views on the impact on teachers

Both the HT and FSH emphatically endorse the improvements in teachers' understanding of their role in supporting children's learning, as a result of the training and intervention. One aspect they identified was a rise in teachers' expectations:

'It's raised their expectations about what kids can do – made them organised, made them better teachers, made them plan ahead better, made them assess for learning better – made them more like the most experienced teacher...' [HT]

'Expectations and awareness of their own expectations have gone up, for themselves as well as for the children.' [FS Head]

Both also described the way that the assessment of individual children enables staff to plan properly for each child's next steps in learning:

'They do proper assessment for learning.' [HT]

'They use assessment for learning and see that it does work... also the sense that you can plan for individuals... previously it would have been planning for groups and it would have been far less relevant to most of the children, more to do with meeting the literacy and numeracy targets.' [FS Head]

7. Views on the Montessori trainer and teachers.

Some of this improvement in teachers' knowledge and skills was attributed to the trainer, although views of her role in the school, and relationships with the staff team, were generally quite negative. The head summarised the general feeling: 'She was a very difficult member of staff to have in the building', but the Foundation Stage Head was more analytical about the MSN team.

'One of the visiting teachers was particularly disliked, one was fairly indifferent, one hardly ever showed up, and then there was [the trainer]... she never did what was agreed she was going to do: she changed from being the consultant to being the team leader. Towards the end I was just going out of my way to avoid her, ... just because when she was in the building it was just unpleasant, an unpleasant atmosphere when she was around.'

This aspect of the project was clearly unsuccessful, and no lasting relationships were built. Some aspects of this unfortunate situation may be attributed to personality, but more importantly it may be attributed to a failure to agree on roles and responsibilities when the project was set up.

(Sample of senior management responses is presented in Appendix 6b)

6

Strengths and weaknesses of the intervention project

6.1 Inputs

Planning and preparation

The initial input into the project came from the vision and planning of the head teacher and her senior management team, and of the Montessori St Nicholas charity. The rapid process of negotiation and agreement, and the successful launch of the project with a very short lead time, are evidence of the commitment on both sides. However, subsequent difficulties in the relationship between the school and the charity, particularly over the role and status of the trainer, suggest that **insufficient care was taken to clarify roles at this early stage**. Early strengths demonstrated emerge as weaknesses in the longer term.

The two major inputs into this intervention have been the rebuilding and refurbishing of the environment, and the re-training of staff. Both of these can be seen as strengths of the project.

Physical environment

The structural work undertaken in the summer of 2005 produced a suite of rooms and service areas designed to meet the needs of a Montessori environment, which were also, by any standards, significant improvements on the rather shabby 'traditional nursery' environment which existed before. Washing and toilet facilities, and kitchen areas, were modernised, while the classrooms were stripped of unnecessary protuberances and decorated and carpeted in a neutral style. The existing, well-worn, furniture was completely replaced by new beech tables, chairs and storage units, and by Montessori-specific shelving and stands.

The head teacher and most of the staff agreed that the learning environment was enormously improved, although parents in general, and some of the staff, disagreed and felt that the newly uncluttered rooms did not 'feel like a school'. Matters of taste can not of course be objectively evaluated, but it can be reported that the children returning to the classrooms in September 2005 did not apparently register any changes in décor although they did register the absence of familiar toys and activities.

The inspector who visited in January 2006 reported that she agreed with staff that 'the change in the environment, from the more visually stimulating one to the much barer one of the Montessori room' had 'brought about a much calmer working environment'. At the same time she pointed out that her report was based on limited information gleaned in a one-day visit (when additional staffing was in place and overall ratios were better than usual). (Extracts from this report are included in Appendix 7).

From the research perspective, the failure to provide displays of children's work, photographs of children's involvement, interactive displays, and a print-rich environment, resulted in low scores on the ECERs measures. Current thinking views the early childhood environment as the 'third teacher', a resource from which children draw ideas and examples of the learning process to which they can relate their own view of themselves as learners, and in this respect there was no opportunity for children to 'see' themselves and their learning in the classroom.

Resources for learning

The resources put in place at the start of the project were completely new and quite comprehensive, and they were supplemented by additional sets of materials as the year went on. The Montessori provision offers self-teaching / self-correcting didactic materials in every area of learning, and the classrooms were equipped with the early and then later stages of materials in all areas. The resources are simple and well-made, and withstand repeated handling by children. Adults find them aesthetically pleasing and pleasurable to handle although there was no evidence from observations of the children taking pleasure from the craftsmanship or 'feel' of the cylinders, cubes and other wooden artefacts. Some children ignored the Montessori materials almost entirely, and opted to occupy themselves with the few remaining toys from the previous environment, and with universal activities such as colouring, cutting and sticking.

Teaching staff, who have the most informed view of the children's progress, feel that the resources were very beneficial for almost all children, and that their quality of construction means that the initial outlay will be repaid by indefinite use. They agree too that some children have not regularly accessed the resources, and give different reasons for this. Resources for literacy and numeracy were particularly highly valued, and will continue to form the basis for teaching and learning in this area even if other areas of learning adopt more eclectic approaches.

Staff training

The Montessori trainer undertook group and individual training with all members of the Foundation Stage team during the two terms of her placement at the school. Most of the staff (and the head teacher and FS head especially) felt that the training was highly effective. Although the immediate aim was to drill teachers in 'presenting' Montessori materials to children in very specific and prescriptive ways, these senior staff believed that all staff had additionally acquired a far greater understanding of the ways that children learn, and hence the most effective forms of instruction.

Rather surprisingly, the teacher questionnaires administered in September 2005 and April 2006 did not reveal any significant changes in self-reported understanding of the teaching and learning process, although teaching assistants responded with greater confidence on the second occasion. From a research perspective it was clear from classroom observations that there was a greater degree of equality between teachers and teaching assistants in the latter part of the year – including a shared understanding of the aims of activities for individual children – although the TAs made it clear that they were still told by teachers to undertake quite repetitive instructional activities for which they felt little enthusiasm.

Several members of the Foundation Stage team will go on to complete a Montessori diploma, and this certification will certainly boost the levels of skill and understanding in this area of the school. It was clear by July 2006 that most members of the Foundation Stage team had reached an accommodation with Montessori methods, in which they 'adopted' those they felt were effective, and 'adapted' those they felt were not. Several staff members indicated that the training (and the trainer) had been highly prescriptive and that they needed to adopt a style of teaching, and interaction with children and parents, that fitted their own situation better. More than one pointed out that the trainer did not 'practise as she preached' and that they too should be entitled to use their own local knowledge in their interactions with children and families. There was considerable ill-will towards the trainer, but not towards the training, so the overall impact of training can be seen as beneficial.

6.2 Processes

Children's cognitive learning and dispositions

The process of children's learning, both cognitive and social-emotional, was assessed through the ECERs scales and the Leuven observations on individual children, and through classroom narratives of the whole group, in two classrooms. The findings were inconclusive. Children were never 'more involved' in their learning when observed in the Montessori environment, and at some points in the year were certainly 'less involved', although a minority of individual children achieved reasonably good involvement scores throughout the year. Certain children took to aspects of the Montessori materials (especially for literacy and numeracy) with great pleasure, and were frequently observed in self-sustaining activities. On the other hand, some children were never seen to be engaged in specifically Montessori learning activities (as opposed to chatting, drawing, leafing through books, cutting and sticking) and it must be assumed that they did not benefit from them.

Children's dispositions to learn, as evidenced by their engagement in activities of their own devising, may be viewed as a positive outcome of the project although it is impossible to identify, let alone quantify, any change over the year.

Relationships and social-emotional learning

Adult-child relationships are a strong feature of the ethos throughout the school, and all those interviewed (parents, teachers, teaching assistants) felt that these had continued in the same way before and after the intervention. Relationships between teachers and parents were also felt by staff to be 'the same as ever' although some parents dissented: there was considerable annoyance that parents were not allowed into the classroom for two terms, although this rule was relaxed after the trainer left, and the cordial relations viewed before the intervention were re-instated in the summer term.

Children's behaviour and emotional state was quite poor during the Autumn term (as evidenced by quarrelling, physical fighting, crying and inactivity) but improved a great deal during the Spring and Autumn terms. Peer relationships and friendships between children were difficult in the early months, but flourished as the year went on. In part this seemed due to the fact that some children were less interested in the activities on offer in the classroom than formerly, and made more use of their own resources to devise imaginative games, including role plays and friendship rituals. Children's behaviour as a whole remained problematic for teachers throughout the year, although the difficulties were probably instigated by a small number of children, and a good deal of adult time was devoted to behaviour management, which was in accordance with the school's existing good practice.

Neither strengths nor weaknesses of the intervention can be identified with any certainty from these data.

6.3 Outcomes

As detailed above, the children's overall progress on all the measures undertaken was satisfactory but not exceptional, and in line with normal expectations. Neither strengths nor weaknesses can be claimed for the intervention.

Foundation Stage profile

As reported above (Section 4.5), no major changes were seen in the year-on-year performance of reception children on this measure, except that there were some rather disappointing scores for reading and writing, and some improved scores for mathematical elements.

Emergent literacy (LARR) tests

As reported above (section 4.4), the gains made on this measure after a 6-month period were good, but far less impressive than those of a neighbouring school offering a traditional reception class environment.

6.4 Value for money

The budget for the intervention, which was contributed by the Montessori St Nicholas charity and the DfES, was quite large but the costs of all aspects were reasonable. The largest sum was spent on building work to restructure and refurbish the classrooms, and on resources. As indicated above, these improvements are of high quality and should last for many years, and will thus repay the initial investment.

The second largest expenditure was on the salary and accommodation of the trainer. Again, the effectiveness of the training must be regarded as an investment in the school which will bear fruit for many years. Several staff members have completed part of their Montessori accreditation, so these individuals and the school will continue to benefit from the specific expertise that has been imparted, as well as from the generic increase in the awareness of, and interest in, children's learning. With continuing support from the charity, post-evaluation, it is anticipated that ten members of staff will eventually acquire a Montessori diploma.

In the end, it is clear that the school will not become a Montessori school as originally planned – rather the head teacher and governors will adopt those aspects of Montessori methods and approaches which suit their own ethos and existing good practice, and will compromise on other aspects. The outcomes therefore must be viewed as rather mixed:

- From the school's point of view, the investment was worthwhile as they will have benefited in many ways from the generosity of both the charity and the DfES, as well as from their own considerable commitment and investment of effort.
- From the charity's point of view, the experiment has only partially succeeded. Its original intentions were not simply to transform a state school into a Montessori school, but also to identify the opportunities and difficulties that such a transformation would involve. It was never assumed that the first of these intentions would be realised in full, but it is clear that the learning opportunities provided by the experiment will give the trustees and others in the charity many interesting directions to follow up. In addition, the project has generated enormous publicity for the charity; although the quality of much of the reporting appears to be poor, and the information misleading, both the school and charity have benefited from the generation of public interest and goodwill.
- From the DfES point of view, very little change seems to have resulted from their investment. Gorton Mount school was not a 'failing school' and therefore did not require a special intervention. However, the research findings may contribute to the sum of knowledge in this area, and perhaps offer a unique insight into the application of a 'private' mentality and method to a 'public' facility.

6.5 Conclusion

The project must be described as successful in one fundamental respect: that this enormously challenging intervention was planned, funded, implemented and brought to a satisfactory conclusion, despite a relatively short lead time at its start, and some very difficult problems throughout the year. This success is itself tribute to the vision and commitment of the head teacher, and her ability to inspire and motivate her staff, who had an exhausting and challenging year for all kinds of reasons. The project, in this sense 'succeeded'.

From the point of view of the participating children, the question of whether the aims and objectives originally outlined were met is more difficult. Most of the indicators will not be visible until the children who participated in the first year of the project are much further on in their learning. At this point the hypothetical gains in scores on national and standardised tests can be measured. The children in this pilot year have made some gains and some losses in comparison with their predecessors in the Reception year, but overall they have learned at approximately the level that would be expected of them in a school which was already demonstrably effective, which holds high expectations for its children, and which successfully prioritises a positive and inclusive ethos. Although some very poor-quality classroom experiences were observed during the year, these can be attributed in large part to structural factors such as the unsatisfactory adult-child ratio, which affected both children's behaviour and their opportunities for learning. Decisions about staff allocations within the school (and within the permitted LEA allocation) were of course the responsibility of the school, and not of the Montessori team.

From the point of view of staff, the future implementation of aspects of the Montessori approach in their classrooms can be anticipated with some confidence and satisfaction. All of them will have gained in knowledge and understanding as a result of the training they have received this year. In addition, the requirement to reflect on their own beliefs and skills has almost certainly improved their awareness of the job they are doing, and their ability to assess their own professional skills. In the next phase of the project, when they complete their certification, it is likely that their 'ownership' of the philosophy as well as the resources offered by Montessori will be greatly enhanced.

From the point of view of the head teacher and governors, there is much still to do throughout the school, but a very large step has been taken towards introducing methods of teaching and learning in which they also have great confidence: this in itself should ensure that the work will develop successfully. It seems likely that the new alliance being forged (post-evaluation) with the MSN charity will need to focus very carefully on the nature of the 'Montessori approach' that is being adopted, since the school has begun to develop its own somewhat idiosyncratic and hybrid version of the method.

The Montessori charity made a generous and potentially risky investment in this project, and its executive and trustees have learned a great deal from the outcomes about both the possibilities and the challenges of applying, to a relatively deprived section of the general population, a system which is typically only offered to fee-paying parents. Much of the difficulty encountered in their relationship with the school must be attributed to the inadequately water-tight project planning, and to the non-availability of a trainer who could fully understand and support the school's own view of its needs and priorities. However, the chief executive and trustees take the view that lessons have been learned from this project which will helpfully inform any future ventures into the state sector.

It is this alliance of private-sector values and motives, with public-sector understandings of rights and duties, which has proved most challenging in this project, and will repay further inquiry and experiment.

Scores from the Early Childhood Environment Rating Scales (ECERS)

Scores on ECERS-R in two classrooms, June and December 2005 and July 2006

Subscale	Nursery (June 2005)	Reception (June 2005)	Room 1 (Dec 2005)	Room 2 (Dec 2005)	Room 1 (July 2006)	Room 2 (July 2006)
Space and furnishings	4.50	4.60	4.40	4.25	4.25	4.25
Personal care	6.00	4.30	3.25	4.00	3.75	3.50
Language - reasoning	4.00	5.70	4.00	2.00	4.25	4.25
Activities	4.00	3.30	2.50	2.30	3.30	3.20
Interaction	4.60	6.20	5.20	5.20	6.40	6.40
Programme structure	4.00	4.30	2.60	2.60	3.00	3.00

Scores on ECERS-R, combined: June and December 2005 and July 2006

Average Scores

Subscale	Nursery and reception (June 2005)	Rooms 1 and 2 (December 2005)	Rooms 1 and 2 (July 2006)
Space and furnishings	4.55	4.33	4.25
Personal care	5.15	3.62	3.62
Language - reasoning	4.65	3.00	4.25
Activities	3.65	2.40	3.25
Interaction	5.40	5.20	6.40
Programme structure	4.15	2.60	3.00

Scores on ECERS-E in two classrooms, June and December 2005 and July 2006

Subscale	Nursery (June 2005)	Reception (June 2005)	Room 1 (Dec 2005)	Room 2 (Dec 2005)	Room 1 (July 2006)	Room 2 (July 2006)
Literacy	3.30	5.50	2.50	2.70	3.50	2.60
Maths	3.50	4.00	2.50	2.50	2.75	2.75
Science	3.60	1.60	1.20	1.00	1.40	1.40
Individual needs	1.00	4.00	1.00	1.00	3.00	3.00
Gender equity	1.00	1.00	1.00	1.00	3.00	3.00
Race equality	2.00	1.00	1.00	2.00	2.00	2.00

Scores on ECERS-R, combined: June and December 2005 and July 2006

Average Scores

Subscale	Nursery and reception (June 2005)	Rooms 1 and 2 (December 2005)	Rooms 1 and 2 (July 2006)
Space and furnishings	4.40	2.60	3.05
Personal care	3.75	2.50	2.75
Language - reasoning	2.60	1.10	1.40
Activities	2.50	1.00	3.00
Interaction	1.00	1.00	3.00
Programme structure	1.50	1.50	2.00

Sample narratives from the Leuven Involvement Scale observations

Three examples taken from the same 3 children observed 12 months apart are given as illustration of typical activity patterns. Levels of involvement are rated from 1 ('No activity') to 5 ('Continuous intense activity'), while 3 represents 'More or less continuous activity'. The first set dates from June/July 2005, the second set from July 2006.

Boy F		
23 June 2005	Room: N Number of children: 30 Number of adults: 5	Level of involvement
1.50pm	<p><u>Activity</u></p> <p>6 boys are on road mat in building corner. F is removing animals from petrol station, using them to 'fight' with 2 of the boys. Sits back, looks around, talks to boys, then 'walks' a zebra on the mat for a while on his own.</p> <p>Picks up some cubes he has spotted and puts them in the garage; continues collecting cubes systematically. Rejoins other boys, exchanges zebra for crocodile, and departs.</p>	3
2.30pm	<p><u>Activity</u></p> <p>Playing outdoors, mostly on his own. Climbs on tunnels, then runs around and climbs on a block, quite intent, but then wanders away.</p> <p>Runs to bike area, gets hold of a bike with no pedals and circumnavigates the track. Then leaves it to push another boy on his bike, and seems to get more pleasure from this. Returns to his own bike.</p>	2
3.10pm	<p><u>Activity</u></p> <p>Sitting in a class group singing action songs. Not clear if he is listening: he rubs his eyes, rocks on his knees, and does not copy the actions of other children and the adult. Examines his socks, rocks his body, stares passively while adult talks to a distressed child.</p>	1
12 July 2006	Room: 2 Number of children: 30+ Number of adults: 2	
10.55am	<p><u>Activity</u> Waiting</p> <p>Walks from 'gate', looks round room for activity. Stands behind children seated round snack table, picks nose. Walks round table and stands holding the back of another child's chair. Stares as if uncomprehending as the children at the table chat.</p>	1
11.15am	<p><u>Activity</u> Friendship</p> <p>Kneels on mat with another boy turning pages of car magazine, mouth open in admiration of different models. Points, identifies and discusses cars. Boy turns pages from back to front then starts again from the back. One page gets torn out, other boy runs off with it. F left to himself closes magazine, but runs to fetch boy and bring him back. They sit and turn pages together again, pointing out features.</p>	3
2.25pm	<p><u>Activity</u> Friendship, puzzles</p> <p>With other African boys, choosing pictures of cars in magazine, acting tough, striking poses. They move to sit at nearby table with peg puzzles; he takes out all pieces, shows each item to another boy, lets him take them and replace them. Cheers each time a piece is placed correctly (both boys shout "I did it"). Enjoys standing the board up vertically and watching the pieces fall out on table.</p>	3

Boy D

	Room: N	Number of children: 30	Number of adults: 5	Level of involvement
23 June 2005				
2.35pm	<u>Activity</u>			
	In outdoor area; watches the children at the drinks table; runs around alone; comes and goes; runs to climbing frame and then tunnels. Sings loudly to himself with evident pleasure.			2
	Leans on drinks table briefly then wanders off again. Experiments with door.			
2.50pm	<u>Activity</u>			
	Outdoors; drags blocks from tunnel and pushes them across the playground. Stops and looks inside tunnel; examines it intently then crawls through.			3
	Stops, stands, wanders; picks up stilts; runs to where other children are. Carries a box across the yard.			
3.00pm	<u>Activity</u>			
	Sitting on the road mat playing with Elmer the elephant; singing and talking to himself, completely absorbed. Lies flat on floor, leans over and talks to elephant, waves it in the air.			5
	Lies with relaxed posture on back, waves arms in air, picks up plastic elephants and makes them interact and talk.			
July 2006	Room: 1	Number of children: 29	Number of adults: 3	
9.05am	<u>Activity</u> Selecting work			
	He has been wandering the room, looking and chatting, for 10 minutes, and is now invited by TA to come and do some writing. Sits down and is given lined paper and pencil. Writes name (incorrect letter formation) then stops to talk about this trainers to a passing child. Writes name again on next line starting letters from bottom instead of top! TA dictates words for him to write and he produces 'mum', 'cat', 'sisdo'.			3
9.40am	<u>Activity</u> Writing story			
	Kneels on floor to lean on table, then moves to sit on chair, to continue writing with TA. He writes 'story' and TA writes underneath. Stops to rub eyes and watch other children; returns to writing briefly but has lost interest. Returns to task but distracted by other children. Cheerful but yawning by this point.			2
				3
2.20pm	<u>Activity</u> Making zigzag book			
	TA shows him and others how to make a zigzag about their route to school. He draws a careful picture, lays head on table to add details and colour in. Tongue pokes out as he lies with head on arm and concentrates. Leans back, smiles at his work. Moves off chair and kneels on floor again to bring face closer to paper as he starts on next page.			4

Girl K

23 June 2005	Room: N Number of children: 30 Number of adults: 5	Level of involvement
1.55pm	<p><u>Activity</u> Book sharing</p> <p>In group playing on road mat, uses a plastic mammoth to hit the garage; listens to other children talking; walks off.</p> <p>Gives a book to an adult and shares with her, looking at pictures, pointing, intent on story, commenting on the children in the pictures. Listens as adult interacts with other children, then returns to looking at the book.</p>	3
2.50pm	<p>In the outdoor area, wandering around and watching other children.</p> <p>Walks along, examining her own hands and feet with apparently mild interest.</p> <p>Arrives at the tunnel, chats with other children, kneels, then wanders on.</p>	2
3.00pm	<p><u>Activity</u> Group session</p> <p>Sits with group on the mat taking part in action rhyme session; does as instructed by adult.</p> <p>Watches adult intently, copies actions briefly, then appears to forget: fiddles with shoes, looks around her, no longer joins in singing. Turns back to look at adult again.</p>	2
July 2006	Room: 2 Number of children: 30+ Number of adults: 2	
10.45am	<p><u>Activity</u> Drawing table</p> <p>She sits back from the table with a sheet of small stickers from home. Peels last stickers off and tries to work at the sticky sheets remaining. Sticks a piece of this on Girl N's back then puts bits of backing sheet in her mouth; leans back, balancing chair on two legs, and yawns. Returns chair to floor, continues to pick at sticky sheet, dropping scraps on floor.</p>	3
1.45pm	<p><u>Activity</u> Reading</p> <p>Sits at a table turning pages of book; informs me 'me and Girl L like quiet reading'. Flicks through book without focusing on content then swaps books with Girl L. Starts on back page (advertising other books in series) and turns pages from back to front without looking at them; looks round room; goes to pour herself some water.</p>	2
2.00pm	<p><u>Activity</u> Making zigzag book</p> <p>Has a strip to make a zigzag about her journey to school; draws a lollipop lady; says she saw a squirrel; changes it to a squirrel monster, then to a jelly monster. Working from R > L along the strip. Decides she has done enough but TA tells her to carry on and finish.</p>	3

Scores from the LARR tests in two schools at two times

Gorton Mount Primary School: April scores on the LARR test, showing change from October scores; children (n= 41) grouped in their registration groups

Child	Age	Raw score	Standard score	Change from Oct	Band	Change from Oct
Boy Y	5.5	17	110	-8	B	-1
Boy D	5.2	6	87	-11	C	-2
Boy M	5.3	3	78	-8	E	0
Girl S	4.6	8	100	+10	C	+1
Girl D	5.3	14	104	+25	C	+2
Girl R	5.0	15	110	+25	B	+2
Girl CH	5.2	8	92	-8	D	-1
Boy AK	5.1	7	90	+2	D	+1
Boy DM	5.3	12	99	+5	C	+1
Girl LA	5.0	4	84	+9	E	0
Girl J C	4.6	4	89	+4	D	+1
Boy KC	4.10	6	91	-8	D	-1
Boy EM	4.9	13	109	+26	B	+3
Girl Be M	4.8	12	107	+19	B	+3
Girl Br M	4.8	11	105	+	C	+3
Boy M O	5.2	11	98	-4	C	0
Girl S R	5.1	4	83	+2	E	0
Girl R S	4.10	0	--	--	--	--
Boy KT	5.3	11	97	-2	C	0
Boy R B	5.5	9	91	-1	D	0
Boy Ch C	4.7	8	99	+4	C	+1
Boy O	5.2	14	105	-2	B	0
Girl E L	5.5	15	105	+18	B	+3
Boy F M	4.7	3	84	+	E	+1
Boy E S	5.5	8	89	+8	D	+1
Girl H S	4.7	3	84	-5	E	-1
Girl KU	4.10	12	105	+15	C	+1
Girl F Z	4.8	8	98	+2	C	+1
Girl A A	4.6	14	116	+22	A	+3
Girl K A	5.1	4	83	+3	E	0
Boy MH	4.10	1	72	+	E	+1
Boy Mu H	4.11	11	101	+	C	+3
Girl L H	4.9	9	99	-1	C	0
Boy H I	5.3	3	78	-1	E	0
Boy J K	4.8	7	95	+18	D	+1
Girl N M	4.7	0	--	--	--	--
Boy T N	5.0	8	94	-11	D	-1
Girl N S	4.9	10	101	+24	C	+2
Boy D T	5.0	2	77	+	E	+1
Boy R W	4.9	1	73	-10	E	0
Boy A W	5.4	11	95	+7	D	+1

Control school: April scores on the LARR test (n=20), showing change from October scores

Child	Age	Raw score	Standard score	Change from Oct	Band	Change from Oct
Girl A	5.5	absent	--	--	--	--
Girl C	5.4	21	130	+20	A	+1
Girl N	5.4	15	106	+11	B	+2
Girl T	5.4	18	115	+27	A	+4
Girl S	5.3	14	104	+21	C	+2
Boy W	5.3	19	120	+26	A	+3
Boy Hu	5.3	10	95	+	D	+2
Boy Ha	5.3	19	120	+26	A	+3
Boy A	5.3	left	--	--	--	--
Boy M	5.3	6	86	+7	E	0
Boy I	5.2	21	132	+27	A	+2
Boy J	5.2	7	89	-1	D	0
Girl S	5.2	5	85	+	E	+
Boy D	5.2	14	105	+21	B	+3
Girl H	5.2	16	111	+21	B	+2
Boy Ja	5.2	14	105	-5	B	0
Girl S	5.1	left	--	--	--	--
Boy K	5.1	8	93	-8	D	-1
Girl L	5.1	absent	--	--	--	--
Boy A	5.1	10	97	+17	C	+2

Scores from the Foundation Stage profile in 2004-5 and 2005-6

Comparison of data from FS profile, 2004-5/2005-6

% children at or above national average	2004-5	2005-6	Increase or decrease during the Montessori project
PSE: dispositions & attitudes	95	98	+3
PSE: social development	80	76	-4
PSE: emotional development	70	72	+2
CLL: Language for communication & thinking	80	72	-8
CLL: linking sounds and letters	48	62	+14
CLL: reading	83	56	-27
CLL: writing	73	46	-27
Maths: numbers for labels and counting	70	88	+18
Maths: calculating	80	75	-5
Maths: shape, space and measure	65	90	+25
KUW	93	96	+3
Creative development	98	94	-3
Physical development	83	96	+13

Parental views sampled on repeated occasions

(a) Expressed in July 05 interviews

Child	Siblings	Heard anything good about GM?	Heard anything bad?	Value of Nursery?
Boy H	None. Cousins have attended GM and have really liked it, were really satisfied	Cousins and other friends have 'just had fantastic marks and reports'	Never heard anything said against GM	Mixing with other children, 'blending, because he's basically shy'
Boy B	Has sibling in Year 1	The school 'just has a good reputation' and children get on well there. The discipline is good and they have 'good ways to tackle bullying'	None	'Their development', learning to be sociable
Boy J	One brother	'I really like the teachers, they're really nice'; Children's learning is good and behaviour management	None	'To respect other people... and to know their own future' [she explains that children have to find out more about who they are going to become...]
Boy R	Not at this school	Has not heard anything about the school but it is convenient for her to bring him	None	'To learn manners' (although parents should teach that too, and he already has good manners), 'to mix with other children'
Boy Re	Has two older siblings but not at GM; he has already attended another nursery	Just heard that it was a good school, nothing specific	None	They need to learn to be confident, and learn to share
Girl O	Yes - one of them went to this Nursery	Since the new HT the school has improved a lot, the teaching and the behaviour. The children are treated better, they are not shouted at, just talked to; they get on well	Sometimes the bullying gets overlooked and the parents have to go and see the teachers about it. That's up to parents to do that, and they are listened to	It's about interacting with other children, mixing, sharing; the learn to play with each other, you can see it at playgroup - they have to learn to play, it doesn't necessarily come naturally
Girl N	Sister attends this school but did not attend Nursery	It's a very good school, with very good teachers. The children make excellent progress in their reading and writing	Nothing	They have to learn letters and numbers; and she's a little bit shy, she has to learn to make friends
Boy U	Four older siblings; two are at this school and came to the Nursery	It's a good school...

Boy P	None	He has heard nothing...	Nothing	It's important for him to reckon things; to learn to be a member of a group - at home you just learn to be a member of a family; to learn to co-operate
Twins R and R	Older siblings went to the school but not to the nursery	The teachers are very polite to the children, and they talk to the parents; the children here are OK. The older ones like school and are getting on well with their reading and writing; the teachers are good, they talk to parents when children misbehave	Nothing	To meet other children, learn how to communicate; with the twins, the teachers will talk to them and they will have opportunities to communicate better
Boy M	An older brother at GM but did not attend Nursery	The school is close to their house. The teachers, like all UK teachers, are very highly trained and very friendly. They are happy with their son's learning	No idea about this	He has to learn a new culture because he will live in UK culture; he needs to find out about the toilet, eating and making friends

(b) Responses to September 05 questionnaires (n=21) (22% response rate)

SA = Strongly Agree; A = Agree; D = Disagree; SD = Strongly Disagree; D/K = Don't Know

	SA	A	D	SD	D/K
My child enjoys school	15	6			
My child is making good progress because the teaching is good	12	9			
I feel that my child is safe and well cared for at school	12	8			1
Behaviour in school is good	8	11	1		1
The school is well led and managed	9	11			1
The school takes account of children's views	7	11			3
The school seeks the views of parents/carers and takes account of their concerns	6	12			2
The school provides the right start for my child with good nursery education	13	8			

*Questionnaire distributed around 1 October; 15 responses dated before half-term; 6 responses dated November; one parent completed two questionnaires (6 Oct and 8 Nov - has children in 2 classes!) but slightly differently each time.

Additional comments:

I think playing with a piece of woods in the playground is danger for kids. It is better to use plastics pieces because it is safer

The Montessori method seems exciting to give cleverer learning. On TV pleased to see the pupils get involved in ideas for learning. At progressive school Bedales they had pupils' council, probably still have it. For the Olympics very impressed that young people in Newham-London will be Ambassadors to enthuse youth around the world to come to London. And a schools festival in Britain for sport.

So far the administration has given full weighting to our requests. I am fully satisfied and hope for future too. My son is progressing that is why I preferred to admit my second son also in the same school. He will join on 7 October at your institute of esteem. Once again thank you for the opportunity given to me for comments.

(c) Responses to December questionnaires (n=31)

L = Less than s/he used to; S = About the same as before; M = More than before

	L	S	M
My child looks forward to coming to school:	1	11	19
At home, my child tidies away toys and games:	1	25	5
My child helps to set the table and clear away at mealtimes:	3	18	10
My child gets dressed and ready for school without help:	2	20	8
My child says 'please' and 'thank you':	1	15	15
My child can be expected to behave well:	0	19	12
My child considers other people's feelings:	0	18	13
My child talks about what s/he has learned at school:	1	10	19
I feel my child is developing new skills:	0	5	24
My child talks about her/his school friends and playmates:	1	9	21
My child enjoys looking at books at home (alone or with family members):	0	19	12
My child asks to learn things and find out about things at home:	0	11	20
My child gets tired and moody at home:	7	15	8
My child is keen to learn new things:	0	8	22
My child enjoys a challenge!	0	9	22

My child's favourite activities at school are:

Painting	10	Playdoh	1	Going home	1
Drawing and colouring	8	Shapes	1	<i>(parent whose child dislikes school altogether)</i>	
Singing	6	Dancing	1		
Friends	5	Bricks	1		
Playing	4	Models	1		
Bikes	2	Outdoors	1		
Reading	2	Maths	1		
Stories	2	Puzzles	1		
Letters/Spelling	2	No idea	1		

What I like best about my child's class is:

Teachers: friendly / happy [7], kind [6], co-operative [2], informative [1]

Classroom: clean [1], activities [1], curriculum [1], not as busy [1], learning [1]

Children: more confident [1], polite [1], well behaved [1], settling down [1]

Anything you are not happy with?

Lack of reading, writing, books [3]

Losing clothes etc [2]

Bullying [2]

Not enough help with learning [1]

Classroom: no colour [1], too much noise [1]

Children smoking in playground [1]

APPENDIX 6

Staff and senior management views

(a) Self assessments – teachers’ responses - Sept 05 and April 06 (extracts from longer survey questionnaire and rating scale)

Questions about learning processes	September 05 (n=4)					April 06 (n=3)				
	1	2	3	4	5	1	2	3	4	5
How would you rate your understanding of the learning and assessment cycle? [where 1 is 'very limited' and 5 is 'very good']			1	3					3	
How much do you trust a child to know their own learning needs? [where 1 is 'very little' and 5 is 'very much']			3	1				1	2	
How often should children be allowed to dictate the speed of their own learning? [where 1 is 'almost never' and 5 is 'almost always']				2	2				2	1
How often should children have opportunities to learn from each other? [where 1 is 'very rarely' and 5 is 'very frequently']				1	3			1	1	1

Questions about effective teaching	1	2	3	4	5	1	2	3	4	5
How clear are you in your own mind about what you are teaching? [where 1 is 'unclear' and 5 is 'very clear']			4					1	2	
How would you rate your own subject knowledge across the core and foundation subjects? [where 1 is 'poor' and 5 is 'very good']				4				1	2	
How would you rate the progression of your lessons? [where 1 is 'low' and 5 is 'high']			2	2					2	1
How often do you feel you are teaching without a clear purpose? [where 1 is 'quite frequently' and 5 is 'very rarely']		1	2	1					1	2
How confident are you that you are planning successfully for SEN? [where 1 is 'not very confident' and 5 is 'very confident']		1		3					2	1
How often do children in your class have opportunities to be curious? [where 1 is 'almost never' and 5 is 'almost always']				3	1				1	2
How often do you use modelling as a teaching technique? [where 1 is almost never and 5 is almost always]				3	1				1	2
How often do you teach the whole class? [where 1 is 'almost never' and 5 is 'almost always']	2	1	1				3			
How often do you use group work in lessons? [where 1 is 'almost never' and 5 is 'almost always']	3		1				1	2		

Questions about classroom environment	1	2	3	4	5	1	2	3	4	5
How would you rate your use of your classroom environment? [where 1 is 'ineffective' and 5 is 'very effective']			2	2					3	
How well, in your view, does your classroom environment promote independence? [where 1 is 'very poorly' and 5 is 'excellently']				3	1				2	1
How would you currently rate your classroom for tidiness, orderliness and fitness for purpose? [where 1 is 'very poor' and 5 is 'excellent']				3	1			1	2	
How difficult would another teacher find it to access your classroom resources? [where 1 is 'very difficult' and 5 is 'very easy']	1				3		2			1
How easily can children access all the resources they need for learning? [where 1 is 'not at all easily' and 5 is 'very easily']					4				1	2
Would you describe your classroom as a child-centred environment? [where 1 is definitely not' and 5 is 'very definitely']				3	1				2	1

Questions about pupil behaviour	1	2	3	4	5	1	2	3	4	5
How well do pupils self regulate in your classroom? [where 1 is very poorly and 5 is very well]			3	1				2	1	
How successfully do you feel you model appropriate behaviour? [where 1 is not very successfully and 5 is very successfully]			1	3					3	
How effective do you feel praise is as a tool for managing behaviour [where 1 is very ineffective and 5 is highly effective]?			1	2	1				3	
How well do you promote independence and autonomy in your class? [where 1 is not at all well and 5 is very well]			1	2	1				2	1

(b) Data from senior management interviews, July 06 (extracts)

How would you rate the success of the intervention, on a scale of 1-10?

HT: I would rate it as 9; part of that answer is involved in my thinking of the potential it's got for them to develop on their own really without having to be constantly teacher-directed; so there's space for them to go and find out what they can do. So for me, that is actually creating risk-takers, which I feel my school population has sadly been lacking, and one thing that prevents children doing it is that fear of making mistakes

So the Montessori stuff... in an environment where they have security...combined with the changes we've put into place now, where there's more breadth... the combination of that is a bit of a feast really, and that should mean that children have their full entitlement of approaches and breadth. If I'm truthful I'd probably call it 7 out of 10 now but it has the potential...

FSH: ...7...it's not perfect because there are too many children in the room for it to be perfect; we can't develop them enough to manage themselves that quickly. The experience for the children themselves is really good because they get top quality materials to work with and the teaching has been really focused. The teachers have understood more what they're teaching

What have been the best aspects of the intervention?

HT: ... I think in terms of their mathematical development, that has been a very big weakness in the school for a long time, in every age-phase, and in mathematical development, particularly things like place value, that has been a particular strength. To go into the classroom and see how confidently children handle numbers, for very young children that is something that I have never seen... The other thing that I am very pleased with is the increase in speaking – the amount of communication that children are engaging with adults and with each other - the level of conversations is very good, and previously it had been very poor. I think it's because when they're doing those Practical Life activities they're talking to each other and talking about it...and because there is limited stuff out in the room they talk to each other more.

FSH: Basic building blocks for literacy and numeracy... making the first links between sounds and letters... building up the maths skills from 1:1 correlation and counting. That's helped by the materials being so logical, so ordered, the children aren't having gaps in their learning.

Would you say it has benefited all children equally?

HT: I would say that I think the girls have always been interested in those kind of things and it's the boys, particularly the most intelligent boys, who have benefited because they've been allowed to develop in their own way... [gives examples of children who benefit and of those who do not]. It's been very good for children who are autistic, special needs children have benefited, the children who would act out quite difficult behaviour, I think it's been good for them.

FSH: It has been beneficial to all children but it's fitted some more than others ... Children who have not got on to those materials yet will not get to like them, and some of them have not got far enough yet to have any success with them...

What has been the impact on children's behaviour?

HT: I think because they are confident and independent, although there's still a lot down there that I don't like... I like it when there's calmness and I dislike it when there's a frenetic atmosphere down there, and children are irritable, and I think it's because the staff can't be bothered.. But overall the 'behaviour for learning' is better than it was.

FSH: For some of the children it's enabled them to be self-controlled and show they can do it...the majority of the children will self-correct, will tidy up after themselves... there's a minority, not exclusively boys, who use the independence to do nothing because they're not self-managing to do some work, put the work away, do some more, put the work away... but some of them do come in and do the work-cycle without any intervention.

What has been the impact on staff?

HT: It's raised their expectations about what kids can do – made them organised, made them better teachers, made them plan ahead better, made them assess for learning better – made them more like the most experienced teacher...

FSH: They do proper assessment for learning. Subject knowledge and skills acquisition knowledge has gone up, like in maths. Expectations and awareness of their own expectations have gone up, for themselves as well as for the children. So they've done a good job.

They use assessment for learning and see that it does work... also the sense that you can plan for individuals... previously it would have been planning for groups and it would have been far less relevant to most of the children, more to do with meeting the literacy and numeracy targets

Extracts from report on a one-day HMI inspection, January 06

...Please remember that the evidence on which the feedback is based is limited to the observation of sessions in the Foundation stage, discussions with you and members of your staff, the Montessori trainer, and the perusal of a small selection of documentation.

The overall effectiveness of the provision observed is good.... The children's attainment is PSED is very good and this was particularly the case for the boys I observed. The vast majority of children showed very high levels of concentration and perseverance, even the nursery aged children. There was very little evidence of aimless wandering about as children chose an activity and stuck with it, often for a long period of time. They interacted well with others, operated independently and many initiated conversations. As a result the attainment of the children in this area is well within, and in some cases beyond, the green band of the stepping stones.

The attainment of children in MD was good, and for some nursery children it was very good....Overall children displayed evidence of recognising the value of small groups of objects, using one to one correspondence correctly; they could count and order rods to ten and correctly match them with numerals... All this locates the children's attainment within the green stepping stones band.

The provision within the Foundation Stage is good and the quality of teaching is good...

The leadership and management of the Foundation Stage are good...

Provision to ensure the children's health and well being is good, with one provision [parental concerns about end of day arrangements, routines, procedures]...