RESEARCH

# Playing for Success: An Evaluation of the Second Year

**Caroline Sharp, Leslie Kendall, Sunita Bhabra**
**Ian Schagen, Joanne Duff**
**National Foundation for Educational Research**

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# Executive Summary

## *PLAYING FOR SUCCESS*
## AN EVALUATION OF THE SECOND YEAR

*Playing for Success* is a national initiative, established by the DfES in partnership with the FA Premier League, the Nationwide League and their clubs, and LEAs. It aims to contribute to raising educational standards, especially in urban areas, by establishing Study Support Centres in professional football clubs. Centres are managed by experienced teachers. They use the medium and environment of football to support work in literacy, numeracy and ICT and provide facilities for pupils to complete homework. With a focus on addressing the needs of underachieving young people, mainly in Years 6 to 9, the initiative places a strong emphasis on improving pupils' attitudes and motivation to learn.

# Key Findings

### *Playing for Success* has proved popular with pupils, parents and schools

- Pupils had high hopes of *Playing for Success*, and the experience lived up to their expectations. They enjoyed attending the Centres and few could identify anything that could be improved.
- Despite sessions being held after school, most pupils attended over 80 per cent of the course, with almost half attending all available sessions.
- Parents had very positive views about their children's participation in *Playing for Success*.
- Teachers felt that the Centre had had an impact on pupils' attitudes and skills. Centres had no difficulty filling their places, and most schools would welcome another opportunity to take part.

### The initiative has contributed to improved achievement

- Pupils made substantial and significant progress in numeracy. On average, primary pupils improved their numeracy scores by about 21 months and secondary pupils by about eight months.
- Gains in numeracy brought the performance of these under-achieving young people much closer to the level expected for their age-group, especially at KS2. In comparison, the numeracy performance of control-group pupils fell further behind national norms.
- Performance in reading comprehension improved during the pupils' time at the Centres, although the progress of primary pupils did not quite reach statistical significance when compared with the control group. Secondary pupils' reading comprehension scores improved significantly, by the equivalent of about six months.
- Pupils' ICT skills improved significantly during their time at the Centres. They made progress in basic computer skills, word processing, email and Internet skills.
- Teachers noticed particular improvements in pupils' self-confidence and ICT skills.
- Parents felt the Centres had helped with many aspects of their child's learning, including ICT, self-confidence, numeracy and reading.

## *Playing for Success* has reached its target group of underachieving pupils

- The initial numeracy and reading comprehension scores of participating pupils were well below average for their age. Just under a quarter of pupils had special educational needs.
- Just under a quarter of pupils were eligible for free school meals.
- Just over half (55 per cent) of the pupils attending the Centres were boys. Fifteen per cent of pupils were from non-White backgrounds, including Black, Asian and other ethnic groups.
- The initiative benefited all pupils, regardless of gender, deprivation, ethnicity, their fluency in English or special needs.
- Pupils who attended longer courses made greater progress in reading comprehension and computer skills.

## What contributed to the Centres' success?

The Centres have achieved a great deal in a relatively short period of time. Gains in numeracy are particularly impressive, given the relatively short periods of time for which pupils attend (most pupils attended for less than 30 hours).

The football setting proved attractive to all pupils, regardless of gender and ethnicity. It was a strong element in motivating pupils to become involved in *Playing for Success*.

Once at the Centres, pupils responded positively to many aspects of the initiative, especially using computers and the Internet. They enjoyed the work, felt they had made progress and were grateful for the help they received. They also benefited from the opportunity to meet people and make new friends.

Attending an educational setting other than school gave underachieving youngsters the opportunity to make a 'fresh start'. Student mentors were available in many Centres to provide advice and support, and the high ratio of staff to pupils enabled pupils to get immediate help and to make progress in their learning.

The Centres provided some of the key elements in supporting self-regulated learning. Pupils volunteered to attend and were offered individual support. They were given tasks at their level and were able to see for themselves the progress they had made. Centre staff and mentors encouraged pupils to become more self-reliant and to try things out for themselves. There were opportunities for pupils to make choices and to develop independent study skills. All these elements contributed to pupils' progress and sense of achievement.

## Recommendations

The successful nature of *Playing for Success* has led the evaluation to offer the following main recommendations for the future of the initiative.

1. Continue to 'roll out' the initiative, so that more young people have an opportunity to benefit.

2. Maintain the focus on underachieving young people, including pupils with special needs.

3. Consider the balance between literacy and numeracy work within the Centres' programmes. If improving reading and other literacy skills is a prime objective, consider giving more emphasis to these areas within courses and/or lengthening some of the shorter courses.

4. Continue to work in partnership with schools, focusing particularly on providing feedback on pupils' progress at the Centres.

5. Given the impact on pupil's achievement, teachers and schools should actively participate and seek to build on the success of the initiative once pupils have completed their course.

6. Consider parents' need for information and feedback about their children's progress at the Centres.

7. Encourage Centre Managers to continue to support the development of self-regulated learning by fostering pupils' sense of autonomy, competence and relationships with others.

8. Continue to evaluate the initiative at both national and local levels.

## About the evaluation

This evaluation was carried out for the DfES by a team of researchers based at the National Foundation for Educational Research. The team gathered information during 1999–2000 from 12 of the largest Study Support Centres. The researchers visited each Centre to interview Centre Managers and to observe sessions. Researchers also interviewed pupils and teachers from three Centres about a term after they had attended *Playing for Success*.

Over 1,200 pupils, 450 parents and 70 teachers took part in the evaluation. The views of pupils, parents and schools were gathered by means of questionnaires. Pupils' attitudes were obtained at the beginning and end of their time at the Centre. ICT skills were measured by a self-report questionnaire. Nationally standardised tests of numeracy and reading comprehension, specially designed for the evaluation, were used to assess pupils' progress. For each measure, the progress of pupils attending *Playing for Success* was compared with that of a small control group of similar pupils who did not attend. The research used statistical techniques to assess whether the pupils attending *Playing for Success* had significantly out-performed the control group and to discover whether key characteristics were related to performance and progress.

# 1. Introduction to the Report

## 1.1 About *Playing for Success*

The Government established the *Playing for Success* initiative in 1997, in partnership with the Premier and Football Leagues and their clubs. The broad aim of the initiative was to contribute to raising educational standards, especially in urban areas, through the establishment of Study Support Centres in football clubs. As well as enhancing educational standards, it was anticipated that the Centres would have a major impact on pupils' motivation to learn. The scheme allowed some flexibility for individual Centres to interpret these aims and relate them to local needs.

The initiative was targeted at underachieving pupils in Key Stages 2 and 3. The sessions were to be held after school and at weekends. The running and capital costs of the Centres were to be shared between national and local Government (via the Standards Fund), the clubs and business sponsorship. The initiative envisaged that the Centres would offer excellent facilities for Information and Communications Technology (ICT), with additional funding for this purpose raised from local business sponsors. Using the medium and environment of football, the Centres were expected to focus on skills in literacy and numeracy, as well as to provide opportunities for pupils to develop ICT and study skills and to complete their homework.

Guidelines produced by the Department for Education and Skills (DfES, formerly the Department for Education and Employment). These anticipated that the Centres would be open for six, four-hour sessions per week and would be staffed by a full-time Centre Manager, an ICT technician, four student mentors per session and have administrative support. The DfES convened a national steering group, with representatives from local authorities and football clubs and a national practitioners' group of Centre Managers, LEA representatives and others. The DfES also organised meetings and workshops for Centre Managers, and employed a network of 'critical friends' to provide support and guidance in setting up and running the Centres.

## 1.2 Aims of the National Evaluation

The national evaluation was carried out by a team of researchers at the National Foundation for Educational Research. The main aim of the evaluation was to provide an assessment of the effectiveness of *Playing for Success* and to identify and describe those features leading to success in terms of participation, gains in motivation, positive attitudes towards learning and enhanced learning outcomes.

The project also aimed to provide research instruments and procedures to contribute to the on-going evaluation of the initiative. The evaluation took place between September 1999 and October 2000, although most of the activity in Centres took place during the spring term, 2000 (the rest of the time was taken up with devising new evaluation instruments, liaising with Centre Managers and analysing the results).

## 1.3 Research design

*Playing for Success* is growing as more Centres become established. At the beginning of the 1999 autumn term, 22 Centres had been set up, some of which were in the early stages of development. The DfES wrote to all the Centre Managers to invite them to participate in the evaluation. Most of the Centre Managers agreed to participate, and the DfES selected the 12 which were taking the largest numbers of pupils. The majority of the participating Centres were located in the North of England, reflecting the distribution of the Centres as a whole.

The evaluation used both qualitative and quantitative methods. The qualitative part of the evaluation entailed members of the research team visiting all 12 Study Support Centres to interview Centre Managers about their aims, staffing, liaison with schools and the learning programme.

The main part of the study focused on all pupils attending the Centres during the spring term 2000. The quantitative methods comprised both assessments and questionnaires. Pupils' academic progress during their time at the Centre was assessed using tests of

reading comprehension and numeracy. Pupils' progress in computer skills was assessed by a self-report checklist.

In order to measure attitudinal change, the research team designed questionnaires to assess parent and pupil attitudes and to gather their views of the Centres. The researchers also designed a school feedback questionnaire. In addition, Centres were asked to supply background information on each pupil, namely:

- age and gender;
- ethnic group and fluency in English;
- whether the pupil had special educational needs or was entitled to free school meals;
- their length of attendance at the Centre.

The evaluation established a control group of pupils, drawn from schools that were sending pupils to five of the Centres in the spring term. The purpose of the control group was to enable comparisons to be made between the progress of pupils attending the Centres and that of similar pupils who had not taken part in *Playing for Success*. Pupils in the control group were selected to be as similar as possible to pupils attending *Playing for Success*, and the evaluation instruments were administered to both groups at about the same time (i.e. to coincide with the beginning and end of the course). Pupils who took part in the control group were offered places at the Centres in the summer term.

The evaluation aimed to establish whether the initiative continued to have an impact on pupils after they had completed the course. The team therefore arranged to visit nine schools linked with three of the Centres. These visits took place at the end of the summer term. Interviews were arranged with pupils, link teachers and heads.

## 1.4 About the Centres

Most of the 12 Centres were run by a Centre Manager, supported by other staff and volunteers. The Centre Managers all had a background in teaching (in primary,

secondary or special schools). Most had had some middle or senior management experience in schools, and a few had also worked as advisers in a local authority.

In addition to the Manager, four of the 12 Centres employed teachers, who were responsible for delivering some of the sessions. Six of the clubs had qualified IT technicians and six had at least part-time administrative support (in other cases, this work was taken on by the Centre Manager and/or mentors). Most of the Centres used mentors, the majority of whom were students recruited from local colleges and universities. A few used adult mentors, and one Centre drew on volunteers from the sixth form of a local school. The main role of the mentors was to help and encourage pupils during each session. In some cases, the Centre Manager also intended that the mentors should present positive role models to pupils (for example, of people who had decided to continue with their education beyond school). Typically, the staff-pupil ratios were about one adult/mentor to five pupils.

All but one of the Centres were based in the football club. (The exception was based at the team's practice ground, rather than at the main stadium.) Although nine of the Centres were in more or less permanent accommodation, three were occupying rooms regularly used for other purposes (such as conference rooms and hospitality suites). In these cases, Centre staff had to move equipment in and out for each session, or had to set up the Centre the beginning and end of each week.

The Centres varied considerably in the extent of their operation. Some offered *Playing for Success* sessions on two evenings per week, whereas the most established Centres were open five evenings and alternate Saturdays (excluding match days). Typically, the Centres ran two, two-hour sessions each evening. The first session began at around 3.30 p.m. and took children from primary schools. Secondary pupils attended the later session, beginning at around 5.30 p.m.. Between 13 and 25 pupils could be accommodated per session (depending on the size of the room). Most Centres could take up to 20 pupils at a time. It was also common for Centres to be used for educational purposes other than *Playing for Success*. This could include use by individual schools,

numeracy and literacy summer schools, teacher training sessions, and courses for college students and adults (e.g. for computer training or adult literacy courses).

One of the particular features of *Playing for Success* is the access it affords to new technology. Most of the Centres were equipped with at least one computer per pupil. All but three Centres were able to provide pupils with access a computer for the whole session. The Centres offered a range of educational software (in some cases including integrated learning packages) and 11 of them had Internet access and email facilities. The software included word processing and graphics packages, tutorials, educational games and reference materials. Some of the Centres provided other software packages, including spreadsheets, questionnaire design, desk-top publishing, and software for making presentations to an audience. Many had a collection of printed reading material, including club programmes, and a stock of fiction, non-fiction and reference books.

The Centres' learning programmes focused on helping pupils with basic skills in literacy, numeracy and ICT. The Centre staff encouraged pupils to bring their homework or coursework, and some offered resources for a range of subject areas, such as history, geography and art. The Centres used the environment and context of football in different ways. All of them organised a tour of the ground and offered club merchandise as incentives and prizes (including pens, signed photographs, items of clothing and match tickets). Most set tasks involving football, such as using fantasy football scenarios for numeracy work, or getting pupils to access information about players from the club's website. Some had football-related software and many organised football-related competitions for pupils (e.g. designing a football strip or working on a football magazine). The pupils did not *play* football during their time at the Centres.

Most of the clubs enabled pupils to meet people associated with the club (including grounds staff, conference and catering staff, former players and young players from the club's academy). Contact with current professional team players was more difficult to organise, given that many of the football players were based at the training grounds and only visited the club for matches. Also, players tend to be contracted to the clubs for

training and playing only, and all other work has to be negotiated separately with the players' agents. However, several of the Centres were able to call upon one or two interested players to attend the presentation ceremonies, which took place at the end of the course.

## 1.5 About this report

This report is divided into eight main sections. Section 2 presents information about the characteristics and attendance of pupils at the 12 Centres. Section 3 looks at the expectations and experiences of *Playing for Success*, based on the views of pupils, parents and teachers.

In Section 4, we examine the impact of the Centres on pupils' attitudes to reading, writing, mathematics, study skills and their attitudes towards themselves. Section 5 presents the results for reading and numeracy, and Section 6 focuses on pupils' computer skills. Section 7 presents the findings from the interviews with pupils and teachers. The report concludes with a discussion of the main findings (Section 8). The appendices contain further details of the research design, samples, instruments and analysis.

# 2. Who attends Playing for Success?

This section describes the pupils who attended *Playing for Success* Study Support Centres in terms of how they were selected, and their characteristics such as year group and gender. We also consider the pupils' rates of attendance at the Centres and whether pupils were interested in football.

Most of the information summarised here was provided by Centre Managers with the help of the schools sending pupils to the Centres. Some of the information came directly from the schools and some from the pupils themselves.

## 2.1 Pupil selection

Pupils were nominated by their schools to attend *Playing for Success*. Centres provided guidelines to schools about this, but in most cases, schools had a considerable degree of discretion. When we asked Centre Managers about the guidelines they provided to schools, most referred to 'pupils who benefit' and 'pupils who deserve a chance'. They also encouraged schools to select pupils who would be motivated to attend. One Centre Manager stressed that it was important that attending the Centre was not seen as a 'reward' for poor behaviour in school.

We asked Centre Managers to identify all the schools sending pupils to the Centres in the evaluation period. There were 119 such schools (74 primary and middle deemed primary, and 45 secondary). We sent a short questionnaire to the link teacher in each of these schools, just after the summer half term. In total, 70 questionnaires were returned, 44 from primary and middle deemed primary schools and 26 from secondary schools. This represented an overall response rate of 58 per cent. The number of questionnaires returned per Centre ranged from one to 11. In part, this reflects the fact that at any one time, different Centres were working with different numbers of schools. (During the period of our evaluation, the number of schools per Centre ranged from five to 19.)

Link teachers were asked about the criteria used in selecting pupils to attend *Playing for Success*. A number of possible criteria were listed, and teachers were invited to add any others that they had used. The most frequent responses are given in Table 2.1.

**Table 2.1 Which criteria did you use to select pupils to attend the Centre?**

| | **Number of schools** |
|---|---|
| Children that teachers considered would benefit from the initiative | 57 |
| Children underachieving in relation to their ability | 38 |
| Children with low self esteem/lacking in confidence | 38 |
| Children who showed an interest in the scheme | 28 |
| Children who lacked motivation towards school work | 23 |
| Children with learning difficulties | 20 |
| Children with good attendance at school | 19 |
| Children showing a strong interest in football | 8 |
| Children with poor fluency in English | 5 |
| Children with poor attendance at school | 4 |
| Other criteria (including: borderline level 3/level 4 or level 4/level 5 pupils, more able pupils, and those seen as deserving) | 15 |
| | |
| No response | 0 |

*Based on responses from 70 schools. Teachers could make more than one response.*

Teachers typically indicated that they used three or four selection criteria, suggesting that they were taking a range of factors into account. The table shows that teachers tended to select those pupils who they felt to be the most likely to benefit from the initiative, pupils seen as underachieving, and pupils with low self-esteem or lacking in confidence. This is very much in line with the scheme's target groups. Selecting pupils with good attendance at school, those with learning difficulties, and children lacking motivation were each more likely be mentioned by secondary schools than by primary or middle deemed primary schools.

We also asked teachers if they had used assessment results to select pupils. The majority of the 70 schools (42) had used assessment results to select pupils. Most of them used National Curriculum Assessment results, while a few used other assessments (such as reading and mathematics tests).

## 2.2 The pupils attending *Playing for Success*

The Centre Managers, with the help of schools, provided a range of information about pupils attending the Centres during the evaluation period. The Centres provided information on a total of 1,247 pupils, almost equally divided between Key Stages 2 and 3. Table 2.2.1 shows the year groups of the pupils attending *Playing for Success* Centres during the spring term 2000.

**Table 2.2.1 Pupils attending *Playing for Success***

| Year group | % |
|---|---|
| **Primary** | |
| 5 | 2 |
| 6 | 46 |
| KS2, year group not known | 2 |
| **Secondary** | |
| 7 | 13 |
| 8 | 20 |
| 9 | 13 |
| KS3, year group not known | 4 |

*Based on responses for 1247 pupils. Percentages may not sum to 100 because of rounding.*

The table shows us that the Centres were taking equal proportions of pupils in Key Stages 2 and 3. The majority of primary pupils were from Year 6. At secondary level, a range of year groups participated, most commonly Year 8. Some Centre Managers told us that attendance in the spring term, when we were conducting our evaluation, differs from that in the summer term. During the summer term, some primary schools send Year 5 rather than Year 6 pupils. There is a similar pattern at KS3, with fewer Year 9 pupils attending during the summer term.

Table 2.2.2 shows some of the other characteristics of pupils attending *Playing for Success*.

**Table 2.2.2 Pupil characteristics**

| | | Key Stage | | |
|---|---|---|---|---|
| | | **2** | **3** | **Total** |
| **Variable** | **Category** | **%** | **%** | **%** |
| Gender | Male | 54 | 56 | 55 |
| | Female | 45 | 43 | 44 |
| | Missing | 1 | 2 | 1 |
| Special Educational Needs | No SEN | 57 | 40 | 49 |
| | Pupil with SEN (concern identified) | 18 | 15 | 16 |
| | Pupil with SEN (statement) | 3 | 11 | 7 |
| | SEN data missing | 22 | 34 | 28 |
| Free School Meals | Entitled to FSM | 28 | 18 | 23 |
| | Not entitled to FSM | 51 | 43 | 47 |
| | FSM data missing | 21 | 39 | 30 |
| Ethnicity | White | 72 | 63 | 67 |
| | Non-White | 18 | 12 | 15 |
| | Ethnicity data missing | 11 | 25 | 18 |
| English Language | English first language | 45 | 43 | 44 |
| | English not first language | 16 | 11 | 14 |
| | English language data missing | 39 | 46 | 42 |

*Based on responses for 626 KS2 and 621 KS3 pupils. Percentages may not sum to 100 because of rounding.*

This table shows that slightly more boys than girls were attending the 12 *Playing for Success* Centres during the spring term 2000. This may reflect the relative under-achievement of boys. However, the proportion of boys varied between Centres, and two Centres, had almost equal numbers of boys and girls.

We were also interested to find out about other characteristics of the pupils, such as whether they had special needs, were entitled to free school meals, their ethnic background and fluency in English. These details were gathered by the Centres from the schools (the Centre Managers themselves found it useful to have this information because it enabled them to monitor the characteristics of pupils attending the Centre). The table shows that there was a certain amount of missing data. This was because some Centre

Managers had difficulty in obtaining the more detailed background information from schools.

The high proportion of pupils for whom Centres were unable to establish whether or not special educational needs had been identified is disappointing, although some Centres managed to obtain complete information. However, it is clear that over 20 per cent of the pupils attending the Centres had special educational needs. Most Centres encouraged schools to select pupils with special educational needs, although one Centre Manager felt that it was not appropriate for pupils with statements to attend, because these pupils had other forms of support available within the LEA. Most of the pupils identified as having statements were from just two Centres, and in most Centres less than five per cent of pupils had statements.

We were interested to know whether or not pupils were entitled to free school meals. This is frequently used in research as an indicator of social deprivation. Unfortunately, details about entitlement to free school meals were unavailable for almost a third of the pupils. This makes it difficult to interpret the information in Table 2.3. In particular, we cannot tell if the apparent difference in entitlement between Key Stages 2 and 3 is really a result of different amounts of missing information. However, it is clear that at least 20 per cent of pupils attending the Centres were entitled to free school meals. Again, it appears that Centres varied widely. In two Centres, over half the pupils were entitled to free school meals, while in another two the proportion was about one in five. (Two Centres did not provide information about entitlement to free schools meals for any of their pupils.)

Overall, fifteen per cent of pupils were identified as being from non-White backgrounds. The non-White pupils came from a variety of ethnic backgrounds, with the largest proportions from Black Caribbean, Indian and Pakistani ethnic groups. There were smaller numbers from Black African, Black other, and Bangladeshi backgrounds. (Due to the low proportion of pupils from different ethnic backgrounds, we were forced to

adopt a fairly crude category of 'non-White' in our analysis of the impact of ethnic differences.)

About 14 per cent of pupils were identified as having English as an additional language, although this information was missing for over 40 per cent of pupils. The pupils' ethnic backgrounds and English fluency reflect the locations of the clubs. There were three Centres in which 15 to 20 per cent of pupils were from minority ethnic backgrounds. In one Centre, over half the pupils were from non-White backgrounds, and 70 per cent did not have English as their first language. This Centre serves an area with a high proportion of pupils from ethnic minorities, including asylum seekers from East European countries.

## 2.3 Pupils' attendance at *Playing for Success*

We were interested to know whether pupils kept up their attendance at the *Playing for Success* Centres. Centre Managers kept a register of each pupil's attendance at each session, and also recorded the length of each session and the number of sessions per course.

Courses varied considerably in length, from nine hours over six weeks to 40 hours over 10 weeks. In some Centres, the courses for primary and secondary pupils differed in length. The variation between Centres is shown in Table 2.3.1.

**Table 2.3.1 Length of course in hours**

| | Key Stage | |
|---|---|---|
| | **2** | **3** |
| | **Number of Centres** | **Number of Centres** |
| Less than 10 | 1 | 0 |
| 10 – 16 | 1 | 3 |
| 21 – 24 | 5 | 5 |
| 34 | 2 | 1 |
| 38 – 40 | 3 | 3 |

*Based on data for 12 Centres.*

The table shows that 21 to 24 hours was the most popular course length for both primary and secondary pupils. Although Centres tended to offer the same length of course to all pupils, there were some differences within Centres between groups attending on different days of the week. In some cases this was scheduled, as in one Centre which ran two-hour sessions during the week and one-and-a-half hour sessions on Saturday mornings. In other cases it was due to circumstances beyond the control of the Centre Manager, such as staff illness or being unable to use the Centre because of a football match.

Table 2.3.2 shows the proportion of pupils attending courses of different lengths, and the percentage of the course pupils attended.

**Table 2.3.2 Pupils' attendance at the Centres**

| | | Key Stage | | |
|---|---|---|---|---|
| | | **2** | **3** | **Total** |
| **Variable** | **Category** | **%** | **%** | **%** |
| Length of course (hours) | 9 to 20 | 25 | 22 | 23 |
| | 21 to 30 | 36 | 46 | 41 |
| | 31 or more | 38 | 32 | 35 |
| Percentage of course attended per pupil | Up to 50% | 2 | 9 | 6 |
| | 51 to 80% | 9 | 15 | 11 |
| | 81 – 99% | 31 | 31 | 31 |
| | 100% | 56 | 39 | 47 |
| | % course attendance data missing | 3 | 6 | 5 |

*Based on responses for 1247 pupils. Percentages may not sum to 100 because of rounding.*

The table shows that the majority of pupils attended courses running for over 20 hours. Almost half the pupils attended all the sessions in their particular course and the majority (78 per cent) attended for at least 80 per cent of the available time. The table also demonstrates that pupils in Key Stage 2 were more likely than those from Key Stage 3 to attend all, or almost all, of the available sessions. The high rate of attendance may be taken as an indication of pupils' commitment to the programmes offered by the Centres, given that all the courses took place out of school time and some involved sessions on Saturday mornings.

The actual hours of attendance depends on both pupils' willingness to attend and the length of the course on offer. Almost a fifth of pupils actually attended for 15 hours or less, and a further fifth for 16 to 20 hours. These are relatively short periods in which Centres have the opportunity to influence young people. Less than a quarter of pupils attended a *Playing for Success* Centre for more than 30 hours.

## 2.4 Pupils' interest in football

We wanted to know whether pupils attending *Playing for Success* were interested in football. We included a question on this in the attitudinal questionnaire that was completed by about half of the pupils attending the Centres. The question asked pupils whether or not they were interested in football (yes, no, not sure), and if yes, which team they supported. We were then able to work out whether pupils supported their Centre's team. Table 2.4 shows the level of interest in football among pupils attending *Playing for Success*. It is based on the answers to the pre-course questionnaire.

**Table 2.4: Pupils' interest in football**

| | | Support Centre team | Support another team | Not interested in football/ not sure | No response |
|---|---|---|---|---|---|
| | | % | % | % | % |
| Key Stage | KS2 | 53 | 37 | 3 | 8 |
| | KS3 | 48 | 34 | 2 | 17 |
| Gender | Boys | 46 | 41 | 2 | 12 |
| | Girls | 56 | 29 | 3 | 13 |
| Ethnicity | White | 61 | 28 | 2 | 9 |
| | Non-White | 18 | 59 | 3 | 20 |
| | Ethnicity data missing | 32 | 45 | 3 | 20 |
| | | | | | |
| **Total** | All pupils | 51 | 35 | 2 | 12 |

*Based on responses for 620 pupils attending Playing for Success. Percentages may not sum to 100 because of rounding. Results are based on pupils with pre-course questionnaires.*

Table 2.4 shows a very high level of support for football among pupils who attended *Playing for Success*. In total 86 per cent of the pupils who completed the questionnaire said they were interested in football, and half of them supported the team associated with the Centre which they were attending. The pattern of responses was similar for pupils in Key Stages 2 and 3, although it is slightly masked by the fact that a higher proportion of secondary pupils did not respond to the question.

We wanted to know whether pupils' interest in football differed according to their gender and ethnicity. The table shows that girls were as likely to be interested in football as boys, although boys were considerably more likely than girls to support a team other than that of the football club where the Centre was based. We were also interested to find out whether support for football differed among pupils from different ethnic backgrounds. As noted above, there was a relatively high proportion of pupils for whom ethnicity information was missing. However, the table indicates that a high proportion of pupils from non-White backgrounds were interested in football, although more of them chose not to answer the question. Non-White pupils were more likely than White pupils to support other teams.

It is a matter of speculation whether the high levels of football interest are typical of pupils as a whole, or whether they were inflated by the fact that pupils had been selected to take part in *Playing for Success*, and had just begun visiting the Centre. One of the ways of throwing light on this is to draw comparisons with the replies given by pupils in the control group. There were 114 control group pupils for whom we had pre-course attitude questionnaires. These pupils were drawn from schools sending pupils to the Centres, and were selected to be as similar as possible to pupils who were attending in the spring term. (In most cases these pupils went on to attend the Centres in the summer term.) An analysis of their answers to this question indicated a very similar level of interest in football among control group pupils. Only three per cent said they did not support football; 48 per cent supported the Centre team and 39 per cent supported another football team.

## 2.5 Summary

This section has looked at the ways in which pupils were selected to attend *Playing for Success*, and described the pupils attending in terms of a number of background characteristics. It also considered attendance rates, and looked at pupils' interest in football and support for their Centre's team.

**Selection for *Playing for Success***

- Schools used a wide variety of criteria when selecting pupils to attend the Centre. Teachers commonly selected the pupils they considered would benefit from the initiative, pupils who were underachieving in relation to their ability, and pupils with low self-esteem or lacking in confidence.
- The majority of schools used pupils' assessment results as part of the selection process.

**Characteristics of pupils attending the Centres**

- The pupils attending *Playing for Success* were equally divided between KS2 and KS3. Most primary pupils were from Year 6. Among secondary pupils, most were from Year 8, with the remainder equally divided between Years 7 and 9.
- There were slightly more boys than girls attending the Centres.
- Just under a quarter of the pupils had identified special educational needs, ranging from Stages 1 to 5 of the Code of Practice. Information on special needs was not available for a further quarter of the pupils.
- Just under a quarter of pupils were entitled to free school meals (information on entitlement to free school meals was missing for a further 30 per cent of pupils).
- About two-thirds of pupils came from 'White European' ethnic backgrounds. Fifteen per cent of pupils could be described as being from non-White backgrounds (mainly Black Caribbean, Indian and Pakistani). Information was not available on the ethnic background of a further 18 per cent of the pupils.
- Just under 15 per cent of pupils were identified as having English as an additional language, but this information was missing for over 40 per cent of pupils.
- The characteristics of pupils varied considerably between Centres.

**Rates and length of attendance**

- Attendance at the Centres was generally high. Almost half the pupils attended all the sessions and over three-quarters attended for at least 80 per cent of the available time. Rates of attendance were higher for KS2 pupils than for pupils in KS3.
- Courses ranged in length from nine to 40 hours. Most pupils attended a Centre for between 16 and 20 hours. Less than a quarter of pupils attended a *Playing for Success* Centre for more than 30 hours.

**Support for football**

- The majority (86 per cent) of pupils attending the Centres said that they were interested in football. Half of pupils supported the club where the Centre was located.
- Interest in football was equally high among girls and boys. There were similar patterns of interest among pupils from White and non-White ethnic backgrounds. Boys and pupils from non-White backgrounds were more likely to support other teams.
- The majority of control group pupils (87 per cent) said they were interested in football. This suggests that pupils' support for football had not been inflated by their initial involvement in *Playing for Success*.

# 3. Expectations and experiences of *Playing for Success*

This section reports information from the questionnaires concerning expectations and experiences of *Playing for Success* from the point of view of parents, schools and the pupils themselves.

## 3.1 What pupils thought of the Centre

The pupil attitude questionnaire ('What do you think?') was completed by half of the pupils attending the 12 Centres at the beginning and end of their courses. The information below is based on the 536 pupils who attended the Centres and completed both pre- and post-course questionnaires.

Table 3.1.1 shows pupils' responses to a series of 'closed' questions about the Study Support Centre. The questionnaire invited pupils to give one of three responses to each item (yes, not sure, no). As most of the pupils had strong opinions on these items, we have chosen to report the percentage of pupils answering 'yes' to each item. (All pupils responded to all of the items – there was no missing data.)

**Table 3.1.1 What do you think of the Centre?**

| | Pre-course % | Post-course % |
|---|---|---|
| The Study Support Centre will be/was **fun** | 86 | 91 |
| The Study Support Centre will be/was **boring** | <1 | 1 |
| The Study Support Centre will be/was **interesting** | 84 | 85 |
| The Study Support Centre will be/was **a good idea for me** | 82 | 85 |
| The Study Support Centre will help/helped me to **be better at maths** | 76 | 71 |
| The Study Support Centre will help/helped me to **be better at writing** | 72 | 59 |
| The Study Support Centre will help/helped me to **be better at reading** | 69 | 65 |
| The Study Support Centre will help/helped me to **use a computer** | 84 | 92 |
| The Study Support Centre will help/helped me to **be a more confident person** | 77 | 79 |

*Based on responses from 536 pupils who completed both pre- and post-course questionnaires.*

The table shows that pupils had very high expectations of *Playing for Success* and that the Centres lived up to their expectations in offering an enjoyable and interesting experience (for example, at the end of the course, 91 per cent of pupils found the Centre to be 'fun' and 85 per cent considered it to be 'interesting' and 'a good idea for me'). In addition, over three-quarters of pupils both expected the Centre to help them become more self-confident and felt that it had done so.

Pupils also had very high expectations of the Centres in terms of helping their learning. Here their expectations at the beginning of the course were sometimes more positive than their judgements at the end. This was particularly the case for help with writing skills, but also for mathematics and reading. (Paired t-tests for these three items showed that pupils' responses were significantly more positive at the beginning than at the end of their course, $p<0.01$.) However, we should point out that it is possible for pupils to have misinterpreted the item concerning 'writing' to mean handwriting, rather than written

composition as we had intended. If so, this may explain the lower scores on this item at the end of the course (because much of the written work was carried out using computers, pupils' handwriting is unlikely to have improved as a result of their attendance at *Playing for Success*).

On the other hand, pupils' already high expectations of the Centre in providing help with computer skills were exceeded by their positive ratings at the end, when 92 per cent said that the Centre had helped them to use a computer ($p<0.05$).

There were some differences between primary and secondary pupils in their patterns of responses. At the pre-course stage, primary pupils were significantly more likely than secondary pupils to anticipate that the Centre would be fun and to think that it would help them with maths, writing, reading and using a computer ($p<0.05$). There was also one difference between girls and boys at the pre-course stage: girls were more likely than boys to think that the Centre would help with their maths ($p<0.05$).

There were fewer differences at the post-course stage. Primary pupils were more likely than secondary pupils to think that the Centre had helped them get better at writing ($p<0.05$) and girls were more likely than boys to say that the Centre had helped with their maths ($p<0.01$).

Overall, this suggests that secondary pupils were more cautious than primary pupils in their initial assessment of whether the Centre would help them, but that primary and secondary pupils found the Centre equally helpful. The exception to this was in the area of writing, where primary pupils were more likely to feel that the Centre had helped. Girls and boys did not differ significantly in their expectations and experiences, except in relation to mathematics, where girls were more likely both to predict that the Centre would help them and to feel that it had helped.

We also asked pupils to tell us how else they would like the Study Support Centre to help them (the post-course version of the question asked 'What else did the Centre help you to

do or know?'). The coding of this open-ended question revealed that pupils took it as an opportunity to confirm their answers to the closed items, as can be seen in Table 3.1.2.

**Table 3.1.2 How else would you like/did the Study Support Centre help you?**

| | Pre-course % | Post-course % |
|---|---|---|
| Improve literacy | 25 | 15 |
| Develop computer/Internet skills | 17 | 29 |
| Improve numeracy | 16 | 14 |
| Boost self-confidence | 8 | 10 |
| Improve school work in general | 8 | 4 |
| Get on with other people | 3 | 9 |
| | | |
| No response | 10 | 6 |

*Based on responses from 536 pupils who completed both pre- and post-course questionnaires. Percentages may sum to more than 100 because pupils could make more than one response.*

The table shows that the expectation held by the highest proportion of pupils at the beginning of the course was that the Centre would help them with their literacy skills. Developing computer/Internet skills and improving numeracy were also areas in which some pupils said they would like help.

At the end of the course, the most popular answer was that the Centre had helped pupils with their computer and Internet skills. For example, one boy explained that the Centre had helped him to: '*Use more things on a computer than I could before*.' Another said the Centre had helped him to: '*Work on a computer better and it helped me with my work. I am very proud that I went. Thank you.*'

### 3.1.1 What pupils liked most about the Study Support Centre

The final question in the pre-course questionnaire asked pupils what they were looking forward to most at the Study Support Centre. The parallel question in the post-course questionnaire asked pupils what they liked most at the Centre. Pupils' answers to these open-ended questions are shown in Table 3.1.3.

**Table 3.1.3 What are you looking forward to/did you like most at the Study Support Centre?**

| | Pre-course % | Post-course % |
|---|---|---|
| Using computers/the Internet | 41 | 45 |
| Football related aspects | 13 | 5 |
| Meeting new people | 9 | 7 |
| Learning new things | 7 | 3 |
| The Centre staff | 0 | 5 |
| | | |
| No response | 9 | 6 |

*Based on responses from 536 pupils who completed both pre- and post-course questionnaires. Percentages may sum to more than 100 because pupils could make more than one response.*

Computers and the Internet were highlighted in pupils' responses, both before and after their course. Almost half of pupils mentioned computers as the thing they had enjoyed most about going to the Centre. Typical comments included: '*I liked going onto the computer and playing Amazing Maths, because it helped me with my maths*' and '*I liked going on the computers because I didn't know what to do on a computer but now I am quite good on one*.'

Features of the Centre singled out by fewer of the pupils included football-related aspects, such as touring the ground, meeting players, learning about football and watching a match. Football-related aspects were mentioned by a higher proportion of

pupils at the beginning of their course than was true at the end. This may be because pupils had fewer opportunities to meet players than they had hoped, and/or because other aspects of the Centre had come to the fore.

Other aspects mentioned by a small minority of pupils included: meeting new people (such as pupils from other schools); learning new things in general; and, at the post-course stage, the Centre staff. One girl identified the best things about the Centre as: '*The staff and the wonderful and exciting things we did.*' Another summed up her experience in the following way: '*It was fun, interesting and very cool*.'

## 3.2 Parents' views of *Playing for Success*

A total of 898 parents responded to the parents' questionnaire at the beginning of the course (a response rate of 53 per cent). Of these, 455 parents completed a questionnaire both before and after their child attended one of the 12 Centres. Centre Managers reported difficulties in encouraging parents to complete questionnaires, particularly after their children had completed their course (the response to the post-course questionnaire was disappointingly low at just under a third).

The following analyses are based on responses from parents who completed both questionnaires. This enables us to make direct comparisons between parents' expectations of *Playing for Success* and the comments of the same group of parents after their child had completed the course.

We wanted to know whether parents who completed both questionnaires held similar opinions to the larger sample of parents who completed the pre-course questionnaire only. In order to establish this, we compared parents' answers to the pre-course questionnaire. The results of statistical tests on the 'closed' items demonstrated that parents' answers were broadly similar, regardless of whether or not they had completed the post-course questionnaire.

### 3.2.1 Were parents pleased that their children were selected for *Playing for Success*?

The questionnaire at the beginning of the course asked parents how pleased they were that their child was selected to go to the Study Support Centre. Parents were invited to respond using a five-point scale (very pleased, pleased, not very pleased, not pleased at all, not sure). The responses to this question at the pre-course stage were very positive, with 86 per cent of parents saying that they were 'very pleased' and a further 13 per cent saying they were 'pleased'. Similarly, the parents' responses at the post-course stage showed a high degree of satisfaction with the initiative, with 88 per cent saying that they were 'very pleased' that their child had been selected, and a further 11 per cent saying that they were 'pleased'.

### 3.2.2 What parents wanted the Centre to do for their child

We were interested to find out which of the Centres' objectives were most important to parents. The pre-course questionnaire included the following question: 'Study Support Centres try to help children in a number of ways. Please tick the ways that are most important to you.' The question listed ten different items from which parents could choose five. The post-course questionnaire listed the same items, asking parents to indicate whether they felt the Centre had helped their child with each one (helped, not sure, did not help).

The results (listed in order of parents' responses) are shown in Table 3.2.2.

**Table 3.2.2 What are the five most important ways in which the Centre can help your child/Did the Centre help?**

| | Pre-course % rating as important | Post course % saying it helped |
|---|---|---|
| Become more self-confident | 80 | 80 |
| Get better at maths | 78 | 62 |
| Learn to use a computer to do school work | 78 | 93 |
| Get better at writing | 68 | 49 |
| Get better at reading | 56 | 59 |
| Have a better chance of getting a job when they leave school | 51 | 49 |
| Become more willing to do homework | 37 | 55 |
| Meet children from other schools | 28 | 63 |
| Like school more | 12 | 43 |

*Based on responses from 455 parents who completed both pre- and post-course questionnaires.*

The table shows that help with self-confidence, mathematics and computers were high on the list of importance in terms of parents' expectations of *Playing for Success*. These three items were each selected as important by over three-quarters of parents. Their children's self-confidence was a key issue for parents. Help with writing, reading and employability were each selected as important by over half of the parents who responded. Items that came lower on the list of expectations were: willingness to complete homework, meeting children from other schools and positive attitudes to school.

Parents' responses to the post-course questionnaire show a slightly different pattern. The statement gaining the highest agreement was that the Centre had helped their children to use a computer for school work. Over half of the parents felt that the Centre had helped with their child's self-confidence, maths and reading. However, just under half of

parents felt that the Centre had helped their child with writing skills, despite this being a relatively high priority at the pre-course stage (as with pupils, it is possible that parents misinterpreted this statement to mean handwriting). On the other hand, there was a high level of satisfaction with the Centre's impact in relation to two other items, namely their child's willingness to do homework and meeting children from other schools. It is also worth noting that, although improving pupils' attitudes to school was not among most parents' top priorities at the pre-course stage, 43 per cent of parents felt *Playing for Success* had made a positive impact on their child's attitudes to school.

In addition to the closed questions, the pre-course questionnaire included an open-ended question asking parents to tell us what they felt was the best thing that the Study Support Centre could do for their child. (The post-course questionnaire had a similar question, asking parents to identify the best thing about their child going to the Centre.) The results from these two open-ended questions are shown in Table 3.2.3.

**Table 3.2.3 What is the best thing that the Study Support Centre can do/did for your child?**

| | Pre-course % | Post-course % |
|---|---|---|
| Boost self-confidence | 44 | 31 |
| Develop computer/Internet skills | 28 | 50 |
| Improve social skills | 17 | 20 |
| Improve literacy | 17 | 6 |
| Improve school work in general | 14 | 5 |
| Get help with their work | 13 | 6 |
| Improve numeracy | 11 | 8 |
| Become more motivated and eager to learn | 11 | 8 |
| Enjoy learning | 11 | 22 |
| | | |
| No response | 8 | 11 |

*Based on responses from 455 parents who completed both pre- and post-course questionnaires. Percentages may sum to more than 100 because parents could make more than one response.*

A high proportion of parents responded to these questions. The table shows that parents gave a variety of different answers to this question and commonly mentioned more than one 'best thing'. These results are broadly consistent with parents' answers to the closed questions, giving top priority to improving children's self-confidence. Again, there were some differences in emphasis between the answers parents gave before and after the course.

Parents' expectations at the beginning of the course can be grouped into two main areas: personal/social attributes and skills (such as self-confidence, social skills and motivation); and academic skills (ICT, literacy, numeracy or school work in general).

In relation to personal and social attributes, the most common answer before the course was that parents wanted the Centre to help boost their child's self-confidence. Many of the parents expressed their concern about their children's lack of confidence, which they felt held their children back and inhibited them from trying at school. Several parents also made the point that a basic level of self-confidence and self-belief would be a key asset for their children in the future. For example, one parent answered the question as follows: '*My daughter has a wonderful character but lacks in confidence. She is very unsure of herself and often thinks that what she has to offer in group talks is nonsense or uninteresting. I think she has shown great courage wanting to attend the Centre and I am hoping to see a difference with her. Thank you for the opportunity*.'

Another said: '*I think the best thing the Study Support Centre can do for my child is to help him become more self-confident as I believe this is an important part of getting on in life. Being more confident can help people accomplish the things they want from their lives*.'

As well as self-confidence, parents also hoped the Centre would help their child to develop social skills, and to improve their motivation and enjoyment of learning. For example, one parent wrote: '*I would like the Centre to teach him self-discipline and tolerance with others. For my son to learn to work with others in a team, to reduce his competitive nature to a level where he can interact with others without stressing himself about winning or losing*.' Another said: '*If the Centre could help my son to enjoy learning, and therefore want to learn, it would benefit him so much*.'

In terms of academic learning, parents hoped that the Centre would help their child with specific skills, particularly computer skills, but also literacy and, less commonly, numeracy. Several pointed out that the Centre was in a good position to offer their child some additional help with learning. Typical comments included: '*The best thing the Centre could do is to help with learning computer skills and having extra help with reading and spelling*' and '*I would like my daughter to be able to read and write and have the support that I feel she has lacked at school*.'

Parents' comments **after** the course revealed that they felt the Centre had helped their child most with computer skills (half of the parents made this point). Other areas that parents identified as the 'best thing' about their child attending the Centre were improvements in self-confidence, enjoyment of learning and social skills. Parents often took the opportunity to thank the Centre staff for their work. Typical comments are reproduced below.

*It helped make my daughter more confident and able to mix with [children from] other schools.*

*The Centre has helped our daughter become a lot more computer literate than she was and she is now totally at ease with computers. She enjoyed every minute of the Centre and is disappointed that her visits have come to an end.*

*My son has no interest what so ever in football but has thoroughly enjoyed his time at the Study Support Centre. He is now begging us to get the Internet at home because he enjoyed so much all the work he has done on the computer.*

*The best thing was seeing the joy and excitement it brought to him every time the bus picked him up. When he returned home he would be telling me and his mum what he had learnt and that he could not wait until the Saturday session. This has been a great experience for my son and we would like to thank the team for the excellent support towards our child and the other children.*

*My son is a lot more happy and better in himself. He used to be a very quiet kid but now he loves going to the Study Support Centre.*

## 3.3 Teachers' views of *Playing for Success*

This section reports the expectations and experiences of teachers. Questionnaires were sent to all the 119 schools which sent pupils to one of the 12 Centres during the Easter term. The questionnaires were addressed to a named 'link teacher' and were sent out just after summer half term (i.e. at least half a term after the pupils had completed their course at the Centres). We received responses from 70 schools (59 per cent). The majority of responses (44) were from primary schools, including a few from middle deemed primary schools. For just over half (36 schools) this was the first time they had taken part in *Playing for Success*.

Because the number of responses from schools is below 100, the following tables report the number of respondents, rather than percentages.

### 3.3.1 How teachers expected pupils to benefit

The questionnaire asked teachers in what ways they anticipated pupils would benefit from attending the Study Support Centre. All teachers responded to this open-ended question and their responses are shown in Table 3.3.1.

**Table 3.3.1 How teachers thought pupils would benefit**

| | N |
|---|---|
| Boost self-confidence/self-esteem | 42 |
| Become more motivated and eager to learn | 28 |
| Develop computer/Internet skills | 24 |
| Improve literacy skills | 16 |
| Enhance/develop learning (unspecified) | 13 |
| Improve numeracy skills | 12 |
| | |
| No response | 0 |

*Based on responses from 70 teachers who completed the school questionnaire. Numbers may sum to more than 70 because teachers could make more than one response.*

Teachers had a number of expectations of *Playing for Success*, which fell into the two main areas of self-confidence/motivation to learn and academic skills. The majority of teachers (42 out of 70) said that they anticipated that the Centre would increase pupils' self-confidence or self-esteem. A further 28 teachers said that they hoped the Centre would improve pupils' motivation. One teacher listed the school's expectations of the Centre as follows: '*Confidence-building, raising self-esteem and further determination to succeed*.' Another wrote: '*Motivation would be developed. A desire for learning for its own sake – the joy of discovering something new – not just for SATs*.'

In terms of academic skills, just over a third of teachers said that they hoped the Centre would help children with their computer skills. As might be predicted, this answer was more likely to be given by teachers from primary and middle schools than by those from secondary schools. As one teacher from a middle school said: '*Our children do not have access to computers at home to support their learning – this was our opportunity to develop an interest in IT outside of school, prior to high school*.'

A minority of teachers said that they expected the Centre to help pupils with literacy and/or numeracy. Other points made by a small minority of teachers included: improving attainment in National Curriculum Assessments; developing study skills; and providing additional study time.

### 3.3.2 Teachers' views of the Centre's impact on pupils

The school questionnaire contained a 'closed' question, asking teachers to rate the impact of the Centre on different aspects of pupils' attitudes, behaviour and skills. The aspects listed in the question were related to the stated purposes of *Playing for Success*. Teachers were asked to indicate their level of agreement with each statement, using a three-point scale (agree, neutral, disagree). The results are shown in Table 3.3.2 (not all teachers answered every item).

**Table 3.3.2 Teachers' ratings of the impact of the Centre on pupils who attended during the Easter term**

| | Agree N | Neutral N | Disagree N |
|---|---|---|---|
| The Centre had a positive impact on pupils' motivation at school | 56 | 14 | 0 |
| Pupils' self-esteem and confidence improved | 65 | 5 | 0 |
| Pupils' school attendance improved | 6 | 56 | 4 |
| The Centre had a positive impact on homework completion | 26 | 39 | 3 |
| Literacy skills improved | 44 | 23 | 1 |
| Numeracy skills improved | 42 | 25 | 1 |
| ICT skills improved | 64 | 3 | 1 |
| Study skills improved | 54 | 12 | 0 |

*Based on responses from 70 teachers who completed the school questionnaire.*

The table shows that the majority of teachers felt that the Centre had helped to develop pupils' attitudes and skills. Most teachers felt that the Centre had had a positive impact

on pupils' self-esteem/confidence and on their ICT skills and over three-quarters felt that the Centre had impacted on pupils' motivation at school and study skills. Over half of the teachers agreed that the Centre had helped pupils to improve their literacy and numeracy skills.

Two statements obtained the agreement of fewer than half of the responding teachers. Just over a third (26) of teachers agreed that the Centre had had a positive impact on pupils' homework completion, and only six teachers agreed that pupils attending the Centre had shown improvements in school attendance. The response to the latter question may simply reflect the selection criteria for the Centre. Only four teachers reported that the school had selected pupils with a record of poor attendance at school, and 19 said that a record of good attendance was one of the criteria they had used in selecting pupils to attend. In most cases therefore, pupils probably had an acceptable or good record of attendance at school before attending the Centre. It is more difficult to interpret the pattern of responses to the question about homework completion. Perhaps pupils attending the Centre already had a good record of homework completion? In any case, we know that Centres varied in their practice towards homework: while some set aside time for this, many encouraged pupils to use the Centre's facilities for homework if they so wished.

### 3.3.3 How teachers rated the Centres' organisation

The school questionnaire included a section concerning four organisational aspects of the scheme, namely: information about the Centre; liaison over practical arrangements; transport; and feedback on pupils' progress at the Centre. Teachers were invited to rate the Centre's performance in relation to each item (see Table 3.3.3).

**Table 3.3.3 Teachers' ratings of aspects of the Centre's organisation**

| | Good N | Neither good nor poor N | Poor N |
|---|---|---|---|
| Information about the Study Support Centre | 65 | 4 | 1 |
| Liaison over practical arrangements (e.g. dates, times) | 67 | 3 | 0 |
| Transport arrangements | 61 | 6 | 3 |
| Feedback on pupils' progress at the Centre | 51 | 13 | 5 |

*Based on responses from 70 teachers who completed the school questionnaire.*

The table shows that the majority of the 70 teachers considered the Centres to be well-organised, especially in relation to practical arrangements and information about the Centre. Feedback on pupil progress was rated less highly overall. Although the majority of teachers considered the Centre's feedback on pupil progress to be 'good', 13 teachers gave this aspect a neutral rating and five rated it as 'poor'. As might be expected, this was something of a 'Centre' factor, with some Centres getting better ratings than others on the quality of feedback provided to schools.

## 3.3.4 Would teachers send pupils to the Centre in future?

We wanted to know whether the schools would be keen to send another group of pupils to the Centre, so we asked teachers to respond to the following question: 'If you have the opportunity, will you send pupils to a *Playing for Success* Study Support Centre in the future? Teachers were asked to respond by ticking one of three boxes (yes, not sure, no) and then to explain the reasons for their answer.

All but one of the 70 teachers said that they would be prepared to send pupils to *Playing for Success* in future. The one teacher who ticked the 'don't know' box cited poor communication as the main reason: '*Feedback has been poor and messages were late for pupils. Even if it is only a brief call, more regular feedback would be appreciated*.' However, even this teacher acknowledged that '*some of the pupils have really benefited'*.

On the whole, teachers were very positive about their reasons for wanting to send more children to the Centres in future. About a third of teachers said that they were keen to do so because the initiative had proved a worthwhile experience for their pupils. Other reasons given by teachers included: that attending the Centre helped pupils to broaden their experience of learning; and that it increased pupils' motivation to learn.

A selection of teachers' comments is reproduced below.

*[I would send pupils again] Because it worked! The children improved in so many areas. It helped to switch them on to learning.*

*The Study Support Centre is an excellent support and provides a superb extra dimension to our work. It was exceptionally beneficial to all pupils.*

*Self-esteem and the opportunity to develop ICT skills was superb. Watching ten- and eleven-year-olds produce Powerpoint presentations was truly awesome and has raised my expectations.*

*This is the second year our school has taken part. The pupils love it, they don't seem to realise they're working. It's a shame that we can only send 20 per year. More clamour to go. It's brilliant!*

## 3.4 Improvements to the Study Support Centres suggested by pupils, parents and schools

This section presents the suggestions offered by pupils, parents and schools about how the Centres could be improved.

In the previous evaluation study, the pupil questionnaire asked: 'Was there anything you did not like about the Study Support Centre?' The main response to the question was 'nothing' although a few pupils took the opportunity to suggest improvements. For the

current study we changed the wording to elicit more suggestions about improvements. Pupils were asked simply: 'What would make the Study Support Centre better?'

The post-course parent questionnaire invited parents to tell us about anything they felt could be improved. Similarly, the school questionnaire invited further comments and suggestions for improvement from teachers.

The responses to these open-ended questions are shown in the following two tables. Table 3.4.1 shows the improvements suggested by parents and pupils (expressed in terms of percentage of responses) and Table 3.4.2 shows the comments and improvements suggested by teachers (expressed in terms of the number of responses).

**Table 3.4.1 Improvements suggested by pupils and parents**

| | **Pupils %** | **Parents %** |
|---|---|---|
| Nothing – it's good already | 18 | 15 |
| Longer courses | 10 | 12 |
| Improvements to Centre facilities | 5 | 1 |
| More information for parents | - | 5 |
| | | |
| No response | 23 | 51 |

*Based on responses from 536 pupils and 455 parents who completed both pre- and post-course questionnaires.*
*Respondents could make more than one comment.*

These comments underline the positive nature of pupils' experiences at the Centre. The most popular answer from both pupils and parents was 'nothing because the Centre is good already'. Typical comments from pupils included: '*It couldn't get any better*' and '*Change nothing at all. They have everything just right. It is absolutely CLASS.*'

The second main suggested 'improvement' was that pupils would have liked to attend for a longer period. Comments here included: '*It would be better if it lasted a little bit longer. It has been great*', and '*It would be better if you could come every week for ever*'.

A small number of pupils made other comments, including suggesting improvements to Centre facilities. On closer examination, these appeared to come from certain Centres where the room allocated to Study Support were a little small and crowded. Additional suggestions made by a small minority of pupils (less than five per cent) included: more use of computers and more football-related content, such as the opportunity to meet players or play football.

Parents' suggestions tended to echo those of the pupils, although a few parents (five per cent) said that they would have liked more information. One parent wrote: '*[I would like] an information pack for parents covering all the activities and more information on what we could do to help*' and another would have liked '*Better communication with parents. I'm not sure whether my son had made any improvements with his study, although his confidence has lasted and he did seem to enjoy attending.*'

Nevertheless, most of the parents who replied took the opportunity to make positive comments about the Centre. One parent spoke for many when she said: '*The Study Support Centre is an excellent initiative and the only way in which it could be improved would be to offer more places!*'

**Table 3.4.2 Teachers' further comments and suggested improvements**

| | N |
|---|---|
| Centres should increase their pupil intake | 11 |
| Pupils gained a great deal from their involvement | 11 |
| The Centre is well organised | 9 |
| Communication between the Centre and the school is good | 9 |
| More liaison and feedback is needed | 8 |
| Facilities at the Centre are excellent | 7 |
| The school is satisfied with the Centre – it's difficult to suggest improvements | 7 |
| | |
| No response | 21 |

*Based on responses from 70 teachers who completed the school questionnaire. Teachers could make more than one response.*

The teachers' responses reinforced the positive nature of the experience for the majority of schools. Teachers said that pupils gained a great deal from their experience and they wished that the opportunity could be available for more pupils to benefit. For example, one teacher said: '*The enthusiasm of the Centre Manager is a strong feature of the programme. The programme is well run and fits into the existing knowledge/experience of pupils. We would just like more of it!*'

As with the parents' responses, the main suggestion for improvement was in the area of information and liaison (a point made by only a small minority of teachers). One teacher said: '*We would have liked more information as to what tasks the pupils were actually being given to do. This would have allowed us to discuss more of the project with them.*' Another said: '*I would have liked more feedback on progress. I had to rely on what the pupils told me they had done*.' One teacher felt that the Centre could have made a more

proactive approach to involving teachers: '*The opportunity to visit was open, but a more concrete invite would have been more likely to make me feel welcome.*'

On the other hand, these criticisms came from a minority of teachers and several others made positive comments about the quality of their involvement with the Centre. As one teacher said: '*I was very impressed with the organisation and communication. All kids who attended benefited in some way*.' Another said: '*Could we send twice as many children? The Centre is excellent – the management, admin. and teaching staff are a credit to [the LEA], [the club] and the schools they serve*.'

One school reported that the Centre had made a contribution to staff and curriculum development. This had arisen through the participation of teachers in *Playing for Success* sessions.

*The Playing for Success scheme is absolutely superb and fulfilled all of our hopes and expectations. In addition to the benefits for pupils, the school's participation in this scheme proved to be a very valuable staff development strategy. It enabled teachers to observe and participate in their after-school sessions, thereby providing access to expert advice as well as opportunities to seek guidance about computer programs which would be suitable for use in the school. The only possible improvement which I could suggest would be to provide us with <u>more sessions</u>! PLEASE!*

## 3.5 How did the football club environment contribute to pupils' experiences?

We were interested to find out how the football club environment had contributed to the quality of pupils' experiences, so we included a question on this in the school questionnaire. Teachers' responses to this question are shown in Table 3.5.1.

**Table 3.5.1 How did the fact that the Centre was located in a football club contribute to the quality of pupils' experiences?**

| | **N** |
|---|---|
| Pupils felt privileged/special going to a football club | 29 |
| The location raised the profile and status of the initiative | 14 |
| Pupils who attended gained kudos with their peers | 10 |
| The possibility of seeing players was an incentive | 10 |
| The football environment was not important | 7 |
| | |
| No response | 0 |

*Based on responses from 70 teachers who completed the school questionnaire. Teachers could make more than one response.*

Most teachers were able to identify one or more ways in which the football club environment had contributed to the quality of pupils' experiences. Only seven of the teachers felt that the football environment had not contributed to pupils' experiences (for example one teacher commented: '*This fact seemed immaterial to the children.*') Others said that the football location acted as an incentive at first, but that different aspects of the scheme (particularly the learning programme and computer facilities) were more important in sustaining pupils' willingness to attend. Teachers also made the point that part of the 'special' character came from the experience of visiting a high-profile venue that was different from school.

On the whole, teachers felt that the fact that the Study Support Centre was in a football club made it a unique experience and generated enthusiasm among the pupils. The words 'special' 'privilege', ' exciting', 'status' and 'kudos' occur frequently among their comments. One teacher explained: '*Children were aware of the privilege of being chosen to visit such a "high focus" venue in the area.*' Another said: '*It made it "special" and so they felt "special".*'

Some teachers felt that the football connection had an equal appeal to all pupils. As one teacher commented: '*All pupils can relate to the football club, whether they like sport or not*.' Others made the point that the football club environment held a strong appeal for boys and for pupils who were football supporters, although this was not to the detriment of other groups. For example, one teacher wrote: '*The connection with football is undoubtedly a strong motivator, especially for disaffected boys. Girls also enjoyed being included on equal terms*.' Another said: '*It was influential – a great deal of self-esteem was derived from the fact that the children could associate their learning with football – particularly important to boys*.' A third commented that the football club held a particular appeal for '*Boys and those of Asian heritage who do not traditionally attend football matches*.'

The strength of the football club appeal clearly varied from Centre to Centre. Some teachers reported that 'their' club was successful and/or enjoyed a particularly high status within the local community. As one teacher explained: '*[The team] is held in high regard by the majority of pupils and visiting their local club had a huge impact on their desire to attend and learn... It helped to fulfil many pupils' dreams being under the same roof as their heroes!*' A teacher from a school in a different area said: '*These are [area name] kids – what more need I say! They live football. It was very positive*.'

The football club location raised the profile and status of the initiative among parents, schools and classmates. For example, one teacher said: '*It made it exciting for pupils and gave credibility to the project for parents. Everyone knows where they've been*.' Others referred to the 'street cred' among fellow pupils of attending a Centre based in a football club, and the fact that it was seen as a 'cool' thing to do. Teachers commented that these were important ingredients in attracting pupils who were not strongly motivated towards learning and that it helped boys, in particular, feel able to participate in a learning initiative without fear of ridicule from their classmates.

A few teachers mentioned that pupils benefited from the team spirit engendered by the Centre. For example, one teacher commented: '*The children felt a sense of belonging,*

*part of the football club. This association inspired them academically and socially to give of their best with their work, behaviour and attitudes*.'

Several also pointed out that the possibility of meeting professional players and other club staff gave an added incentive for pupils to attend. Points made by a small minority of teachers included: that the pupils enjoyed the opportunity of seeing 'behind the scenes' at the club; that the clubs were able to provide an excellent standard of facilities; and that pupils benefited from football-related incentives and prizes (such as match tickets and team merchandise).

## 3.6 Summary

This section has revealed very positive views of *Playing for Success* among pupils, parents and schools.

### Pupils' views of *Playing for Success*

- Most pupils were looking forward to attending the Centres. They anticipated that their experiences would be fun and interesting and they expected to be given help with self-confidence and academic skills.
- The Centres lived up to pupils' expectations, especially as far as using computers was concerned. However, pupils' expectations of the Centres appeared unrealistically high in relation to help with writing skills, mathematics and reading.
- Secondary pupils tended to be more cautious in their expectations of the initiative, but primary and secondary pupils found the Centres equally helpful.

### Parents' views of *Playing for Success*

- The majority of parents said they were very pleased that their children had been selected to attend *Playing for Success*. For example, at the post-course stage, 88 per cent of parents indicated that were 'very pleased' that their child had been selected, and a further 11 per cent said that they were 'pleased'

- They wanted the Centres to help their children in a variety of ways, particularly in self-confidence, mathematics and computer skills. Parents' comments revealed that they were particularly concerned about their children's lack of confidence, which they felt held their children back at school.
- Parents felt the Centres had helped their children, especially in using computers and improving self-confidence.

## Teachers' views of *Playing for Success*

- Teachers expected the initiative to benefit pupils' self-confidence, motivation and academic skills. The majority of teachers noted improvements in pupils' attitudes and skills. They were most likely to note an impact on pupils' self-confidence, ICT skills, motivation at school and study skills.
- Most teachers rated the Centres' organisation highly, although a minority thought the Centres could provide better feedback on pupils' progress at the Centre.
- 69 out of 70 teachers said that they would be prepared to send pupils to *Playing for Success* in future (one teacher said 'not sure').
- Most teachers felt that the football club environment had added to the quality of pupils' experiences. They reported that pupils felt 'special' going to the football club, and that the location raised the profile of the initiative.

## Suggested improvements

- Pupils, parents and teachers were asked to identify any aspects of the Centres they felt could be improved. The replies from pupils and parents underlined the positive nature of pupils' experiences: the most popular answer was 'nothing, it's good already'. Pupils, parents and schools wanted the scheme to be expanded, by offering longer courses with more places.
- A small number of parents and teachers suggested that the Centres could improve their feedback on pupils' progress.

# 4. Changes in Pupils' Attitudes

This section considers evidence of changes in pupils' attitudes. The evaluation team derived seven attitude scales, measuring different aspects of pupils' attitudes to reading, writing, mathematics, study skills and self-esteem. The section begins with an explanation of the design and analysis of the attitudinal measures before presenting the results for each attitude scale in turn.

## 4.1 The design of the evaluation

The evaluation included a range of outcome measures designed to measure outcomes linked to the core aims of *Playing for Success*. In order to keep the burden on pupils to a minimum, we asked each pupil to complete two of the four evaluation instruments. Approximately half the pupils who attended Centres in the spring term 2000 completed an attitudinal questionnaire and a test of numeracy at the beginning of their course. The attitudinal questionnaire asked pupils about their attitudes to reading, writing, and mathematics. We also asked pupils a series of questions aimed at assessing their self-esteem. At the end of their course, they completed a slightly revised version of the attitudinal questionnaire and a different version of the numeracy test.

One Centre Manager decided to administer all four assessments to pupils at the beginning and end of the course.

## 4.2 The statistical analysis

The analysis was designed to give an overview of the progress of pupils attending the 12 Centres and to allow comparisons with a similar group of pupils who had not attended.

Our first step for the attitudinal questionnaire was to see whether pupils' answers to a set of items were related to underlying attitudes or 'factors'. For example, we discovered that pupils' answers to the items concerning reading yielded two main factors, relating to their enjoyment of, and confidence in, reading. This was the starting point for us to consider changes in pupils' attitudes during the evaluation period. We looked at pupils' mean scores and their standard deviations for the pre- and post-course assessments. These tell us

something about pupils' starting point, progress and the extent of variation in scores overall. However, we needed to use more sophisticated approaches to data analysis in order to find out more about the *relative* progress of different groups.

We knew that different groups of pupils varied considerably in their characteristics and that this was likely to affect the results. We wanted to be able to see whether pupils with different background characteristics, such as gender, key stage and ethnic background, made different amounts of progress. We also wanted to find out which pupil characteristics had the greatest impact on attainment levels and the amount of progress between pre-and post-test. This would allow us to make comparisons between groups of pupils with different characteristics: for example to compare pupils attending a *Playing for Success* Centre with the control group; or to see if pupils attending some Centres made more progress than others, once we had made allowances for the differences in background characteristics.

We decided to use 'multilevel modelling' for this purpose. Multilevel modelling is the accepted technique for analysing educational data which is grouped into similar clusters at different levels (see Goldstein, 1987). It allows for the apparent impacts of background factors to be estimated at the same time as taking account of the variations between levels. In the case of the *Playing for Success* evaluation, individual pupils are grouped into Centres, and pupils within the same Centre may have more in common than pupils from different Centres. Multilevel modelling allows us to take account of this hierarchical structure of the data as well as estimating relationships between background factors and outcomes.

We tried a number of different versions of the model before deciding on the best one to use. For each outcome measure, we included all pupils with both pre- and post-course scores on that measure. Initial analyses indicated that there was a different pattern of results for primary and secondary pupils, so we decided to treat these as separate groups in the model. The final model included the pupils in the control group alongside all the pupils who had attended *Playing for Success*.

We included the following variables for each pupil:

- key stage;
- sex;
- free school meal entitlement;
- stage of Code of Practice for special educational needs;
- English fluency;
- ethnic background; and
- whether pupils attended a *Playing for Success* Centre or were in the control group.

At the Centre level, the model included:

- the Centre attended; and
- the course length (number of hours).

We chose this model because it was relatively simple, and the results were similar to those from more complex models. (Further details of the model are given in Appendix 1.)

For each outcome measure we carried out a preliminary analysis including all the variables listed above. We then removed any variables which were clearly not contributing to the model, and carried out a second analysis. We describe the results based on these analyses. The results are given in relation to 'confidence intervals'. These indicate our level of confidence that the scores for a given population are really within the stated range. We chose the 95 per cent confidence interval, which can be interpreted as meaning that there is only a five per cent chance that the real score is not within the stated range.

The rest of this section reports the results relating to pupils' attitudes to reading, writing, mathematics, study skills, and to their self-esteem. Pupils' answers to the individual items were combined into scales, using factor analysis.

## 4.3 Attitudes to reading

We developed two scales to assess pupils' attitudes to reading. One included seven items and assessed pupils' enjoyment of reading. The second, with four items, assessed pupils' confidence in their reading ability. Further details of all the attitude scales are given in Appendix 2.

## 4.4 Reading enjoyment

Reading enjoyment was measured by asking pupils whether they agreed with a number of statements about reading (pupils were invited to answer each question 'yes' 'not sure' or 'no'). The reading enjoyment scale was composed of statements such as 'I like reading stories' and 'Books are fun'.

Table 4.4 summarises the pre-course and post-course scores on the reading enjoyment scale for the pupils attending a *Playing for Success* Centre, and for the control group pupils. The table shows the mean scores with their standard deviations (shown as sd) in brackets. The table shows the progress made by each group of pupils and the significance level indicates the probability that there is a real difference in scores between the pre- and post-test for each group.

**Table 4.4: Summary results for reading enjoyment**

| | | **Pre-course** | **Post-course** | **Progress** | |
|---|---|---|---|---|---|
| | **N** | **Mean (sd)** | **Mean (sd)** | **Mean (sd)** | |
| **KS2 pupils attending *Playing for Success*** | 290 | 4.3 (3.2) | 4.0 (3.4) | -0.3 (2.7) | p<0.05 |
| **KS3 pupils attending *Playing for Success*** | 246 | 3.6 (3.6) | 3.5 (3.6) | 0.0 (2.4) | ns |
| **All pupils attending *Playing for Success*** | 536 | 3.9 (3.4) | 3.8 (3.5) | -0.2 (2.5) | ns |
| **Control group** | 85 | 4.0 (3.3) | 3.5 (3.8) | -0.5 (3.1) | ns |

Scores on the reading enjoyment scale could range from -7 to +7 (as with all the attitude scales, higher scores indicate more positive attitudes). The mean scores were positive for all pupils at the pre-course stage, indicating that on the whole, pupils found reading fairly enjoyable at the beginning of the evaluation. Looking down the pre-course column, we can

see that KS2 pupils had higher scores, indicating that they were initially more positive about reading than were the pupils in KS3, with the control group in between.

We can see from looking at the progress column that pupils in KS2 who attended *Playing for Success* had slightly lower scores at the end of the course than they did at the beginning. Although small, this decrease was statistically significant. There was no significant change in the scores of pupils in KS3 attending *Playing for Success*. The 85 pupils in the control group were from schools linked with four of the Centres. The table shows us that the scores for pupils in the control group fell by a greater amount than did those for pupils attending *Playing for Success.* However, this change was not statistically significant, mainly because of the relatively small sample size.

We used multilevel modelling to look in more detail at the comparative scores of particular groups of pupils. This showed that the apparent difference in reading confidence between pupils in Key Stages 2 and 3 was not significant, once we had taken account of other pupil characteristics. Girls had higher reading enjoyment scores than boys. The difference was about two points and was statistically significant. This finding is not surprising, given that girls are generally considered to have more positive attitudes to reading than do boys.

Non-White pupils' scores indicated that they enjoyed reading slightly more than was true of White pupils. The difference was about one point and was statistically significant. There was also some evidence that pupils with special educational needs enjoyed reading less than other pupils, although the difference was small – about 0.15 points for each stage of the Code of Practice – and was on the borderline of statistical significance at the 95 per cent confidence interval.

### 4.4.1 Changes in pupils' reading enjoyment

Chart 4.4 summarises what we learnt from the multilevel model about changes in pupils' enjoyment of reading. It shows the relative progress of different groups. The degree of change in pupils' reading enjoyment scores is indicated on the vertical axis, which runs from –2 to +2. Each bar represents the progress of a particular group of pupils, and the diamond mark indicates the mean (average) progress of each group. Bars shown below the heavy horizontal mid-line (marked 0), indicate that there was a relative decline in scores for that

group. Similarly, bars above the line indicate progress. The length of the bar indicates the 95 per cent confidence interval. Where these overlap the mid-line, it indicates that we cannot be sure that pupils in that group made significant progress overall.

**Chart 4.4: Change in Reading Enjoyment scores**

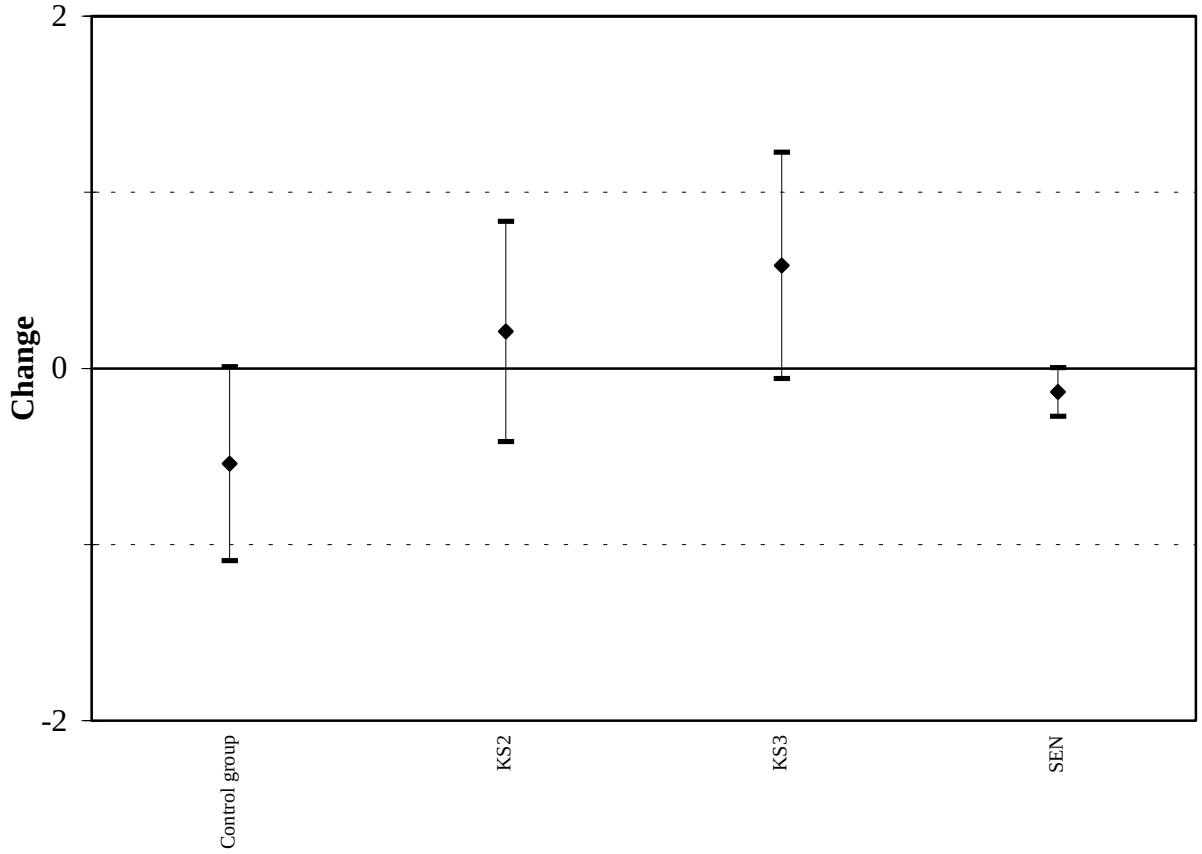



Chart 4.4 shows several trends in the relative progress of different groups in reading enjoyment. The left-hand vertical bar in the chart (labelled 'Control group') confirms the trend identified in Table 4.4 above. The mid-point of this line is below the mid-line, showing that the scores of control pupils went down by about half a point on average. The upper and lower points on this vertical bar show the 95 per cent confidence interval. This bar just crosses the horizontal axis. If the vertical bar did not cross the axis, we could say, with considerable certainty, that there was a real decline in average scores for the control group. In this case, we cannot be quite so sure.

The second vertical bar (labelled 'KS2') shows the change in reading enjoyment scores for pupils in KS2 and attending *Playing for Success*, relative to those of the control group. While this relative gain is positive (because the mid-point of the bar is above the horizontal axis), it is not statistically significant. This is indicated by the fact that the vertical bar crosses the horizontal axis. This pattern is consistent with what we saw in Table 4.4, which showed that pupils' attitude scores declined, but by less for KS2 pupils attending *Playing for Success* than for pupils in the control group.

The vertical bar labelled 'KS3' has its mid-point about half a point above the axis, although the bar just crosses the mid-line. This suggests that the difference between the control group and pupils in KS3 attending the *Playing for Success* Centres was on the borderline of statistical significance at the 95 per cent confidence interval.

The scores of the three main groups (control group, KS2 and KS3) were always included in the multilevel model. We also included the scores of pupils with different background characteristics, where the model indicated substantial differences in their progress. In this case, the model indicated that background characteristics had a significant effect on progress in relation to one dimension only: special educational needs.

The right-hand vertical bar in Chart 4.4 shows the progress made by pupils attending *Playing for Success* who had identified special educational needs. The bar has its mid-point below the horizontal mid-line and its upper end is just on the line. This shows us that pupils with special educational needs made slightly less progress in terms of their enjoyment of reading than those without identified special needs. The difference is very small – about 0.1 points for each stage of the Code of Practice – but is statistically significant.

We did not find any significant differences between the 12 Centres in relation to changes in pupils' enjoyment of reading.

## 4.5 Reading confidence

Reading confidence was measured by pupils' responses to four statements about reading, such as 'I am a good reader' and 'I can work out hard words by myself' (see Appendix 2 for full details of the attitude scales).

Table 4.5 summarises the pre-course and post-course scores on the reading confidence scale for the pupils attending a *Playing for Success* Centre, and for the control group pupils. Scores on this scale could range from -4 to +4.

**Table 4.5: Summary results for reading confidence**

| | | Pre-course | Post-course | Progress | |
|---|---|---|---|---|---|
| | **N** | **Mean(sd)** | **Mean(sd)** | **Mean(sd)** | |
| **KS2 pupils attending *Playing for Success*** | 290 | 2.4 (1.9) | 2.5 (1.8) | 0.1 (1.7) | ns |
| **KS3 pupils attending *Playing for Success*** | 246 | 2.4 (1.9) | 2.7 (1.7) | 0.3 (1.3) | p<0.01 |
| **All pupils attending *Playing for Success*** | 536 | 2.4 (1.9) | 2.6 (1.8) | 0.2 (1.5) | p<0.05 |
| **Control group** | 85 | 2.4 (1.7) | 2.7 (1.6) | 0.2 (1.3) | ns |

We can see from the table that pupils in KS2 and KS3 and those in the control group all started from the same level of confidence about their reading ability. The fact that the scores are above zero suggests that pupils felt fairly confident in reading at the pre-course stage.

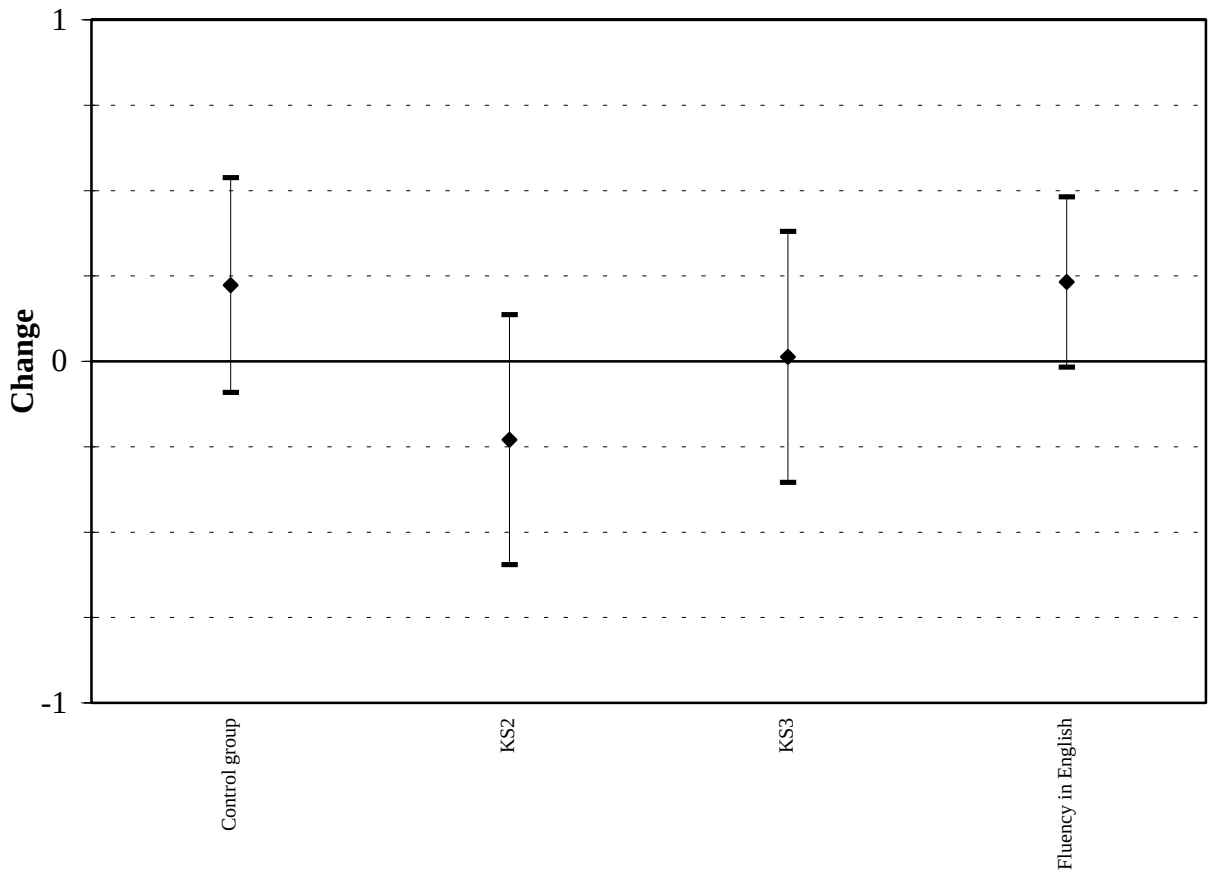
The table shows that the pupils who attended *Playing for Success* had significantly higher scores for reading confidence when they had finished the course than they did at the beginning. KS2 pupils' reading confidence did not increase as much as that for KS3 pupils. Pupils in the control group also increased their scores by about the same amount, although this increase was not statistically significant (probably because of the small number of pupils in the control group).

Using multilevel modelling, we found that the difference between KS2 and KS3 pupils was not significant. In addition, the model showed that pupils with special needs had lower levels of reading confidence than pupils with no identified special needs. The difference was 0.24 points for each stage of the Code of Practice, and was statistically significant. Girls were slightly more confident about reading than boys, although the difference is not quite statistically significant at the 95 per cent confidence level. There was a trend for non-White pupils to be more confident about their reading ability than White pupils, although this was not quite statistically significant. The difference was about 0.5 points.

### 4.5.1 Changes in pupils' reading confidence

Chart 4.5 summarises what we learnt from the multilevel model about changes in pupils' reading confidence, as measured by scores on the reading confidence scale.

**Chart 4.5: Change in Reading Confidence scores**




Firstly, the left-hand vertical bar in Chart 4.5 (labelled 'Control group') indicates that, when other characteristics were taken into account, pupils in the control group made progress in reading confidence relative to pupils who attended *Playing for Success*. However, the difference was not statistically significant (note that the bar extends below the horizontal mid-line).

The second and third vertical bars show that the reading confidence of KS2 and KS3 pupils attending *Playing for Success* did not increase relative to those of the control group. The vertical bar labelled 'Fluency in English' refers to the progress in reading confidence made by pupils of different levels of fluency in English. It shows us that pupils who were more fluent

in English tended to make more progress in reading confidence than those who were not fluent in English. However, the difference is quite small – about 0.25 points for each stage in our measure of fluency – and it is not quite statistically significant at the 95 per cent interval.

## 4.6 Writing enjoyment

The writing enjoyment scale was made up of three statements, namely: 'I like writing stories'; 'Writing stories is boring'; and 'Writing stories is hard for me'.

Table 4.6 summarises the pre-course and post-course scores on the writing enjoyment scale for the pupils attending a *Playing for Success* Centre, and for the control group pupils. Scores on this scale could range from -3 to +3.

**Table 4.6: Summary results for writing enjoyment**

| | | Pre-course | Post-course | Progress | |
|---|---|---|---|---|---|
| | **N** | **Mean (sd)** | **Mean (sd)** | **Mean (sd)** | |
| **KS2 pupils attending *Playing for Success*** | 290 | 0.8 (1.5) | 0.7 (1.6) | -0.1 (1.5) | ns |
| **KS3 pupils attending *Playing for Success*** | 246 | 0.6 (1.6) | 0.8 (1.6) | 0.2 (1.2) | p<0.05 |
| **All pupils attending *Playing for Success*** | 536 | 0.7 (1.6) | 0.7 (1.6) | 0.0 (1.4) | ns |
| **Control group** | 85 | 0.8 (1.4) | 0.8 (1.5) | 0.0 (1.5) | ns |

The pre-test scores for all groups were just above zero, indicating slightly positive attitudes towards writing enjoyment.

Looking at progress, KS2 pupils attending a *Playing for Success* course showed a slight decline in their mean scores from the pre-course to post-course responses. However, this was not a statistically significant finding. On the other hand, there was a statistically significant improvement in the writing enjoyment scores for KS3 pupils. This suggests that KS3 pupils made progress in this area whilst attending a *Playing for Success* Centre. By looking at the row entitled 'All pupils attending *Playing for Success*', which is a combination of the KS2 and KS3 pupils responses, we can see that overall there was no change in pupils' scores on

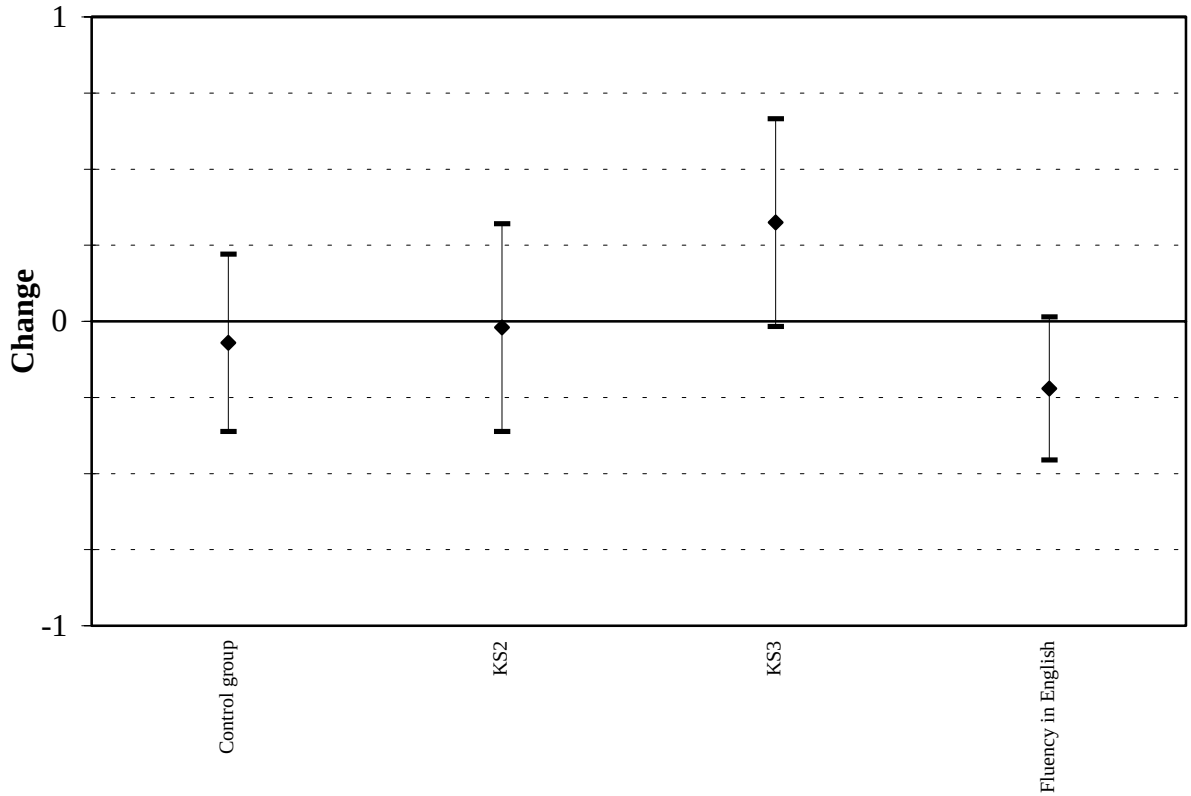
writing enjoyment. The same was true for the control group sample, where there was no significant change in scores.

Further analysis of the data, through multilevel modelling, found that when other pupil characteristics were taken into consideration, KS2 pupils had higher scores than KS3 pupils for the writing enjoyment scale. This difference was almost 0.25 points and was on the borderline of statistical significance. Girls had significantly higher scores than boys on this scale, by almost half a point. Pupils identified as having special educational needs scored lower on the writing enjoyment scale than those who did not have special needs. The difference was small, 0.1 points for each stage of SEN, but was just statistically significant using the 95 per cent confidence interval.

### 4.6.1 Changes in pupils' writing enjoyment

Chart 4.6 shows what we have found about pupils' progress in writing enjoyment, using multilevel modelling.

**Chart 4.6: Change in Writing Enjoyment scores**



The chart shows that there were no statistically significant changes for either the Control Group or for KS2 pupils attending a *Playing for Success* Centre. There are indications that KS3 pupils attending a *Playing for Success* course made relatively greater progress, although because the bar crosses the mid-line, the difference is not quite significant at the 95 per cent level. The final vertical bar shows the progress made by pupils who were fluent in English. This bar shows that there was a trend for pupils who were more fluent in English made less progress in their writing enjoyment scores, although the result is not quite statistically significant at the 95 per cent level.

## 4.7 Writing confidence

Pupils' confidence in writing fiction and non-fiction was measured by asking pupils whether they agreed with a number of statements about writing such as 'I am good at writing letters to people' and 'It is hard for me to write down what I want to say'. This scale included two statements about spelling, namely: 'I can spell most words correctly' and 'Spelling is hard for me'.

Table 4.7 summarises the pre-course and post-course scores on the writing confidence scale for the pupils attending a *Playing for Success* Centre, and for the control group pupils. Scores on this scale could range from -5 to +5.

**Table 4.7: Summary results for writing confidence**

| | | **Pre-course** | **Post-course** | **Progress** | |
|---|---|---|---|---|---|
| | **N** | **Mean (sd)** | **Mean (sd)** | **Mean (sd)** | |
| **KS2 pupils attending *Playing for Success*** | 290 | 1.9 (2.4) | 2.2 (2.4) | 0.3 (2.0) | p<0.05 |
| **KS3 pupils attending *Playing for Success*** | 246 | 2.0 (2.5) | 2.2 (2.4) | 0.2 (1.8) | ns |
| **All pupils attending *Playing for Success*** | 536 | 2.0 (2.4) | 2.2 (2.4) | 0.2 (1.9) | p<0.01 |
| **Control group** | 85 | 2.0 (2.3) | 1.7 (2.5) | -0.3 (2.0) | ns |

Table 4.7 shows that pupils' pre-course scores were one or two points above zero, indicating a fairly low level of confidence in writing. The pre-course scores were similar for pupils in the two key stages and for those in the control group.

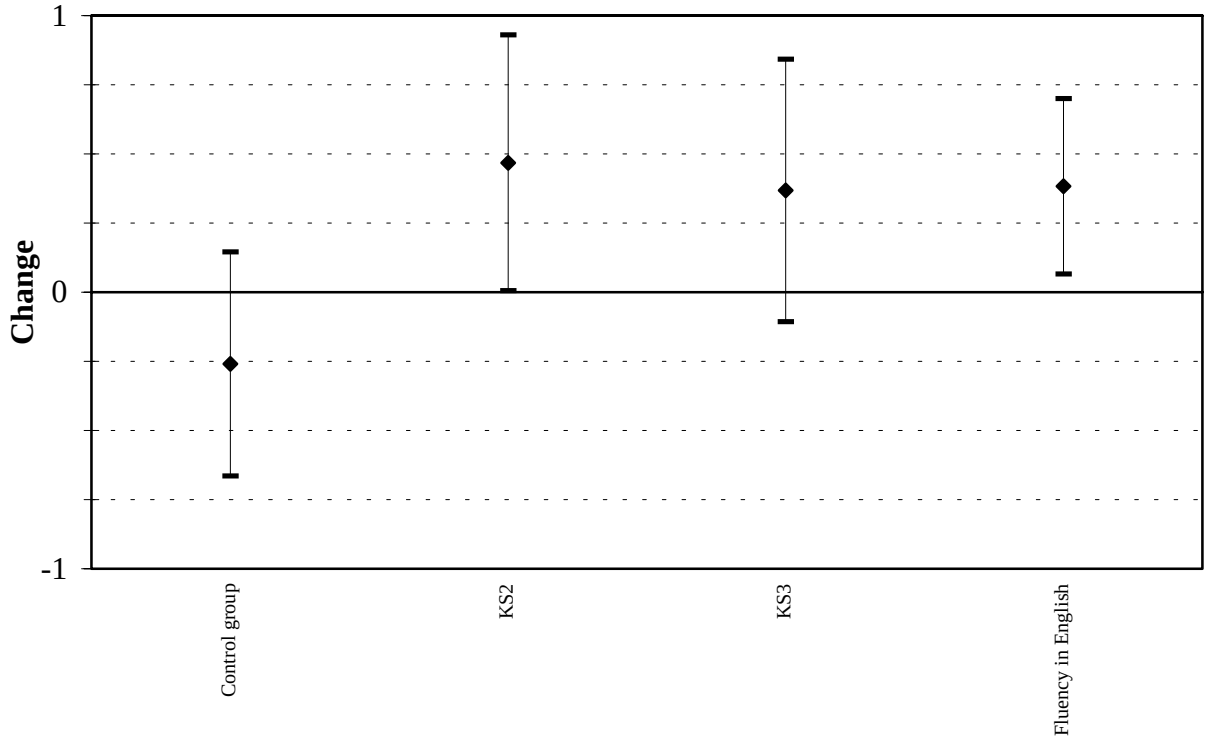
The scores of pupils who attended *Playing for Success* rose significantly and most of the difference came from pupils in Key Stage 2. (There was a slight, but non-significant, increase in the writing confidence of KS3 pupils.) The table also shows that there was a decline in the writing confidence of the control group sample, but this result was not statistically significant.

Using multilevel modelling, we looked at pupils' results in more detail. As may be expected, pupils with special educational needs had less confidence in their writing than those with no identified special needs. There was about a 0.2 point difference between each stage of the Code of Practice and the difference was statistically significant. Pupils who were fluent in English were significantly more confident about their writing, as were pupils from White ethnic backgrounds. The difference between the pupils who were fluent in English and those not so fluent was 0.5 point for each stage of fluency. The difference in writing confidence between pupils from White and non-White ethnic backgrounds was almost one point.

### 4.7.1 Changes in pupils' writing confidence scores

Chart 4.7 shows what we have found from the multilevel model about pupils' progress in writing confidence, as measured by scores on the writing confidence scale.

**Chart 4.7: Change in Writing Confidence scores**



The first bar on the chart, labelled 'Control Group', shows that the scores for writing confidence for the control group sample decreased slightly, although this decrease was not statistically significant. The second bar on the chart, entitled 'KS2', shows significantly greater progress for those KS2 pupils attending *Playing for Success* than for those pupils in the control group. On average, the difference was about 0.5 points. As the vertical line does not cross the horizontal axis, we can be reasonably confident that KS2 pupils who attended a *Playing for Success* course made more progress in writing confidence than those who did not attend.

To investigate this finding further we decided to look at the **effect size** (Cohen, 1969). The effect size refers to the magnitude of the effect and is another way of assessing the difference between two groups relative to underlying variation within the groups. A useful rule of thumb is that an effect size of 0.25 or more is likely to represent a finding which is of educational, as well as statistical, significance (Gray *et al*., 1990; Slavin and Fashola, 1998). In this case, the effect size is 0.19 for KS2 pupils. This suggests that *Playing for Success* did not have a strong impact on pupils' writing confidence.

Chart 4.7 also shows that KS3 pupils made slightly more progress than the control group sample. This difference was about 0.4 points. However, because the vertical bar crosses the horizontal axis this difference is not statistically significant using the 95 per cent confidence interval.

The final bar on the chart, labelled 'Fluency in English', shows that pupils who were more fluent in English made markedly greater progress in their writing confidence than those who were not so fluent. This result is statistically significant and therefore we can be reasonably certain that the writing confidence level of those pupils fluent in English increased to a greater extent than that of pupils with less fluency in English. The difference is about 0.4 points of score for each stage of our measure of fluency.

## 4.8 Punctuation

The punctuation section of the questionnaire asked pupils to indicate whether they could use four items of punctuation, namely: full stops; commas; capital letters; and speech marks.

(Pupils responded to each item by ticking a box labelled 'yes', 'no' or 'not sure'.) From these four items, we derived a scale measuring pupils' confidence in using punctuation correctly. Scores on this scale could range from -4 to +4.

Table 4.8 summarises the pre-course and post-course scores for punctuation of the pupils attending a *Playing for Success* Centre, and of the control group.

**Table 4.8: Summary results for punctuation**

| | | Pre-course | Post-course | Progress | |
|---|---|---|---|---|---|
| | **N** | **Mean (sd)** | **Mean (sd)** | **Mean (sd)** | |
| **KS2 pupils attending *Playing for Success*** | 290 | 3.4 (1.2) | 3.6 (0.9) | 0.3 (1.1) | p<0.001 |
| **KS3 pupils attending *Playing for Success*** | 246 | 3.3 (1.2) | 3.6 (0.9) | 0.3 (1.1) | p<0.001 |
| **All pupils attending *Playing for Success*** | 536 | 3.3 (1.2) | 3.6 (0.9) | 0.3 (1.1) | p<0.001 |
| **Control group** | 85 | 3.3 (1.4) | 3.7 (0.8) | 0.3 (1.3) | p<0.05 |

The maximum score any pupil could achieve on the punctuation scale was four. The mean pre-course scores shown in Table 4.8 are all above three points, showing that most pupils were confident that they could use punctuation. The pre-course scores for pupils in the control group were very similar to those for pupils attending *Playing for Success*. High starting scores mean that there was little scope for pupils to improve their scores. Nevertheless, KS2 and KS3 pupils attending *Playing for Success* had significantly higher scores at the end of the evaluation and the scores for pupils in the control group increased by a similar amount.

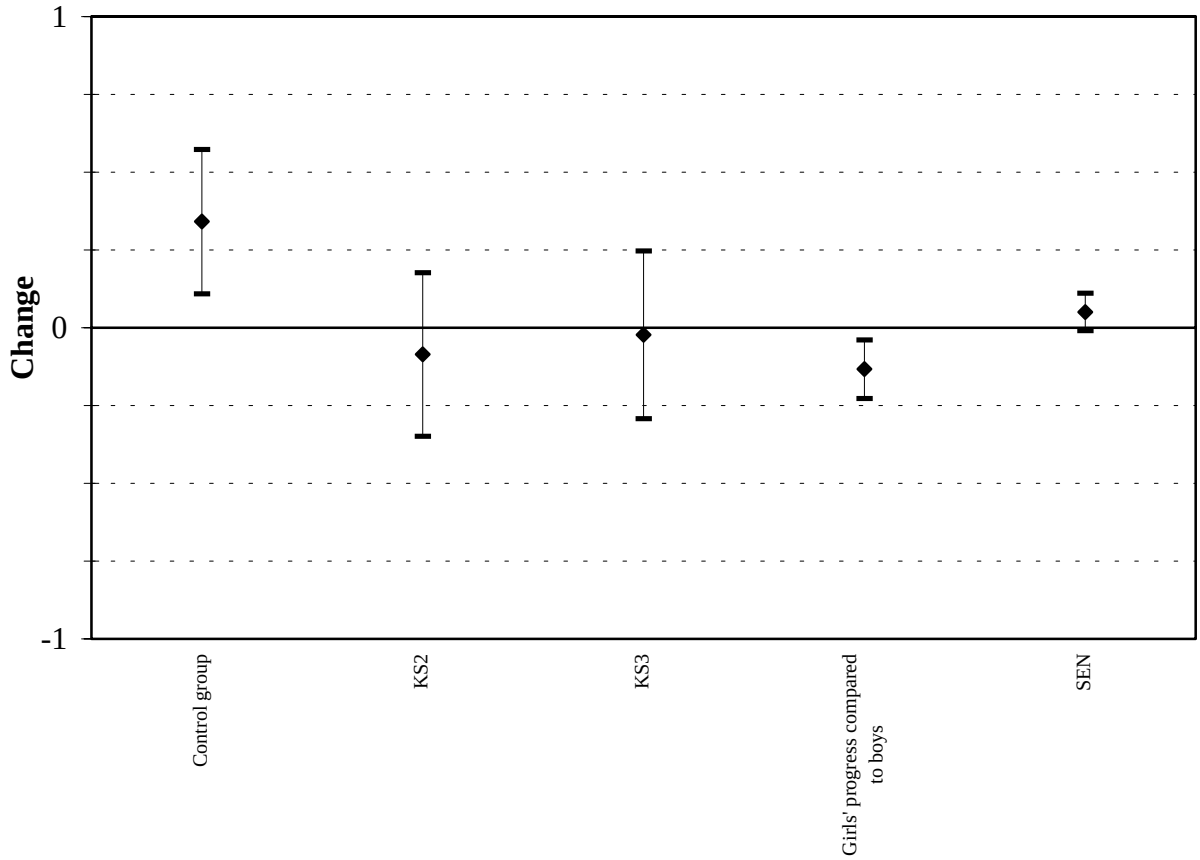
Multilevel modelling was used to look at these scores more closely. This revealed that pupils with special needs had slightly lower scores than other pupils. The difference was significant and equal to about 0.1 points for each stage of the Code of Practice.

Perhaps surprisingly, average scores for KS2 pupils were almost identical to those for pupils in KS3. Girls had slightly higher scores than boys, reflecting the fact that girls' mastery of written language tends to be greater than boys'. The difference was small, about 0.1 points, and was not quite significant at the 95 per cent level.

### 4.8.1 Changes in pupils' punctuation scores

Chart 4.8 shows the results from multilevel modelling for changes in punctuation.

**Chart 4.8: Change in Punctuation scores**




We can see from the first vertical bar in Chart 4.8 that the punctuation scores of all three groups rose slightly during the evaluation period. The control group pupils increased their scores significantly, relative to all pupils attending *Playing for Success*. The increase was about 0.3 points. However, the relative difference is very small when broken down into each key stage. This is indicated by the fact that the mid point of the vertical bar labelled 'KS2' is very close to the horizontal mid-line, indicating that pupils in KS2 and attending *Playing for Success* made similar progress to pupils in the control group. Similarly, there was little difference between the progress made by KS3 pupils attending *Playing for Success* and that made by pupils in the control group. This was confirmed by considering effect sizes, which were 0.08 for Key Stage 2 and 0.02 for Key Stage 3, indicating that the progress made by the

control group, relative to pupils attending *Playing for Success,* is too small to be considered educationally significant.

Chart 4.8 also indicates that girls attending *Playing for Success* made significantly less progress than boys in relation to their punctuation scores. The difference was about 0.1 points. We saw earlier that girls started with scores which were on average about 0.1 points higher than those for boys. Taken together, this suggests that boys' and girls' scores were very similar at the end of their attendance at *Playing for Success*.

The final vertical bar in Chart 4.8 shows that pupils with special educational needs and attending *Playing for Success* made slightly more progress than would be expected, taking other factors into consideration. This difference was statistically significant, although it represented less than 0.1 points for each stage of the Code of Practice.

We did not find significant differences between Centres in the progress made by their pupils in using punctuation.

## 4.9 Attitudes to mathematics

We developed two scales to assess pupils' attitudes to mathematics. One included four items and assessed pupils' enjoyment of mathematics. The second, with six items, assessed pupils' confidence in their mathematical skills.

## 4.10 Mathematics enjoyment

Pupils' enjoyment of mathematics was measured by their responses to four statements, including: 'I can solve maths problems' and 'I am good at maths'.

Table 4.10 summarises the pre-course and post-course scores on the Maths Enjoyment scale for the pupils attending a *Playing for Success* Centre, and for the control group pupils. Scores could range from -4 to +4.

**Table 4.10: Summary results for mathematics enjoyment**

| | | Pre-course | Post-course | Progress | |
|---|---|---|---|---|---|
| | N | Mean (sd) | Mean (sd) | Mean (sd) | |

| | | | | | |
|---|---|---|---|---|---|
| **KS2 pupils attending *Playing for Success*** | 290 | 1.8 (2.6) | 1.9 (2.7) | 0.1 (2.1) | ns |
| **KS3 pupils attending *Playing for Success*** | 246 | 1.5 (2.7) | 1.6 (2.6) | 0.1 (2.0) | ns |
| **All pupils attending *Playing for Success*** | 536 | 1.7 (2.7) | 1.8 (2.7) | 0.1 (2.1) | ns |
| **Control group** | 85 | 1.9 (2.5) | 1.5 (2.6) | -0.4 (2.5) | ns |

Table 4.10 shows that the average scores for pupils at the pre-test stage were between one and two points above zero, suggesting that pupils enjoyed mathematics to some extent.

The post-course mathematics enjoyment scores of pupils attending *Playing for Success* were slightly higher than their pre-course scores, but this increase was not significant. The table also shows that the scores for pupils in the control group went down slightly – by about 0.4 points – over the same period. This change was not statistically significant.

We learnt more about the achievement of particular groups of pupils by using multilevel modelling. Overall, pupils in KS2 tended to have slightly higher scores than those in KS3. The difference was about 0.4 points and was not quite statistically significant at the 95 per cent level.

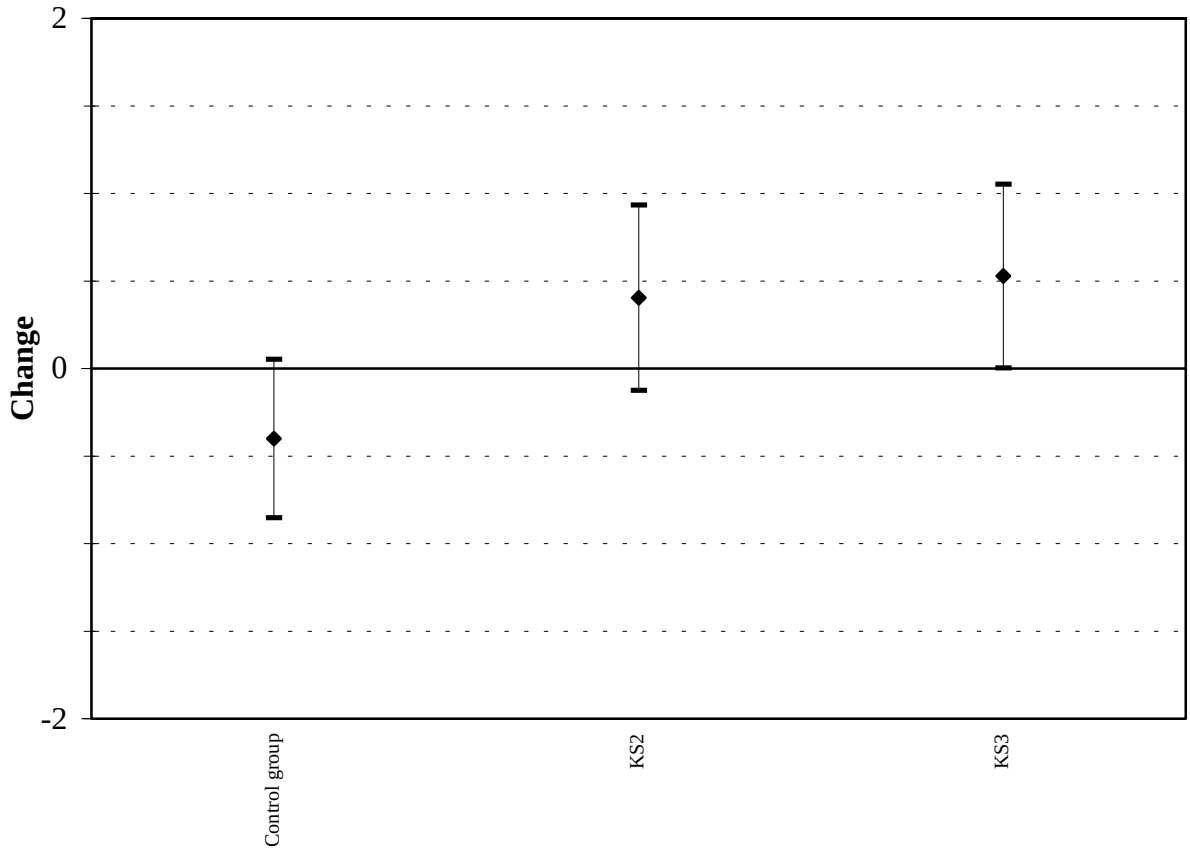
We found that the pupils with special educational needs who attended *Playing for Success* enjoyed mathematics less than other pupils. The difference was about 0.2 points for each stage of the Code of Practice and was statistically significant. Multilevel modelling also showed that pupils from non-White ethnic backgrounds enjoyed mathematics more than White pupils. The difference was about 0.7 points and was statistically significant.

There were no significant differences between boys and girls in their enjoyment of mathematics.

### 4.10.1 Changes in pupils' mathematics enjoyment

Chart 4.10 summarises what we learnt from the multilevel model about changes in pupils' enjoyment of mathematics, as measured by scores on the mathematics enjoyment scale.

**Chart 4.10: Change in Mathematics Enjoyment scores**




The left-hand bar of Chart 4.10 shows that the average mathematics enjoyment scores for pupils in the control group went down slightly, although this was not statistically significant. The middle vertical bar (labelled 'KS2') shows a positive change in mathematics enjoyment scores for pupils in KS2 and attending *Playing for Success*, compared with pupils in the control group. This tells us that the average scores for KS2 pupils attending *Playing for Success* probably increased relative to the scores for the control group, although the difference is not quite significant at the 95 per cent level.

The improvement in scores for KS3 pupils attending *Playing for Success*, relative to that for control group pupils, is shown by the final vertical bar in Chart 4.10. This gain was about 0.5 points and was statistically significant. However, it is important to remember that this is a relative gain: as Table 4.10 shows, scores for the *Playing for Success* pupils stayed level, whereas the scores for the pupils in the control group declined.

For both KS2 and KS3 pupils attending *Playing for Success* there is, therefore, some evidence that attending the Centre maintained, but did not increase, pupils' enjoyment of mathematics. The effect size was 0.20 for KS3 pupils: this is below the level of 0.25 which we would usually require if we were to conclude that attending *Playing for Success* had a real impact on pupils' enjoyment of mathematics.

We did not find any other significant differences between groups of pupils in changes in their enjoyment of mathematics during the period of our evaluation. Nor did we find any statistically significant differences between Centres in the changes in pupils' enjoyment of mathematics.

## 4.11 Mathematics confidence

Pupils' enjoyment of mathematics was measured by their responses to six statements, including: 'Maths is usually easy for me'; 'I can solve maths problems'; and 'I am good at maths'.

Table 4.11 summarises the pre-course and post-course scores on the mathematics confidence scale for the pupils attending a *Playing for Success* Centre, and for the control group pupils. Scores on the mathematics confidence scale could range from -6 to +6.

**Table 4.11: Summary results for mathematics confidence**

| | | Pre-course | Post-course | Progress | |
|---|---|---|---|---|---|
| | **N** | **Mean(sd)** | **Mean(sd)** | **Mean(sd)** | |
| **KS2 pupils attending *Playing for Success*** | 290 | 1.8 (2.7) | 2.3 (2.9) | 0.5 (2.2) | p<0.001 |
| **KS3 pupils attending *Playing for Success*** | 246 | 2.1 (2.7) | 2.7 (2.6) | 0.6 (1.9) | p<0.001 |
| **All pupils attending *Playing for Success*** | 536 | 1.9 (2.7) | 2.5 (2.7) | 0.5 (2.1) | p<0.001 |
| **Control group** | 85 | 2.0 (2.9) | 2.3 (2.9) | 0.3 (2.5) | ns |

The pre-test scores indicate a degree of confidence in mathematics among all three groups of pupils, although pupils' scores were some way off the maximum possible score of six points.

Pupils in KS2 and pupils in KS3 who attended *Playing for Success* had more confidence in their mathematics ability after attending the Centre than they did before. The improvement in mathematics confidence was greater for KS3 pupils than for those in KS2. These increases are both highly statistically significant.

The table also shows that pupils who did not attend *Playing for Success* increased their mathematics confidence slightly, but the difference was not statistically significant.

Using multilevel modelling, we found that the difference in overall levels of confidence in mathematics between KS2 and KS3 pupils was not statistically significant. Boys showed a significantly higher level of mathematics confidence than girls, by about 0.75 points.

We found that pupils with special needs were less confident in mathematics than those without special needs. The difference was quite small, about 0.25 points for each stage of special need, but was statistically significant.

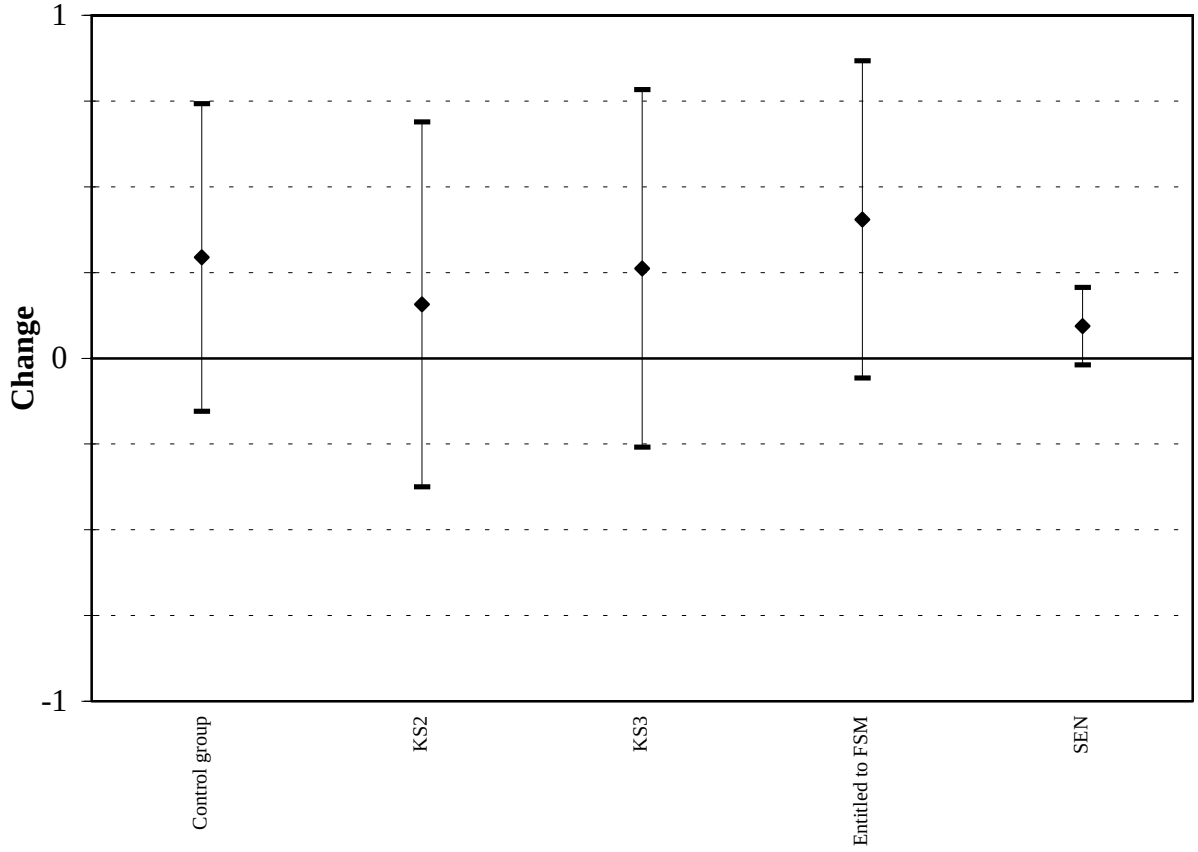
### 4.11.1 Changes in pupils' confidence in mathematics

Chart 4.11 summarises what we learnt from the multilevel model about changes in pupils' mathematics confidence, as measured by scores on the mathematics confidence scale.

Although all three groups made progress, the change for the control group was not significant, nor was the change for KS2 and KS3 pupils relative to the control group.

The vertical bar labelled 'Entitled to FSM' refers to the change in mathematics confidence for pupils entitled to free school meals, compared with those not entitled to free school meals. This shows that pupils who were entitled to free school meals made more progress in mathematics confidence than pupils who were not. The difference is not quite statistically significant at the 95 per cent level.

**Chart 4.11: Change in Mathematics Confidence scores**




The right-hand vertical bar suggests that pupils with special educational needs may have made more progress in mathematics confidence than those without special needs. The difference was only about 0.1 points for each stage of special educational need, and was not quite statistically significant at the 95 per cent level.

## 4.12 Study skills

The following sections focus on pupils' self-reported study skills. Pupils were invited to respond to 15 statements about their study skills (e.g. 'I can get my work finished on time' and 'I can explain things to other people').

The analysis of pupils' responses to the 15 items revealed that there were two underlying factors: Independent study skills and working with others.

## 4.13 Independent study skills

Pupils' independent study skills were measured by a factor including seven items such as 'I can set myself targets for my work' and I can find out information to help me do my work'. Scores on this scale could range from –7 to +7.

**Table 4.13: Summary results for independent study skills**

| | | Pre-course | Post-course | Progress | |
|---|---|---|---|---|---|
| | **N** | **Mean (sd)** | **Mean (sd)** | **Mean (sd)** | |
| **KS2 pupils attending *Playing for Success*** | 290 | 4.5 (2.4) | 5.0 (2.3) | 0.5 (2.3) | p<0.001 |
| **KS3 pupils attending *Playing for Success*** | 246 | 4.6 (2.4) | 5.1 (2.3) | 0.5 (2.3) | p<0.01 |
| **All pupils attending *Playing for Success*** | 536 | 4.6 (2.5) | 5.1 (2.3) | 0.5 (2.3) | p<0.001 |
| **Control group** | 85 | 4.9 (2.3) | 4.8 (2.6) | -0.1 (2.9) | ns |

The table shows that pupils' pre-course scores were all around five points, indicating that they already felt able to demonstrate a fair degree of independence in their work. At the pre-course stage, the scores for the control group were similar to those of pupils attending *Playing for Success*. The table also shows that pupils attending *Playing for Success* made significant progress overall, but this was not the case for pupils in the control group (whose independent study skills scores actually declined slightly between the pre- and post-test).

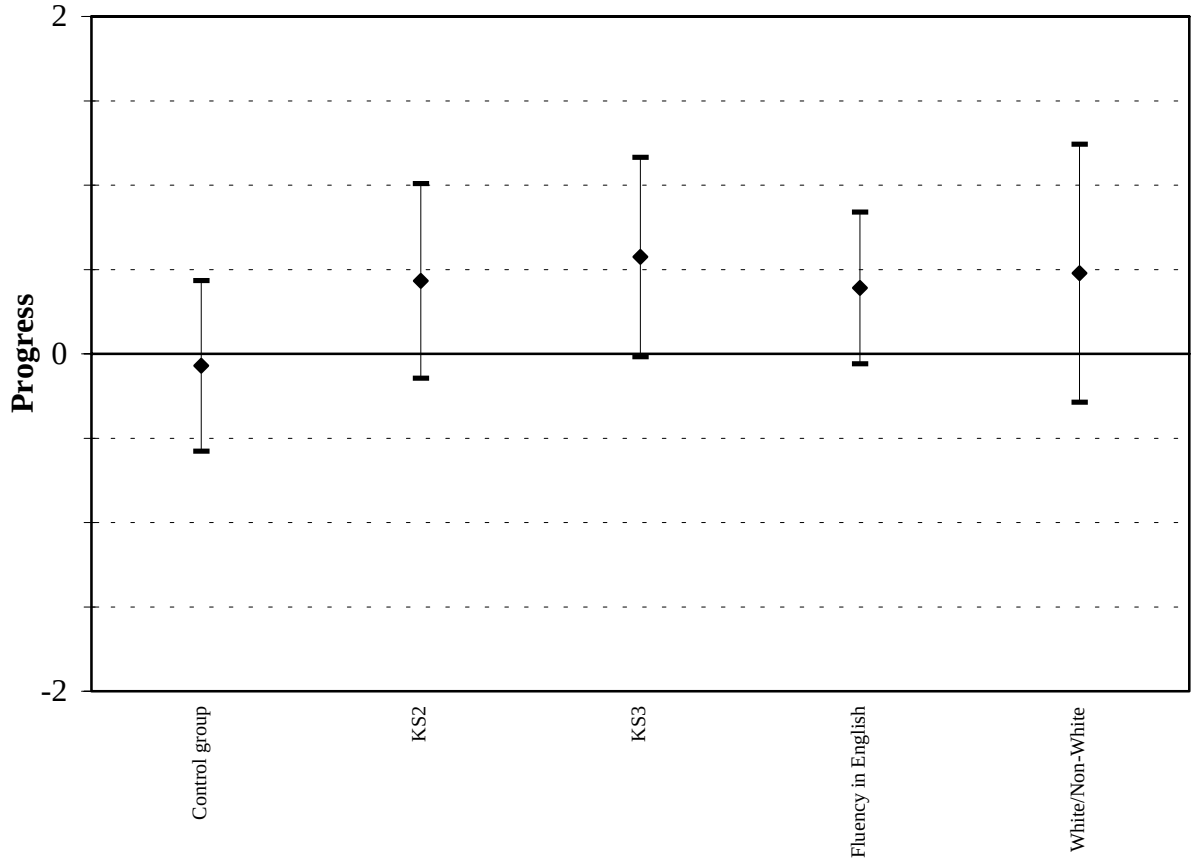
The multilevel model indicated that, when other characteristics are taken into account, girls reported a higher level of independent study skills than boys. This difference was small, amounting to about 0.25 of a point on average, but it was statistically significant at the 95 per

cent level. As may be expected, pupils with special needs did significantly less well on this measure, although the difference in scores was very small (about 0.12 points for each stage of the Code of Practice). There were no other significant differences between pupils with different characteristics in terms of their independent study skills. Perhaps surprisingly, pupils in Key Stage 3 did not record significantly higher scores on this measure than those in Key Stage 2.

### 4.13.1 Progress in independent study skills

Chart 4.13 shows the progress of different groups of pupils in relation to their self-reported independent study skills once relevant background factors have been taken into account.

**Chart 4.13: Progress in Independent Study Skills scores**




The Chart tends to confirm the findings in Table 4.13. Whereas the independent study skills scores of the control group declined slightly, those for pupils attending *Playing for Success* rose slightly. These differences were too small to be statistically significant, although the progress achieved by *Playing for Success* pupils in Key Stage 3 approached significance at

the 95 per cent confidence level. Pupils with greater fluency in English made slightly greater progress on this measure, as did non-White pupils, although again the differences were not statistically significant. There were no significant differences between Centres in relation to progress on this measure.

## 4.14 Working with others

Table 4.14 shows the results for the measure called 'working with others'. The factor included seven items such as 'I can work as part of a team' and 'I can listen to other people'. Scores on this scale could range from –7 to +7.

**Table 4.14: Summary results for working with others**

| | | Pre-course | Post-course | Progress | |
|---|---|---|---|---|---|
| | **N** | **Mean (sd)** | **Mean (sd)** | **Mean (sd)** | |
| **KS2 pupils attending *Playing for Success*** | 290 | 4.7 (2.5) | 5.2 (2.2) | 0.6 (2.4) | p<0.001 |
| **KS3 pupils attending *Playing for Success*** | 246 | 4.9 (2.3) | 5.3 (2.2) | 0.4 (2.1) | p<0.01 |
| **All pupils attending *Playing for Success*** | 536 | 4.8 (2.4) | 5.3 (2.2) | 0.5 (2.3) | p<0.001 |
| **Control group** | 85 | 5.0 (2.2) | 5.2 (2.6) | 0.2 (2.7) | ns |

The table shows that pupils scored about five points at the pre-course stage, indicating a fairly high level of confidence in their ability to work with others. The scores of pupils attending *Playing for Success* rose by about half a point overall and this difference was statistically significant. The scores of pupils in the control group did not change to a significant extent.

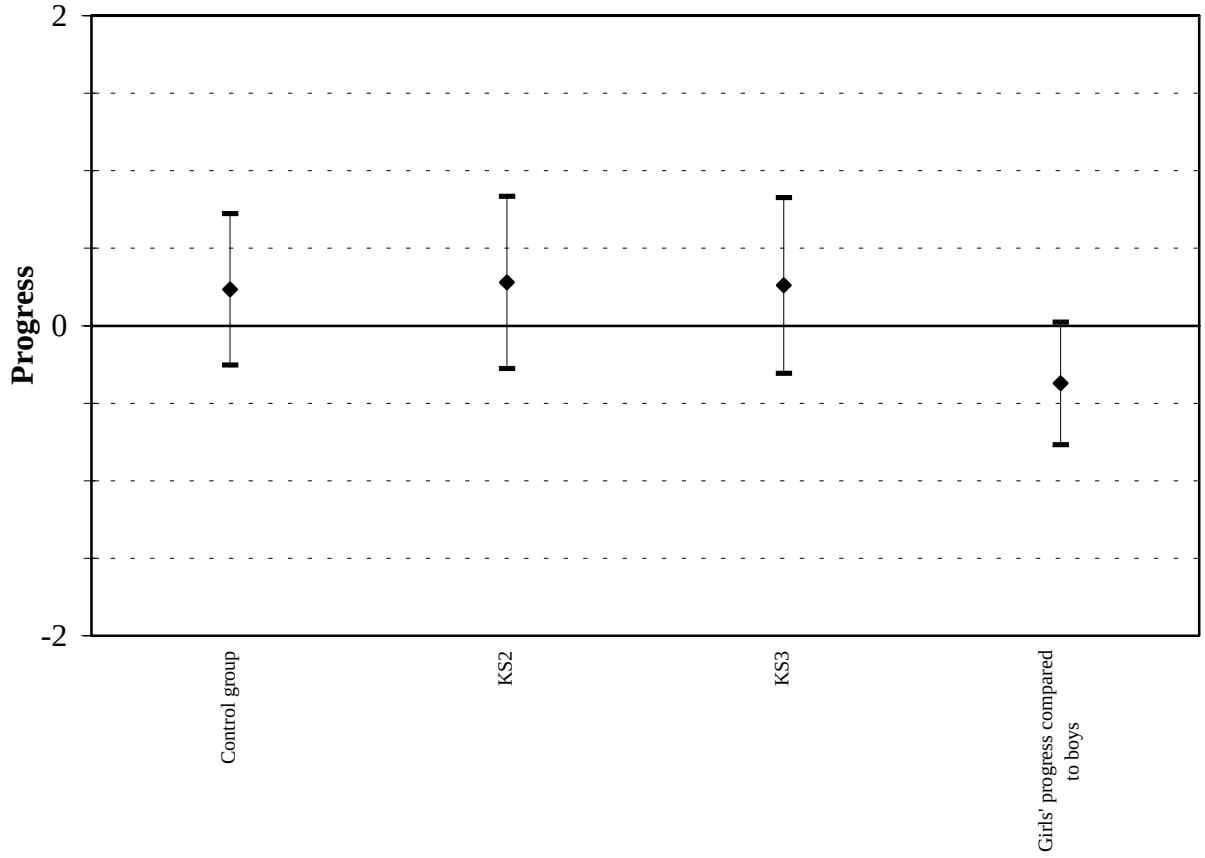
The multilevel analysis for 'working with others' showed that there were no statistically significant differences between groups of pupils, once other characteristics had been taken into account. The multilevel model indicated that the scores of the control group were equivalent to those of pupils attending *Playing for Success*, and that there were no significant differences between pupils in the two key stages. However, pupils with special needs tended to score less highly on this measure. The difference was small (about 0.12 of a point for each stage of the Code of Practice) and was on the borderline of statistical significance. There was

also a non-significant indication that pupils who were eligible for free school meals scored less highly in terms of their ability to work with others.

### 4.14.1 Progress in working with others

Chart 4.14 shows the progress of different groups of pupils in relation to their self-reported ability to work with others, once relevant background factors have been taken into account.

**Chart 4.14: Progress in Working with Others scores**




The Chart shows that pupils made a small amount of progress in working with others, but that pupils attending *Playing for Success* did not make significantly greater progress than those in the control group. Girls made slightly less progress than boys and this difference was on the borderline of statistical significance. There were no significant differences between Centres in relation to progress on this measure.

## 4.15 Self-esteem

One section of the attitudinal questionnaire for pupils was called 'What do you think about yourself?'. This was designed to measure pupils' self-esteem and included 16 items such as: 'When I do something, I do it well' and 'I worry about meeting new people'. We calculated a score for self-esteem based on these items. Scores on this scale could range from -16 to +16.

Table 4.15 summarises the pre-course and post-course scores on the self-esteem scale for the pupils attending a *Playing for Success* Centre and for the control group pupils.

**Table 4.15: Summary results for self-esteem**

| | | **Pre-course** | **Post-course** | **Progress** | |
|---|---|---|---|---|---|
| | **N** | **Mean (sd)** | **Mean (sd)** | **Mean (sd)** | |
| **KS2 pupils attending *Playing for Success*** | 290 | 5.3 (4.5) | 5.9 (4.7) | 0.5 (4.0) | p<0.05 |
| **KS3 pupils attending *Playing for Success*** | 246 | 5.6 (4.9) | 6.2 (4.9) | 0.6 (3.5) | p<0.01 |
| **All pupils attending *Playing for Success*** | 536 | 5.4 (4.7) | 6.0 (4.8) | 0.6 (3.8) | p<0.001 |
| **Control group** | 85 | 3.9 (5.3) | 4.1 (5.0) | 0.3 (4.5) | ns |

Table 4.15 shows that the pre-test scores for all groups were positive, but not markedly so, given that the maximum possible score was 16.

Pupils attending *Playing for Success* had significantly higher scores on the self-esteem scale at the end of the evaluation period than at the beginning. The improvements in scores were statistically significant for both Key Stage 2 and Key Stage 3 pupils. This suggests that we can be reasonably certain that the self-esteem of pupils who attended a study support Centre improved. The pupils in the control group sample also showed a positive change in their post-course scores. However, this change was small and was not statistically significant.

Table 4.15 also indicates that pupils attending *Playing for Success* had higher scores than pupils in the control group. This was unexpected, given that the attitudes of pupils participating in *Playing for Success* were similar to those of control group pupils in other respects. It is important for researchers to ensure that pupils in a control group are as similar

as possible to those in participating in the initiative under consideration, to enable 'fair' comparisons to be made. Because the self-esteem scores for the control group were not equivalent to the group of pupils attending all Centres, we decided to carry out some further analysis. This entailed comparing the scores of the control group pupils with those of their specific 'matched' group.

We had self-esteem scores for 76 pupils from the same schools as those attended by the pupils in the control group (or from matched schools within the same area). These 76 pupils had a mean score of 5.4, i.e. the same as that for *Playing for Success* pupils as a whole. By the end of their time at the Centres, the mean score for these 76 pupils was 6.0, an increase of 0.6 points. In other words, this sub-group of 'matched' pupils was very similar to the other pupils attending *Playing for Success* in terms of their self-esteem, indicating that there was a real difference between pupils attending the Centres and those in the control group. We are unable to account for the apparent difference in the control group's self-esteem, other than to speculate that selection for *Playing for Success* could possibly have had a positive effect on pupils' self-esteem, even at the pre-course stage.

Further analysis of the influence of background characteristics, using multilevel modelling, confirmed that pupils in the control group had significantly lower self-esteem scores than did pupils attending for *Playing for Success*. It also showed that, when other pupil characteristics were taken into consideration, girls had lower self-esteem scores than boys. The difference was 0.8 points and was statistically significant. There was a non-significant trend for non-White pupils to have higher self-esteem scores than White pupils. The difference was 1.2 points.

### 4.15.1 Changes in pupils' self-esteem scores

Chart 4.15 shows what we have found through the multilevel model about changes in pupils' self-esteem, as measured by the self-esteem scale.

**Chart 4.15: Change in Self-esteem scores**

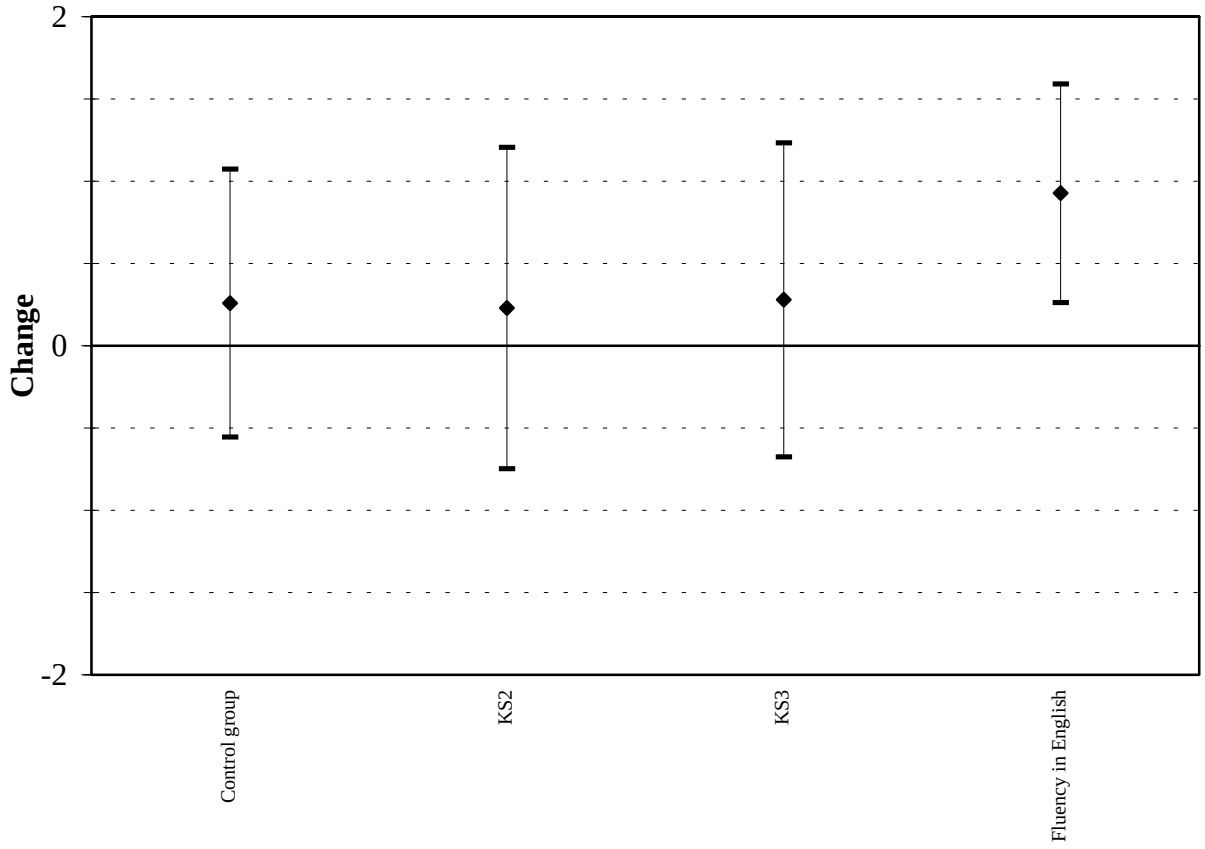



Chart 4.15 indicates that all three groups of pupils made progress, but that the relative difference in progress between the groups were not sufficient to be statistically significant. The fourth bar on the chart indicates that pupils with a greater level of fluency in English who attended a Centre made significantly greater progress in self-esteem than did less fluent pupils. The difference is about 0.9 points for each stage of fluency in English.

## 4.16 Summary

This section focused on changes in pupils' attitudes during their time at *Playing for Success*. Pupils' attitudes were assessed using a questionnaire specially designed for the evaluation. There were seven attitude scales, measuring pupils' attitudes to reading, writing, mathematics, study skills and self-esteem. The following results are based on the outcomes from multilevel modelling, which takes account of differences in pupils' characteristics and makes comparisons between those who attended *Playing for Success* and pupils with similar characteristics who did not attend.

### Reading enjoyment

- There were no significant differences between the control group and pupils attending *Playing for Success* in relation to their enjoyment of reading, although there was a non-significant trend for control group pupils' reading enjoyment to decline relative to pupils in KS3 who had attended the Centres.
- Girls had significantly higher scores for reading enjoyment than boys, and pupils from non-White ethnic backgrounds had significantly higher reading enjoyment scores than White pupils.
- All pupils attending *Playing for Success* made equal progress in relation to reading enjoyment, although there was a non-significant trend for pupils with special educational needs to make less progress than others.

### Reading confidence

- There were no significant differences between the control group and pupils attending *Playing for Success* in relation to reading confidence.
- Pupils with special educational needs were significantly less confident in reading.
- All pupils attending *Playing for Success* made equal progress in relation to reading confidence, although there was a non-significant trend for pupils who were more fluent in reading to become more confident.

## Punctuation

We measured pupils' ability to use punctuation correctly, using a set of self-report items.

- Surprisingly, the analysis revealed that, once background characteristics were taken into account, pupils in the control group made greater progress in their punctuation than was true of pupils who attended *Playing for Success*. However, the effect sizes (0.08 for Key Stage 2 and 0.02 for Key Stage 3) indicate that the difference is too small to be considered educationally significant.
- Pupils with special needs scored significantly lower on this scale, although their rate of progress was similar to that of other pupils.
- There was a non-significant trend for girls to score higher on this scale, but boys made significantly greater progress in relation to their self-reported punctuation skills.

## Writing enjoyment

- There were no significant differences between the control group and pupils attending *Playing for Success*, although there was a non-significant trend for pupils in KS3 to improve their enjoyment of writing, relative to the control group.
- Girls had significantly more positive attitudes towards writing enjoyment than boys, and pupils with special educational needs had significantly lower scores for writing enjoyment.
- There were no significant differences in the progress of different groups, although there was a non-significant trend for pupils who were less fluent in English to improve their writing enjoyment, compared with pupils who were fluent in English.

## Writing confidence

- Pupils in Key Stage 2 who attended *Playing for Success* became significantly more confident in writing, compared with pupils in the control group. However, the effect size for this finding (0.19) is too small to indicate a difference of educational significance.
- There were significant differences in the writing confidence scores of three groups. Pupils without special needs; those who were fluent in English; and pupils from White ethnic backgrounds were all significantly more confident in reading.
- Pupils who were fluent in English made significantly more progress in writing confidence.

## Maths enjoyment

- Pupils in KS3 who attended *Playing for Success*, made better progress in mathematics enjoyment than was true of pupils in the control group, whose scores tended to decline. However, the effect size for this finding (0.20) is too small to indicate a difference of educational significance.
- Pupils with special educational needs had significantly lower scores for maths enjoyment than pupils who were not identified as having special needs. Pupils from non-White ethnic backgrounds had significantly higher scores on this measure.
- There were no significant differences in the progress of different groups who attended *Playing for Success* in relation to enjoyment of mathematics.

## Maths confidence

- The mathematics confidence of all pupils improved slightly during the evaluation period. The confidence of pupils in the control group improved by about the same extent as for pupils attending *Playing for Success*.
- Boys were significantly more confident about mathematics than girls, and pupils with special needs were less confident than others.
- All pupils attending *Playing for Success* made equal progress in maths confidence, although there was a non-significant trend for pupils with special educational needs and those eligible for free school meals to become relatively more confident in reading.

## Study skills

There is relatively little to report in relation to our measures of pupils' study skills (independent study and working with others).

- Pupils scored fairly high on our measures of study skills at the pre-test stage. Compared with pupils in the control group, those attending *Playing for Success* did not make significantly greater progress in either measure, although the progress of Key Stage 3 pupils approached significance for independent study skills.
- The analysis revealed two statistically significant associations between pupils' background characteristics and their self-reported independent study skills. Girls felt more able to work independently than boys, and pupils with special needs scored less

highly than their peers on this measure. There were no significant differences in relation to pupils' background characteristics and their progress on either measure.

## Self-esteem

- The self-esteem scores of all pupils improved slightly during the evaluation period. The self-esteem of pupils in the control group improved to about the same extent as for pupils attending *Playing for Success*.
- Pupils selected for *Playing for Success* had significantly higher self-esteem than pupils in the control group. Boys had significantly higher self-esteem than girls.

# 5. Achievement in Numeracy and Reading Comprehension

This section focuses on pupils' achievement in numeracy and reading. It presents the findings from the NFER tests, which were specially devised for this evaluation (see Appendix 3 for further details). Results are given for the whole sample and in comparison with the control group. We also examine the impact of different pupil and Centre characteristics on levels of achievement, using multilevel modelling.

## 5.1 Numeracy

We developed new tests of numeracy for use in the evaluation. The new tests were designed to be:

- relevant to National Curriculum requirements;
- short, because pupils attend *Playing for Success* for a relatively short period, and Centre Managers did not wish to devote a significant part of this time to testing and assessment;
- appropriate for a relatively wide age range of pupils (Year 6 to Year 9);
- suitable for pupils who are predominantly at the lower end of the achievement range; and
- in a format that would make the tests suitable for possible adaptation to a computer-based form.

Each of the two versions of the test included 33 items and each item had a multiple choice or short answer format. Most of the items assessed pupils' abilities to carry out the sort of numerical operations used in everyday life, such as money, weight, area and distance. A few items focused on purely numerical operations.

Completed tests were returned to NFER for marking and scoring. (Completed numeracy tests were received from 11 of the 12 Centres.) Control group pupils were selected to be as similar as possible to a matched group of pupils attending the Centres during the spring term of 2000.

As part of a separate study, each of the numeracy tests was age standardised, using a nationally representative sample of approximately 1,600 pupils. The scores obtained by

pupils attending the Centres or in the control group were converted to age-standardised scores[1]. This enabled us to compare the progress of pupils of different ages.

Table 5.1 summarises the pre-course and post-course numeracy scores of the pupils attending a *Playing for Success* Centre, and the scores achieved by pupils in the control group. The table shows the mean age-standardised scores with their standard deviations (shown as sd) in brackets. These scores have not been adjusted to take account of Centre or pupil characteristics (such as the length of the course or the pupils' gender or special needs). The significance levels are given for changes between pre- and post-test scores within each group. They therefore represent the changes in scores between the beginning and end of the course.

**Table 5.1: Summary results for Numeracy**

| | | **Pre-course** | **Post-course** | **Progress** | |
|---|---|---|---|---|---|
| | **N** | **Mean (sd)** | **Mean (sd)** | **Mean (sd)** | |
| **KS2 pupils attending *Playing for Success*** | 253 | 88.4 (12.2) | 97.5 (11.9) | 9.1 (9.0) | p<0.001 |
| **KS3 pupils attending *Playing for Success*** | 218 | 90.9 (13.5) | 94.8 (13.8) | 3.9 (10.6) | p<0.001 |
| **All pupils attending *Playing for Success*** | 471 | 89.6 (12.9) | 96.2 (12.9) | 6.7 (10.1) | p<0.001 |
| **Control group** | 49 | 94.4 (12.6) | 91.8 (15.0) | -2.7 (9.2) | p<0.05 |

The results in Table 5.1 demonstrate that the pupils attending *Playing for Success* were well below average in terms of their ability to deal with basic numerical operations when they started attending the Centres. The average (mean) pre-test score for the *Playing for Success* pupils was about 90, considerably below the national average score of 100. Compared with the national sample of pupils who contributed to the standardisation of this test, the average performance of the *Playing for Success* pupils at the beginning of their course was equivalent to the 22 per cent point in the national distribution. In other words, 78 per cent of pupils nationally would achieve the same score or higher than the average KS2 pupil just beginning their attendance at *Playing for Success*. Similarly, 73 per cent of pupils nationally would achieve the same score or higher than that achieved by the KS3 pupils beginning to attend the

[1] Feedback of their own Centre's results were provided to each Centre Manager in Autumn 2000. The results of the national standardisation were not available at that time, and therefore the feedback was based on a more limited age standardisation based on data from Centres and control groups.

Centres. The control group pupils had higher pre-test scores, but their performance was also considerably below the national average (64 per cent of pupils nationally would achieve at least the same score).

Table 5.1 also shows us that pupils in KS2 who attended *Playing for Success* made substantial gains in the skills measured by the numeracy test. Pupils in KS3 attending the Centres made smaller, but still highly significant, gains. In contrast, the scores of pupils in the control group actually decreased significantly, by an average of 2.7 standardised score points.

The control group pupils scored more highly in numeracy at the beginning of the initiative, indicating that the control group is not equivalent to the group of pupils attending all 11 Centres included in the analysis, at least as far as their numeracy attainment is concerned. For this reason, we undertook further analysis, comparing the scores of the control group pupils with those of their 'matched' group.

The control group for numeracy included results from 49 pupils selected from schools linked with three of the Centres. We had numeracy scores for 41 pupils who attended *Playing for Success* and were from the same schools as those attended by the pupils in the control group (or from matched schools within the same area). These 41 pupils had an initial mean score of 93.2 points, with a standard deviation of 13.0. That is, the control group achieved very similar initial scores to the 'matched' pupils, but both these groups started out with higher numeracy scores than the *Playing for Success* pupils as a whole. By the end of the evaluation period, the mean score for the 41 pupils who attended the Centres was 100.2, an increase of seven points. This confirms the trend shown in the rest of the data: whereas pupils attending *Playing for Success* made positive gains, the numeracy scores of pupils in the control group declined.

It is important to note that the scores of the pupils attending *Playing for Success* rose to bring them closer to the national average for their age. By the end of the course, the average KS2 pupil had a score which would be equalled or exceeded by about 57 per cent of pupils nationally (if pupils were scoring at the national average, 50 per cent of pupils would achieve the same, or a higher score). Similarly, by the end of their course, the average KS3 pupil would achieve a score which would be equalled or exceeded by 64 per cent of pupils

nationally. In comparison, the post-course scores achieved by the average control group pupil would be equalled or exceeded by 71 per cent of pupils nationally.

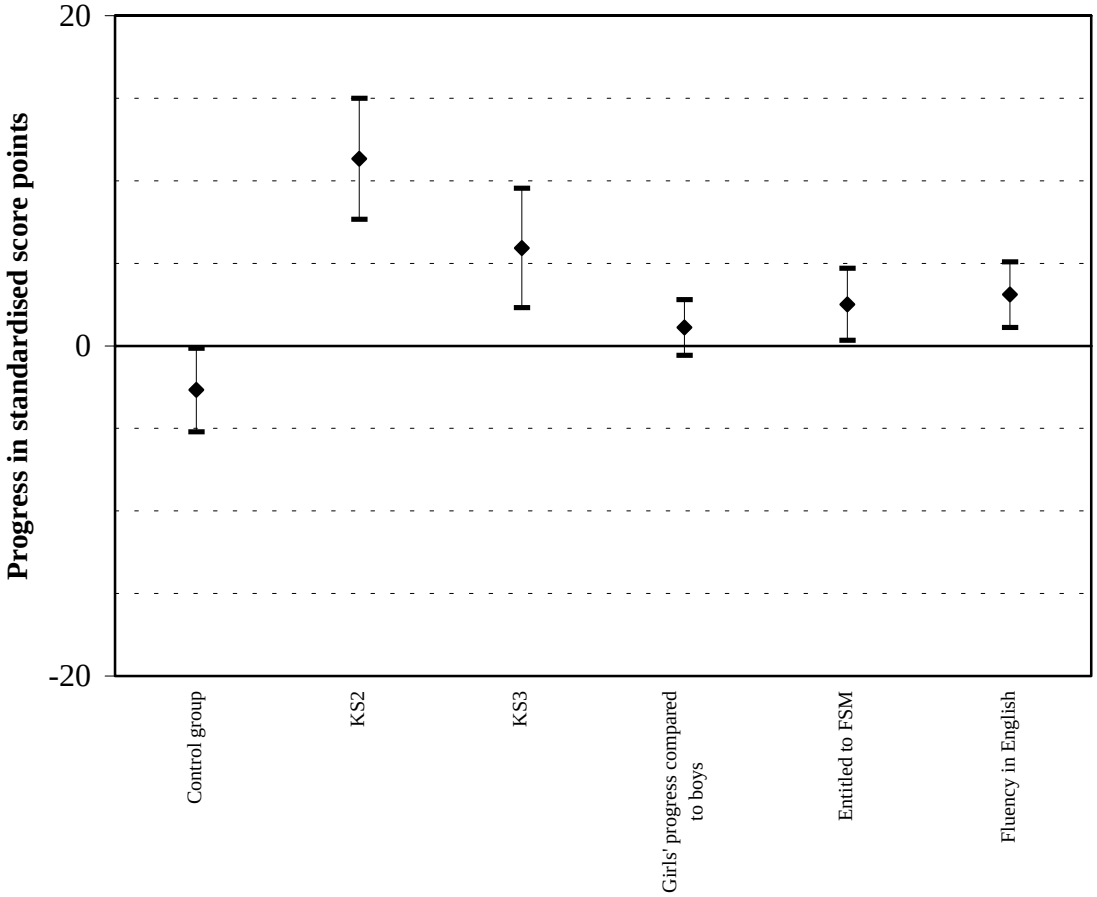
As noted earlier, we used the statistical technique of multilevel modelling to look in more detail at the achievements of particular groups of pupils.

Girls' numeracy scores were slightly but significantly lower than those for boys, by about two standardised score points. This may be a reflection of differential performance between girls and boys, or could reflect the ways in which schools chose pupils to participate. More predictably, pupils with identified special educational needs had lower scores than others. The difference was about two standardised score points per stage of the Code of Practice, and was statistically significant. There were no other significant differences for achievement in numeracy (i.e. in relation to Key Stage, eligibility for free school meals, ethnicity or fluency in English).

### 5.1.1 Pupils' progress in numeracy

Chart 5.1 summarises what we learnt about pupils' progress from the multilevel model. It shows the progress of the control group, compared with pupils in KS2 and KS3 who attended *Playing for Success*. The scores have been adjusted to take account of factors found to be important in affecting pupils' progress. In this case, the factors were: whether the pupil was a boy or a girl, pupils' entitlement to free school meals; and fluency in English.

**Chart 5.1: Progress in Numeracy**




As for Section 4, in order to interpret the chart, the reader needs to consider the position of the vertical bars in relation to the horizontal mid-line (marked 0). For example, the left-hand vertical bar in the chart (labelled 'Control group') shows the average numeracy progress scores for pupils in the control group. The mid-point of the bar is below the horizontal axis (the heavy horizontal line marked 0), showing that on average the scores of these pupils decreased by almost three standardised score points. The upper and lower points on each vertical bar show the 95 per cent confidence interval. In this case, the bar does not cross the horizontal axis, and therefore we can say, with considerable certainty, that there was a real decline in average numeracy scores for pupils in the control group.

The second vertical bar (labelled KS2) shows the progress made by pupils in KS2 who attended *Playing for Success* compared with the control group. The mid-point of this bar is about 11 standardised score points above the horizontal axis. This shows the relative gain for this group of pupils. It is very similar to the pattern shown in Table 5.1 above, which showed

that the average score for KS2 pupils increased by nine points, while scores for the control group declined by almost three points, i.e. a net gain for KS2 pupils of about 12 points. In this case, the lower end of the vertical bar is well above the horizontal axis, so we can be confident that KS2 pupils attending *Playing for Success* made significantly greater progress in numeracy than the control group.

Similarly, the vertical bar labelled KS3 indicates that pupils in KS3 attending the *Playing for Success* Centres made about six points' relative progress. Again, this is broadly consistent with Table 5.1, which showed that pupils in KS3 attending *Playing for Success* increased their numeracy scores by about four points, while the control group pupils' scores declined by almost three points. Although somewhat smaller than that for pupils in KS2, the gain was also highly statistically significant.

Another way of looking at these differences is to consider the **effect size** (Cohen, 1969). The effect size assesses the difference between two groups relative to underlying variation within the groups. As explained in Section 4, a useful rule of thumb is that an effect size of 0.25 or more is likely to represent a finding which is of educational, as well as statistical, significance (Gray *et al*., 1990; Slavin and Fashola, 1998). In this case, the effect sizes are 0.85 and 0.44 for KS2 and KS3 respectively. This suggests that *Playing for Success* had a real and substantial impact on pupils' achievement in numeracy.

These gains can also be interpreted in terms of months of progress, using the results from the National Standardisation (although this calculation is an estimate, and should therefore be treated with caution). For KS2 pupils, the gain between pre-and post-test for numeracy was equivalent to about 21 months. Similarly, by the end of their attendance at the Centre, KS3 pupils had made about eight months' progress in numeracy. These are substantial immediate gains, given that most pupils attended *Playing for Success* for less than 30 hours (see Section 2).

The next set of bars in Chart 5.1 show the progress achieved by groups with different characteristics. Some groups of pupils attending *Playing for Success* made greater progress in numeracy than would be expected, given their other characteristics. For example, pupils entitled to free schools meals who attended *Playing for Success* made more progress than

expected, although the impact was fairly small – about 2.5 standardised score points. The analysis indicated that the greatest progress in numeracy was made by those pupils most fluent in English. Pupils' fluency in English was assessed on a scale from one (new to English) to four (fully fluent in English as an additional language), with pupils whose first language was English coded as five. The difference was equivalent to about three standardised score points for each stage of fluency in English. There were no other significant differences in numeracy progress related to pupil characteristics. All 11 participating Centres made positive gains for numeracy. There were no overall significant differences in numeracy scores between individual Centres or in relation to the length of the course.

## 5.2 Reading comprehension

The NFER developed two new tests of reading comprehension especially for the evaluation of *Playing for Success*. These were developed with a similar brief to that outlined for assessing numeracy i.e. that the tests should be short and appropriate for pupils with relatively poor reading skills (see Appendix 3 for further details of the tests).

Each test consisted of three passages of text, with nine multiple choice questions per text. The passages were all 'real texts'. They were predominantly non-fiction, selected to be likely to appeal to the target group of pupils. Items were constructed to assess children's ability to read the text and to answer both literal and inferential questions. The items required both semantic and syntactic understanding, but did not assess understanding of grammatical terms. The multiple choice format was selected to ensure that marking would be as simple and reliable as possible.

Completed tests were returned to NFER for scoring. All 12 Centres returned some tests. The scores were age standardised, in the same way as the numeracy tests, so that we could compare the progress of pupils of different ages.

Table 5.2 summarises the pre-course and post-course reading comprehension scores of the pupils attending a *Playing for Success* Centre and of the control group.

**Table 5.2: Summary results for Reading Comprehension**

| | | Pre-course | Post-course | Progress | |
|---|---|---|---|---|---|
| | **N** | **Mean (sd)** | **Mean (sd)** | **Mean (sd)** | |
| **KS2 pupils attending *Playing for Success*** | 292 | 91.9 (14.4) | 94.7 (14.8) | 2.7 (14.8) | p<0.01 |
| **KS3 pupils attending *Playing for Success*** | 214 | 88.0 (13.8) | 89.9 (13.7) | 1.9 (13.9) | p<0.05 |
| **All pupils attending *Playing for Success*** | 506 | 90.3 (14.3) | 92.7 (14.5) | 2.4 (14.4) | p<0.001 |
| **Control group** | 73 | 91.5 (17.9) | 89.9 (17.0) | -1.5 (14.6) | ns |

Table 5.2 shows, as expected, that pupils attending *Playing for Success* had reading comprehension scores below the national average. In comparison with national standards of performance on this test, the pre-course scores for KS2 pupils attending *Playing for Success* would be equalled or exceeded by 71 per cent of pupils. The average pre-course score of pupils in KS3 is even further below national standards: almost 80 per cent of a national sample would equal or exceed the pre-course score of these pupils attending *Playing for Success*.

The control group comprised 73 pupils from schools linked with four of the Centres. As the table demonstrates, the mean pre-test reading comprehension score of the control group pupils was similar to, but slightly higher than, those achieved by pupils attending *Playing for Success*. This suggests that the control group pupils were broadly equivalent to the pupils attending the 12 Centres in terms of their initial reading comprehension scores. The scores for the control group pupils declined slightly during the evaluation period, although the change was not statistically significant. In contrast, the scores of the pupils attending *Playing for Success* rose slightly and to a statistically significant extent, bringing them a little closer to the national average for their age. The scores indicate that the average KS2 pupil attending *Playing for Success* achieved a post-course reading comprehension score that would be equalled or exceeded by 64 per cent of pupils nationally. The equivalent for KS3 pupils is 75 per cent.

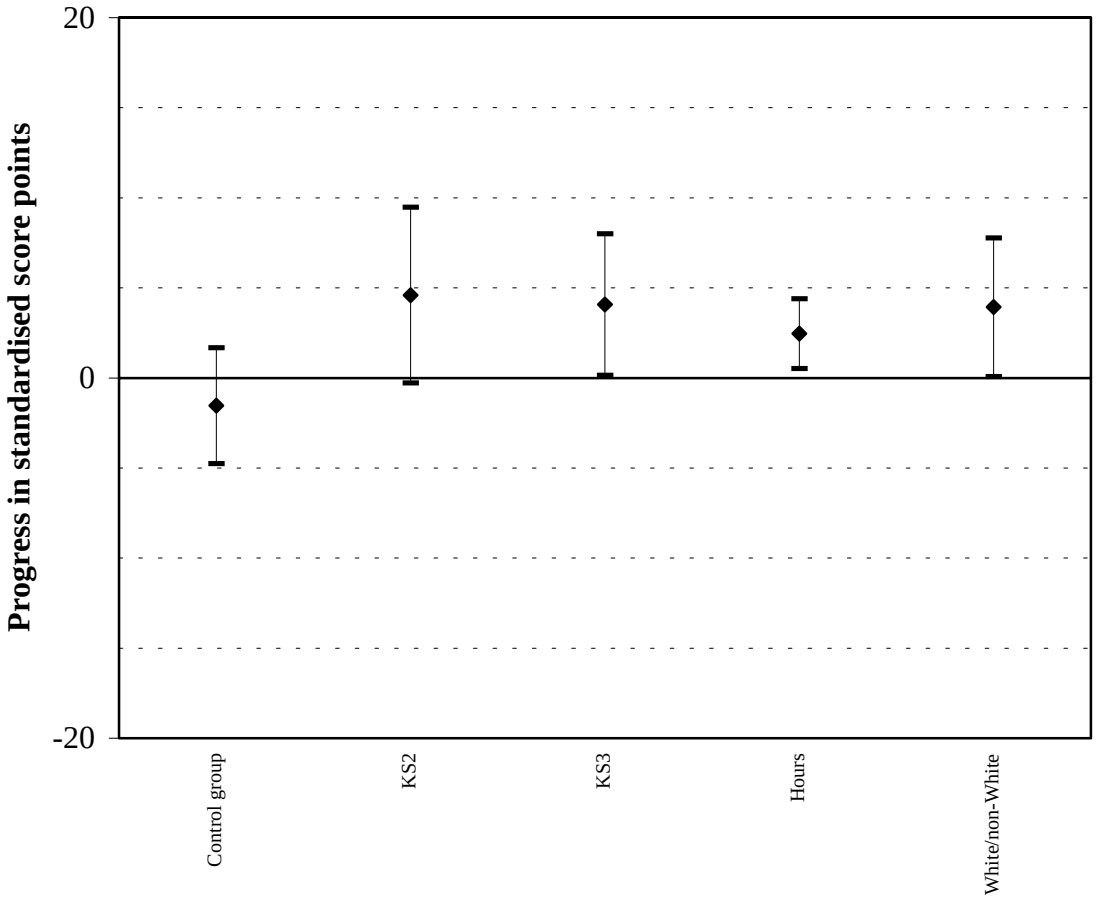
Multilevel modelling enabled us to look in more detail at whether reading performance was related to pupils' background characteristics. When we did this, we found that there were no significant differences between pupils in different key stages, or between control group pupils and those attending *Playing for Success*. The differences between boys and girls were not statistically significant, nor were the differences between pupils who were or were not entitled to free school meals.

Not surprisingly, we found that pupils with special educational needs had significantly lower reading comprehension scores than other pupils. The difference was about two standardised score points for each stage of the Code of Practice. Pupils who were fluent in English achieved significantly higher scores (by about two standardised score points for each stage of our fluency measure). However, pupils from White and non-White backgrounds had similar test scores.

### 5.2.1 Pupils' progress in reading comprehension

Chart 5.2 summarises what we learnt from the multilevel model about pupils' progress in reading comprehension.

**Chart 5.2: Progress in Reading Comprehension**




The first vertical bar on the chart shows that the reading comprehension scores for the control group went down slightly, but not significantly, between the pre- and post-test. This is indicated by the fact that although the average progress for the control group is below the mid-line, the bar indicating the confidence interval extends across the mid-line. The chart also shows that pupils in both key stages who attended *Playing for Success* made greater progress than pupils in the control group. On average, pupils in KS2 made gains of about 4.5 points in comparison to pupils in the control group. Although indicative of real progress compared with control group pupils, this result was not quite statistically significant at the 95 per cent level (the bar just crosses the mid-line).

For pupils in KS3, the average gain, relative to the control group was about four points and was statistically significant. The fact that the KS3 result achieved significance might seem surprising, given that the average (mean) gain for KS3 pupils was slightly smaller than that for pupils in KS2. The reason for this apparent discrepancy is that the calculation of

significance takes into account the variability of individual pupils' scores and the consistency of the gains between pre- and post-test. The gains achieved by pupils in KS3 were less variable and more consistent than the scores of pupils in KS2. This allows us to be more confident that there was a real difference in progress between KS3 pupils attending *Playing for Success* and pupils in the control group.

The effect size for pupils in KS3 is 0.27, indicating an educationally significant difference in reading progress between the control group and pupils in KS3 who attended *Playing for Success*.. We can also look at these results in terms of months of progress. For KS3 pupils, the gain from pre- to post-course scores is roughly equivalent to six months of progress in reading comprehension.

Unlike the numeracy results, we found a relationship between the length of time pupils spent at the Centre and pupils' progress in reading comprehension. The vertical bar labelled 'Hours' indicates that there was a statistically significant relationship between longer *Playing for Success* courses and improved reading comprehension scores. The mid-point of this bar is about 2.5 standardised score points above the mid-line. This can be interpreted to mean that pupils who attended a course running for an additional ten hours made 2.5 points greater progress in reading comprehension. (However, we should point out that course length is not necessarily a good measure of the emphasis placed on, or time devoted to, developing reading comprehension skills by the Centres.)

The final vertical bar, labelled 'White/Non-White', shows that non-White pupils attending *Playing for Success* made significantly greater progress than White pupils. The difference was equivalent to about four standardised score points.

As with numeracy, the results from the multilevel model suggest that there were no overall significant differences between Centres in relation to pupils' progress in reading comprehension. In other words, pupils attending different Centres made roughly the same progress in their reading comprehension scores.

## 5.3 Summary

This section has provided detailed information about pupils' achievement and progress in numeracy and reading comprehension. These two assessments were designed especially for this evaluation and results were age-standardised in relation to the performance of a national sample of pupils. The main findings are summarised below.

### 5.3.1 Numeracy

- Pupils attending *Playing for Success* had pre-course numeracy scores well below the national average for their age, confirming that the majority of the pupils involved were low achievers. Their post-course scores, although still indicating underachievement, brought them much closer to the national average for their age, especially for pupils in KS2.
- Pupils attending *Playing for Success* made considerable and significant gains in numeracy compared with pupils in the control group. Pupils in both key stages significantly out-performed control-group pupils, whose numeracy scores dropped by a significant amount during the evaluation period.
- Pupils attending *Playing for Success* improved their numeracy scores by about 21 months for pupils in KS2 and eight months for pupils in KS3.
- Girls' numeracy scores were slightly, but significantly lower than boys' scores, although boys and girls made similar progress at the Centres.
- Pupils with special educational needs scored significantly lower in numeracy, but made about the same rate of progress as other pupils attending *Playing for Success*.
- Two groups of pupils made larger than expected gains in numeracy during their time at the Centres. They were: pupils entitled to free school meals; and those with greater fluency in English.
- There was no evidence that pupils attending longer courses made significantly greater numeracy gains.
- All 11 participating Centres achieved similar rates of progress in numeracy.

### 5.3.2 Reading comprehension

- Pupils attending *Playing for Success* had pre-course reading comprehension scores well below the national average for their age, confirming that many of the pupils involved were low achievers. By the end of their time at the Centres, pupils' scores were still showing considerable underachievement, but were a little closer to the national average for their age.
- Pupils who attended *Playing for Success* made progress in reading comprehension, while the scores of pupils in the control group did not improve. Although the progress of pupils in Key Stage 2 did not quite reach significance at the 95 per cent confidence level, the progress achieved by pupils in Key Stage 3 was significantly greater than the control group pupils.
- Pupils in KS3 who attended *Playing for Success* improved their reading comprehension scores by approximately six months.
- Pupils with special educational needs and those who were not fluent in English, had significantly lower initial scores in reading comprehension, although the progress of these two groups was similar to that of other children attending the Centres.
- Pupils from non-White ethnic backgrounds made significantly greater progress in reading comprehension during their time at the Centres.
- On the whole, pupils attending longer courses made significantly greater progress in reading comprehension.
- All 12 Centres achieved similar rates of progress in reading comprehension.

# 6. Achievement in Computer Skills

This section considers pupils' perceptions of their skills in using a computer. It begins with a brief description of the computer skills checklist, before presenting the results for the whole checklist and then for each of the four main skill areas.

About half the pupils completed a checklist of computer skills before and after their attendance at a *Playing for Success* Centre. From this we derived scales measuring pupils' own perceptions of their ability to use a computer in a number of different ways.

## 6.1 The checklist of computer skills

A key aim of *Playing for Success* is to give pupils an opportunity to improve their computer skills, and Centre Managers were keen to know how effective the Centres were being in achieving this. We were unable to find a test of computer skills suitable for underachieving young people, so we developed a self-report checklist to provide us with information about pupils' confidence in carrying out a range of tasks. The items were developed to reflect the content of the National Curriculum. The skills we asked pupils to assess ranged from very basic operations, such as switching on a computer, to more complex tasks such as manipulating text and searching the Internet. The checklist was divided into four sections, dealing with: computer basics; word processing; using the Internet and sending email. Further details of the checklist's development and content are given in Appendix 4.

For each item in the checklist, we asked pupils if they could carry out a specified procedure on their own (with a score of two points), with help (with a score of one point), or if they could not yet carry out the task (no points).

## 6.2 Overall computer skills

Table 6.2 summarises the total pre-course and post-course scores for the pupils attending a *Playing for Success* Centre, and of the control group. The table shows the mean scores with their standard deviations (shown as sd) in brackets.

**Table 6.2: Summary results for total ICT score**

| | | Pre-course | Post-course | Progress | |
|---|---|---|---|---|---|
| | **N** | **Mean (sd)** | **Mean (sd)** | **Mean (sd)** | |
| **KS2 pupils attending *Playing for Success*** | 309 | 43.4 (14.4) | 59.1 (10.3) | 15.7 (12.9) | p<0.001 |
| **KS3 pupils attending *Playing for Success*** | 260 | 50.0 (13.4) | 62.1 (9.0) | 12.1 (10.9) | p<0.001 |
| **All pupils attending *Playing for Success*** | 569 | 46.4 (14.5) | 60.5 (9.8) | 14.1 (12.1) | p<0.001 |
| **Control group** | 105 | 46.9 (14.5) | 48.6 (15.8) | 1.7 (9.4) | ns |

The maximum score that any pupil could obtain was 72. Table 6.2 shows us that most pupils could carry out quite a range of computer operations before they attended *Playing for Success*. Not surprisingly, older pupils had higher scores than younger pupils. The table also shows us that pupils who attended *Playing for Success* made highly significant progress in their ability to carry out a range of tasks. Pupils in KS3 made smaller but still highly significant gains.

The control group of 105 pupils was selected from schools linked with five of the Centres. Control group pupils were selected to be as similar as possible to a matched group of pupils attending the Centre during the spring term of 2000. For the total computer skills score, the control group had broadly similar initial scores to those for pupils attending the Centres. But unlike pupils attending the Centres, scores for these pupils were only slightly higher at the end of the evaluation period and the increase was not statistically significant.

We used multilevel modelling to look in more detail at the achievement of particular groups of pupils. This showed that, when we take account of other pupil characteristics, pupils in KS3 had higher overall ICT scores than those in KS2. The difference was about eight points and was statistically significant. This difference is to be expected: older pupils, with their greater access to computers at school (if not at home) are likely to report a higher degree of computer skills.

When we took their other characteristics into account, the scores for the control group were slightly lower than those for pupils overall. The difference was about three points and was

statistically significant. This difference takes into account both initial and final scores. Although control group pupils had similar initial scores as those attending *Playing for Success*, they made much less progress, which explains their lower overall score.

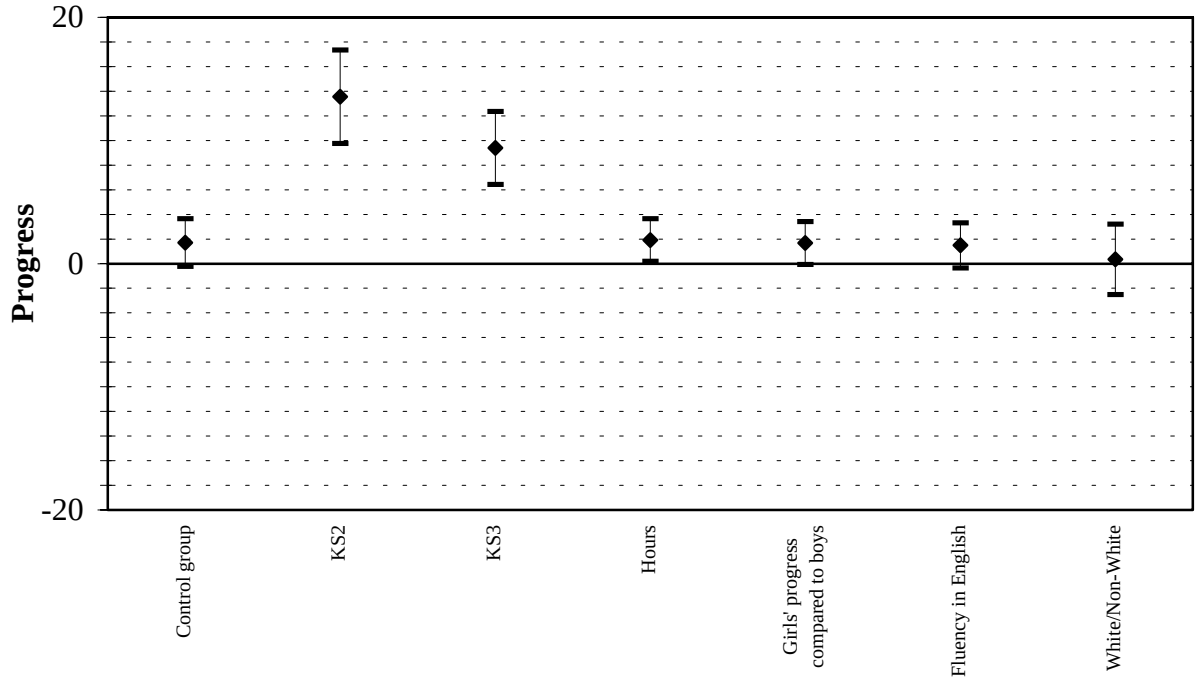
Girls' scores were about four points lower than those for boys. This difference is statistically significant and may indicate girls' lower levels of computer use both at school and at home. The difference between the scores for pupils entitled to free school meals and those pupils not entitled was also statistically significant. Pupils entitled to free school meals scored about four points less than those who were not entitled.

The scores of pupils with special needs were slightly lower than those for other pupils. The difference was small – about one point for each stage of the Code of Practice – but was statistically significant.

### 6.2.1 Pupils' progress in total computer skills

Chart 6.2 summarises what we learnt from the multilevel model about pupils' progress in overall computer skills.

**Chart 6.2: Progress in Total Computer scores**



Firstly, the left-hand vertical bar in the chart (labelled 'Control group') confirms that the average scores of pupils in the control group increased slightly during the evaluation period, by about two points.

The second vertical bar (labelled KS2) shows the progress made by pupils in KS2 who attended *Playing for Success*. The mid point of this line is almost 14 points above the horizontal mid-line, showing the gain for this group of pupils relative to other pupils. The lower end of the vertical bar is well above the horizontal axis, so we can be confident that Key Stage 2 pupils made significantly greater progress than the control group.

Similarly, the vertical bar labelled KS3 shows that pupils in KS3 attending the *Playing for Success* Centres made significantly greater progress than pupils in the control group. The difference was highly significant, although the gain of about 10 points was smaller than that for pupils in KS2.

The effect sizes were 0.93 for KS2 and 0.65 for KS3. These effect sizes are well above the level of 0.25, indicating that *Playing for Success* had a real impact on pupils' ability to carry out a range of computer tasks at both key stages.

Chart 6.2 also shows that some groups of pupils made more progress than others. Firstly, we can see that the chart has a vertical bar labelled 'Hours'. This shows us the difference between pupils attending two *Playing for Success* courses, one of which was ten hours longer than the other (for example, it represents the difference between a course of 20 hours and one of 30 hours). The difference, which is statistically significant, is about two points for ten hours (or 0.2 points for each additional hour spent at the Centre). This suggests that longer courses allowed pupils more time to develop their computer skills across a range of areas.

The bar labelled 'Girls/boys' shows us that girls made slightly more progress in computer skills than boys. The difference was about two points and was statistically significant.

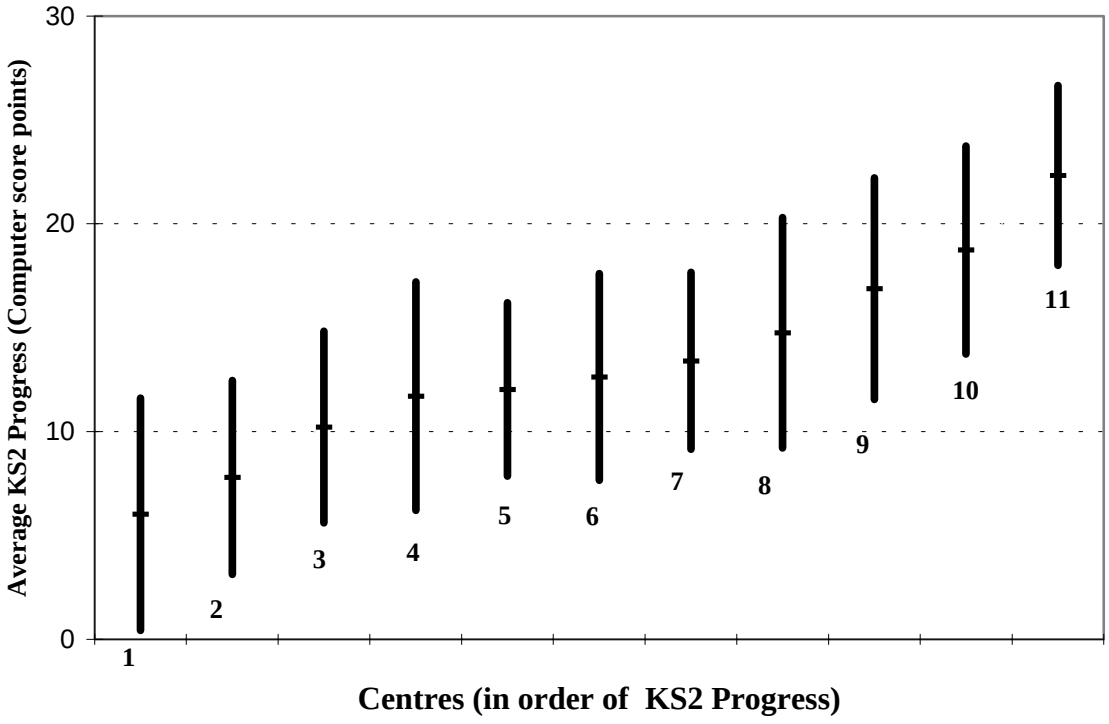
There is some evidence that greater progress was made by those pupils most fluent in English than for less fluent pupils, although the difference was on the borderline of statistical significance. The difference was about 1.5 points for each stage of our fluency measure.

White pupils made slightly greater progress than pupils from non-White backgrounds, although the difference was not statistically significant.

### 6.2.2 Differences between Centres in progress in total computer skills

An analysis of the average gains achieved by each Centre found that all the Centres made progress, but there were significant differences between Centres in the average progress made by KS2 pupils in total computer skills. Charts 6.2.2 shows these differences.

**Chart 6.2.2: KS2 Progress in Total Computer Scores by Centre, showing 95% confidence intervals**




The chart shows that KS2 pupils at all Centres were making progress in computer skills, but those at the extreme right of the charts were making greater progress than those at the extreme left. The mean progress achieved by pupils at different Centres ranged from about six points to over 20 points.

### 6.2.3 Centres performing well in computer skills

One Centre performed particularly well in terms of gains in pupils' self-reported computer skills at KS2. This Centre is identified as number 11 on the chart. Interestingly, the Centre Manager identified computer skills as an area of particular strength for the Centre, saying: '*My own observations are that there was more progress made in this skill area [computers] than in any other*.'

The Centre serves a group of about 30 schools located near to the ground. It is very well-equipped with computers, with sufficient numbers of work-stations for each pupil to use a computer for the whole session. There are several colour printers, two scanners, a digital camera and an interactive white board. The Centre has a full-time computer technician, who is seen as an invaluable member of the team. The ICT resources are grouped into specific areas. While all have word-processing software, a quarter of the machines have Internet access, a quarter can run CD ROMs and a quarter have an Integrated Learning System. The Centre operates a 'carousel' system, so that all pupils can use each of these resources at some time during each session.

The Centre has devised a structured programme to help pupils to develop their computer skills. Pupils taught in small groups, as well as having access to individual support from Centre staff and student mentors. The staff aim to build up pupils' computer skills step-by-step, beginning with showing pupils how to carry out basic operations (such as opening programs and to saving and retrieving their work from the network) before moving on to more advanced skills (such as modifying print formats and editing text). The Centre also teaches pupils how to use the Internet for study and research and pupils practice sending and receiving email messages.

## 6.3 Computer basics

The first part of the checklist asked pupils whether or not they could carry out a number of simple tasks, such as opening and saving files and using a printer. For each of the eight items, pupils were asked if they could do it on their own, do it with help, or could not do it yet.

Table 6.3 summarises the pre-course and post-course scores for computer basics of the pupils attending a *Playing for Success* Centre and of the control group. The table shows the mean scores with their standard deviations (shown as sd) in brackets.

**Table 6.3: Summary results for computer basics**

| | | **Pre-course** | **Post-course** | **Progress** | |
|---|---|---|---|---|---|
| | **N** | **Mean (sd)** | **Mean (sd)** | **Mean (sd)** | |
| **KS2 pupils attending *Playing for Success*** | 309 | 11.9 (3.1) | 14.0 (2.5) | 2.2 (2.9) | p<0.001 |
| **KS3 pupils attending *Playing for Success*** | 260 | 13.4 (2.6) | 14.8 (2.0) | 1.4 (2.3) | p<0.001 |
| **All pupils attending *Playing for Success*** | 569 | 12.5 (3.0) | 14.4 (2.3) | 1.8 (2.7) | p<0.001 |
| **Control group** | 105 | 13.0 (2.9) | 13.0 (3.1) | 0.0 (2.2) | ns |

The maximum score which any pupil could obtain on this scale was 16. Table 6.3 demonstrates that pupils could already carry out many of these basic computer operations before they attended *Playing for Success*. Not surprisingly, older pupils had rather higher scores than younger pupils. Table 6.3 also shows us that pupils who attended *Playing for Success* made highly significant progress in their ability to carry out basic computer operations. Pupils in KS3 made smaller gains than pupils in KS2, but this is partly because they were already scoring highly on computer basics before attending *Playing for Success*.

The pre-course scores for the control group were broadly similar to those for pupils attending the Centres. But unlike pupils attending the Centres, pupils in the control group had almost identical scores at the end of the evaluation period to their scores at the beginning.

We used multilevel modelling to look in more detail at the achievements of particular groups of pupils. This showed that, when we take account of other pupil characteristics, pupils in KS3 had higher overall computer basics scores than those in KS2. The difference was almost two points and was statistically significant.

Girls' scores were slightly but significantly lower than those for boys, by about half a point. The difference between the scores for pupils entitled to free school meals and those pupils not

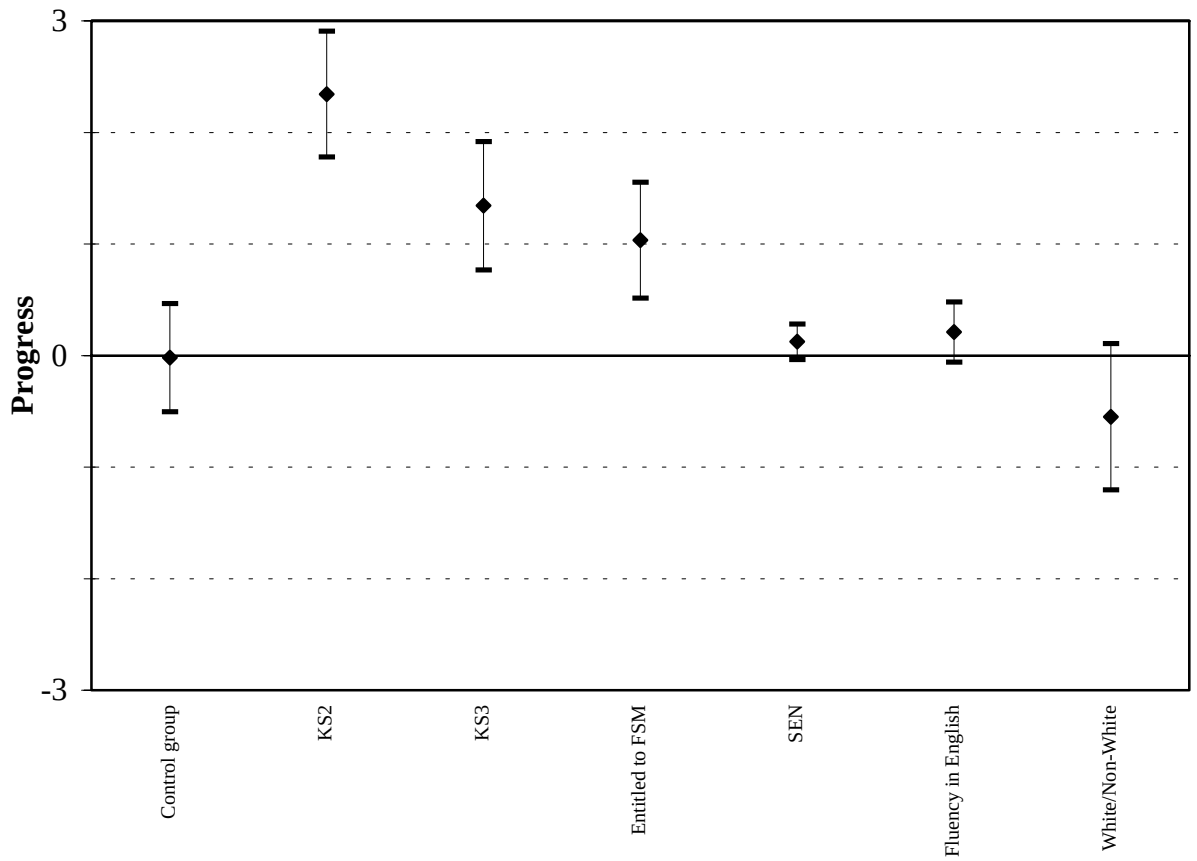
so entitled was also statistically significant. Pupils entitled to free school meals scored about one point less than those who were not entitled to free school meals.

The scores of pupils with special needs were slightly lower than those for other pupils. The difference was small (about 0.1 points for each stage of the Code of Practice) but was statistically significant.

### 6.3.1 Pupils' progress in computer basics

Chart 6.3 summarises what we learnt about pupils' progress from the multilevel model.

**Chart 6.3: Progress in Computer Basics scores**




The left-hand vertical bar in the chart (labelled 'Control group') confirms what we found in Table 6.3 above, and shows that the average scores of pupils in the control group did not change (the mid-point of the bar is almost exactly on the horizontal mid-line).

The second vertical bar shows that pupils in KS2 who attended *Playing for Success* made gains of about 2.3 points in relation to the control group. Because the lower end of the bar is well above the mid-line, we can be confident that Key Stage 2 pupils made significantly greater progress than the control group.

Similarly, the vertical bar labelled KS3 shows that pupils in KS3 attending the *Playing for Success* Centres made significantly more progress than pupils in the control group. The effect was highly significant, although the gain of 1.4 points was rather smaller than that for pupils in KS2.

In this case, the effect size for KS2 was 0.83 and that for KS3 was 0.47, indicating that *Playing for Success* had a real impact on pupils' ability to carry out basic tasks using a computer.

Chart 6.3 also shows that some groups of pupils made more progress than others. Pupils entitled to free schools meals made significantly more progress than expected. The difference was about one point.

There was some evidence that greater progress was made by those pupils most fluent in English than for less fluent pupils, although the difference was on the borderline of statistical significance. The difference was about 0.2 points for each stage of our fluency measure.

Similarly, pupils with special educational needs seem to have made greater progress than expected, although the difference of about 0.1 points for each stage of the Code of Practice was small and not quite statistically significant. Non-White pupils made slightly less progress – about half a point – than White pupils, but again the difference is not quite statistically significant.

We did not find significant differences between Centres in the progress made by pupils in basic computer skills.

## 6.4 Word processing skills

The second section of the ICT checklist had a number of items related to word processing, such as typing and formatting of text and inserting graphics into a document. There were 15 items in total, so scores on the word processing scale could range from 0 to 30.

Table 6.4 summarises the pre-course and post-course scores for word processing of the pupils attending a *Playing for Success* Centre and of the control group.

**Table 6.4: Summary results for Word Processing**

| | | Pre-course | Post-course | Progress | |
|---|---|---|---|---|---|
| | **N** | **Mean (sd)** | **Mean (sd)** | **Mean (sd)** | |
| **KS2 pupils attending *Playing for Success*** | 309 | 21.8 (5.8) | 25.8 (4.3) | 4.0 (5.3) | p<0.001 |
| **KS3 pupils attending *Playing for Success*** | 260 | 24.2 (5.2) | 27.5 (3.0) | 3.3 (4.2) | p<0.001 |
| **All pupils attending *Playing for Success*** | 569 | 22.9 (5.7) | 26.6 (3.8) | 3.7 (4.8) | p<0.001 |
| **Control group** | 105 | 23.3 (5.5) | 23.7 (6.5) | 0.4 (4.0) | ns |

At the start of the course, KS2 pupils attending *Playing for Success* had a range of word processing skills, with the average score being about three quarters of the possible maximum. Pupils in KS3 who attended *Playing for Success* had higher initial scores. Initial word processing scores for the control group were similar to scores for pupils attending *Playing for Success* as a whole.

By the end of the course, the word processing scores for pupils who attended *Playing for Success* had risen significantly, whereas the scores for pupils in the control group had increased only marginally. KS3 pupils had a slightly higher starting point and made significant progress, to the extent that their average score at the end of the course was close to the maximum possible score of 30.

Multilevel modelling was used to look at these scores in more detail. The results were very similar to those for computer basics. Differences between groups were slightly greater, in terms of points, probably because the overall scale was longer. To summarise: pupils in KS3

scored 3.1 points more than those in KS2; girls scored almost one point less than boys; pupils entitled to free school meals scored 1.4 points less than those not entitled; and pupils with special educational needs scored less than those without identified needs, by 0.4 points for each stage of the Code of Practice.

### 6.4.1 Pupils' progress in word processing

The results from the multilevel model concerning pupils' progress in word processing scores are shown in Chart 6.4.

**Chart 6.4: Progress in Word Processing scores**

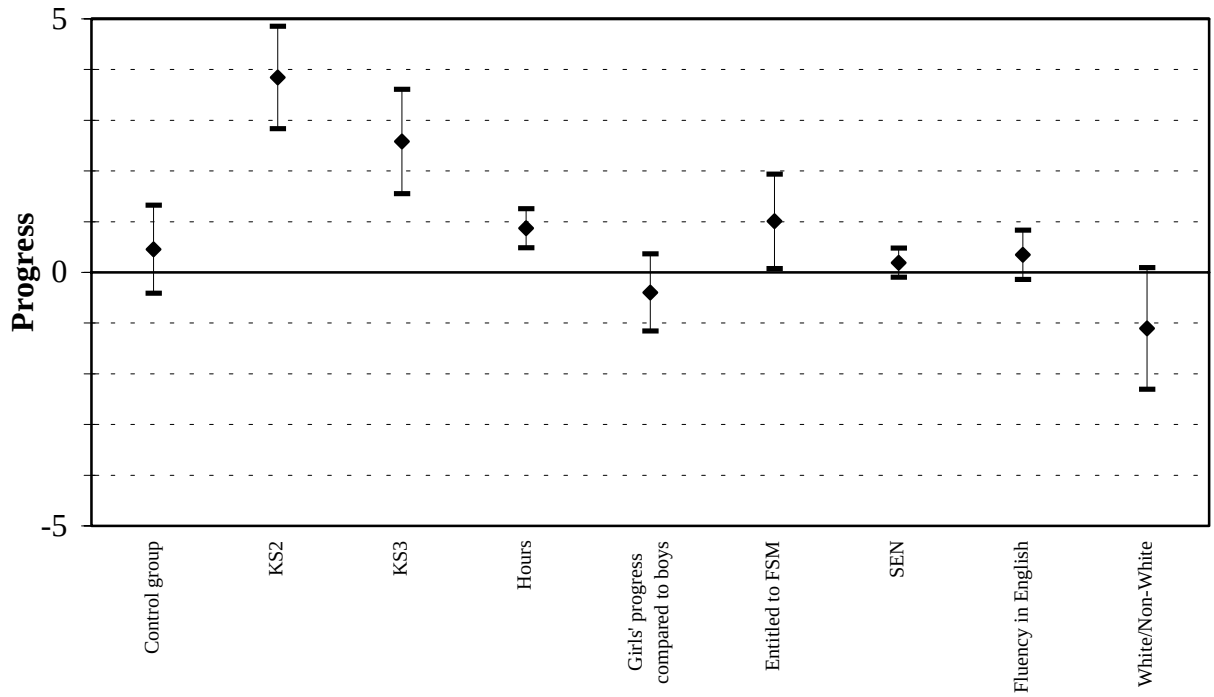



Chart 6.4 shows a very similar pattern to Chart 6.3. In this case, the effect sizes for KS2 and KS3 are 0.72 and 0.48 respectively, again demonstrating a significant impact of attending *Playing for Success*.

There are, however some important differences between Charts 6.3 and 6.4. Firstly, we can see that Chart 6.4 has a vertical bar labelled 'Hours'. This indicates that pupils attending shorter courses scored about one point lower for word processing than pupils on a course ten hours longer. The difference was statistically significant. Longer courses allow pupils more

time to develop their skills in word processing and to become more confident in using a range of approaches. In contrast, even the shortest *Playing for Success* courses would, presumably, allow time to develop basic computer skills.

When we looked at the progress made by the pupils from each Centre, we did not find any significant differences.

## 6.5 Using the Internet

The next section of the checklist gave pupils the chance to tell us about their ability to use the Internet (including typing web addresses, using a browser and using a search engine). There were eight items in this section and scores could range from 0 to 16.

Table 6.5 summarises the pre-course and post-course scores for using the Internet of the pupils attending a *Playing for Success* Centre and of the control group.

**Table 6.5: Summary results for using the Internet**

| | | **Pre-course** | **Post-course** | **Progress** | |
|---|---|---|---|---|---|
| | **N** | **Mean (sd)** | **Mean (sd)** | **Mean (sd)** | |
| **KS2 pupils attending *Playing for Success*** | 309 | 6.5 (5.0) | 12.6 (3.1) | 6.1 (5.1) | p<0.001 |
| **KS3 pupils attending *Playing for Success*** | 260 | 8.4 (5.3) | 13.1 (3.2) | 4.7 (4.8) | p<0.001 |
| **All pupils attending *Playing for Success*** | 569 | 7.4 (5.2) | 12.8 (3.2) | 5.4 (5.0) | p<0.001 |
| **Control group** | 105 | 7.3 (5.4) | 8.1 (5.3) | 0.8 (3.8) | p<0.05 |

Table 6.5 shows that the pre-test scores were similar for the control group and for pupils attending *Playing for Success*. The initial scores are about half the maximum possible, indicating that pupils had some familiarity with the Internet, but were unsure of their ability to demonstrate a number of Internet skills.

Pupils in KS2 had lower initial scores and the standard deviation for this group is almost as large as the mean score, indicating that there was considerable variation between pupils. By the end of their course, the scores for KS2 pupils had almost doubled, indicating a very

marked and highly significant increase in their skills. At the same time, the standard deviation became considerably smaller, indicating that there was less variation between pupils at the end of the course. The changes among KS3 pupils were similar, although the increase in scores was greater for KS2 than for KS3, probably due to the higher initial scores for pupils in KS3. There was also a statistically significant increase in the scores for pupils in the control group, but this was much smaller than for pupils attending *Playing for Success*.

We used multilevel modelling to consider these scores more closely. As expected, pupils in KS3 had significantly higher scores than did pupils in KS2. The difference was about two points. Taking other characteristics into account, the difference between control group pupils and those attending *Playing for Success* was almost one point, with the control group pupils having lower scores. This difference was on the borderline of statistical significance and is mainly due to differences in the post-course scores.

As we had found on other aspects of computer use, girls had lower scores than boys. The difference was about 1.8 points and was highly significant. Pupils entitled to free schools meals had scores almost one point below those of pupils not entitled. Again, this difference was statistically significant.

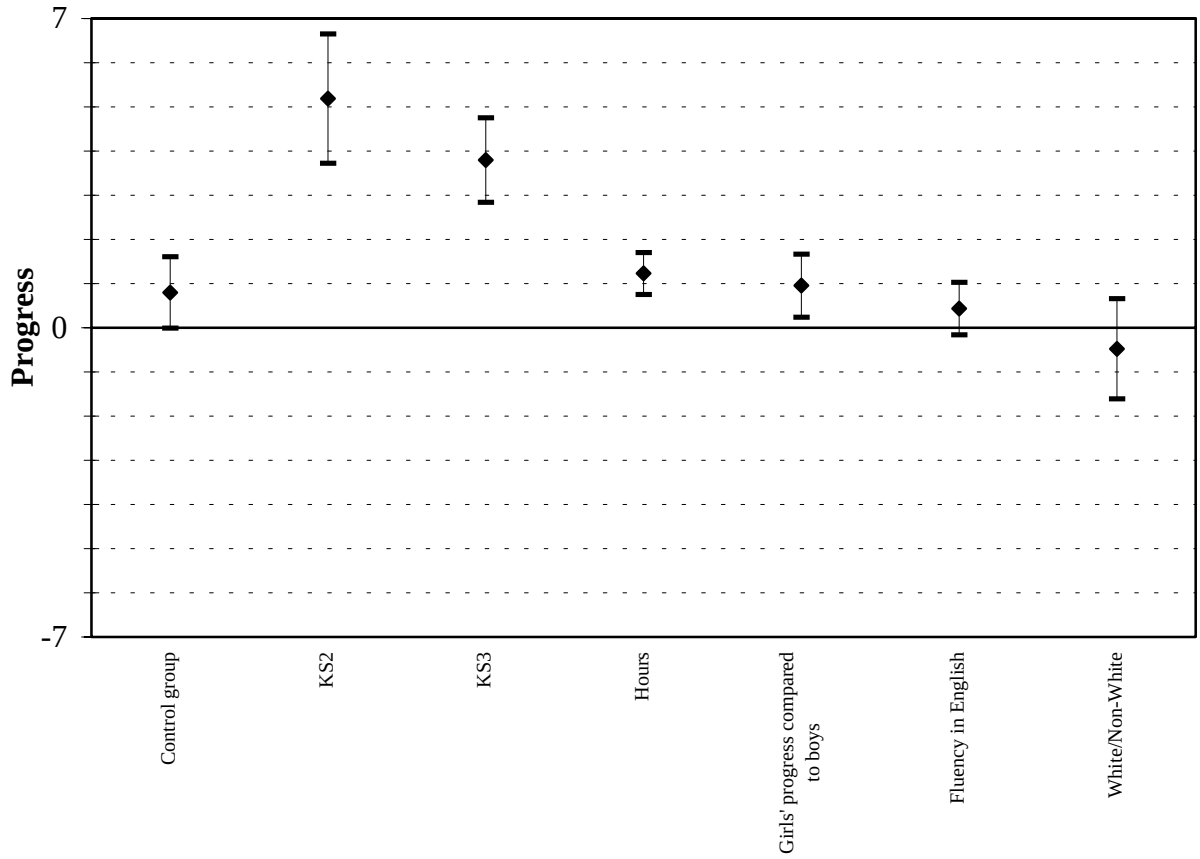
Pupils with special needs had slightly lower scores than other pupils, the difference being significant and equal to about 0.2 points for each stage of the Code of Practice.

### 6.5.1 Pupils' progress in using the Internet

Chart 6.5 shows what we learned from the multilevel model about pupils' progress in using the Internet.

In Chart 6.5, the vertical bar labelled 'Control group' shows that control group pupils made a small, but statistically significant, improvement in their Internet skills during the period of the evaluation. This was equal to almost one point. The progress made by pupils in KS2 and attending *Playing for Success* was more than five points greater than this, a highly significant difference. Similarly, KS3 pupils gained almost four points more, on average, than control group pupils.

**Chart 6.5: Progress in Internet scores**




The effect sizes for KS2 and KS3 are 0.99 and 0.73 respectively, again demonstrating the highly significant impact of attending *Playing for Success*.

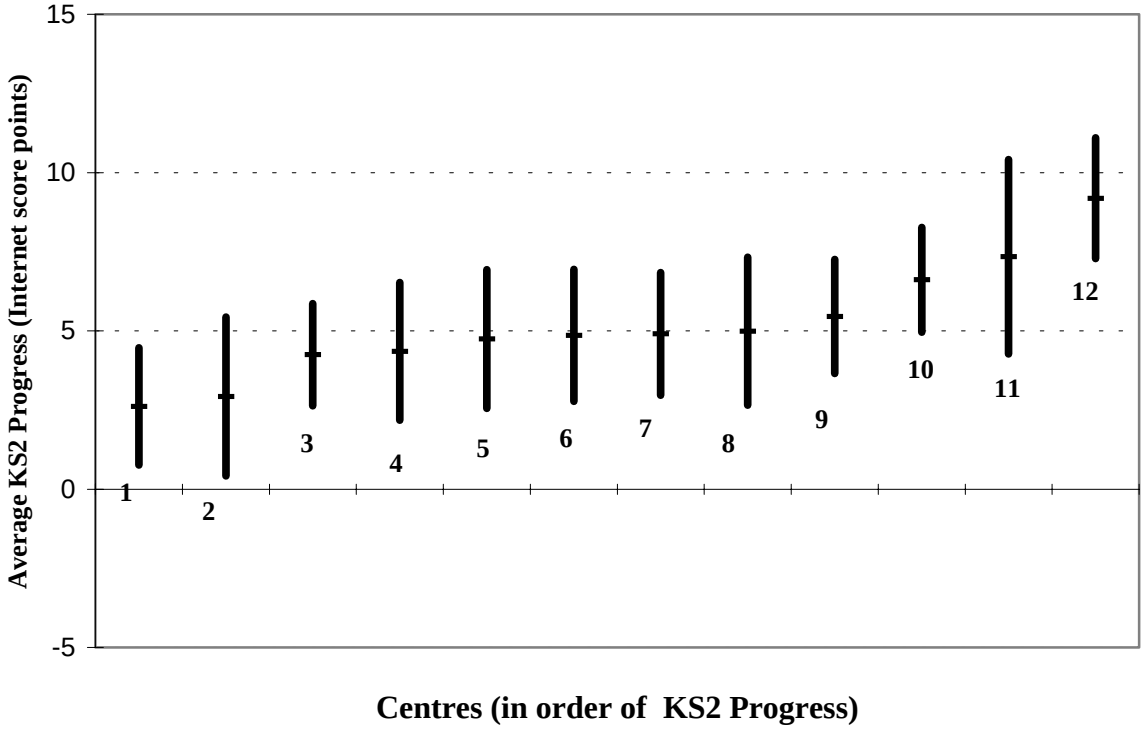
As with word processing scores, we found that pupils attending longer courses made greater progress in their ability to use the Internet. This shows us the difference between attending a *Playing for Success* ten hours longer than another. Again, the difference, which is statistically significant, was about one point.

The vertical bar labelled 'Girls' progress compared with boys' indicates that girls attending *Playing for Success* made significantly greater progress than boys in using the Internet. The difference was about one point.

## 6.5.2 Differences between Centres in progress in using the Internet

When we looked at average progress made by pupils for each Centre separately, we found that there were significant overall differences between Centres at KS2 but not at KS3. The differences at KS2 are shown in Chart 6.5.2.

**Chart 6.5.2: KS2 Progress in Internet Scores by Centre, showing 95% Confidence Intervals**




All the Centres showed significant progress at KS2. This ranged from about three points to nearly ten points. The Centre making the most progress in using the Internet (identified as number 12) is the same Centre in which KS2 pupils made the greatest progress in terms of their total computer skills.

## 6.6 Using email

The fourth section of the checklist included five items about using email, such as sending and opening email and dealing with attached files. The scores for this section could range from 0 to 10.

Table 6.6 summarises the pre-course and post-course scores for using email of the pupils attending a *Playing for Success* Centre and of the control group.

**Table 6.6: Summary results for using Email**

| | | Pre-course | Post-course | Progress | |
|---|---|---|---|---|---|
| | **N** | **Mean (sd)** | **Mean (sd)** | **Mean (sd)** | |
| **KS2 pupils attending *Playing for Success*** | 309 | 3.2 (3.3) | 6.6 (2.8) | 3.4 (3.2) | p<0.001 |
| **KS3 pupils attending *Playing for Success*** | 260 | 4.0 (3.6) | 6.8 (3.1) | 2.8 (3.3) | p<0.001 |
| **All pupils attending *Playing for Success*** | 569 | 3.6 (3.5) | 6.7 (2.9) | 3.1 (3.3) | p<0.001 |
| **Control group** | 105 | 3.3 (3.3) | 3.8 (3.8) | 0.5 (2.9) | ns |

Table 6.6 shows that pupils' average scores at the pre-course stage were around three or four points, indicating a low level of familiarity with email skills. Scores for the control group were slightly lower than for all pupils attending *Playing for Success*.

Consistent with our other results, primary pupils had lower initial scores than secondary pupils. As we saw in Table 6.5, the standard deviation for Key Stage 2 pupils is almost as large as the mean score, indicating that there was considerable variation between pupils. By the end of their course, their scores had more than almost doubled, indicating a very marked and highly significant increase in their skills. The standard deviation was slightly smaller, indicating that there had been some reduction in the variation between pupils (although the decrease was less marked than in the case of using the Internet). Pupils in KS3 also made significant progress although the increase in scores was less for KS3 pupils than for KS2 pupils. The increase in the scores for pupils in the control group was not statistically significant.

Using multilevel modelling revealed the following differences between groups. Pupils in KS3 had significantly higher scores than did pupils in KS2, the difference being about 1.5 points. When we took all their characteristics into account, the difference between control group pupils and those attending *Playing for Success* was almost one point, with the control group pupils having lower scores. This difference was on the borderline of statistical significance. Again, this mainly reflects the lack of progress of control group pupils rather than differences in initial scores.

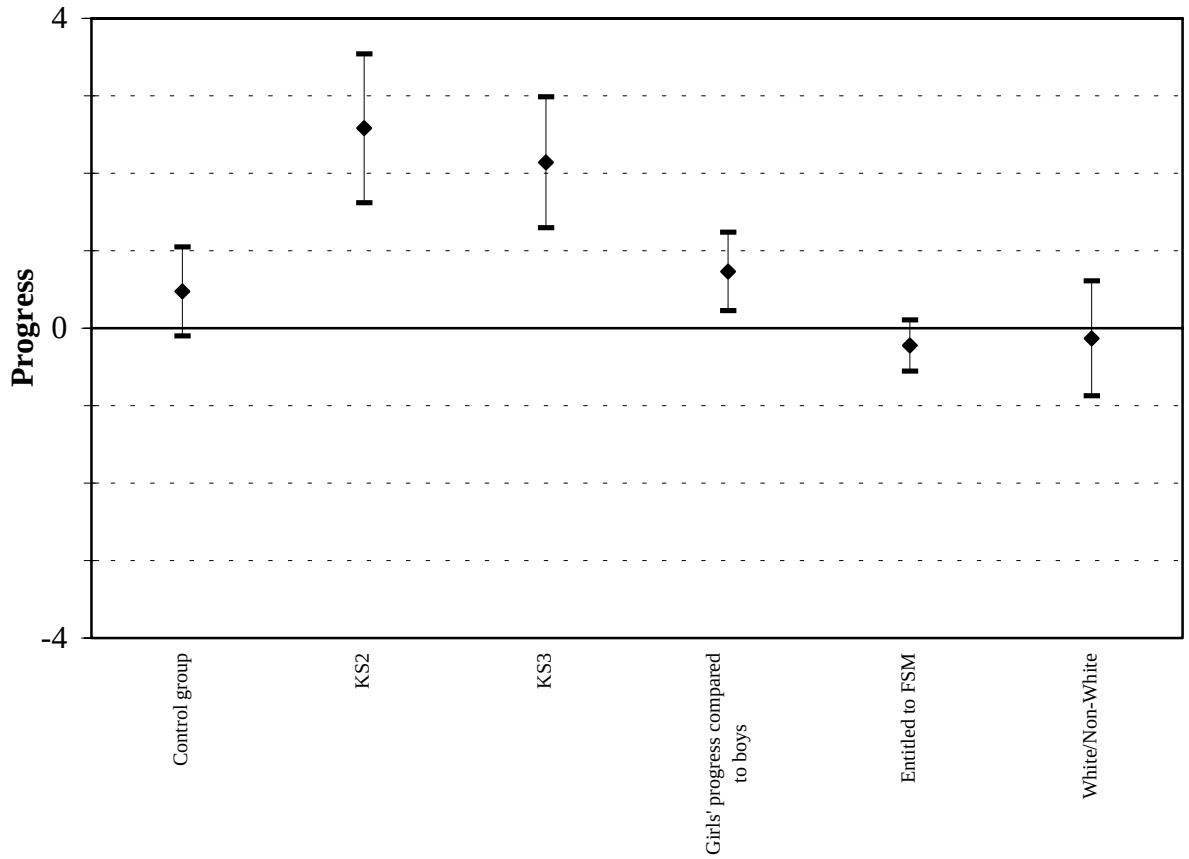
Girls had lower scores than boys. The difference was about two points, and was highly significant. Pupils entitled to free schools meals had scores about half a point below those of pupils not entitled. Again, this difference was statistically significant.

Pupils with special needs had slightly lower scores than other pupils, the difference being significant and equal to about 0.1 points for each stage of the Code of Practice.

### 6.6.1 Pupils' progress in using email

The results from the multilevel model concerning progress in pupils' email skills are shown in Chart 6.6.

**Chart 6.6: Progress in Email scores**




In Chart 6.6, the first vertical bar shows that pupils in the control group increased their email scores slightly during the evaluation period. The increase was about half a point, but was not quite significant at the 95 per cent level (the bar crosses the horizontal mid-line). The progress made by pupils in KS2 and attending *Playing for Success* was more than three points greater than this, a highly significant difference. Similarly, KS3 pupils gained about three points more than did the control group pupils. The effect sizes for KS2 and KS3 are 0.72 and 0.59 respectively, showing that attending *Playing for Success* had a significant impact on pupils' email skills.

The chart also indicates girls attending *Playing for Success* made significantly greater progress than boys. The difference was about half a point and was statistically significant. Pupils not entitled to free school meals, and those from White ethnic backgrounds tended to do less well, but the differences were not significant at the 95 per cent level.

We did not find significant differences between Centres in the progress made by their pupils in using email.

## 6.7 Summary

This section has focused on pupils' self-reported achievement in overall computer skills and in four specific areas: computer basics; word processing; using the Internet and using email. The main findings are given below.

### Computer skills

Pupils' computer skills were measured by a new self-report checklist, devised especially for *Playing for Success*.

- Although pupils were already fairly confident in their ability to operate a computer, those attending *Playing for Success* made significant progress in their overall computer skills compared with pupils in the control group. The effect sizes of 0.93 for Key Stage 2 and 0.65 for Key Stage 3 indicate that *Playing for Success* had a large and educationally significant effect on progress in pupils' overall computer skills and confidence.
- Pupils attending *Playing for Success* made significant progress in each of the four areas measured: computer basics; word processing; using the Internet; and using email.
- Pupils in Key Stage 3 rated their computer skills more highly than those in Key Stage 2. Both primary and secondary pupils made significant progress, although pupils in Key Stage 2 made greater progress overall.
- Girls tended to rate their computer skills significantly less highly than boys. Boys and girls made similar progress in computer skills during their time at the Centres.
- Pupils with special needs scored significantly lower in terms of their overall computer skills, but they made about the same rate of progress at the Centres as pupils not identified as having special needs.
- Pupils eligible for free school meals scored significantly less highly in terms of their computer skills, but made the same rate of progress overall. However, there were two specific areas in which these pupils made better progress than pupils not eligible for free school meals, namely: basic computer skills and word processing.

- Pupils attending longer courses made significantly greater progress in overall computer skills. In particular, longer courses were associated with greater progress in the areas of word processing and using the Internet.
- Although all Centres recorded progress in computer skills, there were statistically significant overall differences between Centres in relation to the amount of progress made by pupils in KS2. This applied to the total computer scores and to pupils' ability to use the Internet.

# 7. Views from Schools and Pupils, One Term Later

This section reports the results from interviews with pupils, teachers and heads after the pupils had completed their *Playing for Success* course. The purpose of the interviews was to follow up pupils who had attended a *Playing for Success* Centre and find out more about the impact it had had on them.

## 7.1 About the follow up study

We decided to carry out a small qualitative study focusing on three of the 12 Centres taking part in the evaluation. The follow-up study also provided an opportunity to gain further insights into the impact of *Playing for Success* on pupils and schools, and to consider whether the initiative was continuing to have an effect beyond the end of the course.

We invited all 12 Centres to take part in the interview study and over half of them volunteered. We chose three Centres, all located in the North of England. It is difficult to say to what extent these Centres were 'typical' of *Playing for Success*, given the considerable variation between Centres. However, they were not among the longest established, having all opened in 1999.

The three Centre Managers were each asked to nominate three schools. The follow-up sample comprised five primary and four secondary schools, all of which had sent pupils to a *Playing for Success* Centre during the spring term, 2000.

Follow-up visits were arranged towards the end of the summer term (July, 2000). We intended to interview the head teacher, the *Playing for Success* 'link' teacher and a small group of between four and six pupils in each school. Due to time limitations and end of term commitments, not all of the head teachers were available for interview. The follow-up sample comprised five head teachers (two of whom were also the link teacher), six teachers, and 39 pupils, interviewed in ten groups.

Most of the primary school link teachers were chosen by heads to be the main contact for Centres because they taught Year 6 (the year group attending the Centre). The secondary school link teachers held various positions in the school, including support roles such as SENCO and EBD teachers.

Interviews were conducted in the schools. Link teachers were asked about their involvement with the Centres, what they felt were the main benefits for pupils, whether they felt well-informed about the Centre's work and whether they could suggest any improvements. Heads were asked to provide information on the school's intake, why they had become involved in *Playing for Success* and what they perceived to be the main benefits for the school. Pupils were asked what they felt about being selected for the initiative, how attending the Centre had contributed to their learning and whether they thought anything could be improved.

## 7.2 How pupils were selected to attend the Centre

All three Centres had produced information packs identifying the types of pupils that would benefit most from attending *Playing for Success*. Typically, these guidelines encouraged primary schools to select pupils who teachers had identified as likely to achieve Level 3 in their Key Stage 2 assessments, but capable of achieving a level 4. The criteria for secondary school pupils tended to focus on students who were underachieving, disaffected or those who had poor social skills and lacked in confidence, motivation or self-esteem. Nevertheless, the actual selection procedure was left to the link teachers.

In one of the five primary schools, all the Year 6 pupils were given the chance to attend the local Centre. However, the more common approach, used by both the primary and secondary schools, was for link teachers to select which pupils would go.

Most link teachers said they had sent pupils that met the Centres' criteria, but a few added that they had chosen to send pupils who they thought would regularly attend the Centre and remain motivated. Teachers said they were wary of sending '*risky*'

pupils, such as those with behavioural problems (who might be disruptive at the Centre), or those who might drop out, thereby wasting a precious place.

## 7.3 Why pupils thought they had been selected for *Playing for Success*

Pupils were asked to comment on why they felt they had been given the opportunity to attend a *Playing for Success* Centre.

Many of the pupils were aware that places were limited to only a handful of pupils from their school, but few were certain as to why they had been selected. Some believed it was 'good luck' because teachers had told them that their names had been randomly selected from a hat. A number of pupils thought they were chosen because of weaknesses in literacy and numeracy. One Year 9 pupil commented: '*If you look at my records for my maths and my English, they are not as good as they should be. I'm not that good at maths and English but since I've been going [to the Study Support Centre] I have come up a bit. I've been doing better in my exams. I've done better in English*.'

Another said: '*I didn't really understand why I got picked at first, but then I started to realise. When I started going the questions were quite hard at first but then you get used to them, because you get to know them all through tests and stuff that you do. That made me go and got me more brainier than I should be!*'

A small proportion of pupils felt they had been selected because they had good attendance at school and were perceived by teachers as being motivated and willing to learn. Many had heard positive comments from their peers who had previously attended and were delighted to be given the opportunity. A number of pupils that we spoke to explained that they had agreed to attend a session on the basis that if they enjoyed it they would continue to attend. All of these pupils enjoyed their first day's experience and chose to attend for the rest of the course. Many said they would recommend the experience to others.

## 7.4 What were pupils' expectations of the Centres?

We asked pupils about their initial expectations of the Centre. Most had already heard about the Centre from their teachers, peers (who had attended the Centre the previous term) and through presentations by the Centre Managers. Pupils were aware that they would be required to work on maths and literacy at the Study Support Centre and they knew that the majority of this work would be on a computer. Pupils said they were excited about attending the Centres because they sounded 'fun' and 'interesting'.

We asked pupils about their first impressions of the Centre. They commonly described their first visit as 'exciting'. They were impressed by the number of computers and the quality of the facilities and equipment. For example, they typically described the Centres as 'new', 'big', and 'smart'.

Pupils attending all three Centres said they warmed to the Centre because it had a totally different feel from school. The Centre staff and mentors made an immediate impression. As one Year 6 pupil said: '*All the staff were very kind. I thought they were dead helpful*.'

## 7.5 What were the main benefits of *Playing for Success*?

We asked pupils and teachers to identify whether and how pupils had benefited from attending *Playing for Success*.

Pupils in all ten groups were able to identify a number of ways in which the Centres had helped with their learning, computer skills, and personal and social development. The only pupils who had reservations about the Centre's impact on their learning were a group from one primary school who said they had found some of the work 'too easy'. (This group had somewhat higher levels of attainment than some of the others we spoke to – although their teachers expected them to get Level 3 or 4, they actually achieved Level 4 or 5 in their Key Stage 2 assessments).

The areas in which pupils said the Centres had helped them most were English and mathematics. Both primary and secondary pupils gave examples of how the Centres had helped with a variety of English work (including writing stories, spelling, grammar, punctuation, handwriting and reading). Pupils also identified the Centres' help with a range of tasks in mathematics (such as manipulating large numbers, using decimals, working out percentages and constructing charts). One secondary pupil explained how the Centre had helped him to improve his knowledge, skills and enjoyment of learning: '*I've got enthusiastic about maths and English. In English I didn't used to know anything to do with punctuation and stuff, but since working on the computer I've got right good at it. I didn't used to like maths before but I like it now because I've got more knowledge*.'

A few pupils had some concrete evidence of how much their English and mathematics performance had improved as a result of their experience at the Centre. For example, one Year 6 boy said that the Centre had helped him to achieve Level 5 in his Key Stage 2 mathematics assessment. Similarly, a girl in Year 8 said that since attending the Centre she had achieved better maths test results than expected, was no longer struggling in mathematics lessons and had moved up a set at school. A Year 9 student said that the Centre had helped her with reading and that Centre staff had encouraged her to read books at home. After her course at the Centre had ended, she took a reading test at school and her scores had improved by the equivalent of three years since her last test, a year before.

The other main area of learning mentioned by pupils was computer skills. Pupils said they felt much more skilled and confident in using computers for learning, they could use a range of computer packages and they felt confident in using email and the Internet.

In terms of personal and social development, the Centres certainly seemed to have enhanced pupils' self-confidence. Both primary and secondary pupils said that the Centres had helped them to become more self-confident and willing to speak out in

class. For example, Jayne[1] and Sarah described themselves as formerly shy and nervous of being called upon by the teacher. However, since going to the Centre they had become 'star pupils' for earning the most merits at school. Their experiences at the Centre had given them such a confidence boost that they were now eager to volunteer for tasks that they would have previously avoided, such as reading to the class or writing answers on the blackboard.

The Centres had also encouraged pupils to ask for help with their learning. For example, one secondary girl said: '*It's made me trust people [i.e. staff] more and get them to help me with stuff.*' Some pupils said the Centres had helped them become more motivated and to persevere in the face of difficulty. For example, one secondary girl explained: '*I've got better in maths and English through not giving up at the first sight of a question. I just try and if I get it wrong I just try again.*' Another secondary girl said: '*It's made me more confident about having a try at things. If I get them wrong, I'll just look them up in a book and see what I'm doing wrong.*'

Several pupils testified to the Centres' help in learning to plan their own work and in being able to work independently of the teacher. Others said that forming positive working relationships with adults and other pupils at the Centres had made them more confident in their ability to get on with new people. Primary pupils pointed out that this experience had helped them to look forward to going to secondary school, because they felt confident they would be able to make new friends there.

### 7.5.1 Teachers' views on the benefits of *Playing for Success*

Teachers' comments tended to echo those of the pupils, although they were more likely to emphasise improvements in pupils' self-confidence than in their academic skills. Teachers had noticed improvements in pupils' confidence in class, particularly their willingness to ask for help and to 'have a go' at answering questions, even if they were not entirely sure of the answer. For example, one primary teacher commented: '*There has been an increase on children's motivation and they are more confident. Whereas before they might have sat quietly [in class] and not said*

[1] Interviews were carried out on condition that we would not name the Centres, schools or individuals concerned. For this reason, we have used pseudonyms when referring to individual pupils.

*anything, they are more confident about having a go, and not being too worried about being wrong*.'

Others noted improvements in pupils' motivation and in their study skills. One teacher described the effect on a Year 6 pupil in the following terms: '*James struggles with logical thinking, sequencing and ordering his thoughts. His work on the computer is much better. He's always enjoyed it but now he can plan and think through what he's going to do before he does it*.'

Teachers had also noticed improvements in pupils' English, mathematics and computer skills. Although we visited the schools before the National Curriculum Assessment results had been confirmed, three of the primary school teachers had evidence from the previous year that children had achieved 'better than expected' grades after attending the Centre. Three others said they were optimistic about the effect of the Centre on their pupils' Key Stage results.

There was clear agreement from pupils and staff about the value of the initiative: all the pupils said they would recommend it to others, and all the teachers said they would be happy to send other groups to the Centres in future.

## 7.6 What contributed to the Centres' impact on pupils?

We were interested to know what it was about the Centres that had contributed to the pupils' positive experiences, so we asked pupils and teachers to identify which aspects of the Centres had helped pupils to learn.

All of the pupil made very positive comments about their learning experiences at the Centres. Several pupils pointed out that they would not have continued to attend if they had not enjoyed the experience. The aspects mentioned by pupils as the most important were: the Centre Manager and staff; the activities and computer facilities; and the system of rewards. The pupils also commented on the excitement of going to the Centre, and their appreciation of a chance to learn in an atmosphere very different from school.

Pupils in all groups spoke warmly about the quality of their relationships with Centre Managers, teachers and mentors. They described the staff as 'friendly', 'kind' 'approachable', and 'helpful', and they appreciated the fact that the staff never shouted at them or criticised them for getting things wrong. They also commented that the staff had allowed them to make their own choices (for example, several pupils mentioned that they were allowed an element of choice in their learning activities, and they did not have to ask permission to visit the toilet or to get refreshments).

Pupils described how the Centre staff had established a positive ethos, where all pupils were encouraged to try their best. As one group of Year 9 pupils said: '*The people were friendly, you could have laughs with them, but if you did something wrong they would tell you. They encouraged you but they didn't force you. They'd say: "Give it a try". I don't think there was anyone who didn't give everything a go.*'

Pupils also benefited from the one-to-one attention from Centre staff. Several pupils gave examples of how Centre staff had explained concepts in a way that helped them to understand. As one Year 8 pupil said:

*We did this question in maths at school. We did all this homework on it and everything but I just didn't understand. Then I went to the Centre and I asked [the Centre Manager] because it was one of the questions on the tutorial [for the computer program]. She explained how to do it in our sense of understanding and saying it. Then I understood and now I know how to do it and I don't get low marks in my mental tests.*

Pupils referred to the programme of activities at the Centre as central in helping them to learn. It was clear that most pupils enjoyed the Centres' programmes, finding the range of activities both stimulating and fun. They liked the games format adopted by the Integrated Learning Systems and other computer packages. They also enjoyed the challenges set by the staff (such as a competition to design a football kit). Pupils described their satisfaction in setting targets, succeeding in tests and receiving positive feedback on their progress. They appreciated being able to use the Centre's computer facilities, describing these as 'excellent'. In fact, several pupils mentioned their amazement at being given access to such good facilities: they did not have to

share a computer terminal with other pupils; they could access a wide range of Internet sites; were encouraged to use email; and could print their work in colour. Pupils liked the fact that the computers enabled them to produce work to a high standard and took some of the drudgery out of school work. One secondary pupil said: '*We get to use new computers, which are better than school. Writing down is really boring but the computer is more exciting. You think: "I'll have a go at this because it looks better than things I normally do". It's fun, and we enjoy doing it.*'

Pupils described their pride in their achievements, as recognised in the Centres' rewards systems. Several pupils said that these rewards had helped to motivate them to behave well, keep up their attendance and achieve their learning targets. Although many of the prizes were relatively modest (for example, stickers, pens and pencils bearing the club logo), they were nevertheless valued by pupils as tangible evidence of their achievement. Several pupils also mentioned enjoying the presentation ceremony at the end of the course, where they had the opportunity to meet players and receive commendations in front of pupils from all the participating schools.

### 7.6.1 Factors contributing to the Centres' impact on pupils: teachers' views

Teachers felt that the Centres had many elements that helped pupils to learn, although they singled out the Centre Managers, the adult-pupil ratios and the facilities as particularly important. One primary teacher described the Centre as having all the 'magical ingredients' necessary to interest pupils, including a committed staff and a stimulating learning environment. Another described the aspects of *Playing for Success* that particularly appealed to students at her school: '*[The students like] the computer programs and certainly the staff at the Centre. They have built up relationships with them. The quality of the facilities is also good. Some of these children come from very poor backgrounds and [appreciate being] allowed to use new stuff without restrictions.*'

Several teachers praised the leadership of the Centre Managers, describing them as 'enthusiastic', 'friendly' and 'understanding of the difficulties faced by children'. The teachers acknowledged that the adult-pupil ratios at the Centres enabled *Playing*

*for Success* to offer underachieving pupils the kind of individual help that was impossible to provide at school. They observed that pupils felt 'special' being selected to attend the Centre, and that this, together with the support from Centre staff, helped boost pupils' self-confidence and motivation to learn.

Teachers also mentioned the fact that the Centres had helped pupils to take responsibility for their own learning. As one secondary teacher said: '*The trust is very important. They [pupils] are given a task and are allowed to have a break whenever they want, but they know that they have got to finish that task, and they have to take that responsibility for themselves*.'

The comments from teachers and pupils demonstrated how the Centres had set up a positive cycle in which pupils enjoyed their learning, felt able to ask for help, gained in skills and understanding, received positive feedback on their progress, were more able to work independently and gained a stronger motivation to learn.

## 7.7 Did pupils continue to use their learning?

One of the aims of the follow up study was to establish whether pupils and teachers were able to identify any continuing effect of attending the *Playing for Success* Centre about a term after the course had ended. We were also interested to know whether pupils thought the skills they had learned at the Centre would be useful to them in future.

We asked pupils to think about the things that they had learned at the Centre and then to tell us whether they had used any of those things since they had completed their course. Pupils in all nine schools were able to identify at least one area of learning that they had used, although one group said that their ability to do so was limited by the fact that their current school work was not related to their work at the Centre.

The most common area of learning to be used after *Playing for Success* was information and communication technology (ICT). Pupils in half of the schools mentioned that they had continued to use their computer skills. Several pupils said that they had gained confidence in using computers and felt more willing to use them.

Secondary students mentioned using the Internet to research coursework in particular. However, two groups of secondary pupils pointed out that the ICT facilities at the Centre were well in advance of what was available at school and that this limited their ability to demonstrate their new skills. As one Year 9 student said: '*At the Centre you could send email and use the Internet, but you don't do stuff like that at school because it's too expensive*.'

The other main areas in which pupils had continued to use skills acquired at the Centre were numeracy and literacy (each mentioned in four of the schools). For example, one group of primary pupils reported that the Centre had helped them to develop their numeracy skills in handling division, multiplication, decimals, and graphs; all of which had proved useful at school. In terms of literacy, pupils mentioned using reading, writing and handwriting skills. For example, one group of Year 6 pupils said that they had used their improved understanding of adjectives and verbs in their work at school. A pupil from another primary school explained how he had used the literacy skills he had developed at the Centre: '*The writing techniques I learned have helped me... They have helped me express things and I know exactly where to put exclamation marks and things. I can also do dictionary work, and use a thesaurus to find information*.'

### 7.7.1 Continued impact of the Centres: teachers' views

We asked the link teachers at all nine schools whether it was possible for them to see any evidence of the impact of the Centre on pupils a term after they had attended. Most teachers felt that it was possible to see such evidence, although some wanted to reserve judgement until they had received the children's National Curriculum Assessment results. According to teachers, the main sign of the Centre's lasting impact was in relation to pupils' confidence in their learning. For example, one primary teacher made the following comment.

*For some children it has had a more lasting effect, particularly on their confidence – it's brought them out of their shells. [At the Centre] they were in charge of their own progression: there wasn't someone behind them saying: "This is the next step"… It has had an effect. I can think of two children in my class who have stopped asking*

*"What do I do next?" The initiative is coming from them, rather than me having to tell them.*

Another primary teacher said: '*A lot of children who had poor literacy skills have had the confidence to access maths and science… Their literacy skills may not be brilliant but, coupled with the teaching at school, I think it has supported them.*'

We asked pupils to speculate whether the Centre would continue to have an impact. Pupils in all nine schools were able to give examples of how the things that they had learned at the Centre would be useful to them in future. Pupils predicted that their skills in literacy, numeracy and ICT would be useful, both at school and in gaining employment. Primary pupils pointed out that these skills would help them at secondary school. A few pupils also mentioned that the social skills and confidence gained at the Centre would be useful in later life. For example, one Year 9 student said her experiences at the Centre would be useful in future because it had made her '*more confident with people I don't know*'.

## 7.8 Liaison with and feedback to schools

Centre Managers had invited teachers to accompany pupils to the sessions and stay for the duration. Four link teachers took up this opportunity and accompanied pupils to and from the Centre. One of these teachers chose to participate in the sessions at the Centre. He worked with the pupils, assisting them on tasks. This seemed to work successfully. Pupils said they became closer to these teachers and this was reflected back in schools where the atmosphere was more harmonious.

One primary school teacher explained the importance of working with the pupils at the Centre:

*It was the choice of our school to send a teacher. It wasn't part of the contract. Most schools didn't have any staff representative at all, but it's part of the ethos of [our school] that we take an interest in whatever the children do, we like them to think that we're supportive. They didn't feel that we were there to be "the teacher", they knew*

*we just wanted to see what they were doing, and because we did, we could carry on or do extra things at school in addition to what they were doing.*

However, some of the pupils from other schools said they were pleased that their teachers did not attend. They said that if a schoolteacher was present it would make the atmosphere at the Centre similar to being at school. Pupils did not want a re-creation of school and for them, different teaching staff and atmosphere made the distinction between the school day and the Study Support Centre.

As discussed in Section 3.3.1 the majority of teachers who participated in *Playing for Success* were satisfied with the liaison they had with the Centres. In the follow-up study we asked teachers and heads to comment on whether they felt they were adequately informed about the aims and objectives of the Centre, prior to sending pupils there. All but one of the link teachers and heads were satisfied with the quality of information they received, with several referring to it as 'excellent'. One teacher described the information as follows: '*I was very impressed with the booklet and administration. It was very concise, easy to read and everything was explained. Also, I have to say that [the Centre Manager] was excellent. If I needed her she would ring back or fax.*'

All three Centre Managers had visited the link teachers at the schools to give a brief introduction to the Centre's aims. They also provided copies of an information pack, stating the Centre's aims.

One link teacher was critical of the information and feedback she received from the Centre. She did not feel sufficiently informed about the Centre's aims or the programme of work. Unlike most of the other teachers, she had had no direct contact with the Centre Manager and had not visited the Centre. She felt that the Centre's programme had been insufficiently focused on preparing pupils for the Key Stage 2 Assessments and explained that she would have liked more information on the work that the pupils would be doing during sessions so that she could link it to their work at school. In her view, the children had not benefited from attending the Centre in terms of their academic skills, although she acknowledged the Centre's contribution to her pupils' self-esteem.

We asked all teachers about the quality of feedback on pupils' progress. Most heads and teachers were satisfied with this aspect. Teachers who took an active interest in the Study Support Centre and had built up a relationship with the Centre Managers were more likely to feel that the feedback had been useful. Two of the Centres provided individual feedback on pupil performance in the form of charts showing the progress that pupils had made throughout the course. The reports showed the gains that pupils had made in their literacy and numeracy and also identified areas of weakness. This detailed feedback was particularly welcomed by the schools concerned.

Pupils were delighted with the feedback they received, in the form of test results, certificates and prizes for good performance, verbal encouragement and presentation ceremonies.

## 7.9 Importance of the football club location

We were interested to know whether the football location had influenced pupils' experience of the initiative, so we asked them if it made a difference that the Study Support Centre was based at a football ground. The majority of pupils said that the football club setting was an incentive for them to attend the Centre. Pupils liked the idea of going to a football club because they enjoyed receiving the football-related prizes and many were football supporters. A few pupils added that they would not have been keen to attend the scheme if it were held at school. As one Year 7 student explained: '*I like [Football Club] and I could see what the players do and where they go. I wouldn't go if it was at school because it would be just like school and you have to come to school every day*.'

A small number of pupils said that although they enjoyed going to the club, the football environment was not of prime importance to them. A few others said that they would want to participate regardless of the site, provided that the same staff and facilities were on offer.

### 7.9.1 Importance of the football club location: teachers' views

When we asked the link teachers and headteachers what they felt contributed to the impact of the initiative, six of the nine link teachers attributed part of its success to the football club location. They saw it as an incentive for pupils to attend the Centre because of the 'kudos' and 'prestige' of visiting a football club. A link teacher at a primary school said: '*The fact that it is at a football ground has had a huge impact especially for boys, but also for girls. They have become part of the football ground, rather than just visiting. They have seen behind the scenes and visited the hallowed turf.*'

We asked teachers whether the football environment was attractive to girls as well as boys – they said it was. They added that the football-related prizes on offer were great incentives for the pupils to work hard and display good behaviour.

## 7.10 Suggestions for improvement

Pupils were asked to suggest improvements for the *Playing for Success* scheme. Overall, pupils were very happy with their experience and could not think of any ways to improve it. However, pupils from two schools suggested that they had spent almost too much time on the computers, and would have welcomed a few more practical activities. (Both groups of pupils had attended the same Centre.)

We asked the link teachers and heads if there was anything that needed to be done to maximise the potential of *Playing for Success* for the pupils who attend. In general, teachers and heads were very satisfied with what the Centres had to offer. Staff at two schools suggested that their schools should now purchase computer packages to match those of the Centre, so that pupils could continue to use the skills they had learnt.

The main suggestions for improvement focused on issues of partnership and expansion of the initiative. Individual teachers and heads made the following suggestions.

**Partnership with schools and parents**

- Schools and Centres should work more closely together.
- Involve more teachers from the pupils' schools.
- Provide more on-going feedback to pupils.
- Involve parents in the work of the Centre and show them what their children are doing.

**Expansion of *Playing for Success***

- Set up more Centres.
- Ten or more sessions are needed.
- Open the Centre at weekends and in the school holidays.
- Open the Centre to all pupils, regardless of ability and social skills.

However, one teacher was concerned that the Centre should not expand its places at the expense of the high ratios of staff to pupils.

Heads and link teachers were asked to comment on what they considered to be the best time of the school term to send pupils to the Centre. The most common response was that any time during the school year would be acceptable, although individual teachers had preferences for specific times. The most popular time for all schools was early in the autumn term, when evenings are still light. The autumn term was suggested because it gave maximum opportunity for pupils and teachers to capitalise on the impact of the initiative, before the National Curriculum Assessments.

We also asked link teachers and headteachers which year group they thought would benefit most from attending the Centre. Most primary teachers suggested that pupils in Year 6 would benefit most because the Centre could help them improve their National Curriculum Assessment results. One link teacher at a primary school suggested that the school should be able to send pupils in Year 5 and again in Year 6 to have greatest impact on their Key Stage 2 results. Secondary teachers most commonly suggested Year 7, to help ease pupils' transition to secondary school. Two teachers (from a primary and a secondary school) expressed the view that pupils from all year groups could benefit in some way from taking part in *Playing for Success*.

## 7.11 Alisha and Ben

We thought it would be interesting to present two short accounts of the way in which *Playing for Success* had made a difference to children's lives. We have drawn on comments from pupils and their teachers to put together the following 'case studies' of two Year 6 pupils who attended different Centres. We have called them 'Alisha' and 'Ben'.

Alisha attends a medium-sized primary school, located on the edge of a council housing estate. The school has a mixed population in terms of social class (about 30 per cent of the pupils are eligible for free school meals). Forty per cent of the children come from Asian backgrounds and many of them speak Gujarati or Punjabi at home.

Alisha's Year 6 teacher thought she would benefit from *Playing for Success* because she was underachieving at school and lacked confidence in class. Alisha said she had enjoyed going to the Centre and felt it had helped to build up her self-confidence. She was particularly pleased with her progress in maths, English and science. As a result of her hard work, Alisha won the prize for the child who had made the most progress out of the ten schools sending children to the Centre that term. The deputy head felt that the Centre had had a particular impact on the children's confidence and motivation. She had noticed the effect on Alisha's contribution in her mathematics lessons: '*Alisha's approach to problem-solving has been much more positive and she works much more collaboratively as well. She has become more of an equal partner in group work.*' Her class teacher said: '*It has done a lot for her self-confidence and it made her feel really special. She seems to have blossomed.*'

Ben attends a medium-sized primary school which draws its pupils from an area of high unemployment and social deprivation. He was selected by his Year 6 teacher because his performance was 'borderline Level 3/4'. Ben admitted to not always trying hard and sometimes getting into trouble at school. As a keen football player, the chance of going to a football club held a strong appeal for Ben. His first visit to the Centre made a very good impression: '*It was really posh and big. I thought the stuff was great – there was lots of big equipment and we could play maths and*

*English games. The staff were very kind and would help you. I thought "I'm going to enjoy this".'*

Ben realised that he had an opportunity to make a fresh start with staff at the Centre who did not know his reputation as a trouble-maker. He found them calm, helpful and tolerant, although they certainly made it clear that bad behaviour was not acceptable. He enjoyed the football-related learning activities at the Centre and worked hard to earn rewards for effort and good behaviour. As a result of going to the Centre, Ben learned to use a computer and improve his maths and spelling (he got his mum to test him every night). Reflecting on his time at the Centre, he said: '*I'm proud of what I achieved... It helped me to learn to believe in myself, be confident and go for it... They told us all the things that could happen if you could be bothered, so I thought for once I'd go for something I really wanted to get.*'

# 8. Conclusions

This study used a variety of measures to assess the impact of *Playing for Success*. The evaluation was charged with addressing one central question, namely: is the initiative meeting its aims? This chapter examines the evidence in relation to: recruitment; pupil attendance; client satisfaction; changes in attitudes; and progress in basic skills. The section looks at whether certain groups of pupils appear to benefit more than others, and considers the importance of the football context. The section ends with a discussion of how the main elements of the initiative contribute to desirable outcomes, and identifies the main issues that need to be addressed in future.

## 8.1 What did *Playing for Success* set out to achieve?

The broad aim of this national initiative was to contribute to raising educational standards, through the establishment of Study Support Centres in football clubs. As well as enhancing standards, it was anticipated that the Centres would have a major impact on pupils' confidence and motivation to learn.

There are two important points about the context for this initiative. First, that it was focused on urban areas, which are facing particular issues of social disadvantage and underachievement at school. Second, that it was, in part, a response to the particular issue of underachievement among boys. The Centres were intended to be open to children of both sexes, but it was hoped that the appeal of football would motivate boys to attend the Centres and work hard to improve their basic skills.

Although sharing certain characteristics, each Centre has its own identity. The Centre Managers, together with their partner organisations, are free to decide how best to meet local needs. This means that there is considerable variation in terms of the number of

pupils and schools that are involved, as well as in the programme of activities on offer to pupils.

This evaluation took place during the second year of the initiative. The first six Centres were established in 1998 and took part in an evaluation of the first year (Sharp *et al*., 1999). By the beginning of the academic year in 1999–2000, 22 Centres had been established, although some of these were in their very early stages of development. The evaluation included over half of these Centres, selecting from those who were willing to take part and choosing the Centres which were most established, in terms of the number of pupils involved.

## 8.2 Has *Playing for Success* reached its target groups?

The initiative is clearly focused on underachieving young people in Key Stages 2 and 3. The definition of underachievement is somewhat open to interpretation, and is influenced by local circumstances (for example, pupils considered to be doing relatively well in one school may be considered to be underachieving in another). Some Centres appeared to focus specifically on pupils with low achievement, whereas others encouraged schools to select pupils with average or even high levels of achievement, but who were underachieving in relation to their potential.

Places at *Playing for Success* Centres are limited, with Centres adopting various methods of targeting pupils who they consider will benefit most from the opportunity. Most commonly, Centres devised a set of criteria for schools to use in selecting pupils for the initiative. Teachers confirmed that they used a variety of selection criteria, but they tended to focus on pupils who were underachieving and pupils who were lacking in confidence. There was also some concern from Centre Managers and teachers that *Playing for Success* should not be seen as a reward for bad behaviour or poor attendance at school. The evidence suggests that the Centres are successfully communicating the

intended target groups to schools and that schools are selecting pupils that meet the criteria.

Most Centres offered equal numbers of places for primary and secondary pupils. Most of the primary pupils were in Year 6. About half the secondary pupils were in Year 8, with the remainder equally divided between Years 7 and 9. We are able to provide some further information about the characteristics of pupils attending the Centres during the spring term. For example, we know that just over half of the pupils (55 per cent) were male. Other information was harder to obtain, but we do know that about a quarter of pupils were entitled to free school meals, indicating that *Playing for Success* reached a relatively high proportion of pupils from disadvantaged backgrounds. About a quarter of the pupils had identified special educational needs. Fifteen per cent of pupils came from non-White Ethnic backgrounds (most commonly from Black Caribbean, Indian and Pakistani ethnic groups) and just under 15 per cent of pupils spoke English as an additional language.

## 8.3 Did pupils keep up their attendance at *Playing for Success*?

The length of the course varied considerably between Centres, from nine to 40 hours. Most pupils attended a Centre for between 16 and 20 hours and less than a quarter of pupils attended a *Playing for Success* Centre for more than 30 hours. These are relatively short periods of time for an initiative to have a measurable impact on pupils.

The courses were run in the evenings after school and at weekends. Transport was provided and pupils agreed to give up their free time to attend. Centre Managers kept registers and these reveal that rates of attendance were generally high. Almost half the pupils attended all the sessions and over three-quarters attended for at least 80 per cent of the available time. Attendance rates were higher among primary than secondary pupils. There are a number of possible reasons for this; not least the fact that whereas primary pupils attended sessions scheduled just after the end of school, secondary pupils usually

attended the second evening session, starting about two hours later. This meant that older pupils either had to wait at school or go home first, before setting out for the Centre.

## 8.4 Did *Playing for Success* generate high levels of client satisfaction?

Pupils, parents and teachers were all highly satisfied with *Playing for Success*. For example, 91 per cent of pupils rated their experience at the Centre as 'fun' and 85 per cent considered it both 'interesting' and 'a good idea for me'. Similarly, 99 per cent of parents were pleased that their child had been selected to attend *Playing for Success*. Teachers were highly satisfied with what the Centres offered and almost all were keen to send other groups of pupils to the Centre in future.

Pupils and parents both expected the Centres to help pupils with self-confidence as well as learning. In the event, the Centres certainly lived up to their high expectations, especially as far as help with computer skills was concerned. Parents felt that the Centres had helped to raise their children's confidence and self-esteem. However, the pupils' initial expectations appeared to be unrealistically high in some respects, especially as far as help with writing, mathematics and reading was concerned.

Teachers were most likely to note an impact of the initiative on pupils' self-confidence, ICT skills, motivation at school and study skills.

The majority of pupils, parents and teachers were unable to identify any ways in which the Centres could be improved, apart from in the area of feedback on pupil progress (a point made by a small minority of teachers and parents). Many individuals took the opportunity to praise the initiative and to thank the staff. There were calls from all parties for the expansion of *Playing for Success*, so that more pupils could benefit in future.

## 8.5 What effect did *Playing for Success* have on pupils' attitudes and motivation?

In common with other study support initiatives, *Playing for Success* acknowledges the key role of self-esteem and motivation in raising achievement.

Self-confidence was clearly an issue for some of the pupils attending *Playing for Success*. In particular, parents expressed concern about their children's lack of confidence, and identified improving self-confidence as the most important thing that the Centre could do for their children. The feedback from pupils, parents and teachers suggests that they noticed considerable benefits in relation to children's confidence and self-esteem. They also felt that the initiative had improved pupils' motivation to learn. The pupils and teachers we interviewed were able to cite specific examples of how the Centres had made pupils more confident in class. However, when we measured the pupils' self-esteem at the beginning and end of their time at the Centres, although self-esteem scores improved, pupils who attended *Playing for Success* did not make significantly greater gains in self-esteem when compared with the control group.

There are several possible explanations for this apparent discrepancy between attitudinal measures and participants' accounts. The ones that seem most likely are that the attitudinal scale was either measuring a different dimension of self-esteem from that identified by participants, or that changes were too subtle to show up in responses to the attitudinal questionnaire. There was also the added complication that the pre-course scores for pupils who took part in *Playing for Success* were higher than those for the control group. This was a puzzling difference, given that the control group pupils' scores were similar to the *Playing for Success* group for all other attitudinal measures. Could selection for the initiative have already caused pupils to feel more positive about themselves, even at the very beginning of the course?

The attitudinal questionnaire identified two statistically significant findings in favour of pupils who had attended *Playing for Success*. Key Stage 2 pupils improved their

confidence in writing, and Key Stage 3 pupils improved their enjoyment of mathematics, relative to the control group. However, when we subjected these differences to the tougher test of educational significance (as indicated by an effect size of 0.25 or more) these differences did not reach this level of significance. In relation to the other attitudinal scales (reading enjoyment, writing enjoyment, writing confidence and confidence in mathematics) the pupils attending *Playing for Success* did not make significantly greater progress than pupils in the control group. We asked pupils about their ability to use punctuation: this was the only measure on which pupils in the control group made greater gains than pupils who attended *Playing for Success*, once differences in pupils' characteristics had been taken into account. However, the effect size was too small to indicate a difference of educational significance.

We also asked pupils about two aspects of their study skills (working independently and working with others). Pupils attending *Playing for Success* did not make significantly greater progress on these measures than pupils in the control group.

## 8.6 What effect did *Playing for Success* have on pupils' basic skills?

*Playing for Success* set out to address underachievement in literacy and numeracy, and to improve pupils' computer skills. The Centres were designed to offer the latest in information and communication technology and were well-equipped with computers, software and Internet connections.

### 8.6.1 Computer skills

Not surprisingly, given the excellent facilities, pupils who attended *Playing for Success* recorded considerable gains in their computer skills. They became much more confident in using a computer for school work and made significant gains in each of the four areas measured: basic operations; word processing; using the Internet; and sending and receiving email. The effect sizes for overall computer skills were 0.93 for KS2 and 0.65 for KS3. This demonstrates that, not only had pupils made significant progress, relative

to pupils in the control group, but the difference in scores was considerably above the criterion of 0.25, indicating a gain of educational significance for pupils in both key stages.

The analysis also indicated that pupils who spent longer at the Centres made significantly greater progress in their computer skills (particularly in the areas of word processing and using the Internet). These findings are consistent with the comments from pupils, parents, and teachers; all of whom identified computer skills as the area in which the initiative had made the greatest impact.

Although pupils in all Centres made positive gains, there were significant differences between Centres. The Centre where pupils made the most progress was very well equipped with modern technology and used a structured programme to teach pupils computer skills.

### 8.6.2 Numeracy and literacy

There is evidence that *Playing for Success* has had a positive impact on gains in pupils' numeracy, as measured by tests specially devised for the evaluation. Pupils' numeracy scores increased by the equivalent of 21 months at Key Stage 2 and eight months at Key Stage 3. These are substantial immediate gains, achieved in a relatively short period of time (most pupils attended a course for less than 30 hours). The evidence also suggests that, without the chance to attend *Playing for Success*, these under-achieving pupils' numeracy scores would have continued to slip further behind the level expected for their age. The effect sizes for numeracy indicated that these were real differences of considerable educational significance for pupils in both key stages. The effect size for Key Stage 2 pupils was 0.85 and 0.44 for pupils in Key Stage 3.

Pupils' scores on the test of reading comprehension also rose, but only the KS3 results met our criterion for statistical significance. Pupils in KS3 who attended *Playing for Success* made gains in reading comprehension equivalent to six months, whereas the results for control-group pupils did not improve. The effect size for KS3 pupils was 0.27,

indicating an educationally significant result associated with attending *Playing for Success*. The other main finding related to progress in reading comprehension was a statistically significant association with the length of the course. Pupils who spent longer at the Centres tended to make greater progress in reading.

The relatively greater gains in numeracy than in literacy are worthy of comment. It may be that Centres were spending a greater amount of time in teaching numeracy than was true of literacy (which entails a range of skills, including writing, spelling, grammar, punctuation, vocabulary as well as reading). It may also be the case that progress in numeracy is easier to achieve within a short period of time. This view is supported by previous research, which has found evidence of larger gains in mathematics than in reading (MacBeath, 2001; Sainsbury *et al*., 1999). In Professor MacBeath's school improvement study, the amount of variance attributed to the influence of the school (the 'school effect') ranged from 12 per cent for reading to 33 per cent for mathematics. The results from the national evaluation of the Government's summer schools initiative (Sainsbury *et al*., 1999) showed that whereas pupils attending literacy summer schools showed no evidence of gains in reading, those attending numeracy summer schools made significant gains in performance.

To succeed in a test of reading comprehension, pupils need to call on a complex range of concepts and skills, including the ability to read text, interpret its meaning, put together ideas from different parts of a text and draw inferences. In comparison, numeracy is a relatively 'discrete' area and acquiring new numeracy skills may be a more straightforward task.

## 8.7 Did certain groups of pupils make greater progress at *Playing for Success*?

By using multilevel modelling to analyse the data, we were able to find out whether certain groups of pupils who attended *Playing for Success* made better progress in each of our measures.

On the whole, there were few significant differences in the progress of specific groups. For example, boys and girls made equal progress in numeracy, reading, overall computer scores and all the attitude measures. The only areas in which there were significant differences in progress were: punctuation (which favoured boys); and using the Internet and email (which favoured girls). The latter two relationships may be due to initial differences in pupils' computer skills, which tended to favour boys. In other words, girls had lower levels of computer skills to begin with and were therefore able to record greater progress, particularly in relation to using the Internet and sending email.

Pupils from non-White ethnic backgrounds tended to make the same progress at the Centres as pupils from White backgrounds. The only significant differences in progress were found in relation to reading comprehension and writing confidence, where non-White pupils made significantly greater progress. Similarly, pupils who speak English as an additional language made similar rates of progress, with one exception: these pupils made greater progress in numeracy.

Pupils who were eligible for free school meals made significantly greater progress on three measures: numeracy; computer basics and word processing. Again, these pupils' progress in computer skills tended to reflect their significantly lower starting point. One possible explanation for this pattern is that pupils from disadvantaged backgrounds had less access to computers at home, but that they were able to make considerable progress, thanks to the good facilities provided by the Centres.

There was a consistent pattern in relation to pupils with special educational needs. Not surprisingly, these pupils tended to record lower scores on a series of measures (including numeracy, reading comprehension, most of the attitude scales and all the computer skills). However, the progress measures indicated that pupils with special needs made about the same rate of progress at the Centres as pupils without special needs.

Finally, there was a trend for pupils in Key Stage 2 to record greater levels of progress than pupils in Key Stage 3. This was true of numeracy, writing confidence and all the computer skills. The only area in which Key Stage 3 pupils made significantly greater progress was in their enjoyment of maths. To some extent this pattern may be a reflection of the fact that pupils in Key Stage 2 score lower to begin with, and it may be easier to make progress from a lower starting point. This seems particularly the case with computer skills, where secondary pupils were able to carry out a wide range of computer tasks unaided, before they began attending a *Playing for Success* Centre. Nevertheless, the scores for reading comprehension and numeracy were age-standardised, and secondary pupils' scores were, on average, some way off the maximum possible score. This would seem to suggest that pupils in Key Stage 2 may have benefited to a greater extent from what the Centres had to offer than was true of pupils in Key Stage 3.

## 8.8 How important is the football context?

The use of professional football in educational initiatives is not without its critics (for example, Burn and Pratt, 2000; Skelton, 1999 and 2000), who have raised concerns about the potential for football to reinforce macho culture and to legitimise racist and sexist attitudes.

However, our evidence does not support the critics' position in relation to *Playing for Success*. Centres served both boys and girls, and attracted a proportion of pupils from ethnic minority backgrounds, reflecting the composition of the local population served by the Centres. The majority of pupils who attended *Playing for Success* said they were interested in football, with half supporting the club at which the Centre was located. Furthermore, the research revealed no differences in the level of football support among girls and boys or among White and non-White pupils. This suggests that the 'saliency' of the football environment was similar for all pupils, regardless of gender or ethnicity.

Teachers felt that the football club environment had added a great deal to the quality of pupils' experiences at *Playing for Success*. They reported that pupils felt 'special' going

to the football club, and that the location had raised the profile of the initiative among parents and peers. They also pointed out that for some boys in particular, the football context was of major importance in their decision to participate, because it was seen as 'cool' for them to take part. Pupils interviewed for the follow-up study also said that the football environment added to their enjoyment of the initiative, giving their work at the Centre a substantially different atmosphere from school.

Centre Managers were well aware of the need to strike an appropriate balance between utilising the environment and medium of football as a motivational tool, and of offering a balanced programme including tasks of interest to pupils who were not football supporters. They were careful to ensure that pupils had realistic expectations, stressing that pupils would not necessarily meet team players and that they would be expected to work hard. Although some pupils cited football-related experiences as the element they were most looking forward to at the Centres, the computer facilities proved an even greater draw for the majority.

But the main test of the initiative is in the results. As noted above, with very few exceptions *Playing for Success* had a similar impact on pupils, irrespective of gender or ethnic background.

## 8.9 What are the most important ingredients for success?

*Playing for Success* is clearly a popular initiative, generating high expectations and achieving a very high level of satisfaction among pupils, parents and schools. This section draws on the evaluation findings to attempt to identify how Centres are able to generate such considerable enthusiasm among underachieving young people. One of the teachers we spoke to commented that her local Centre had all the 'magical ingredients' for success, but what are these ingredients and how do they contribute to learning?

The evaluation gave us some insights into the situation of pupils who are underachieving at school. Some may have failed to grasp basic concepts and skills, making it difficult to make progress in their learning. Teachers do not always have time to devote to individuals' learning needs, and pupils can adopt the practice of 'keeping their heads down' in class for fear of exposing their incomprehension. Learning becomes less and less rewarding, and pupils react by losing self-confidence and/or by becoming disruptive in class.

*Playing for Success* offers a chance for pupils to get some extra help with their learning, in an environment that is different from school. Pupils make a voluntary decision to attend the Centres, giving up their free time to take part. The Centres are modern and equipped with the latest technology and the people are friendly, tolerant and helpful. The Centre Managers have planned their programmes to engage the interest of pupils, drawing on football environment to provide practical tasks, such as interviewing players or designing a football kit.

The encouragement provided by staff and mentors and the support from the learning resources means that pupils find they can grasp basic concepts and that it is worth persisting at difficult tasks. The computer programmes can provide work at the right level of difficulty, often utilising a games-format, which makes 'drill and practise' activities more interesting. Using computers takes some of the drudgery out of writing and pupils are able to produce work to a high standard of presentation (including graphics and colour printing). Their unprecedented access to computers gives pupils a boost in computer skills, and means that they now have an area of expertise, which they can share with parents and classmates.

Centre staff encourage hard work in return for both intrinsic and extrinsic rewards. Pupils gain satisfaction from making progress and are able to build up a considerable folder of work. Extrinsic rewards are provided in the form of verbal encouragement, points systems, small prizes and celebratory events. While these rewards are not the main emphasis of the Centres, pupils clearly feel that their efforts and achievements are

being recognised. Another key element of the Centres' ethos is the way in which staff emphasise personal responsibility and choice. The pupils we spoke to valued the degree of autonomy they were given at the Centres. For example, they mentioned opportunities to make choices about which learning activities to work on, as well as in seemingly small things, such as using the toilet or getting refreshments without having to seek permission first. Pupils also valued opportunities to work in groups and to form positive relationships with adults and other pupils.

Researchers in the USA have established a theory of 'self-regulated learning' (see for example Deci *et al.*, 1996). Simply put, a learner is self-regulated if he or she is motivated out of a personal interest in learning. Self-regulated learners are relatively persistent and successful in life. It can therefore be seen as a primary purpose of education to foster self-regulation in young people. Deci and his colleagues draw on a body of research that has identified some key characteristics of learning environments that are more likely to achieve this goal. Such learning environments respond to three basic human needs for autonomy (including personal volition and initiative), competence (an ability to function successfully) and 'relatedness' (a sense of connection with others). This seems of considerable relevance to study support in general and to *Playing for Success* in particular.

## 8.10 Implications for the future of *Playing for Success*

The evaluation has demonstrated that *Playing for Success* is continuing to meet its core objectives, and is proving equally successful with a range of target groups. We set some fairly hard tests for the initiative: not only should it show a measurable gain in pupils' scores, but these gains should be significantly higher than those achieved by similar pupils who had not attended the Centres.

The successful nature of *Playing for Success* leaves us to offer some very simple recommendations for the future of the initiative.

1. Continue to 'roll out' the initiative, so that greater numbers of pupils have access to *Playing for Success*.
2. Maintain the current focus on underachieving young people, including pupils with special educational needs.
3. Consider the balance between literacy and numeracy work within the Centres' programmes. If improving reading and other literacy skills is a prime target for improvement, consider giving more time to these aspects within the programme, and/or to lengthening some of the shorter courses.
4. Continue to work in partnership with schools, focusing particularly on providing feedback on pupils' progress at the Centres.
5. Given the impact on pupil's achievement, teachers and schools should actively participate and seek to build on the success of the initiative. Examples of teacher participation include: providing the necessary background information about the pupils; accompanying pupils to the Centre; and giving thought to the ways in which the impact of *Playing for Suc*cess can best be maintained once pupils have completed the course.
6. Consider parents' need for information and feedback about their children's progress at the Centres.
7. Encourage Centre Managers to continue to support the development of self-regulated learning by fostering pupils' sense of autonomy, competence and ability to form successful relationships with others.
8. Continue to evaluate the success of the programme and to encourage Centres to undertake self-evaluation in relation to local priorities.

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# Appendix 1
# Response Rates and Statistical Modelling

As explained in the introduction to this report, the evaluation included 12 of the 22 *Playing for Success* Centres in existence in the autumn of 1999. The DfEE selected the 12 Centres taking the largest numbers of pupils and the research team contacted the Centre Managers to establish how many places would be available to pupils in the spring term, 2000.

## A1.1 Response rates for the main sample

The evaluation was designed to assess the progress of pupils attending the Centres, without placing too great a burden on individuals. It was therefore decided to ask each pupil to complete one pair of questionnaires and tests (either the reading comprehension test and the computer skills questionnaire or the numeracy test and the attitude questionnaire). The parents of all participating pupils were asked to complete a short questionnaire at the beginning and end of the course. The NFER team sent questionnaires to all school sending pupils to the Centres during the spring term.

Centre Managers were provided with the appropriate number of instruments, packaged into sets for each group of pupils. Because the tests were newly-designed, it was important for the research to establish whether the pre- and post-course versions were of an equivalent level of difficulty. We therefore alternated the order of the pre-and post-test versions (so that some pupils completed one version first, while others completed the alternative version). In any one Centre, pupils attending on different days completed different sets of evaluation materials and completed the pre- and post-course versions of the tests in a different order. (In one case, the Centre Manager decided to administer all four instruments to all pupils.)

The response rates are shown in the following two tables. Table A.1.1 gives a breakdown for each instrument and shows the number of matched pre- and post-course instruments. The expected number is based on the total number of places offered by Centres, rather than the actual number of places taken up by pupils. In the case of one large Centre, the Centre Manager requested the pupils' schools to

administer the evaluation instruments, but most of them did not do so (this affected the numeracy tests and attitude questionnaires in particular). Also, for the numeracy and reading comprehension tests we needed schools to supply information on the birthdate of each pupil so that we could calculate age-standardised scores (pupils for whom we had test scores but no birthdate information were excluded from the analysis). For these reasons, the response rate shown is an under-estimate of the response for pupils attending the Centre and who were given the opportunity to complete the evaluation instruments.

**Table A.1.1 Return of completed pre- and post-course instruments**

| Instrument | Number Expected | Number Returned | Matched Pre- and Post- course | Response Rate |
|---|---|---|---|---|
| Numeracy Pre-course | 899 | 624 | | |
| Numeracy Post-course | 899 | 568 | 522 | 58% |
| Reading Pre-course | 887 | 693 | | |
| Reading Post-course | 887 | 596 | 581 | 66% |
| Attitudes Pre-course | 899 | 620 | | |
| Attitudes Post-course | 899 | 560 | 536 | 60% |
| Computer Pre-course | 887 | 691 | | |
| Computer Post-course | 887 | 598 | 674 | 76% |
| Parent Pre-course | 1686 | 898 | | |
| Parent Post-course | 1689 | 534 | 455 | 27% |
| School Questionnaire | 119 | 70 | N/A | 59% |

The table shows that response rates for the pupil measures ranged from 58 to 76 per cent. The school questionnaire achieved a response from 59 per cent of participating schools. The lowest response came from parents, less than a third of whom completed both the pre- and post-course questionnaire. The relatively low response from parents was affected by two main factors. First, parent questionnaires were usually not given direct to parents, but were more commonly distributed via pupils. Using 'pupil post' in this way can cause a drop off in response, but distributing questionnaires direct to parents was not a practical option in all Centres. Second, it is

not uncommon for parents of children with literacy problems to have such problems themselves, and this could have affected the response rate for parents of pupils attending *Playing for Success*.

## A1.2 The control group study

Five Centres took part in the control group study. They were asked to liaise with teachers to select a group of pupils as similar as possible to a group of pupils who were due to attend the Centre in the spring term. The research team provided guidelines on the selection process, asking Centres to select pupils in one of two ways: either randomly; or using a matched group. Random selection was our preferred option, because this ensures that the allocation of pupils to 'treatment' (i.e. *Playing for Success*) or control group is unlikely to be affected by systematic bias. We asked teachers to select a group twice as large as their allocation of places at the Centre, and then to select half of the group using a specified protocol (pupils were listed in alphabetical order of their surnames and teachers then used the list to select each alternate pupil to take part in the control group or to attend *Playing for Success*). Pupils in the control group were usually offered places at the Centre in the following term. Four of the five Centres used this method to select the control group.

The second method was to recruit a control group from the same year group in a 'matched' school. We asked the Centre Manager to ensure that the schools were as similar as possible, in terms of their intake and National Curriculum Assessment results. The 'matched school' method was adopted in one Centre, where the random allocation method was not a practical option. This was due to the fact that the Centre worked with schools on a rotational basis (i.e. the schools working with the Centre for during the spring term would not be sending pupils again in the summer term). It was therefore not possible for this Centre to offer places to 'control group' pupils during the summer term.

Once the control group pupils had been selected, the Centre Manager arranged for them to complete the same set of instruments at about the same time as pupils in their comparator group.

The response for the control group pupils is shown in Table A1.2.

### A1.2 Control Group Returns

| Type of Test | Number Expected | Number Returned | Matched Pre- and Post-course | Response Rate |
|---|---|---|---|---|
| Numeracy Pre Course | 208 | 106 | | |
| Numeracy Post Course | 208 | 104 | 49 | 24% |
| Reading Pre Course | 196 | 115 | | |
| Reading Post Course | 196 | 123 | 73 | 37% |
| Attitudes Pre Course | 208 | 116 | | |
| Attitudes Post Course | 208 | 92 | 85 | 41% |
| Computers Pre Course | 196 | 128 | | |
| Computers Post Course | 196 | 109 | 105 | 54% |

At first sight, the response rates appear disappointing. They reflect the difficulty of establishing control groups and persuading busy teachers to participate. The first column of the table represents the number of pupils that Centre Managers initially hoped to include in the control group. In the event, some of the teachers concerned did not feel able to participate. In the case of the two tests, the response was further depleted by the fact that we were unable to obtain the birthdate information from some of the participating schools. Their pupils' results had to be excluded from the analysis because we could not calculate age-standardised scores.

# A1.3 Multilevel Analysis of *Playing for Success* Evaluation Data

## A.1.3.1 Variables used

A wide range of background variables and outcome measures was available for the pupils who took part in *Playing for Success* (PfS) and the associated control groups. The outcomes were available at two time points (pre- and post-course) for a reasonable number of pupils, and these outcomes comprised:

- Age-standardised scores in Numeracy and Reading Comprehension;
- 10 scales derived from an attitude questionnaire, covering reading, writing, mathematics, study skills and self-esteem;
- Scores derived from a self-evaluation questionnaire relating to computer skills, with an overall score and four sub-scales.

The variables are shown in Table A.1.3.1 on the following page.

**Table A1.3.1 Details of Variables Used in Multilevel Modelling**

| | | Range | | |
|---|---|---|---|---|
| **No.** | **Name** | **Min.** | **Max.** | **Description** |
| 1 | CENTRE | 1 | 12 | Centre number |
| 2 | KS | 2 | 3 | Key Stage |
| 3 | PUPIL | 1 | 5980 | Pupil identification number |
| 4 | TIME | 1 | 2 | Pre/post PfS |
| 5 | CGROUP | 1 | 2 | PfS/Control group |
| 6 | SEX | 0 | 1 | 0 = male, 1 = female |
| 7 | FSM | 0 | 1 | Eligible for free school meals? |
| 8 | SEN | 0 | 5 | Special Education needs stage |
| 9 | ENGFLU | 1 | 5 | English fluency |
| 10 | NWHITE | 0 | 1 | Non-White ethnic origin |
| 11 | NUMSCO | 69 | 141 | Numeracy Standardised Score |
| 12 | READSCO | 69 | 137 | Reading Comprehension Standardised Score |
| 13 | READ1 | -6 | 9 | Reading enjoyment |
| 14 | READ2 | -4 | 4 | Reading competence |
| 15 | WRIT1 | -5 | 5 | Writing competence |
| 16 | WRIT2 | -2 | 2 | Writing enjoyment |
| 17 | WRIT3 | -4 | 4 | Punctuation |
| 18 | MATHS1 | -5 | 5 | Maths confidence |
| 19 | MATHS2 | -4 | 4 | Maths enjoyment |
| 20 | STUDY1 | -7 | 7 | Working with others |
| 21 | STUDY2 | -7 | 7 | Independent study skills |
| 22 | SELF | -13 | 14 | Self-esteem |
| 23 | COMPSCO | 9 | 72 | Total score Computers |
| 24 | Q1SCO | 2 | 16 | Computer Basics score |
| 25 | Q2SCO | 4 | 30 | Word Processing score |
| 26 | Q3SCO | 0 | 16 | Internet score |
| 27 | Q4SCO | 0 | 10 | E-mail score |
| 28 | PfSKS2 | 0 | 1 | Impact of PfS at KS2 |
| 29 | PfSKS3 | 0 | 1 | Impact of PfS at KS2 |
| 30 | HOURSINT | -8.63 | 8.63 | Interaction: available hours |
| 31 | SESSINT | -3.78 | 3.78 | Interaction: available sessions |
| 32 | ATTINT | -44.6 | 44.55 | Interaction: sessions attended |
| 33 | ACTHRINT | -11.7 | 11.73 | Interaction: actual hours |
| 34 | SEXINT | -1.10 | 1.10 | Interaction: sex |
| 35 | FSMINT | -1.32 | 1.32 | Interaction: free school meals |
| 36 | SENINT | -2.17 | 2.17 | Interaction: SEN |
| 37 | ENGINT | -1.86 | 1.86 | Interaction: English fluency |
| 38 | NWHINT | -0.43 | 0.43 | Interaction: Non-white |
| 39 | NUMINT | -18.3 | 18.3 | Interaction: overall numeracy score |
| 40 | READINT | -18.4 | 18.4 | Interaction: overall reading score |
| 41 | CONS | 1 | 1 | Constant term |

Table A1.3.1 contains details of all the variables, both background and outcome, which were used in multilevel analysis. There were 17 outcome measures available for modelling. The aim of the analysis was to investigate background factors that might be associated with these outcomes and changes in them from one time point to the other. The multilevel analysis allowed us to investigate these issues and develop indicators of the statistical significance of the relationships modelled.

### A1.3.2 Setting up multilevel models

Multilevel modelling is a development of a common statistical technique known as 'regression analysis'. This is a technique for finding a straight-line relationship which allows us to predict the values of some measure of interest ('dependent variable') given the values of one or more related measures. For example, we may wish to predict schools' average test performance given some background factors, such as free school meals and school size (these are sometimes called 'independent variables').

Multilevel modelling takes account of information that is grouped into similar clusters at different levels. For example, individual pupils are grouped into key stages and within Centres. There may be more in common between pupils within the same key stage and there may be elements of similarity between pupils attending the same Centre. Multilevel modelling allows us to take account of this hierarchical structure of the data and produce more accurate predictions, as well as estimates of the differences between pupils, key stages, and between Centres.

In this case, the model fitted for each of the 17 outcomes incorporated four levels:

1. Centre
2. Key Stage within Centre
3. Pupil
4. Time-point (pre- or post-course)

Thus, there are assumed to be variations between Centres in their average scores and within a Centre there may well be variations between key stages. Pupils are almost bound to have different outcomes from one another. At the lowest level, the two occasions on which outcomes are available for each pupil are likely to give rise to 'noise' or measurement error. The sizes of these variations at each level of the model

are measured in terms of 'random variances' and the relative sizes of these may be of some interest.

The way in which these models are set up means that background factors relate to overall outcomes, at both time points. For example, a strong positive relationship between stage of fluency in English and Reading Comprehension score would imply that Reading Comprehension scores as a whole are related to this factor, but would not tell us anything about progress from one time point to another. To measure the latter, we need to include 'interaction terms' in the model, which relate background factors to changes over time in outcomes. These terms have different values at the two time-points, so that their coefficients represent the relationships between the associated factors and ***progress*** from time 1 to time 2 (that is from the beginning to the end of their course).

Six such 'interaction terms' were included in the model, to look at the relationships between background variables and progress:

- **HOURSINT:** Relationship between available hours at the Centre and progress;
- **SEXINT:** Relationship between females and progress;
- **FSMINT:** Relationship between eligibility for free school meals and progress;
- **SENINT:** Relationship between SEN stage and progress;
- **ENGINT:** Relationship between English fluency and progress;
- **NWHINT:** Relationship between non-White ethnic group and progress.

The interpretation of the results for these variables is straightforward. For example, if the coefficient of SEXINT is negative, this implies that girls are making less progress than boys on average. A positive coefficient for FSMINT would imply that pupils eligible for free school meals are making more progress than others, and so forth.

Three other variables relate to progress over time in the models. These are:

- **TIME:** Progress from Time 1 to Time 2, independent of exposure to the *Playing for Success* (based on control groups);
- **PfSKS2:** Additional progress for KS2 pupils exposed to *Playing for Success*, over and above the general trend from Time 1 to Time 2;
- **PfSKS3:** As above, for KS3 pupils.

The coefficients of the latter two variables are of interest, because they indicate the apparent impact of attending the Centre on the amount of progress which would have been expected. For example, to derive the overall progress of an 'average' KS2 pupil after attending one of the Centres, one would have to sum the coefficients of TIME and of PfSKS2.

An additional feature of the multilevel analysis is that it is possible to make certain coefficients 'random' at different levels. If we assume that the 'impact' of PfS is not constant over Centres, but varies from Centre to Centre, then we may set either or both of PfSKS2 and PfSKS3 to be random at the Centre level. This allows us to estimate whether or not there is any variation between Centres and if so how much. This element of the model was fitted to each outcome measure, although only in a minority of cases was a significant variation between Centres detected. The lack of significant variation may be due, in part, to the relatively small number of pupils involved in each Centre at each key stage.

### A1.3.3 Results of Multilevel Analysis

Table A1.3.3 shows the random variances at each level for the model fitted to each of the outcomes and whether or not these variances are statistically significant at the five per cent level. The columns of this table may be interpreted as follows:

- 'Centre variance': a measure of the variation between Centres in the overall outcome at both time points;
- 'Centre KS2 slope variance': a measure of the variation between Centres in the impact of the Centre at KS2 (PfSKS2);
- 'Centre KS3 slope variance': a measure of the variation between Centres in the impact of the Centre at KS3 (PfSKS3);
- 'Key Stage variance': a measure of the variation between key stage groups in the same Centre in the overall outcome at both time points;

- ‘Pupil variance’: a measure of the variation between individual pupils in the overall outcome at both time points;
- ‘Time point variance’: a measure of the unexplained variation between scores at the two time points for the same pupil.

**Table A1.3.3 Random Variances at Each Level of Multilevel Models Fitted to Each Outcome Measure**

| Outcome measure | Centre variance | Centre KS2 slope variance | Centre KS3 slope variance | Key Stage variance | Pupil variance | Time point variance |
|---|---|---|---|---|---|---|
| Numeracy score | 0 | 11.8 | 10.8 | 21.7* | 86.6* | 40.9* |
| Reading score | 1.8 | 24.8 | 0 | 30.7 | 71.7* | 98.1* |
| Reading enjoyment | 0 | 0 | 0 | 0.7* | 6.3* | 3.4* |
| Reading confidence | 0.1 | 0 | 0 | 0 | 2.0* | 1.1* |
| Writing confidence | 0.1 | 0 | 0 | 0 | 3.7* | 1.8* |
| Writing enjoyment | 0 | 0 | 0 | 0 | 1.4* | 0.9* |
| Punctuation | 0 | 0 | 0 | 0 | 0.4* | 0.6* |
| Maths confidence | 0 | 0.1 | 0 | 0 | 5.0* | 2.2* |
| Maths enjoyment | 0 | 0 | 0 | 0 | 4.6* | 2.3* |
| Working with Others | 0 | 0 | 0 | 0 | 2.6* | 2.6* |
| Independent Study Skills | 0.1 | 0 | 0 | 0.1 | 2.6* | 2.8* |
| Self-esteem | 0.9 | 0.2 | 0 | 0.4 | 14.1* | 7.3* |
| Total Computer | 5.9 | 26.8* | 10.4 | 18.4 | 74.0* | 51.4* |
| Computer basics | 0.2 | 0 | 0 | 0.4 | 2.7* | 3.2* |
| Word processing | 0.4 | 0 | 0 | 2.4 | 9.7* | 10.3* |
| Internet | 0.4 | 3.7* | 0 | 1.2 | 7.7* | 8.9* |
| E-mail | 1.4* | 1.4 | 0.7 | 0 | 4.1* | 4.5* |

* indicates a statistically significant variance at the 5 % level.

Several points are immediately apparent from an examination of Table A3.3:

- The only two columns which are statistically significant for all outcomes are the last two: pupil and time point variances. This implies that each outcome distinguishes between individual pupils and between pupils' pre- and post-course scores.
- There appear to be significant differences between Centres in KS2 progress in total computer score and Internet score. Some other outcomes have between-Centre variances that are not significant.
- Only in numeracy and reading enjoyment are there significant variances between different key stage groups at the same Centres.

Turning to the examination of the model results in terms of the overall relationships between background factors and both overall outcomes and progress, Table A1.3.4 (below) shows the significant coefficients for each model. Significance is taken at the five per cent level for most variables, but the coefficients of the 'impact' variables at KS2 and KS3 are also shown in italics if they are significant at the ten per cent level.

The coefficient of a background variable in a model fitted to a particular outcome measure is an estimate of the amount by which the outcome changes, on average, relative to one unit of change in the background variable. For example, the coefficient of key stage against total computer score is 8.07 in Table A1.3.4; this implies that there was an average difference of 8.07 points on this measure between the two key stages. The coefficient of sex (girls v. boys) is –4.10 on the same measure. That is, the scores for girls were, on average, 4.1 points lower than those for boys.

The coefficients of the 'impact' parameters at KS2 and KS3 are estimates of the progress made by pupils attending PfS *over and above what might have been predicted from the effects of the other background factors, including any general change as modelled by the control group.*

Coefficient values, although they may be interpreted in the ways outlined above, can be difficult to evaluate because of the different units involved. To help with this, therefore, the coefficients which express the estimated relationships between test scores and each of the background variables have been converted into 'normalised coefficients'. These represent the 'strength' of each relationship as a percentage and allow the different variables to be compared in terms of their apparent influence on the test outcome, when all other variables are simultaneously taken into account. Normalised coefficients are shown in Table A1.3.5. Again, only statistically significant values are shown in this table.

**Table A1.3.4 Summary of Significant Coefficients for Each Outcome Measure**

| Variable | Num. score | Read score | Read enjoy | Read conf. | Write conf. | Write enjoy. | Punct. | Maths conf. | Maths enjoy | Work with others | Indep Study skills | Self-esteem | Total Comp | Comp Basics | Word proc. | Inter-net | E-mail |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Affecting both time points** | | | | | | | | | | | | | | | | | |
| Key Stage | | | | | | | | | | | | | 8.07 | 1.89 | 3.25 | 2.03 | 1.43 |
| Control group v. PfS | | | | | | | | | | | | -1.64 | | | | | -0.78 |
| Sex (0 = male, 1 = female) | -2.16 | | 2.26 | | | 0.46 | | -0.76 | | | 0.56 | -0.80 | -4.10 | -0.60 | -0.86 | -1.72 | -1.00 |
| Eligible for free school meals? | | | | | | | | | | | | | -3.66 | -0.98 | -1.40 | -0.74 | -0.58 |
| Special Education needs stage | -2.47 | -2.21 | | -0.20 | -0.21 | | -0.08 | -0.21 | -0.19 | | -0.22 | | -1.28 | -0.22 | -0.50 | -0.34 | -0.18 |
| English fluency | | | | | 0.50 | | | | | | | | | | | | |
| Non-white ethnic origin | | | 1.02 | | 0.98 | | | | | | | | | | | | |
| **Related to progress over time** | | | | | | | | | | | | | | | | | |
| Trend over PfS period (control) | -2.67 | | | | | | 0.34 | | | | | | | | | | |
| Impact of PfS at KS2 | 11.34 | *4.60* | | | 0.47 | | | | | | *0.43* | | 13.56 | 2.34 | 3.85 | 5.19 | 2.58 |
| Impact of PfS at KS3 | 5.93 | 4.07 | *0.59* | | | *0.32* | | | 0.53 | | *0.57* | | 9.40 | 1.34 | 2.58 | 3.80 | 2.14 |
| Interaction: available hours | | 0.25 | | | | | | | | | | | 0.19 | | 0.09 | 0.12 | |
| Interaction: sex | | | | | | | -0.26 | | | | | | | | | 0.96 | 0.74 |
| Interaction: free school meals | 2.52 | | | | | | | | | | | | | 1.04 | 1.00 | | |
| Interaction: SEN | | | | | | | | | | | | | | | | | |
| Interaction: English fluency | 3.10 | | | | 0.38 | | | | | | | | | | | | |
| Interaction: Non-white | | 3.93 | | | | | | | | | | | | | | | |

NB: Impact coefficients shown in normal type are significant at the 5% level, whereas those in italics are significant at the 10% level.

**Table A1.3.5: Summary of Significant Normalised Coefficients for Each Outcome Measure**

| Variable | Num. score | Read Comp. Score | Read enjoy. | Read conf. | Write conf. | Write enjoy. | Punct. | Maths conf. | Maths enjoy. | Work with others | Indep Study skills | Self-esteem | Total Comp | Comp. Basics | Word proc. | Inter-net | E-mail |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Affecting both time points** | | | | | | | | | | | | | | | | | |
| Key Stage | | | | | | | | | | | | | 28 | 33 | 30 | 19 | 20 |
| Control group v. PfS | | | | | | | | | | | | -12 | | | | | -8 |
| Sex (0 = male, 1 = female) | -8 | | 32 | | | 14 | | -14 | | | 11 | -8 | -14 | -10 | -8 | -16 | -14 |
| Eligible for free school meals? | | | | | | | | | | | | | -10 | -14 | -11 | -6 | -6 |
| Special educational needs stage | -30 | -20 | | -17 | -13 | | -12 | -12 | -11 | | -14 | | -11 | -10 | -12 | -8 | -6 |
| English fluency | | 14 | | | 10 | | | | | | | | | | | | |
| Non-White ethnic origin | | | | | 11 | | | | | | | | | | | | |
| **Related to progress over time** | | | | | | | | | | | | | | | | | |
| Trend over PfS period (control) | -10 | | | | | | 16 | | | | | | | | | | |
| Impact of PfS at KS2 | 37 | *13* | | | 8 | | | | | | *8* | | 39 | 35 | 30 | 42 | 30 |
| Impact of PfS at KS3 | 18 | 11 | *7* | | | *8* | | | 8 | | *10* | | 25 | 19 | 19 | 29 | 23 |
| Interaction: available hours | | 8 | | | | | | | | | | | 6 | | 8 | 11 | |
| Interaction: sex | | | | | | | -6 | | | | | | | | | 4 | 5 |
| Interaction: free school meals | 8 | | | | | | | | | | | | | 14 | 8 | | |
| Interaction: SEN | | | | | | | | | | | | | | | | | |
| Interaction: English fluency | 6 | | | | 4 | | | | | | | | | | | | |
| Interaction: Non-White | | 5 | | | | | | | | | | | | | | | |

NB: Impact coefficients shown in normal type are significant at the 5% level,
whereas those in italics are significant at the 10% level.

# Appendix 2
# The Pupil Attitude Questionnaire

The pupil questionnaire used attitudinal statements to collect information about pupils' attitudes to the Centre and to reading, writing, mathematics, study skills and self-esteem. Questionnaires were administered at the beginning and end of the course. This appendix provides further information about the attitude statements and the analysis used to derive factor scores for the questionnaire. It focuses on the composition and reliability of the attitude scales derived from the attitude statements. (The items relating to pupils' attitudes to the Centre were analysed separately – see Section 3 of the report).

The statements in the questionnaire were based on existing instruments, used to evaluate other initiatives. Where no suitable instruments existed, we derived our own. The attitude questionnaires were circulated to managers in all *Playing for Success*. We amended the questionnaires in the light of comments from Centre Managers.

Factor analysis was carried out on pupils' attitudes to each of the five sections in the questionnaire. For each section, analysis was carried out using the pre-course responses because we did not expect much variation between pre- and post-course factors. The factor analysis served as a guide on how to construct a number of different scale scores. The reliabilities of these scale scores (assessed using Cronbach's Alpha) are reported below. Please note that we have re-ordered the items to reflect the composition of the attitude scales – this is not the same order as the items appeared in the questionnaire.

## A2.1 The reading section

The first section contained 13 statements referring directly to pupils' attitudes towards reading. The section on reading drew on a series of attitudinal statements that had previously been used in the Government's evaluation of the first year of *Playing for Success* (Sharp *et al*., 1999). This had drawn on statements devised for evaluating the Government's Summer School programme (Sainsbury *et al*., 1999). The results from

the factor analysis of the reading section are summarised in Table A2.1, which shows the factors extracted and factor loading for each statement.

**Table A2.1 Reading Factors and Factor Loadings**

| | Factor 1 Reading Enjoyment | Factor 2 Reading Confidence |
|---|---|---|
| **I like reading stories** | **0.63** | |
| **I like reading information books** | **0.30** | |
| **I like watching TV better than reading** | **-0.52** | |
| **Books are fun** | **0.73** | |
| **I only read at school** | **-0.53** | |
| **I like going to the library** | **0.58** | |
| **How often do you read books at home? (Every day, most days, not often, Never)** | **0.61** | |
| **I like reading by myself** | **0.36** | **0.32** |
| **I can work out hard words by myself** | | **0.55** |
| **I am a good reader** | | **0.78** |
| **Reading is hard for me** | | **-0.73** |
| | | |
| **Percentage of variance explained** | **19** | **13** |
| ***Internal consistency (Alpha)*** | ***0.80*** | ***0.69*** |

Each factor shows the statements which contributed most to that factor. Two factors emerged from the analysis, and these were similar to the factors identified in the first year evaluation of *Playing for Success*. Factor 1, 'Reading Enjoyment', explained 19 per cent of the variation in pupils' attitudes towards reading. This factor was made up of eight statements. The reading enjoyment score is calculated from the responses to

eight items and can therefore range from –8 to +8. A positive loading shows that pupils agreeing with the statement enjoy reading. A negative loading shows that pupils agreeing with the statement do not enjoy reading. Six of the statements that made up Factor 1 had positive factor loadings, these were: 'I like reading stories'; 'I like reading information books'; 'I like reading by myself'; 'Books are fun'; 'I like going to the library'; and 'How often do you read books at home?' Two statements had negative loadings: 'I only read at school'; and 'I like watching TV better than reading'.

The second factor, 'Reading Confidence', explained a further 13 per cent of the variance. This factor comprised four statements. (Note that the statement 'I like reading by myself' is included in both the factors, indicating that it entails both enjoyment and confidence.)

There were two statements that did not correlate highly with the others. These two statements were 'I like reading comics/magazines' and 'How often do you read other things (e.g. comics, magazines, football programmes) at home?' (We added these statements to the existing scales because Centre Managers wanted us to reflect pupils' interest in non-fiction material.) Because these two statements did not add anything to the factors, they were excluded from the analysis.

The Cronbach's Alpha score for the 'Reading Enjoyment' and 'Reading Confidence' scales show that both these factor scales are quite reliable. In other words, the high alpha scores of 0.80 and 0.69 indicate that the statements that make up each factor measure the same thing. Therefore, we can be reasonably confident in saying that the eight statements that load highly on Factor 1 are measuring 'Reading Enjoyment' and the four statements loading on Factor 2 are measuring 'Reading Confidence'.

## A2.2 The writing section

Pupils' attitudes towards writing were assessed using 14 statements, devised by the evaluation team. Table A2.2 shows the factors and factor loadings for each statement.

**Table A2.2 Writing Factors and Factor Loadings**

| | Factor 1 Writing Confidence | Factor 2 Writing Enjoyment | Factor 3 Punctuation |
|---|---|---|---|
| **Spelling is hard for me** | **-0.79** | | |
| **I can spell most words correctly** | **0.58** | | |
| **I am good at writing letters to people** | **0.32** | | |
| **It is hard for me to write down what I want to say** | **-0.31** | | |
| **Writing stories is hard for me** | **-0.43** | **-0.38** | |
| **I like writing stories** | | **0.84** | |
| **Writing stories is boring** | | **-0.79** | |
| **I can use full stops** | | | **0.63** |
| **I can use commas** | | | **0.50** |
| **I can use capital letters** | | | **0.47** |
| **I can use speech marks** | | | **0.49** |
| | | | |
| **Percentage of variance explained** | **12** | **11** | **9** |
| ***Internal consistency (Alpha)*** | ***0.61*** | ***0.81*** | ***0.60*** |

The analysis revealed three factors, which we named: 'Writing Confidence'; 'Writing Enjoyment'; and 'Punctuation'. The factors explained 12, 11 and nine per cent of the variance respectively. The Cronbach's Alpha scores showed that these scales are quite reliable in measuring the factors that have emerged. Three statements did not correlate highly with any of the others, namely: 'I like making my work look nice'; 'I

like writing about things that have really happened'; and 'My handwriting is neat'. These were therefore excluded from the analysis. Note that the statement 'Writing stories is hard for me' is included in both the 'Writing Confidence' and 'Writing Enjoyment' scales.

## A2.3 The mathematics section

Pupils' attitudes towards mathematics were assessed using ten statements. As with the reading statements, these had also been previously used in the first year evaluation of *Playing for Success* (Sharp *et al*., 1999) and were originally based on the national evaluation of the Summer Schools initiative (Sainsbury *et al*., 1999). The results of the factor analysis on these statements can be seen on Table A2.3.

**Table A2.3 Mathematics Factors and Factor Loadings**

| | **Factor 1 Maths Confidence** | **Factor 2 Maths Enjoyment** |
|---|---|---|
| **Maths is hard for me** | **-0.73** | |
| **I am good at maths** | **0.71** | |
| **I can solve maths problems** | **0.63** | |
| **Maths is usually easy for me** | **0.61** | |
| **I feel worried in maths lessons** | **-0.54** | |
| **I am good at mental arithmetic** | **0.53** | |
| **I like maths** | | **0.85** |
| **I really enjoy maths** | | **0.84** |
| **Maths is boring** | | **-0.80** |
| **I like most other subjects better than maths** | | **-0.50** |
| | | |
| **Percentage of variance explained** | **26** | **26** |
| ***Internal consistency (Alpha)*** | ***0.77*** | ***0.87*** |

Table A2.3 shows that two factors emerged, which together explained over half of the total variance for pupils' attitudes to maths. The two factors were named 'Maths Confidence' and 'Maths Enjoyment' and each explained 26 per cent of the variance. From the table it can be seen that 'Maths Confidence' is made up of six statements while 'Maths Enjoyment' is made up of the remaining four. The high Cronbach's Alpha scores show that both these scales are reliable. Therefore, we can be reasonably confident in saying that the all the statements that load highly on Factor 1 are measuring 'Maths Enjoyment' and all those loading on Factor 2 are measuring 'Maths Confidence'.

## A2.4 The study skills section

This section looked at pupils' attitudes towards their study skills and how competent they felt carrying out basic study skill tasks. The section consisted of 15 statements, devised by the evaluation team. Table A2.4 shows that the statements revealed two underlying factors measuring pupils' attitudes to study skills. This section of the questionnaire was developed specifically for the *Playing for Success* evaluation.

**Table A2.4 Study Skills Factors and Factor Loadings**

| | Factor 1 Working with others | Factor 2 Independent study skills |
|---|---|---|
| **I can set myself targets for my work** | | **0.46** |
| **I can plan my work** | | **0.51** |
| **I can read my first draft and decide how to improve it** | | **0.49** |
| **I can find out information to help me do my work** | | **0.39** |
| **I can work by myself** | | **0.35** |
| **I can follow instructions** | | **0.48** |
| **I can answer questions in class** | | **0.36** |
| **I can work as part of a team** | **0.45** | |
| **I can ask for help when I get stuck** | **0.40** | |
| **I can explain things to other people** | **0.39** | |
| **I can listen to other people** | **0.30** | |
| **I can speak to small groups** | **0.61** | |
| **I can speak to large groups** | **0.55** | |
| **I can ask questions in class** | **0.37** | |
| | | |
| **Percentage of variance explained** | **11** | **11** |
| ***Internal consistency (Alpha)*** | ***0.66*** | ***0.66*** |

The two factors revealed were labelled 'Working with others', which explained 11 per cent of the total variance and 'Independent study skills' which explained a further 11 per cent. One statement did not show an association with either of the two factors: this was 'I can get my work finished on time'. The Cronbach's Alpha scores showed that both of the factor scales are quite reliable.

## A2.5 Self-esteem

The section on self-esteem was based on statements devised by two groups of US and Australian researchers (Heubner *et al.*, 1999; Marsh 1988, 1990). We sought permission from the authors to adapt their instruments for use in this evaluation. Statements were selected from the scales and the wording was amended to reflect English usage in the UK. There were 16 statements used to measure self-esteem, as can be seen in table A2.5.

**Table A2.5 Self-esteem**

| |
|---|
| **When I do something, I do it well** |
| **I am as good at school work as I want to be** |
| **I can usually do my homework** |
| **I wish I did better at school** |
| **I have good ideas** |
| **Other people think I am a good person** |
| **Most other people of my age like me** |
| **I often feel left out** |
| **I am good at making new friends** |
| **I worry about meeting new people** |
| **I wish people liked me more than they do** |
| **I am popular with people of my own age** |
| **A lot of things about me are good** |
| **At times I think I am no good at all** |
| **I hardly ever lose my temper** |
| **In general, I like being the way I am** |
| |
| ***Internal consistency (Alpha) 0.74*** |

We carried out a factor analysis for pupils' responses to the statements measuring self-esteem. A two-factor solution was investigated. However, the two factors that emerged showed all the positive statements loading on one factor and all the negative statements loading on the other. This indicated that it would be better to combine the factors into one reflecting both positive and negative views. The reliability of this

factor was tested using the Cronbach's Alpha. The result of 0.74 indicates that the one-factor solution was adequate and statistically reliable in measuring attitudes to self-esteem.

# References

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# Appendix 3
# The Development of Numeracy and Reading Tests to Evaluate Playing for Success

## A3.1 Background

The DfEE asked NFER to develop new tests of reading and numeracy for use in the 1999/2000 evaluation of *Playing for Success*. Centre Managers involved in the previous year's evaluation had been critical of the tests used, and the new tests were designed to meet some of the objections, because we were unable to identify suitable existing tests.

The new tests were designed to be:

- short, because pupils attend *Playing for Success* for a relatively short period, and Centre Managers did not wish to devote a significant part of this time to testing and assessment;
- appropriate for a relatively wide age range of pupils (Year 6 to Year 9);
- related to National Curriculum requirements for the age-group;
- suitable for pupils who are predominantly at the lower end of the achievement range; and
- in a format which would make the tests suitable for possible adaptation to a computer-based form.

The original remit was for tests with a football theme, but DfEE later decided that a general test would be more appropriate. This decision was taken for two main reasons. First, without a football emphasis, the tests would be more suitable for use in non-football settings (including other sports venues that wished to join the *Playing for Success* initiative). The second reason related to the 'fairness' and transferability of the test results. Items with a football theme could have added saliency for pupils attending *Playing for Success* Centres in football clubs, and therefore may not be a fair test of their achievement on items not using a football theme, or provide a fair comparison between pupils in treatment and control groups.

## A3.2 Test development

The items included in the final version were selected on the basis of item trials carried out in November 1999. These trials involved almost 2000 pupils in Years 6 and 9, selected from a national sample of schools with a similar achievement profile as those sending pupils to *Playing for Success*.

The item trials suggested that the trial versions of the numeracy and reading tests were rather easier than was desirable and did not provide sufficient scope for pupils, particularly the older or more able ones, to demonstrate progress. This did not pose any real problems with the numeracy test, because it was possible to select items with an appropriate range of difficulty from the pool of pre-tested items. With the reading tests, it was necessary to develop a few more difficult items to ensure that the test provided sufficient challenge and room for pupils to demonstrate progress.

Two numeracy tests, designated ❑ and ❍, were developed, so that any pupil being assessed could complete one at the beginning of their course and the other at the end. The final version of each numeracy test comprised 33 items, using a mixture of multiple choice and short-answer format. Items were chosen to assess pupils' abilities to carry out the sort of numerical operations used in everyday life, such as money, weight, area, and distance. A few items focussed on purely arithmetical operations, and were not set in any particular context.

Similarly, two reading tests, again designated ❑ and ❍, were developed. The tests consisted of three passages of text, with nine multiple choice items based on each text. Texts were selected to be those likely to appeal to the target group of pupils, and included one fiction passage. The five non-fiction texts included two on wildlife themes, one description of a hurricane, and two on sporting themes (judo and hockey). The fiction text consisted of a story about a ghost. They were all 'real texts' and copyright permissions were obtained.

Items were designed to assess pupils' reading comprehension at the level of single words, sentences, paragraphs and the text as a whole. The multiple choice format was selected to ensure that marking would be as easy and reliable as possible. More open-

ended response formats would have allowed questions which address deeper levels of understanding, but the multiple choice format was felt to be appropriate for the purpose, given that some of the pupils attending *Playing for Success* have very poor reading skills. We were also aware that any requirement to produce written answers could be an additional source of stress for some of the pupils involved.

## A3.3 Pre-test results

The tests were administered to a total of over 1400 pupils as soon as possible after they started their attendance at *Playing for Success* in January 2000. Each pupil completed either a reading test or a Using Numbers test.[1] At the end of their course, pupils completed the alternate form of the same test. For example, a pupil completing Reading ❑ as a pre-test took Reading ❍ at the end of the course. All tests were returned to the NFER for marking.

Information from the pre-course testing is presented in the tables below. The ***facility*** of an item is the proportion of the sample attempting the test who get the item right, and can range from 0 to 1. The ***discrimination*** of an item is a measure of the extent to which the item discriminates between high and low performers. In other words, it is a measure of whether passing the given item is associated with higher achievement overall, and failing is associated with lower overall achievement. The discrimination of an item can range from -1 to +1, and a value of greater than 0.3 is usually felt to be desirable. The concept of ***reliability*** has a number of aspects, but essentially it is an attempt to quantify the extent to which a test is internally consistent and gives reproducible results. The reliability can range from 0 to 1, with values close to 1 indicating high levels of internal consistency.

[1] In one Centre, the Centre Manager decided that all pupils would be tested in both reading and numeracy.

# A3.4 Using Numbers

**Table A3.4.1: Using Numbers ❑ – item statistics**

| Item number | Facility | Discrimination |
|---|---|---|
| 1 | 0.92 | 0.31 |
| 2 | 0.71 | 0.35 |
| 3 | 0.75 | 0.37 |
| 4 | 0.80 | 0.44 |
| 5 | 0.59 | 0.36 |
| 6 | 0.64 | 0.39 |
| 7 | 0.21 | 0.43 |
| 8 | 0.59 | 0.43 |
| 9 | 0.34 | 0.42 |
| 10 | 0.51 | 0.48 |
| 11 | 0.66 | 0.50 |
| 12 | 0.44 | 0.44 |
| 13 | 0.66 | 0.41 |
| 14 | 0.34 | 0.46 |
| 15 | 0.51 | 0.40 |
| 16 | 0.75 | 0.45 |
| 17 | 0.46 | 0.49 |
| 18 | 0.62 | 0.34 |
| 19 | 0.29 | 0.51 |
| 20 | 0.32 | 0.35 |
| 21 | 0.33 | 0.52 |
| 22 | 0.35 | 0.38 |
| 23 | 0.22 | 0.50 |
| 24 | 0.23 | 0.48 |
| 25 | 0.26 | 0.51 |
| 26 | 0.64 | 0.48 |
| 27 | 0.49 | 0.45 |
| 28 | 0.35 | 0.47 |
| 29 | 0.21 | 0.55 |
| 30 | 0.16 | 0.54 |
| 31 | 0.44 | 0.39 |
| 32 | 0.40 | 0.24 |
| 33 | 0.16 | 0.54 |
| | | |
| Reliability | 0.89 | |
| N of pupils | 256 | |
| Mean (sd) | 15.3 (7.3) | |

**Table A3.4.2: Using Numbers ❍ – item statistics**

| Item number | Facility | Discrimination |
|---|---|---|
| 1 | 0.90 | 0.31 |
| 2 | 0.67 | 0.44 |
| 3 | 0.69 | 0.32 |
| 4 | 0.74 | 0.36 |
| 5 | 0.70 | 0.39 |
| 6 | 0.45 | 0.35 |
| 7 | 0.56 | 0.38 |
| 8 | 0.78 | 0.45 |
| 9 | 0.56 | 0.62 |
| 10 | 0.70 | 0.38 |
| 11 | 0.66 | 0.54 |
| 12 | 0.48 | 0.45 |
| 13 | 0.31 | 0.48 |
| 14 | 0.41 | 0.42 |
| 15 | 0.62 | 0.40 |
| 16 | 0.52 | 0.49 |
| 17 | 0.23 | 0.49 |
| 18 | 0.52 | 0.55 |
| 19 | 0.38 | 0.41 |
| 20 | 0.78 | 0.38 |
| 21 | 0.64 | 0.39 |
| 22 | 0.64 | 0.49 |
| 23 | 0.58 | 0.48 |
| 24 | 0.11 | 0.42 |
| 25 | 0.41 | 0.47 |
| 26 | 0.36 | 0.45 |
| 27 | 0.24 | 0.51 |
| 28 | 0.25 | 0.45 |
| 29 | 0.19 | 0.55 |
| 30 | 0.25 | 0.65 |
| 31 | 0.33 | 0.44 |
| 32 | 0.33 | 0.40 |
| 33 | 0.13 | 0.51 |
| | | |
| Reliability | 0.90 | |
| N of pupils | 446 | |
| Mean (sd) | 16.1 (7.4) | |

The two Using Numbers tests have good reliability (0.89 and 0.90) for relatively short tests. Item discriminations are good. In both tests, there are items at all difficulty levels. In particular, there are some very easy items, allowing almost all pupils to achieve something on the test. The overall mean is just under half the maximum, and

the standard deviation is about a quarter of the maximum score, indicating that the total score range is appropriate.

## A3.5 Reading Comprehension

**Table 3.5.1: Reading ❑ – item statistics**

| Item number | Facility | Discrimination |
|---|---|---|
| 1 | 0.40 | 0.29 |
| 2 | 0.69 | 0.28 |
| 3 | 0.68 | 0.42 |
| 4 | 0.86 | 0.30 |
| 5 | 0.57 | 0.21 |
| 6 | 0.54 | 0.28 |
| 7 | 0.54 | 0.36 |
| 8 | 0.67 | 0.30 |
| 9 | 0.47 | 0.28 |
| 10 | 0.90 | 0.45 |
| 11 | 0.71 | 0.21 |
| 12 | 0.64 | 0.47 |
| 13 | 0.37 | 0.23 |
| 14 | 0.69 | 0.39 |
| 15 | 0.49 | 0.13 |
| 16 | 0.57 | 0.41 |
| 17 | 0.45 | 0.38 |
| 18 | 0.27 | 0.33 |
| 19 | 0.78 | 0.44 |
| 20 | 0.67 | 0.57 |
| 21 | 0.71 | 0.44 |
| 22 | 0.48 | 0.47 |
| 23 | 0.55 | 0.44 |
| 24 | 0.42 | 0.47 |
| 25 | 0.60 | 0.29 |
| 26 | 0.37 | 0.08 |
| 27 | 0.52 | 0.30 |
| | | |
| Reliability | 0.81 | |
| N of pupils | 428 | |
| Mean (sd) | 15.6 (5.3) | |

**Table A3.5.2: Reading ❍ – item statistics**

| Item number | Facility | Discrimination |
|---|---|---|
| 1 | 0.84 | 0.38 |
| 2 | 0.78 | 0.30 |
| 3 | 0.69 | 0.01 |
| 4 | 0.64 | 0.29 |
| 5 | 0.75 | 0.25 |
| 6 | 0.60 | 0.11 |
| 7 | 0.70 | 0.26 |
| 8 | 0.43 | 0.02 |
| 9 | 0.37 | 0.27 |
| 10 | 0.90 | 0.21 |
| 11 | 0.38 | 0.39 |
| 12 | 0.69 | 0.42 |
| 13 | 0.66 | 0.35 |
| 14 | 0.86 | 0.31 |
| 15 | 0.75 | 0.43 |
| 16 | 0.65 | 0.25 |
| 17 | 0.53 | 0.37 |
| 18 | 0.47 | 0.20 |
| 19 | 0.92 | 0.40 |
| 20 | 0.90 | 0.44 |
| 21 | 0.76 | 0.48 |
| 22 | 0.60 | 0.49 |
| 23 | 0.76 | 0.52 |
| 24 | 0.37 | 0.30 |
| 25 | 0.34 | 0.24 |
| 26 | 0.30 | 0.34 |
| 27 | 0.48 | 0.25 |
| | | |
| Reliability | 0.77 | |
| N of pupils | 316 | |
| Mean (sd) | 17.2 (4.6) | |

The reliability coefficients of the two reading tests (0.81 and 0.77) are adequate for assessment of groups of pupils. In each test, there are items at all difficulty levels. All items were presented in a multiple choice format, with four options. By chance, at least a quarter of pupils will give the correct response to any item, so the minimum facility level is, in effect, 0.25. The overall mean is about 2/3 of the maximum possible score: this is slightly higher than desirable but allows scope for most pupils to demonstrate progress. The standard deviations reflect the multiple choice format of the test, and are approximately a quarter of the effective score range.

# Appendix 4
# The Computer Skills Questionnaire

## A4.1 Developing the questionnaire

The NFER devised a computer skills checklist specially for *Playing for Success*. We decided to take this course of action after contacting the British Educational Communications and Technology Agency (BECTa) to find out whether there were any suitable instruments available for use in the evaluation. They were unable to identify anything aimed at assessing pupils, but we were able to find two sources of test materials for adults: the Computer Literacy and Information Technology (CLAIT) materials devised by the RSA Examinations Board; and the European Computer Driving License (available from the British Computer Society). However, because they were designed for adults seeking computer-related qualifications, these were not suitable for use in the evaluation of computer skills for primary and secondary pupils attending *Playing for Success*.

We decided to devise a simple computer skills questionnaire, in the form of a checklist designed to measure National Curriculum targets for IT in Key Stages 2 and 3. The questionnaire focused on the areas that were most commonly addressed in the study support Centres. A draft version was circulated to all Centre Managers and their comments were incorporated into the final version of the questionnaire.

The questionnaire was designed for a relatively wide age-range, so items were arranged in order of difficulty within each section (easiest first).

## A4.2 Content of the questionnaire

The four main sections of the Using Computers questionnaire encompassed a number of statements used to measure pupils' confidence, competence and knowledge of how to use Computers. (Note that the questionnaire included computer-generated graphical diagrams as examples for the pupils: these are not reproduced here.) The statements were designed to find out whether pupils could carry out certain computer tasks. In response to each statement pupils could either answer 'On my own', 'With help' or 'Can't do it yet'. If a pupil indicated that they could complete a task 'On my own' they were given a score of two points. If they could complete a task 'With help' they scored one point and a rating of 'Can't do it yet' yielded no score. The highest possible score a pupil could achieve was 70 points: the higher the score the more competent the pupil was in Using Computers.

The final section of the Using Computers questionnaire was an open-ended section for pupils to state what they could do on the computer that had not been covered in the previous four sections.

Pupils were given the same version of the Using Computers questionnaire at the beginning and the end of the evaluation period to measure the progress made.

# A4.3 Computer basics

The first section of the Using Computers questionnaire was labelled Computer basics and comprised eight statements. These statements can be seen in table A4.3 below.

**Table A4.3 Computer basics**

| | |
|---|---|
| I can double click with the mouse in the right place to OPEN a program (e.g. *Word*). | |
| I can PRINT work in black and white. | |
| I can PRINT work in colour. | |
| I can load and use CD-ROMs. | |
| I can use the ARROWs and the SCROLL BAR at the right of the screen to move up and down in any program. | |
| I can have more than one program open at the same time (e.g. *Word* and *Internet Explorer*) and click on the TASK BAR to see the program I want. | |
| I can SAVE work that I have done onto the computer or a floppy disk. | |
| I can find and OPEN files of work that I saved earlier. | |
| ***Internal consistency (Alpha)*** | ***0.79*** |

The Cronbach's alpha score, used to measure the reliability of the statements that made up the Computer basics section, was 0.79. This suggests that we can be reasonably certain that all the statements in this section are measuring the same thing (i.e. basic computer skills).

# A4.4 Word processing

Section two consisted of 15 statements that were used to gather information on pupils' word processing skills. The statements used for this section can be seen in table A4.4.

**Table A4.4 Word processing**

| | |
|---|---|
| I can type my own sentences. | |
| I can use the mouse or the arrow keys on the keyboard to move to where I want to in my writing. | |
| I can use the mouse to HIGHLIGHT text. | |
| I can change words to look **bold** or *italic*. | |
| I can move words and sentences I have typed by using CUT and PASTE. | |
| I can change the appearance of my work (e.g. size of print/style of print). | |
| I can use the mouse and DELETE or BACKSPACE keys to take out mistakes without deleting all the words I have typed. | |
| I can place my words in the middle of the page by using the CENTRE button. | |
| I can use the SPELL CHECK tool in the program to check and correct my spellings. | |
| I can add pictures to make my work look better. | |
| I can click and drag to change the size of the picture. | |
| I can choose special effects for titles and posters. | |
| I can make my work look like a newspaper, with columns and pictures. | |
| I can set out my writing using bullet points or numbered points. | |
| I can create tables. | |
| ***Internal consistency (Alpha)*** | ***0.88*** |

The Cronbach's alpha score for the word processing section, was 0.88. This suggests that we can be reasonably confident that all the statements in this section are measuring pupils' word processing skills.

# A4.5 Internet

The third section was looking at pupils' Internet skills. This section contained eight statements focusing on areas connected with the Internet. Table A4.5 lists the statements in this section.

**Table A4.5 Internet skills**

| | |
|---|---|
| I can connect to the Internet so that I can use the World Wide Web. | |
| I can go to sites on the World Wide Web by typing a web address in the address box (e.g. www.reebok.com). | |
| I can use the BACK and FORWARD buttons to go to sites I have been to before. | |
| I can go from one part of a website to another by clicking on a link when a hand appears over it. | |
| I can COPY words and pictures from websites and PASTE them into my own work. | |
| I can use a search engine (e.g. Yahoo, Alta Vista) to search for the information I want on the World Wide Web. | |
| If my search finds too many sites I can add extra words to narrow it down to what I really want. | |
| I can bookmark my favourite websites so that I can get back to them quickly (e.g. using ADD TO FAVOURITES or ADD BOOKMARKS). | |
| ***Internal consistency (Alpha)*** | ***0.92*** |

The Cronbach's Alpha for this scale was 0.92. This high correlation coefficient suggests that there is a strong link between the eight statements in this section. Therefore, we can be reasonably confident that the statements in this section are all measuring the same thing.

# A4.6 Email

The final section of the Using Computers questionnaire consisted of five statements concerned with the use of email. The statements used to measure pupils' email skills can be seen in table A4.6.

**Table A4.6 Email**

| | |
|---|---|
| I can SEND emails by typing an address in the TO box and typing a message. | |
| I can OPEN emails sent to me. | |
| I can DELETE email messages that I don't want. | |
| I can ATTACH FILES to the emails I send (e.g. words or pictures). | |
| I can OPEN FILES attached to emails I receive. | |
| ***Internal consistency (Alpha)*** | ***0.92*** |

The Cronbach's alpha for this section was 0.92, suggesting a strong association between all the statements that made up the section. Therefore, we can be reasonably certain that the statements used to measure pupils' email competency are measuring the same thing.

The Cronbach's alpha was also used to test the reliability of all the statements used to measure pupils' computer ability throughout the Using Computers questionnaire. The overall reliability was 0.95, which indicates that the statements were reliably measuring pupils' computer competence.