

Young Learners' Project

Early Intervention Final Report 1997–2001

Section 3: Mathematics

1. Background

1.1 Aims

The aims of the Early Intervention Mathematics project in Inverclyde are:

- a) to raise attainment within recommendations of HMI 'Improving Mathematics Education 5–14'
- b) to prevent underachievement
- c) to work with associated pre-5 establishments to ensure continuity and progression in children's mathematical development
- d) to provide parental support and resources in conjunction with home learning focus group which recognise and develop the parent's role in their child's educational development
- e) to disseminate good practice developed to all Inverclyde schools.

Early Intervention was part of a whole authority drive to raise attainment in mathematics 5–14 across all primary and secondary schools (see Appendix 1).

Four schools were involved in the project initially. Each school was given the support of a full-time nursery nurse and a project teacher for two days per week.

1.2 Maths Focus Group

A focus group chaired by the mathematics adviser was set up to direct the development of the project. This focus group comprised project teachers, nursery nurse, head teacher, home learning worker, and class teacher.

The main focus in year 1, 1997/98 was:

- a) the development of the programmes of study for Level A which incorporated the recommendation of 'Improving Mathematics 5–14' and provided guidelines on oral interactive teaching of mental calculation
- b) resourcing the four schools to the same level
- c) intensive in-service on teaching and learning in mathematics for all P1/P2 teachers, project teachers and nursery nurses. Home learning workers were included in this in-service to ensure that the work they were doing with parents was in line with what was happening in the classroom. This in-service was mainly by the mathematics adviser and Peter Patilla an outside consultant who was closely linked to national curriculum developments.

Appendix 1 gives an outline of the development of the project over the three years.

Appendix 2 gives a list of the factors which influenced the development of the project.

Appendix 3 gives a list of the issues which were addressed through in-service.

2. Activities

2.1 Raising attainment within the recommendations of HMI 'Improving Mathematics Education 5–14'

The tasks undertaken were:

- a) Programmes of study for Level A, incorporating all the recommendations of Improving Mathematics Education 5–14, have been developed and are being used in all primary schools.
- b) All primary schools have a dedicated one hour per day for mathematics, 10–15 minutes of this time is spent on oral interactive teaching of mental calculation.

2.2 Preventing underachievement

The tasks undertaken were:

- a) The main focus of the project teachers and the nursery nurse in the project schools until June 2000 has been to prevent underachievement both with children who were having problems with maths and in challenging the able.
- b) Support resources were produced by the project teachers.
- c) All teachers involved in the project were encouraged to set targets for all the pupils in their class. The targets were openly discussed at meetings for the four schools.
- d) In-service was provided by SEN Network personnel on this issue.

2.3 Working with associated pre-5 establishments to ensure continuity and progression in children's mathematical development

The tasks undertaken were:

- a) Joint in-service to enable pre-5 staff and P1 teachers to discuss continuity and progression.
- b) The mathematics programmes of study in P1 links with the mathematics programmes in pre-5 to provide continuity and progression.
- c) There is substantive evidence that P1 teachers in the four schools now do not spend time teaching children what they have already acquired a competence at in pre-5.
- d) More collaborative work needs to be done with P1 teachers and pre-5 staff to streamline the transfer of information.

2.4 Providing parental support and resources, in conjunction with home learning focus group, which recognise and develop the parent's role in their child's educational development

The tasks undertaken were:

- a) Mathematics activities developed as part of the SHIP package produced by Home Learning Team.
- b) Flyer produced for parents about mental calculation, at each stage.
- c) Maths year 2000 booklet on 'How To Help Your Child With Maths' issued to all parents.
- d) Very successful parents conference on Teaching and Learning in Maths organised in Greenock Town Hall in March 2000.
- e) Maths video 'Learn to Count' illustrates good practice in working with parents.

3. Outcomes

- a) Teachers' expectations for pupils in P1–P3 have been raised. Most pupils are expected to attain Level A by the end of P2 rather than P3.
- b) In the four schools in the project the percentage figures of pupils attaining Level A in June 2000 were as follows:

School	1	2	3	4
P2	68.4	88.2	88.1	81.3
P3	91.3	86.4	97	95.8

- c) In June 2000, the overall percentage figure for Level A National Test in Inverclyde for P2 is 75.2 and for P3 is 96.3.
- d) Assessment carried out by project coordinator in a standard way across the four project schools in May/June 2000 confirmed that all pupils that passed Level A national test were consistently competent in all the work at that level.
- e) Evidence from surveys of teachers, nursery nurses and pupils in the project schools indicates that the learning and teaching of mathematics is an enjoyable experience.
- f) Inverclyde Maths Policy document has been used by all P1/P2 teachers and headteachers for evaluation.

4. Dissemination of Good Practice

Based on the activities of the focus group and the evaluations of the materials by school staff and based on the outcomes in section 3 above, the following are identified as good practice.

- a) Mathematics policy, programmes of study and parental booklets have been issued to all primary schools with supporting in-service.
- b) Project teachers spending time in all schools to help develop teaching and teaching strategies and to support children who may be underachieving in P1–P3.
- c) 'Learn to Count' video has been produced to illustrate the good practice

- developed in teaching and learning in the project schools.
- d) In-service has been provided for all headteachers and infant teachers to disseminate the good practice developed in the project.
 - e) All schools have had the opportunity to attend in-service to develop teaching and learning skills provided by the adviser, project teachers, Peter Patilla and Ruth Mertins.

5. Conclusion

- 5.1** The evidence from national test results indicate that there has been a significant improvement in attainment in both the project schools and in the authority as a whole, with the target for achievement of Level A now in all schools being P2 instead of P3.
- 5.2** In a number of recent HMI reports, it has been noted that the quality of learning and teaching has been commended.
- 5.3** The high quality in-service on mental calculations and the follow-up support provided in classrooms by the project teachers helped embed the Inverclyde maths policy in all schools.

6. Way Ahead

To look at:

- a) how we support the 3.7% of pupils that are not attaining Level A by the end of P3. The authority is exploring the strategies used as part of the National Numeracy Strategy in England
- b) how we identify and challenge able pupils mathematically
- c) how we sustain and develop learning and teaching in mathematics throughout the primary school.