Essex LEA and the Leverhulme Trust are currently funding a six year research project, the Early Reading Research (ERR), which combines large scale, classroom-based, experimental investigations with a series of smaller scale studies designed to identify the impact of specific instructional principles on children's learning. The ERR aims to establish the most effective ways of teaching reading and to examine the extent to which (i) every child can reach age and skill appropriate targets in reading and (ii) 'perceived difficulties' in reading can be prevented.

**Outcomes of the Early Reading Research**

Children in six ERR schools in Essex were taught to read through a 'reading framework' based on psychological principles of teaching and learning. Children's progress was monitored over a two year period while they were in Reception and Year 1 and compared to (i) children in six similar schools who were taught through their schools' usual methods and (ii) children in schools taking part in the National Literacy Project (NLP), the pilot version of the NLS. The results demonstrated the effectiveness of the 'reading framework,' with ERR children outperforming those in the comparison group on ten out of the eleven measures taken. Although both groups had a mean chronological age (CA) of 6 years 4 months, children in the ERR schools had a mean reading age (RA) of 6 years 10 months whereas those in the comparison schools had a mean RA of 6 years 3 months, a seven month difference, one month for every three months in school. Only 2% of ERR children would be seen as lower achievers in the comparison group whereas 65% of children in the comparison schools would be lower achievers in the ERR schools. Similarly as many as 58% of ERR children would be seen as higher achievers in the comparison schools but just 9% of higher achievers in the comparison schools would be higher achievers in the ERR schools.

In the comparison between a sample of ERR children and those in the NLP, the mean RA of the ERR children was 6 months higher than the RA of the NLP children (7 years 2 months compared to 6 years 8 months). Only 3% of ERR lower achievers would be lower achievers in the NLP schools but 60% of NLP children would be seen as lower achievers in the ERR schools. In relation to higher achievers, 58% of the ERR children would be higher achievers in the NLP schools but only 14% of NLP higher achievers would be higher achievers in the ERR.

The research has demonstrated that attainments in reading can be raised quite dramatically and that 'learning difficulties' can, to a large extent, be prevented, through methods which improve the attainments of all children. The research indicates that; (i) it is preferable to teach children three times a day for short periods (distributed practice), rather than for a single, concentrated period (massed practice); (ii) forgetting can be prevented to a considerable extent by a psychological
process known as 'interleaved learning' where new and old material are practised together and (iii) generalisation is promoted through the sequences through which skills are introduced, teaching skills to accuracy and fluency and giving children a wide choice of reading material.

**Follow-up Study**
A follow-up study designed to replicate the outcomes of the above studies was undertaken in nine further schools. Children from 'disadvantaged' areas were seen to perform as well as those from more 'advantaged' areas, with both groups having RAs approximately eight months ahead of their CAs. The results suggest that high quality teaching can overcome social differences in children's backgrounds.

**Implications of the ERR for Special Education**
The results are of particular significance to those working in the field of special education and raise questions about current patterns of SEN provision. The ERR provides a framework for teaching all children, irrespective of their attainments. It sets clear goals for children's learning, identifies teaching methods through which they can be achieved and ensures that progress is monitored, assessed and recorded on a regular basis. One implication, therefore, of the ERR is that resources and interventions should be redirected from special needs assessments and remediation, to identifying ways of raising the attainments of all children. For example, the ERR suggests that the key to ensuring that children make progress is what and how they are taught rather than the availability of additional resources, parental support or 1-1 teaching. It also appears that lower achieving pupils are best taught, by their class teachers for up to six brief daily teaching sessions, in groups where possible, using the same resources and teaching methods that are used to teach other children.

The ERR effectively renders the procedures specified in the Code of Practice (CoP) redundant for a variety of reasons. Placing children on Stages 1-3 of the CoP is unnecessary and it is difficult to see how children would not benefit from, or require, a statutory assessment or statement. Within the ERR debates about teaching and learning are related to the needs of all children, not the small minority perceived to have problems. Teachers would require in-service training on the psychological principles of teaching and learning to implement the 'reading framework' but this could be funded, in part, from existing SEN budgets as current patterns of SEN provision and funding would be unnecessary. Similarly the expensive training of SENCOs would not be required as their role would be largely irrelevant in relation to children seen to have literacy difficulties. Overall, therefore, the message from the ERR is that children's attainments could be increased dramatically if more time was spent teaching the right things, in the right way, and less on all the bureaucracy and administrative tasks special needs specialists are currently required to undertake.
Implications of the ERR for the National Literacy Strategy

The ERR also raises considerable questions about the NLS, particularly at the word level. In numerous respects the NLS teaches children skills which are either inappropriate or potentially confusing and so will not readily be generalised from one context to another. Expectations for the rate at which skills are taught are much lower in the NLS than ERR, so children may not, as a result, progress as quickly as they are capable. The outcomes and implication of the ERR indicate that the NLS may actually cause problems for some children and lead teachers to experience difficulties in teaching them to read. This is reflected in the concept of the ‘zero tolerance of failure,’ where only 80% of children are expected to reach appropriate targets at the end of Key Stage 2 by 2002. Unfortunately this is no different from the number of children predicted by the Warnock report to have special educational needs, 24 years earlier in 1978.

Implications of the ERR for Educational Psychologists

The ERR has been developed by University and LEA based educational psychologists. The reading attainments of all children have been enhanced by psychologists working collaboratively with teachers and advising them on the implementation of psychological principles of teaching, learning and curriculum design across the whole school. Thus, it implies a radically different role for educational psychologists from the one typically undertaken. Within the paradigms imposed by the field of special educational needs, teachers and psychologists usually only focus on the few children causing particular concern and treat them as isolated cases, focusing on their individual needs and how best to secure the resources to meet them. The ERR therefore highlights an alternative route through which psychological theory, research and practice can influence educational practice.

Finally, the research was initially commissioned by Essex LEA and demonstrates the value of experimental work being undertaken in the classroom through collaborations between LEAs and higher education and between teachers and psychologists. The research has only been possible because of the nature of this collaboration and its emphasis on partnership and joint decision making. To date it represent one of the few attempts to apply psychological theory and research to classroom contexts to identify the most effective ways of teaching children to read.

For further information about the Early Reading Research please contact Dr Jonathan Solity: c/o Ursula Kelly, Leverhulme Reading Research Project, Department of Psychology, University of Warwick, Coventry, CV4 7AL (01203) 523745 e-mail: j.e.solity@warwick.ac.uk