Collaborative learning with technology: some effects on educational disaffection

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Introduction

How welcome parents and carers feel at their children's school seems likely to have a significant influence on the degree to which they and their children engage with its educational programme. The ethos of the school and the nature of the classroom environment as determined by teachers are therefore significant and continuing features of its pedagogy and its taught and 'hidden' curriculum (Landon and Carr, 1999; McDowell and Kay, 1998).

This paper draws on evidence gained from an evaluation of the work of ten junior (middle) and primary (elementary) schools involved in the Parents And Children Together (PACT) project in County Durham, in the northeast of England, since 1998. At its centre is an analysis of test scores in reading and the gains made by children as a result of their participation in the PACT programme. Informal interviews and participant observation notes have also been drawn upon from interviews with school headteachers (principals), basic skills tutors, class teachers, parents and children. Documentary analysis is also reported from teacher lesson plans, evaluation sheets and questionnaires completed by parents and children.

Context

Since PACT first began, significant changes in education, social policy and schools have taken place in England. Literacy and numeracy sessions are now government requirements in the curriculum of primary schools (DfES, 2005). Computers are no longer a novelty, either in the primary classroom or in homes (UK National Statistics, 2002). A revised system of local governance has emerged through Local Strategic Partnerships (Office of the Deputy Prime Minister, 2005) as has coordination of post-compulsory education provision (Learning Partnerships, 2006) and programmes to improve basic skills in the population (Learning and Skills Council, 2006). Other initiatives including Sure Start (2006), aimed at improving parenting skills and support for the under fives, are now widespread nationally.

Within this context, the value of the programme reported in this paper is what it illustrates about how

school disaffection can be overcome. It is also concerned with how the development of basic skills can be made more effective and about the implications for current school practice, classroom methodology and community engagement. This is of particular timeliness because many local education authorities and schools in England are considering their response to the government's policy for Extended Schools (DfES, 2005) within the wider policy agenda framed by 'Every Child Matters' (DfES, 2004).

The families involved in the PACT project live in geographical areas in the north-east of Durham County that are among the most deprived in the United Kingdom and where the number of one-parent families is well above the national average. Many of the children involved come from homes with low or very low incomes (i.e. the household income is provided wholly from state benefits); cope with one or more parents who are in prison (most often the father); and live in areas with high levels of vandalism, youth crime and substance abuse.

Headteachers of the schools reported that low self-esteem and a lack of adequate parenting skills were key problems among parents. They noted that such parents often characterised themselves as 'thick' (stupid) and that problems in dealing successfully with the education of their children often reflected their own as well as their child's experience of disempowerment at school, the legacies of which are well understood (Smith, 2004).

The PACT project comprised discrete ten week courses for primary carers and their children, each run within the normal school day and supervised by a tutor skilled in small group work, adult education and working with disadvantaged families. The primary carers who attended were either unemployed (the majority) or had part-time work, which meant that sessions during school time were convenient for them. Tutors were non-judgmental, sympathetic and adept at creating 'third space' environments (Cook, 2005). They encouraged parents and carers to discuss wider educational issues such as bullying and homework. The tutors also often addressed the wider and often complex needs of parents and carers.

Three parallel strands of activity were organized: one for parents on the use of information technology and the development of basic skills; one for children on reading strategies; the third for parents and children together, with the latter being the most frequent.

Activities were deliberately varied, highly participative and emphasised enjoyment. Parents worked together to make teaching aids, practice their basic skills and learn strategies to help children to read. They read to children and also read poems together as a group; they wrote stories, checked spellings, used dictionaries and played alphabet games. Technology was introduced into sessions gently, most often to illustrate how their children worked during routine school activities. Explicit 'how to' instructional sessions on using computers were most often on a one-to-one or small group basis or as the need arose and always in the context of providing information to help them with their current task. For example, they would be introduced to word processing or the use of story-telling software packages while working in small groups to prepare teaching aids to help their children or to develop strategies collaboratively prior to joint sessions with their child.

Parents gained confidence and expertise in using computers and were encouraged to see this as a natural part of their wider educational work with their children. For the tutor, this aspect of PACT was an important objective in their work with parents. Attendance of parents with their children at PACT sessions was high and most parents succeeded in gaining certificates of accreditation in information technology. Tutors found that as a result of parents becoming less self-conscious about using computers and more confident in their use of them, many became more aware of ways in which they could gain access to computers outside of school – for example in public libraries – and more confident in making use of them for their personal development. Parents increasingly began to bring examples of or suggestions for computer use with the children to PACT sessions.

It is often difficult to overcome chronic low self-esteem or to address lengthy histories of educational failure and social exclusion within families where no living member has successfully engaged with employment. So while the programme benefited both parents and children, it was not always successful in helping them to be together in new ways or in changing the established and sometimes dysfunctional parenting culture within families.

As a consequence of their own experience of formal education, many parents who were attracted to the programme itself lacked the confidence to re-engage with 'school work'. Some were wary of the programme tutor and suspicious about being involved in school-

based activities. Others were anxious about tutors' expectations of them. Some felt that tutors assumed they would know more than they did about how to help their children, whereas in reality they had very little or no working knowledge of information technology and little access to it outside of their child's school.

Many of the parents on the programme were more interested in how their children behaved at school than in how they performed academically. The programme helped many to become more focused on the learning needs and academic achievements of their children. As a consequence, it improved their ability to help their children with school work. As one parent put it:

I really do think my son has benefited very much from this course. He was very disruptive and had a 'couldn't care less' attitude. He wouldn't learn his spellings or reading as he thought he couldn't do them. However, now he has more confidence and when he thinks he can't do it he asks me for help. He now enjoys coming home with his homework and reading book.

I have definitely learned how to help my child more with his work, especially the multi-sensory spelling routine. Like my son, I have also seen that learning can be more fun by making spelling games. The course has been really good for me. I can get a lot more involved in my children's school work.

The intention was to identify a number of parents and children who had become disengaged from education and were in need of help with basic skills, with whom PACT would be relevant and worthwhile. Within any school community this is a group of people without a clear identity. Few individuals feel comfortable about identifying themselves as being in need of help with basic skills; those whose needs are greatest are often least likely to do so. However, young people themselves are often agents of change, particularly in environments which include the use of technology. (Watts and Lloyd, 2004) So despite some initial anxieties, most of the parents joined the project because their children had asked them to do so.

Performance data

The analysis presented here is based upon data for 129 children and their parents/primary carers in ten schools (Fig. 1) and draws upon: pre/post-intervention information from the regional local education

authority (school attendance); PACT project administration (interviews with parents; interviews and reports from group tutors); interviews with head-teachers and parents (pupil behaviour, school ethos, classroom culture, parental engagement); observation of project work (group activities, tutor engagement with parents/carers and children); interviews and questionnaires from individual parents/primary carers (initial expectations and perceived benefits, sustained benefits, consequent engagement with education or employment, changes in self-esteem); and (separately) from their children: initial expectations and perceived benefits, personal objectives met, general educational benefits, changes in self-esteem. Additionally, reading age measures were established pre and post-intervention to assess gains in functional literacy.

PACT school sector	Males	Females
Primary: ages 4-11*	40	19
Junior: ages 7-11*	40	30
Totals	80	49

Figure. 1 Composition of PACT cohorts by school. (*typical age profile)

No significant correlation was found in the data for schools between the average point scores per pupil in national Standardised Attainment Tests, or SATs (QCA, 2006; Guardian, 2002), the percentage of pupils with formally assessed special educational needs, or the percentage of pupils with above average attainment in Mathematics, English or Science. The percentage of pupils receiving free school meals was, however, strongly associated with that of pupils eligible for assessment of special educational needs (r = .66).

Reading age gains produced by PACT were not found to be strongly associated with individual differences between schools in the performance of children in SATs, the proportion of children with special educational needs or the percentage in receipt of free school meals (Fig. 2). This suggests that the programme produced reading age gains relative to non-PACT cohorts in schools, irrespective of the innate ability or prior learning of children, or of the academic profile of particular school cohorts, or the socio-economic context within which individual schools were operating. PACT appears to be a robust methodology for producing educational improvement which is tolerant of wide variations in context and is a promising model with potential for addressing the increasing concerns about relatively poor literacy levels amongst boys. This is borne out by the
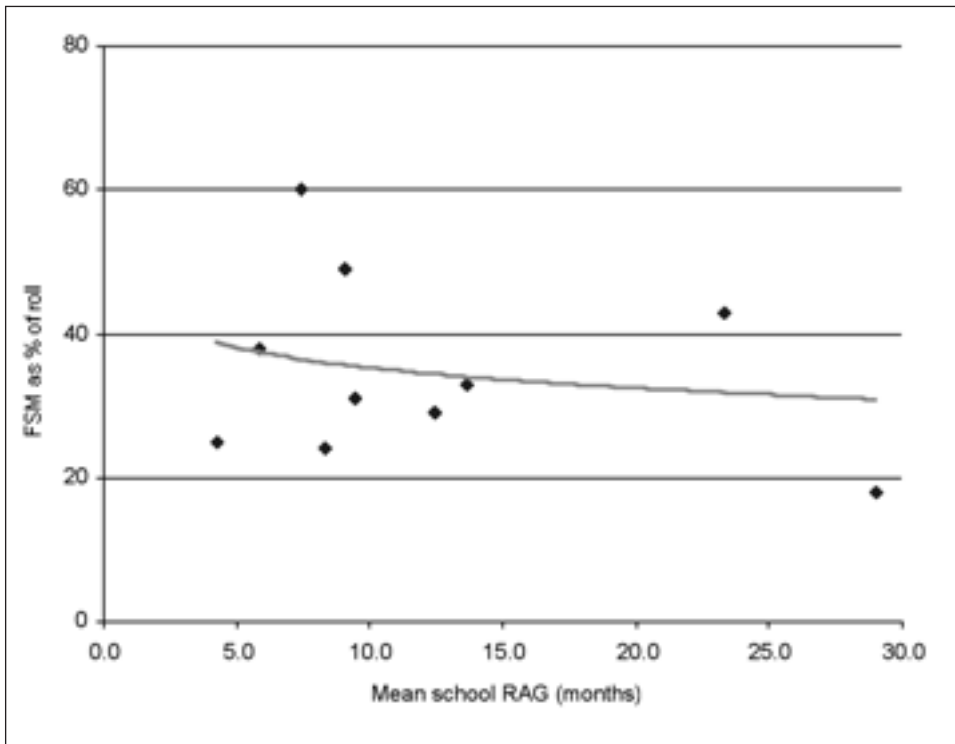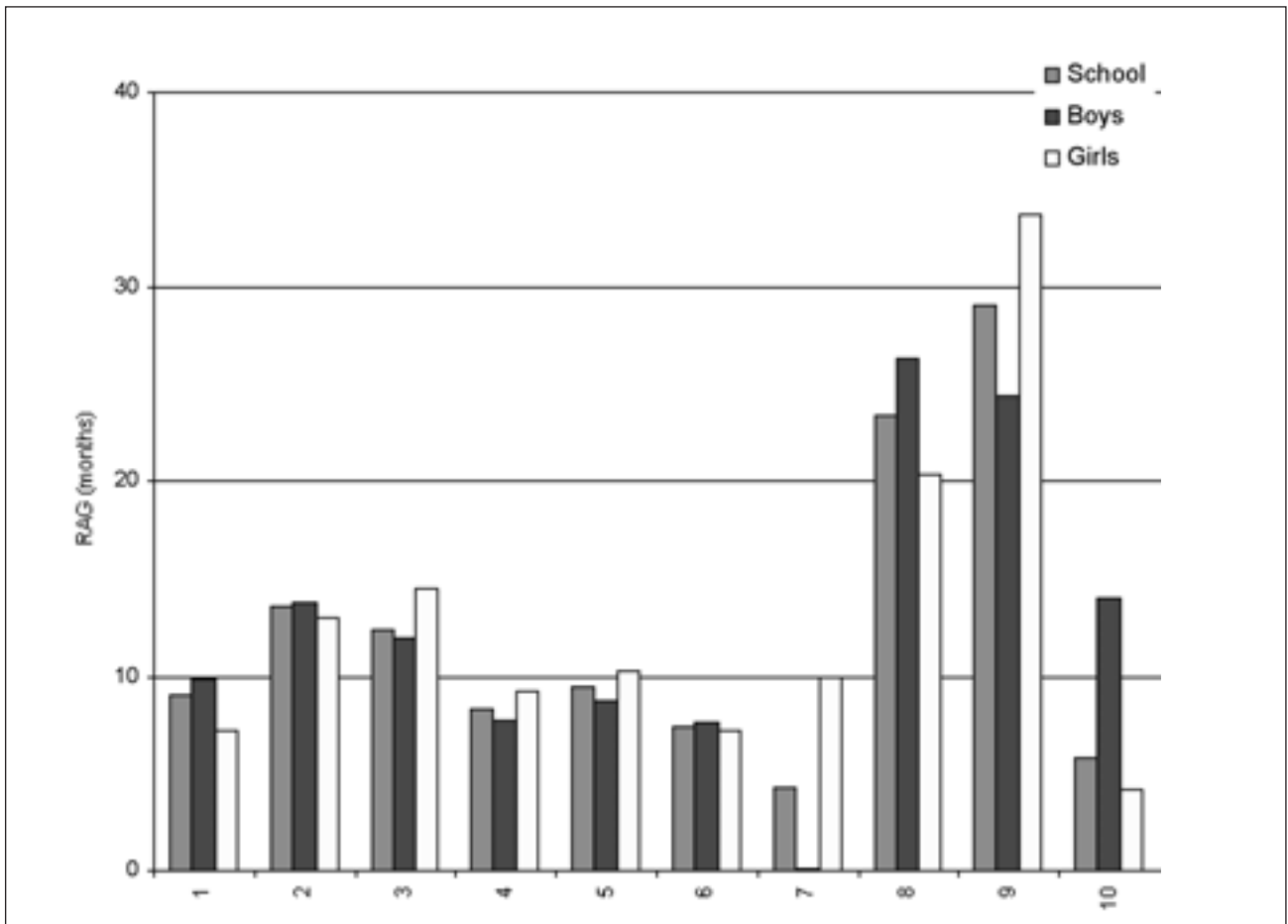
Figure 2: Only weak association was found between the percentage of pupils in receipt of free school meals (FSM) and each institution's mean reading age gain (RAG).

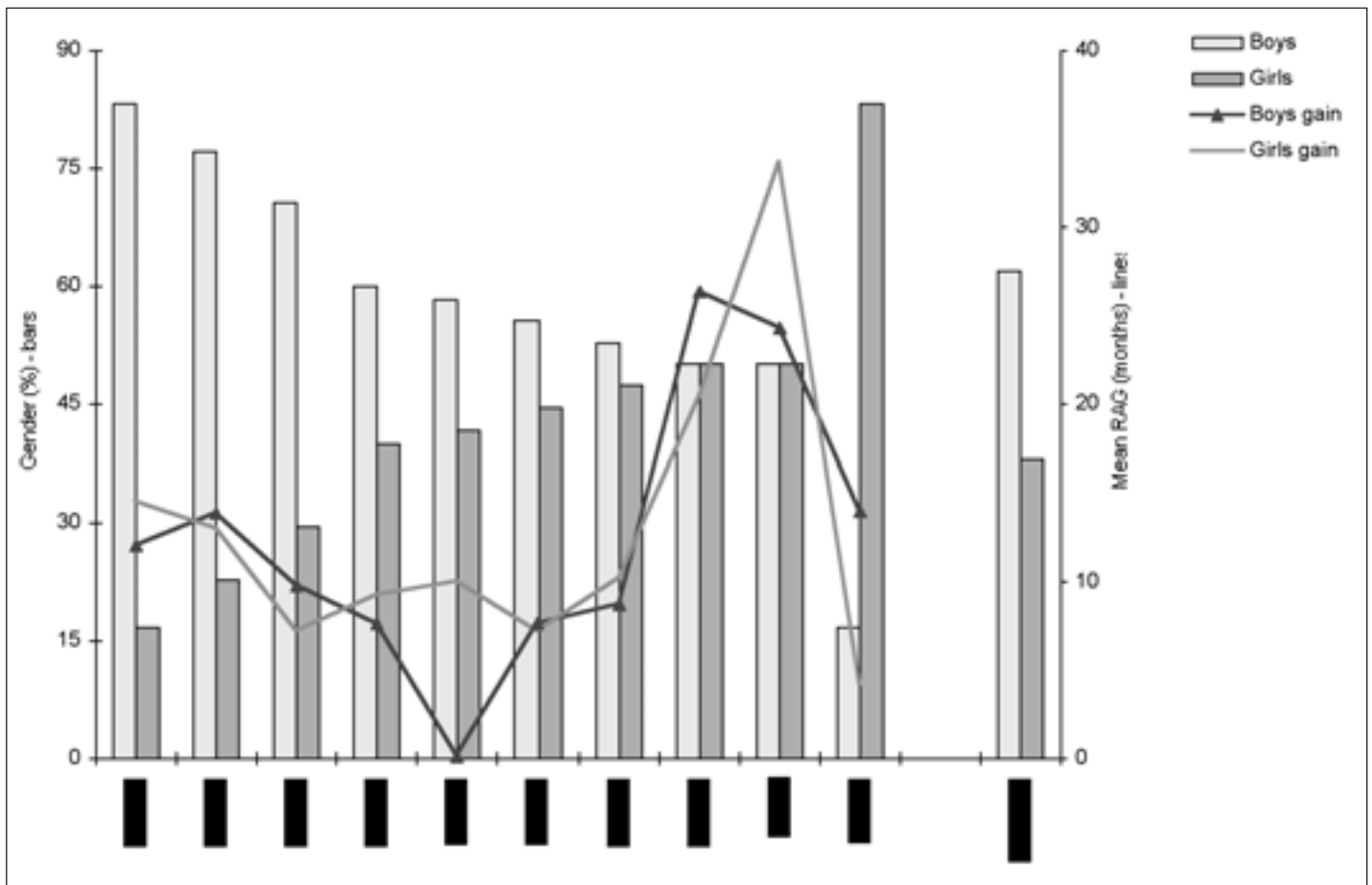Figure 3: Average reading-age gains by school and gender.

Fig. 4 School cohort compositions in PACT data with mean reading-age gains (RAG), by school and gender.

substantial reading-age gains in all schools, with those of girls being closely matched by those of boys (Fig. 3).

The differing reading-age gains of boys and girls are not associated with their proportions within cohorts. In some schools with the highest overall reading age gains (e.g. School I, Fig. 4) there were marked differences between boys and girls (24 and 34 months, respectively), but this was also the case in schools with relatively low overall gains (e.g. School E). The average reading-age gains within schools tended to be similar for boys and girls although for some, the range was markedly wide (Fig. 5).

The small number of students who lost ground in terms of reading age development (Fig. 6, RAG = >0) were almost equally divided between boys and girls and were characterised by poor attendance at the project.

For some students the gains were large (Fig. 6), in one group reaching in excess of four years. Overall the gains cluster into three main identifiable groupings: those pupils (approximately half the sample) who gained up to nine months; those (approximately a third of the sample) who gained between ten and nineteen months; and those who gained twenty months or more. Membership of these groups is not significantly skewed by chronological age or by gender (Fig. 6).

While many parents felt both enthusiasm and anxiety about the programme, their mixed feelings weren't a barrier to their involvement. Most said they had looked forward to working with their children, to improving their own skills and to learning about computers. Many valued the chance of gaining a qualification in the field of information technology and learning more about their child's school. What parents said they gained most from the project was an insight into teaching methods and into what they could do to help support their child's learning. Parents also experienced the course as an opportunity to make

changes in their own lives, to re-establish links with learning and to change their relationships with their children and the school. Empowering parents is an important element in tackling school disaffection (Bird, 2005; Camilleri, *et.al.*, 2005). One parent put it this way:

> *The project was a great experience for me because I'm a mother of over 50 years of age. The thought of going back to school was really daunting, wondering if the brain cells would cope with all that learning. The whole experience was fantastic. Our tutor had incredible patience with me. But I got there in the end. I never realized I was artistic until I joined PACT.*

More than half the parents reported that PACT changed for the better their view of their child's ability and gave them confidence to engage with school and
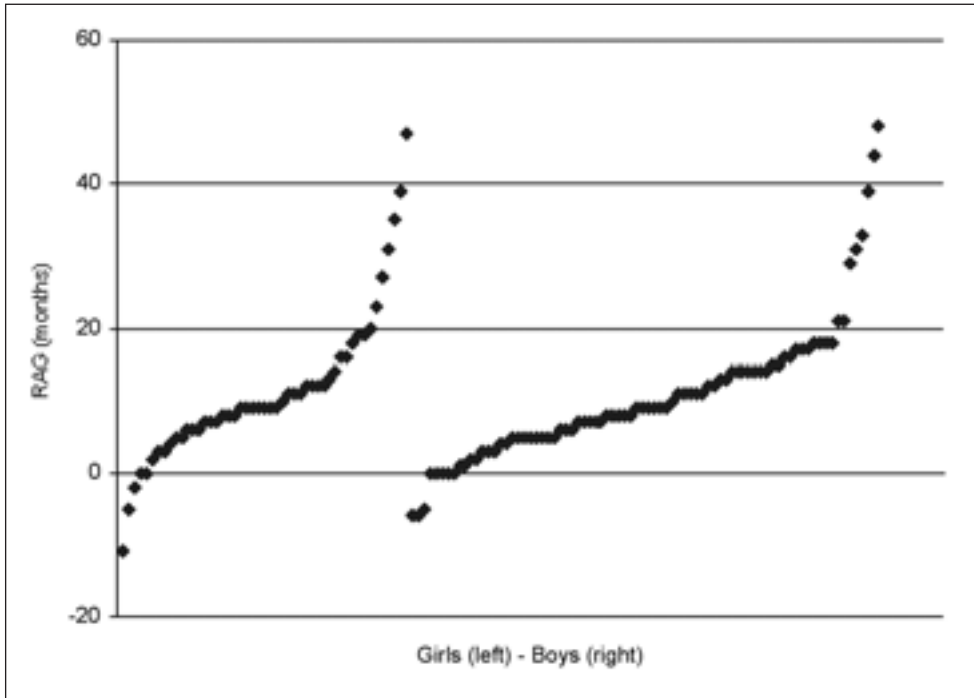

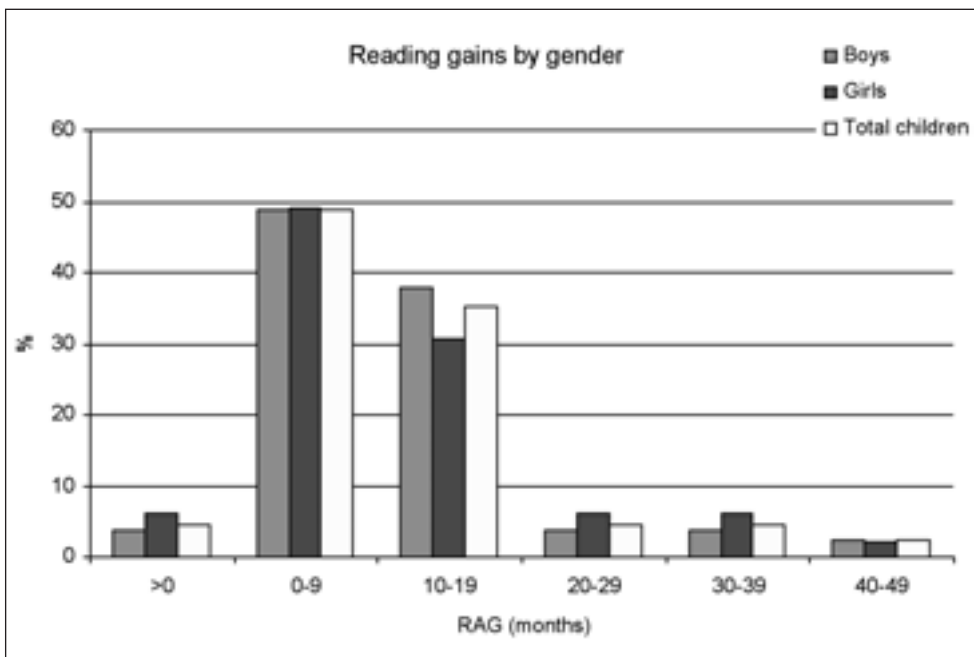Figure 5: Reading-age gain (RAG) by individual and gender.

Fig. 6 Reading-age gain (RAG) groups by gender.

to carry on with their own education. Over 80% of parents said that PACT had helped them and their partners to change how they supported their children at home:

> *'It helped you to know the ways in which your child learns in school so you can get a better understanding of their homework.'*

The hope was that PACT would enable families to develop their learning together and that on the basis of this parents would be more able and likely to re-engage with education. Fifteen per cent of parents reported that they had been able to make use of PACT to take up another course of study, including college access courses and computer-based courses:

> *'I did a numeracy and literature course so I could help my child with her homework. I have also now achieved numerous certificates for computer courses I completed with the school. This gave me the confidence to go on to college.'*

The programme was not designed to help people directly into jobs but there is evidence that sometimes it had this effect by developing confidence and skills, by improving self-belief and by giving hope to individuals and their children. PACT also helped parents to get involved with school and in some cases to become classroom helpers. The programme therefore offers a promising model for policymakers seeking ways to break the cycle of low expectation within disaffected communities.

Many children demonstrated high levels of commitment to the course and enjoyed working with their parents. Disaffection with traditional schooling had not dimmed their enthusiasm for an alternative approach to learning. One child summed up his experience of PACT:

> *I would tell my friends to join a project like this. It was enjoyable working with my mother. More pupils should do it. Because I needed special needs classes the project was really important to me to give my work that extra boost and more confidence to do better in class. It was also good fun.'*

Teachers were unequivocal that the children involved in the programme gained confidence. Their behaviour and their concentration also improved and, contrary to initial concerns from teachers, it conferred increased status on pupils in the eyes of their peers.

Teachers also commented that the project had significantly reduced their anxiety about contact with parents and had made them more able to value the differences between individual children. Headteachers were convinced that the project improved parental contact with the school and parent-school relationships. One head put it this way: 'It helps parents, teachers and children to value one another. It locks it all together for the child and improves things for the teacher.'

Why did the programme work? Interviews with teachers, PACT tutors, parents and children consistently identified a number of key elements which, between them, appear to have been crucial in producing the programme's impact. The combined effect of these factors appears to have been more powerful that any single one of them alone. Working with their parents within the school environment appeared to break down many established negative attitudes in carers, children and also teachers, which were unhelpful for learning. Being part of a small group led by a skilled tutor experienced in working in informal learning contexts enabled children and parents to adopt a pro-active role, which they found empowering. Making the learning relevant, fun and therefore interesting encouraged parents and children to engage enthusiastically with education in ways that most of them had not experienced previously within the traditional school curriculum.

For *children,* PACT was: a positive learning experience with substantial measurable gains in literacy; a fun experience in which they enjoyed working both with computers and with their parent/carer; and a programme that helped other aspects of their school work and their enjoyment of school.

For *parents and families*, PACT was: a framework that supported learning and skills development; a programme that improved links with the school; an encouraging experience that enabled parents to be more helpful to their children's learning at home; a means of improving family understanding of the aims and objectives of the school; a platform from which to secure employment and enable access to other courses (for a small number of parents); and a fun experience that they looked forward to each week.

For *schools* PACT was: a valuable additional support for both the development of greater literacy and Information Technology competence; an opportunity for classroom teachers to experience professional

development; a partly frustrating experience (most schools felt that such work would be difficult to sustain without additional resources); and a successful programme with limited though varied impact on the educational culture of the school.

It seems possible that a significant number of the key features of PACT could be developed in many schools, perhaps by a direct reproduction of the scheme or by adapting its principles in related initiatives, such as those which make use of older pupils in mixed-age mentoring schemes. The important contribution to be gained from any such programme by involving parents or carers should not be underestimated, given the importance of child-parent relationships and family-school relationships on the educational process.

Conclusion

The project was aimed at some of the most disengaged and excluded families in the county and therefore among the most difficult to reach. Despite this, PACT was successful: the gains in basic skills made by children were sustained; children enjoyed their experience in the programme; and schools reported associated improvements in classroom work and in the attitude of children and parents towards school.

There are often disincentives for teachers to engage with such programmes, including workload, anxieties about support and recognition from their professional colleagues, the essentially unpaid nature of the extra work and the disruption it can cause to existing classes. But despite such reservations – and the lack of government funding – teachers volunteered to join the scheme, which is a testament to the continuing willingness of educationalists to find time and resources to address disaffection and the needs of their pupils and parents.

Because many parents were keen to continue their re-engagement with education, several schools developed their own skills-based IT courses as extensions of the project. Headteachers commented that confidence among the parents increased as a result, with some going on to organise school-based events like discos and book fairs. A small number went on to get jobs, attributing their success directly to the project and the follow-on extension work.

One-off interventions to boost the basic skills of narrowly defined constituencies of learners who have the greatest needs can at best ameliorate the problems

of some children and their families. The evidence from PACT is that where schools are able to sustain such work, the benefits can be significant and long lasting.

References

Bird, V. (2005) The Literacy and Social Inclusion Project: a new model for building parental skills. *Literacy,* 39, 2, p59-63.

Camilleri, J., Spiteri, S. and Wolfendale, S. (2005) Parent empowerment for family literacy: a European initiative. *Literacy*, 39, 2, p74-80.

Cook, M (2005) 'A place of their own': creating a classroom 'third space' to support a continuum of text construction between home and school. *Literacy,* 39, 2, p85-90.

DfES (Department for Education and Skills) (2004) *Every Child Matters: Next Steps.* http://www.everychildmatters.gov.uk

DfES (Department for Education and Skills) (2005) *Extended schools: Access to opportunities and services for all – a prospectus*. http://publications.teachernet.gov.uk

DfES (Department for Education and Skills) (2005) *Literacy* http://www.standards.dfes.gov.uk/primary/publications/literacy/1200695/

DfES (Department for Education and Skills) (2005) *Education Action Zones* http://www.standards.dfes.gov.uk

Landon, J. and Carr, D. (1999) Teachers and schools as agencies of values education: reflections on teachers' perceptions. Part two: the hidden curriculum. *Journal of Beliefs and Values;* 20, 1, p21-29.

Learning and Skills Council, 2006, http://www.lsc.gov.uk

Learning Partnerships (2006) *Lifelong Learning* http://www.lifelonglearning.co.uk

McDowell, L. and Sambell, K. (1998) The construction of the hidden curriculum: messages and meanings in the assessment of student learning. *Assessment and Evaluation in Higher Education*; 23, 4, p391-402.

Office of the Deputy Prime Minister (2005) *Local Strategic Partnerships,* http://www.neighbourhood.gov.uk

QCA (Qualifications and Curriculum Authority) (2006) *National Curriculum Online.* http://www.qca.org.uk/

Smith, V. (2004) Empowering teachers: empowering children? How can researchers initiate and research empowerment? *Journal of Research in Reading,* 27, 4, p413-424.

Sure Start (2006) http://www.surestart.gov.uk

The Guardian (2002) Guardian Education Results: How your LEA performed, *The Guardian Online* supplement, December 5, p4-36.

UK National Statistics, 2002 http://www.statistics.gov.uk

Watts, M. and Lloyd, C. (2004) The use of innovative ICT in the active pursuit of literacy. *Journal of Computer Assisted Learning*, 20, 1, p50-58.

Wenger, E (1998) *Communities of Practice: Learning, Meaning and Identity* Cambridge: Cambridge University Press.