Local Government Association

review of the evidence relating to the introduction of a standard school year

final report

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National Foundation for Educational Research

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Contents

Executive summary

Introduction

From September 2004 a number of Local Education Authorities (LEAs) in England will be following the Local Government Association's (LGA) recommendations and implementing a 'standard school year'. The standard school year divides the current three term pattern into six terms of a more even length. Although each authority can exercise flexibility in the pattern, it is proposed that the standard school year incorporates an extended October break of up to two weeks, a fixed Spring break that is not dependent on the date of Easter and a slightly shorter summer holiday. This is designed to make the term lengths more similar or 'standard' and the process of learning more continuous.

The main purpose of this review was to consider the existing research evidence on changing the school year in order to provide helpful information for policy makers and practitioners and to inform further empirical research.

Key findings

The main finding of this literature review is that the evidence base is weak. Although there is a great deal of advocacy for the benefits of calendar change, there is relatively little recent research on the subject. There are some concerns about the quality of some of the studies that have been conducted (in relation to independence, design, methodology and reporting). This limits the ability of the review to provide information that may be helpful to policy makers and practitioners.

The impact of calendar change on students: achievement, motivation, attendance and social exclusion

Most of the research-based literature available focused on the impact of alternative calendars on student attainment in the USA and Canada. Taken together, this material suggested that alternative school calendars do not raise student attainment to a significant extent. Unfortunately, despite claims that calendar change impacts on pupils in other respects, the review found very few recent studies that addressed the impact of alternative calendars on student motivation, attendance or social exclusion.

The impact of calendar change on staff, curriculum and teaching

Advocates of calendar change suggest that staff benefit from lower stress levels associated with a more regular pattern of the school year. However, the impact of alternative calendars on staff, curriculum and teaching has not been explicitly researched within recent studies.

The impact of calendar change on parents

Opinion-based material has suggested that the main concerns of parents centre on childcare provision and the difficulties of having children in more than one calendar system. Research data is severely limited: when parents have been included in research studies, they are usually asked to comment on the impact of calendar change on their children, rather than on themselves.

Why schools have opted to change the school calendar and how they have implemented change

Most of the information about how and why schools or areas have adopted alternative calendar patterns comes from accounts written by headteachers/principals who have first-hand experience of implementing calendar change. The main reasons for change identified in these accounts included increasing student capacity by adopting multi-track year-round schooling. Headteachers were also motivated by the hope that, by standardising term and holiday lengths, the process of learning would become more regular and thereby less stressful for students and staff.

Conclusions/recommendations

In light of the overarching finding, that there is little evidence available to answer the research questions, the review concludes that further research is needed. Such

research would need to address the key research questions and also to redress the poor quality of much of the existing evidence.

The following suggestions are made:

- research needs to be independent from advocacy
- research needs to use suitable designs and to address specific research questions
- both qualitative and quantitative research is needed
- research needs to look at issues beyond the impact of calendars on test results, typically used to assess pupil achievement or attainment. This would include consideration of impact on attendance and motivation
- research documenting the process of calendar change would be helpful to decision makers
- research conducted in England and other UK countries would be helpful to explore issues of calendar change in specific educational contexts.

About the study

This literature review conducted comprehensive database searches for material published from 1999 to 2003. Most of the resulting material originated in the USA and Canada. There was also some material from Australia and the UK. All material was summarised using a structured framework. The review covered a wide range of calendar patterns, but excluded those that entailed extending the number of teaching days.

1 Introduction

1.1 Background

This review forms part of the Local Government Association (LGA) Educational Research Programme. It examines the evidence relating to the introduction of a standard school year. LEAs and policy makers are our primary audience, but we hope that other educational practitioners will find the study both interesting and useful, particularly in light of the changes to be adopted in some English LEAs later in 2004.

This review addresses several questions. First, it investigates the evidence of impact of alternative school calendars on key stakeholders and teaching and assesses the quality of the evidence available. Second, it describes how stakeholders have been involved in decision making, what strategies have been employed in implementing calendar change and how resources have been affected by alternative calendar patterns. Finally, it looks at the evidence and quality of evidence overall and identifies the further research that is needed.

1.2 Why change to a 'standard school year'?

There has been considerable interest in the organisation of the school year, both within and outside the UK (see for example, Sharp, 2000 and Price, 2000). A number of arguments have been proposed for the need for change, arising from both a general interest in the school year in England and other countries, and more specific concerns of the LGA. General arguments put forward in favour of changing the school year are:

- that the current pattern of the school year has not been comprehensively reviewed in England since the introduction of compulsory attendance in 1875
- that the long summer holidays are detrimental to children's learning

More specific concerns regarding the pattern of the school year in England include:

- that school terms of uneven length present difficulties for curriculum planning, delivery and assessment
- that changing term dates each year to accommodate Easter is unhelpful and illogical
- that long school terms (especially the autumn term) are stressful and tiring for both students and teachers
- that the increasing diversity of religious faiths in England has produced pressure in some areas for occasional religious holidays in addition to those based on Christian festivals
- the legislative change in 1985, which effectively increased the length of the year (for teacher training purposes) from 190 to 195 days, thereby reducing the flexibility for LEAs and schools seeking standardisation of school terms
- the growth of 'parent-condoned absence from school' (Ofsted, 2002), which may be exacerbated by the lack of regular and fixed school holiday periods.

Internationally, the arguments used to support school calendar change are similar to those in the UK. Concerns over the relevance of 'traditional' school calendars to the present day are common. The term 'traditional' refers to the most common school calendar arrangement in use. This varies between countries and even regions, but typically runs from September to June/July. In England it is divided into three terms, in USA it is usually divided into two semesters. Ballinger (1999, p. 28) describes the traditional calendar as 'yesterday's calendar' and Borman (2001) asserts that such a calendar is more appropriate for an agrarian lifestyle which is no longer relevant to the majority of people.

However, the effect that changes in the pattern of the school year could have on other related issues such as teaching and learning must also be considered. A key issue, particularly in the USA, is the concept of 'summer learning loss'. This is the phenomenon whereby students appear to forget much of their previous learning during the long summer holidays (Ballinger, 1999). The long

holiday periods may also be linked to other negative social consequences, such as vandalism (Ballinger, 1999). According to Gold (2002) these are not new problems; such concerns have been voiced throughout the last century.

1.3 The policy context in England

In maintained schools in England, the school year must contain a minimum of 190 teaching days (England. Statutory Instruments, 1999). The responsibility for determining school term dates lies with LEAs for community and voluntary controlled schools and with the school for voluntary-aided and foundation schools. However, most schools (including many independent day schools) follow the same dates as the LEA-determined school year.

The most common pattern for the school year in England is a long autumn term with shorter spring and summer terms, each broken by a one-week half-term. The autumn term usually lasts around 16 weeks. The length of the spring and summer terms are determined by the timing of Easter, which can fall on any date between March 22 and April 25. This means that the spring term can last between 10 and 14 weeks. The summer holiday lasts around six weeks.

The organisation of term dates is the responsibility of the LEAs. Although most English authorities follow a similar pattern, there are considerable local variations between and even within LEAs. For example, some schools in the Midlands adopt a shorter (four-week) break in July and August, followed by a two-week holiday (known as 'Wakes Weeks') in early September.

In 1999, the LGA decided to set up an Independent Commission on the Organisation of the School Year (Price, 2000). The Commission's remit was to consider the pattern of the school year in relation to LEAs' statutory responsibilities and central government policy imperatives. The Commission examined the current position and considered two alternative arrangements:

- a five-term year, consisting of five eight-week terms, with two-week breaks between terms and a four-week break in the summer
- a six-term year with terms of unequal length, but with a fixed spring and summer term (irrespective of the date of Easter), a two-week break in the middle of the current autumn term and a six-week break in the summer.

The Commission concluded that there was a need to reform the school year. It examined the evidence from six City Technology Colleges (CTCs) that had adopted a six-term year and six that had adopted a five-term year. The Commission saw no evidence of a differential improvement in educational standards between the two groups. The Commission did not believe that a government-imposed solution was likely in England in the foreseeable future and doubted whether most LEAs would try to impose a five-term pattern in the face of opposition from the teacher unions (largely arising from teachers' wishes to retain the long summer holiday).

Although acknowledging the merits of a five-term year, the Commission therefore decided in favour of the six-term model. The six-term solution was recommended because it did not require radical change, but nevertheless was felt to have the effect of standardising the school terms and providing regular breaks. It was hoped that this would lead to three main benefits:

- a reduction in pupil and teacher stress
- a reduction of social exclusion, especially in relation to easing the transition from school to higher education
- a smoother process of learning, assessment and transfer.

The Commission believed that the integration of a successful rhythm of learning, assessment and transfer from one educational stage to another was an important objective, in an era when government-imposed changes in assessment and examination patterns would be a continuing factor.

Following the publication of their report, the Commission entered a period of consultation on their proposals, which resulted in a largely positive response. It announced a plan to accommodate public examinations earlier in the year and to gradually bring the summer holiday earlier (to the beginning of July). In 2003, the LGA set up a Standing Committee on the School Year to take this forward with the English LEA network.

1.4 Recent developments in England

By March 2004, 28 LEAs and a further 17 London boroughs had made 'in-principle' decisions to implement the LGA's proposals for a standard, six-term year (LGA, 2004). Of these 12 had committed to implementing their plans in September 2004. At present, it seems likely that the remaining 33 will introduce a standard school year from September 2005.

March 2004 also saw the standard school year receive some high profile attention in the national press. The Secretary of State for Education and Skills, Charles Clarke, gave his support to the proposed changes in an interview for Radio 4's 'Today Programme' (BBC, 2004a). In a later interview, on the Today Programme in April, he was again asked to comment on the standard school year (BBC, 2004b). The National Association for School Masters/Union of Women Teachers, (NASUWT) had voiced concerns over the potential confusion that could arise from not taking a uniform and national approach to implementation. When this argument was put to him, Charles Clarke expressed his understanding of the issue but explained that a coordinated approach was not easy in a system that was already characterised by great diversity.

Wider press coverage suggests that feelings towards the standard school year remain mixed (BBC, 2004c and Smithers, 2004). It is clear from press coverage over the last five years (the date parameters for this review) that the issues of concern have not changed. Although there is considerable support for the proposed changes some issues are still unresolved. These include, most commonly, concern over the perceived reduction in the long summer holiday; the lack of a coordinated approach across LEAs and the associated issues for parents with children attending schools using different systems (NASUWT, 2003).

1.5 The international and historical context

Although the focus of this review is primarily on the changes proposed for England, literature from America, Canada and Australia has also been considered. Comparisons with the situation in England are not straightforward because of different policy contexts in these countries. However, the purpose of this section is to outline some of the contextual information that may be helpful in assessing the transferability of messages from research conducted in other countries to the situation in England.

In the USA, since the 1920s, the school year has contained approximately 180 days (Byrd, 2001 and Frazier-Gustafson, 1999). The exact number of instructional days is controlled at state and district levels. (School districts in USA and Canada tend to be smaller than LEAs in England but perform a largely similar function.) The traditional school calendar starts in mid August and continues until June. The summer holiday is up to 13 or 14 weeks long. Schools that want to operate a different calendar from this model must seek permission from the district before doing so. Approximately 3.5 per cent of schools in the USA operated on an alternative calendar of some kind in 1999 according to Ballinger (1999, p. 28). Many districts will include schools using different calendar patterns. Although it is uncommon for districts to force schools to adopt alternative calendar patterns, some of the literature reviewed here describes such instances (Shields *et al.*, 1999).

In Canada, the school year varies in length from 190 to 200 days (The Alberta Teachers Association, 2004). This includes training and other non-instructional days. Decisions about the school calendar fall under the jurisdiction of each province. Traditionally, the academic calendar runs from September to the end of June, with July and August as the summer holiday months. The precise dates are decided by the districts and are largely dictated by established patterns.

In Australia responsibility for education is shared between federal, state and territory governments (Department of Education, Science and Training, 2004). The traditional calendar runs from late January to early December and is divided into four terms in mainland Australia and three in Tasmania

These varied policy contexts have implications for the comparability of information. Although there may be important lessons to be learnt from the experiences of other countries, it may not be appropriate to transpose these into the English context. For example, the proposed changes due to take place in September 2004 in England do not involve multi-tracking (see Table 1). Therefore the issues that relate specifically to this type of schedule have been largely omitted from this review.

1.6 Definitions/terms of alternative calendars

There is a wide variety of alternative school calendars. This section presents some common terms and descriptions of alternative calendar patterns, some of which are comparable and some of which are very different from the standard school year proposed in England.

Some general terms are used throughout this report. *Year-round education* (YRE) refers to all calendar modifications that involve rearranging the same amount of instructional time across more of the year. YRE is also known as year-round school or schooling (YRS) but only YRE will be used here. *Extended school year* is used to describe any calendar alteration that increases the amount of instructional days. Often *extended school year* also describes calendars that spread the increased amount of instructional time across more of the year. These are not comparable with the changes proposed for England and have largely been excluded from this review.

The literature identified many other terms that refer to alternative academic calendars. Table 1 provides a summary of the terms used in this report, what kind of calendar arrangement they typically describe and the most common geographical location for each. Another complicating factor is that there is little uniformity between exact interpretations of these calendars. Each country, region or institution may adapt the calendar to fit their own needs, courses or requirements. However, in most cases the changes are relatively small so that the calendar pattern is still recognisable.

Table 1 Alternative calendar descriptions and associated terminology

Name	Description	Where?
Standard school year	This is the phrase used by the LGA, describing a six-term pattern. The first two terms would be no longer than seven weeks, three days. A two week break would be introduced in October, and a Christmas break would comprise not less than two weeks. Terms three, four, five and six would be approximately six weeks in length. The summer holiday would not be less than five weeks long. Schools would be allowed to vary the calendar by five days. The spring holiday would become a fixed break. Should Easter fall outside this, schools could use these five days to extend the break to encompass Easter if they wished. It is proposed that term five would be ideally used as an exam term and term six could be used for enrichment activities or preparation for the following year transfer to another school. The number of instructional days remains unchanged. It is this system that is proposed by the LGA and to be adopted by LEAs in 2004/5.	England
Five-term year	This pattern is most associated with City Technology Colleges (CTCs) in England. Typically the school year begins in late August/early September. There are five terms of approximately eight weeks, each followed by a two week break. The summer holiday is slightly shorter than the traditional six weeks. Again the number of instructional days is unlikely to be affected.	England
Semester	The *Semester* system breaks the academic year into two periods, September to January/February and February to June. In the UK it is most associated with higher education or universities. The system originated in the USA but it has become increasingly common in the UK and worldwide over the last two decades.	USA and worldwide
Compressed calendar system	This is similar to a normal semester, but as the name suggests the instruction time is compressed. Instead of an 18 week semester, the instruction period is reduced to 16 weeks. The lesson times are lengthened so the total instruction time is not reduced but squeezed into a shorter period.	USA

Name	Description	Where?
Trimester	The *trimester* is an academic year consisting of three terms of approximately 15 weeks in duration. The three terms span the whole year (as opposed to the academic year) so students/staff may only be required to attend/teach for two out of the three periods. The advantages are said to be greater flexibility of study patterns, particularly for part-time students.	USA Australia England
45/15, 60/20, 90/30	Some calendar schedules are referred to by a number pattern. The first number indicates the number of days in school. The second number indicates the length of the holiday. So 45/15 indicates that there are 45 days in school (nine weeks) followed by 15 days of holiday (three weeks).	USA Canada
Intersession*	Intersession (or holiday) times provide opportunity for extra teaching periods. These are typically used for both enrichment and remedial work and last for approximately one week. They are usually compulsory for failing students only, but any student can participate in enrichment activities. There is usually a charge for non-compulsory attendance.	USA England Canada
Summer school*	Summer schools have proved a popular way of providing both enrichment and remedial learning opportunities for students. Although still most associated with the USA, they are becoming increasingly popular elsewhere in the world.	USA England Canada
Block Schedules**	The block schedules divide the day into 'blocks' of time. Typically a 'block schedule' will divide the day into four lessons of approximately 90 minutes. This is said to allow more in depth study and prevent disruption to learning.	USA Canada

Associated terminology

Name	Description	Where?
Single track#	Year-round education (YRE) calendars can be single-track or multi-track. Single-track means there would be only one group of students attending the school at a time. All students would be on the same track - as is the common pattern now.	England USA Canada Australia
Multi-track#	Multi-track refers to calendar arrangements that typically seek to increase the capacity of the school. The tracks are staggered across the year, with one on holiday while the others are attending school.	USA Canada
Summer learning loss	This phrase is used to describe the effects of long summer holidays on learning, whereby students appear to forget some of what they have learned the previous year.	USA England Canada

* *Care must be taken when considering material reporting on intersession and summer schools because these initiatives effectively add time to the existing school year.*

** *It is important to note that these schedules are not directly comparable to the standard school year as they are concerned with re-arrangement of time in a day rather than across the year.*

\# *Single-track and multi-track schedules have different implications for schools.*

2 What did this review aim to achieve?

2.1 Project aims

The main purpose of this review was to consider the existing research evidence on changing the school year in order to provide helpful information for policy makers and practitioners and to inform further empirical research.

The project had three main aims:

- to review the research evidence on the process of changing the school year
- to consider the evidence for the impact of changing the school year
- to report on the quality of the evidence available and to identify areas for further research.

2.2 Research methods

A systematic approach was adopted for this literature review. In brief, this process involved conducting searches of key databases, websites and hand searches. We also conducted searches of selected authors known to be active in the field. Of the 250 items identified through these searches, 66 met the criteria for inclusion in the study. Such criteria included relevance to one or more of the key research questions, type of document, (i.e. research, policy or opinion) and date of publication between 1999 and 2003. This five-year period was chosen to avoid overlap with another recent research report written on the standard school year (Sharp, 2000). The reference sections of selected items were also searched and a further 22 items were requested from this source.

The materials were prioritised and summarised according to a standard format, which included:

- purpose of the research
- research design
- sample details and methods
- project description (where appropriate)
- author's conclusions
- reviewer's comments

Of the 86 items identified a total of 72 items were summarised. It was not possible to locate the remaining 16 items within the time frame. Various types of material were reviewed, including research based studies, opinion pieces and policy papers. Full details of the research methods can be found in the appendix.

2.3 What kinds of material did the searches generate?

The searches generated a variety of relevant material.

- Most of the material originated in the USA, England, Australia or Canada.
- The literature covered a wide range of alternative calendar patterns, as defined in Table 1 (see Chapter 1).
- The material addressed several levels of education, although material focusing on primary/elementary education (years 1 to 6 in England) was the most common.
- Predominantly research-based, the material also included opinion pieces, conference papers and policy documents. Some were written by academics active in this field of research and others by headteachers who had first-hand experience of calendar change.
- The literature was predominantly written by proponents of calendar change. This is important because it suggests research design favours alternative calendars and that reporting may be selective.

3 What is the evidence of the impact of calendar change on students?

This section presents the evidence of impact on student achievement, attendance and school exclusion. It also considers the evidence on the relationship between student characteristics and differences in achievement or preferences.

3.1 What is the evidence of the impact on student performance/achievement?

The belief that changing the pattern of the school year will have a positive impact on student achievement and/or negate the effects of summer learning loss is widely cited by proponents of change (Stenvall, 2001 and Frazier-Gustafson, 1999). One of the aims of this review was to investigate the evidence to support such claims.

3.1.1 Common methods and results

The bulk of the research in this field relies on analysis of test data, comparing the progress/outcomes of students who have attended schools with different calendar arrangements.

Where such comparisons have been carried out no statistically significant difference is observable. For example, a particularly large-scale project was carried out by Kneese (2000a). This was a retrospective study of achievement data of students in the USA using end of grade (EOG) test scores and archival records. She compared the performance in English and mathematics for approximately 28,000 students in grades 4 to 8 (equivalent to years 5 to 9 in England), enrolled in schools with either a traditional or an alternative calendar. The two groups from different school types were matched as closely as possible on location within the same district, similar parental education levels and socio-economic status (SES). The analysis revealed no statistically significant differences between the two groups. Studies which reached similar conclusions using similar methods include Dosset and Munoz (2000) and Shields and Oberg (1999). Ferguson (1999) looked at the mathematics scores of 88 elementary students in Canada. Of these 40 students were enrolled in traditional and 44 were enrolled in year-round calendar schools. By comparing scores on the same tests at different times of year, the study found no statistically significant differences in achievement between the two groups.

Some studies claim to have found that results based on the direction of the findings only (before any statistical tests have been applied) showed small, but positive impacts of calendar change on student achievement (Dosset and Munoz, 2000).

Cooper *et al.* (2003) conducted a meta-analysis that considered the results from a number of studies. Their work found some evidence of a positive trend in favour of students following a year-round system, but results were only marginally better than the results for traditional calendar students. Their report goes onto conclude that these *'direction only'* results cannot automatically be attributed to the different calendars as there are so many variables that could have influenced this trend.

3.1.2 Alternative methods of assessing the impact of calendar change on achievement

Some research studies have investigated difference in achievement via alternative means. For example, Reece *et al.* (2000) criticised other research studies for relying on data from norm-referenced tests. These types of tests, they claim, are not designed to capture small differences in pupil performance over short periods of time. In response they developed their own test instrument which they named 'Curriculum Based Measures' (CBM). This was designed to measure small differences that accrue over short periods of time in reading fluency, spelling, written expression and mathematics. Their study compared scores on this new test for students in grades 1, 3 and 5 (equivalent to years 2, 4 and 6 in England) in traditional and alternative calendar schools in Kentucky, USA. The findings revealed little difference in the scores of lower-attaining students, but for higher attaining students there was a trend for students in alternative calendars to perform better.

Reece *et al.* are themselves conservative about the implications of this trend, suggesting that the results are at best tenuous. They acknowledge that they made no attempt to control for special educational needs or other differences between students. They also say that even with such measures in place it would still be difficult to attribute causation to the change in calendar. In addition to this, there are also concerns over the validity of the CBM test itself as its reliability had not been previously established. However, this study does suggest that more studies using an experimental methodology might be necessary in order to fully explore the impact on student achievement and performance of calendar change.

McCreary and Hausman (2001) also opted for a different approach by comparing three types of calendar, rather than two. They used grade point average scores and scores from the Stanford Achievement Test (SAT) to compare students in grades 9 to 12 in the USA (equivalent to years 10 to13 in England). The students were enrolled on one of three systems: a semester, (which would be the normal calendar schedule for this level education); trimester or block schedules. They found that those on the semester system scored highest on the grade point averages and on the SAT in mathematics. This suggests a need to look in greater detail at differences between types of calendars rather than simply comparing 'traditional' with 'non-traditional' calendars.

3.1.3 Summary of evidence of the impact of calendar change on student achievement

- Most of the material reviewed as part of this study suggests that there is little or no impact of calendar change on student achievement. Some studies that report 'direction only' findings claim to demonstrate small differences in favour of calendar change. However, considerable caution is required when ascribing small differences in results to calendar change, as the authors themselves acknowledge.
- None of the studies reviewed suggested that there was any negative impact of calendar change on student performance.
- Much of the existing research uses similar methods (i.e. using existing databases of test results). While there is an advantage in using data already collected, these studies are not able to distinguish between different calendars. Experimental studies have been done but their methods need refining.

3.2 What is the evidence of the impact on students from different groups?

3.2.1 Why is there an interest in the impact of calendar change on students from different groups?

Some proponents of calendar change argue that alternative calendars impact differently on different pupil groups (Davies and Kerry, 2000). Often these differences are linked to seasonal learning patterns, particularly for students from disadvantaged backgrounds and low-attainers. For example, Entwistle *et al.* (2001, p. 2) state that during the long summer holiday 'the achievement scores of children from disadvantaged families either stay the same or slip back a little'. The explanation behind this is that students in this group do not have access to the same learning resources during the summer holiday as their peers from higher socio-economic groups (Alexander *et al.*, 2001). The length of the summer holiday is also thought to be a threat to low-attaining students. Frazier-Gustafson (1999, p. 34) wrote that low achievers were more at risk of summer learning loss than other student groups.

3.2.2 Is there any evidence to support this interest?

Only three of the research studies examined have specifically investigated the impact that changes in the pattern of the school year may have on students with different characteristics (Cox, 2001; Entwistle *et al.*, 2001 and Alexander *et al.*, 2001). These studies have looked at the impact on students from disadvantaged backgrounds, low attaining students, students enrolled on different tracks and those from minority ethnic groups. In all these cases the research quality is questionable.

Other accounts based on opinion rather than research have touched upon gender and age differences, but there has been no research published on these issues in the time period covered by this review.

3.2.3 Socio-economic groups

Alexander *et al.* (2001) looked at the issue of summer learning loss and its impact on children from different socio-economic groups in the USA. They analysed data from the California Achievement Test (CAT) that had

been gathered as part of an earlier study (the Beginning School Study or BSS) conducted in Baltimore between 1982 and 1987. The findings are based on a sample of 368 kindergarten and primary students. Of these an unreported number attended summer schools, the scores for these students were compared with those who did not show the seasonal differences in their learning patterns. Hierarchical linear modelling (HLM) was used to analyse the data across time to show individual learning patterns over the five year period.

They found that during the school year children learn at the same rate which, according to the authors, shows that school actually has an equalising effect on pupils from different backgrounds. However, each summer when the students from lower socio-economic status (SES) groups were out of school the learning either halted or regressed whilst their counterparts from higher SES backgrounds generally continued to make progress. This, the authors say, leads to the gap between the groups widening over time. In their view, this trend provides a strong rationale for rearranging the calendar to remove the long summer break. The authors assert that this will have an equalising effect on learning and help to reduce inequality.

The implication of this study is not evidence-based because although it suggests that summer learning loss is a problem, particularly for lower SES groups, it does not present any evidence that shows alternative calendar patterns will alleviate the problem. It is also not directly transferable to the English context as the summer break in the USA, at up to 13 weeks, is substantially longer than that in England.

3.2.4 Low achievers and students

McMillen (2001) was interested in the impact of calendar change on students in traditional, single-track YRE and multi-track YRE schools. The study looked at EOG scores and other demographic data for approximately 345,000 grade 3 to 8 students, (equivalent to year 4 to 9 in England) for the period of 1997-8. These students were from 1,470 schools, of which only 106 were operating year-round schedules. By comparing the EOG test scores for students enrolled in traditional single and multi-track schools and those in YRE single and multi-track schools the study found some differential effects. The lower-achieving students in YRE were scoring slightly higher than their lower-achieving counterparts in traditional calendar schools. However, the author states clearly that these differences were not statistically significant. In addition to this, the groups were not equivalent to begin with so even these small differences could have been due to school effects rather than to the adoption of YRE.

3.2.5 Differences in student preferences for alternative calendars

The literature is not only concerned with the impact on the achievement of different student groups. Other authors have suggested a link between student characteristics and student preferences for alternative calendars at higher levels of education (Carley, 2002). Fallows and Symon (1999) report on a pilot project conducted in a number of higher education institutions, Luton University in particular. The project evaluated a trimester system across a three year period, 1996-8. The study found a relationship between student characteristics and student preference for the alternative calendar pattern. They suggest that the choice offered by YRE at university level is likely to attract more students.

Cox (2001) conducted the only study published during the time period of concern to this review that investigated a relationship between student preferences for a compressed calendar and their characteristics. By surveying 322 students enrolled in two Californian colleges, the study found that those who preferred the compressed calendar tended to have certain characteristics. These included being male, being aged 16-34, being married and/or working between 20 and 40 hours per week. However, the percentage of students reported as demonstrating a 'preference' for an alternative calendar were little over 50 per cent. This does not constitute evidence of a strong preference. It seems likely that there may be some relationship between student characteristics and preferences for different calendar types, but further, high quality research is needed to explore this more fully.

3.2.6 Summary of the evidence on the influence of calendar change on different groups of students

- Of the evidence currently available from this time period it is not possible to reach any conclusions about the influence of calendar change on different groups. The data is not of sufficient quality, depth or range to allow well-founded conclusions to be drawn.

- There is a need for further empirical research to be conducted in this field.

3.3 What is the evidence of the impact on student motivation?

The review set out to consider evidence concerning calendar change and student motivation. Unfortunately, however, the review was unable to find any research that directly investigated the effects of the pattern of the school year on student motivation. Nevertheless, some of the literature reporting on the impact of calendar change on student achievement mentions non-academic outcomes, such as motivation.

3.3.1 Findings related to student motivation

The headteacher of a USA high school (Brower, 2000) wrote an article describing the introduction of a trimester schedule in his school. He claimed that after this had been introduced there was a rise in the number of pupils graduating; a trend that he attributed to the greater motivation of students.

Davies and Kerry (1999) investigated the five-term year in four City Technology Colleges (CTCs). This was connected to the Time and Resource Distribution project (TARDIS). The remit of the TARDIS project was to establish whether alternative calendars were justified in the UK context. The authors acted as 'critical friends' to three schools in the London area that were considering the introduction of an alternative calendar and conducted research based on the experiences of CTCs that had already adopted a 5-term pattern. In this account of the research the authors report that students in CTCs operating a five-term year demonstrated improved concentration, better management of work and greater relaxation.

3.3.2 Alternative calendars, greater choice and motivation

Three studies suggested an indirect link between alternative calendars and motivation via an increase in option choice. For example, the study by McCreary and Hausman (2001) which compared three different versions of alternative calendars in USA, found that students on a trimester schedule opted for more courses than students on other calendar schedules. They attribute this finding to a greater availability of option choices made possible by calendar reform. These suggestions were echoed by Baldwin and McInniss (2002) who state that highly motivated, part-time students in higher education showed a preference for schedules that allowed year-round learning or accelerated course options. Such accounts suggest that a possible relationship between alternative calendar patterns and student motivation, but do not constitute evidence.

3.3.3 Summary of evidence on the influence of calendar change of student motivation

- This review has not found sufficient material of relevance to the impact on student motivation to constitute a reliable evidence base.
- Further research is needed to investigate the relationship between calendar change and student motivation.

3.4 What is the evidence of the impact on student attendance and social exclusion?

It is supposed that changing the pattern of the school year will increase attendance and decrease social exclusion, particularly at the time of transfer from school to higher education (Kerry, 1999 and Price, 2000). The rationale behind such claims is based on a number of assumptions. First, at school level (primary, secondary) long terms and infrequent breaks may have a detrimental affect on student health, causing more frequent illness-related absence. It is thought that the new, more standardised pattern would provide more frequent and substantial breaks throughout the year reducing exhaustion and illness. Second, in higher education students have more commitments to family and work (Carley, 2002) and these can affect their ability to attend.

3.4.1 Attendance

Only three of the studies included in this review made reference to attendance issues. Dosset and Munoz (2000) compared attendance data for traditional and

alternative calendar pupils. Their 'direction only' analysis indicated that attendance was higher in the YRE schools, but when statistical tests were applied, no significant differences were observable. Shields and Oberg (1999, 2000a) also investigated non-academic areas where alternative calendars may impact on grade 5 students, (equivalent to year 6 in England). These included homework and attendance. They report that their research did not uncover any statistically significant differences in attendance data for traditional and YRE schools. McCreary and Hausman (2001) compared attendance data for students enrolled on semester, trimester and block schedules. This formed a smaller part of their study investigating differences in achievement for students in different calendars. They found that students enrolled on a trimester schedule were absent more frequently than those on block and semester schedules. They suggest that further research is needed to corroborate this finding as record keeping differed in each school and could explain the variance. None of these studies provided details of the data they were using.

3.4.2 Social exclusion

According to Price (2000, p. 11) a suggested benefit of the standard school year was to '...reduce social exclusion, especially in the transition from school to higher education'. None of the research material included in this review discussed the impact of changes in the pattern of the school year on social exclusion.

In response to the lack of data available on attendance and social exclusion, the research team contacted representatives from the DfES and Ofsted, seeking information on patterns in pupil attendance and exclusion that may be related to the pattern of the school year. The data currently collected does not reflect the seasonality of either attendance or social exclusion.

3.4.3 Summary of evidence on the impact of calendar change on student attendance and motivation

- Only three studies researched attendance. These suggest that there is no impact but the quality of such evidence is questionable.
- There is no evidence currently available on the impact of calendar patterns on social exclusion.

3.5 Perceptions of student responses to alternative calendars

Rather than examining the impact of alternative calendar patterns on students through test scores and attendance data, some studies have asked the pupils, parents and teachers directly how they felt about the changes and what they perceived the impacts are on students. Of the four research studies that had asked pupils directly what they felt about alternative calendar patterns, one asked before the change was implemented (Shields and Oberg, 2000a) and three asked students after the change had been implemented (Shields and Oberg, 2000b; Davies and Kerry, 1999, 2000).

3.5.1 Student perceptions

Davies and Kerry (1999) gave a questionnaire to 269 year 8 and 10 students from four CTCs in England. They report that students were positive about the experience and claimed the benefits included better recall of information, improved concentration, better management of work and the more frequent holidays meant they were more relaxed.

3.5.2 Parent perceptions

The Davies and Kerry study also asked parents what benefits of the five-term year they perceived for their children (Davies and Kerry, 1999). They reported it helped their children by allowing more time for homework, reducing 'dead periods' (like the long summer holiday) and improved the overall academic performance of their children. Shields and Oberg (2000a) also found that parents were positive about the impact they perceived on their children. The main reasons they gave were that their children were less bored during the summer and were generally less tired and stressed throughout the year.

3.5.3 Teacher perceptions

In a study conducted by Shields and Oberg (1999) that asked teachers about the impact of YRE on their students, they found that teachers commented that they found their pupils more receptive and ready to learn. In a later study conducted by the same authors, this time investigating the role and opinions of stakeholders, they found that teachers reported increased motivation, concentration and attendance of their pupils (Shields and Oberg, 2000b).

3.6 Overview and quality of the evidence of impact on students

- Overall, this review suggests there is little evidence to suggest any impact on student achievement or attendance. More experimental methods are needed to investigate impact on achievement and performance. Attendance research needs to focus on seasonal differences.
- There is little in the way of information about the impact on motivation or school exclusion. More information is needed in order to address questions in these areas.
- The evidence concerning students with different characteristics is of poor quality.
- Most of the research evidence is based on USA research and therefore their results may not be directly applicable in England. More UK based studies are needed.

4 What is the evidence of the impact of calendar change on staff, curriculum and teaching?

This section of the report looks at the evidence relating to the impact of changing the pattern of the school year on school staff and teaching.

4.1 What is the evidence of the impact on staff stress and attendance?

It has been argued that the more regular breaks offered by year-round calendars will reduce teachers' stress and time off work (Price, 2000; Haser and Nasser, 2003). However, others have expressed concern that subjecting schools to yet another change will actually have the unintended effect of increasing stress, workloads and related absence (NUT, 2001). These polarised arguments are complicated by confusion between single and multi-track schedules. These two systems, although variants of calendar change, are likely to differ in their impact on staff. The latter can require one school building to house two or more tracks of students. As McGlynn (2002) points out, multi-track systems are more complicated, and more likely to have a negative impact on staff. For example, administrative staff may experience increases in workload, greater difficulty in taking holidays and timetabling difficulties as demands on school space and resources increase (Shields and Oberg, 2000c, p. 15).

Changes to be implemented by the first tranche of LEAs in England in September 2004, do not involve multi-tracking. Studies that focus on comparable single-track accounts suggest there may be a positive impact on stress. Shields and Oberg (1999) found that teachers were largely supportive of year-round calendars and reported that one of the benefits was 'less stress'.

Shields and Oebrg (2000d) in a non-research based article, claim that teacher attendance improves and school spending on supply teachers reduces as a result of year-round calendars. Few of the research-based reports included in the review make any reference to impact on teacher attendance. However, one study, reporting staff and student experiences of a pilot project conducted at Luton University found negative connotations of an alternative calendar. The university implemented an extended year programme (similar to a trimester system). Staff said that the change had resulted in greater workloads of administrative and support service staff (such as librarians) (Fallows and Symon, 1999).

4.1.1 Summary

- There is little available evidence of the impact of calendar change on staff stress and attendance.
- Most of the views on the impact calendar change may have on staff stress and attendance are positive, and only one study reports negative outcomes.
- It is assumed that single-track designs will be less demanding on school staff than multi-track schedules.

4.2 What is the evidence of the impact on staff motivation?

Some of the literature implies that the adoption of a standard school year would have a positive impact on working conditions and environments for school staff (Price, 2000 and Kneese, 2000b). The literature uncovered in this review rarely separates motivation from other related issues, such as changes in working practices. It is also anecdotal in nature.

In the few instances where staff motivation is commented on as an issue in its own right, the comments are positive. For example, Shields and Oberg (2000d) found that teachers who had experienced a change to a year-round calendar reported higher motivation afterwards. This response was based on wider changes such as less 'burn-out', more time with their own families and a more modular approach to planning and teaching. Kneese (2000b) also states in a non-research based article that because of the more frequent breaks, teachers showed improved morale and motivation.

4.2.1 Summary

- The impact of calendar change on staff motivation features prominently in opinion-based literature as an argument for adopting calendar change.
- Some anecdotal evidence suggests a positive relationship, but the quality of this is questionable.

4.3 What is the evidence of the impact on curriculum and teaching?

The proponents of change argue that it is not just the teachers and students who benefit from changes in the pattern of the year but also the curriculum and teaching in schools (Kneese, 2000b). Davies and Kerry (1999) suggest that changing the pattern of the school year can result in 'improved philosophies of education' where it is implemented successfully.

This study, however, has not uncovered any research-based evidence to support such claims. Where associations are made they are based on inferences and conclusions from research studies rather than research evidence. One such example comes from Shields and Oberg (1999) who claim that some of their research has shown that calendar changes can be associated with improved pedagogy and social environments.

Where these positive results are reported they are attributed mainly to greater modularisation of the curriculum, this is said to result from the more regular term lengths (Shields and Oberg, 2000a). This, it is argued, makes for easier time management, a different (and easier) approach to planning and clearer defined deadlines. Working relationships are also said to improve through, for example, sharing rooms and materials and team teaching (Shields and Oberg, 2000c). However, these benefits are more likely to be evident in multi-track programmes where teachers adopt more flexible working practices.

In Higher Education there may also be positive implications (Fallows and Symon, 1999). It is argued that year-round calendars give students (especially those studying part-time) greater flexibility and choice to study either more continuously or to progress through a course faster than normal. For staff however, it can mean the lines between their teaching and research responsibilities are blurred and their workloads increase (Fallows and Symon, 1999, p. 226).

4.3.1 Summary

- The impact on curriculum and teaching has not been studied explicitly in the literature reviewed in this study.
- It is argued that year-round calendars facilitate curriculum modularisation and that this in turn brings advantages, such as easier planning, time management and clearer defined deadlines.
- Further research is needed to explore in more depth the effect of calendar change on curriculum and pedagogy.

4.4 Views of the impact on staff

The evidence of the impact of alternative calendar patterns on staff was limited. However, some material explored the views people held about the impacts calendar change can have on staff.

School staff say one of the main benefits of year-round calendars is that they provide more regular holidays throughout the year, which allows teachers more time to spend with their families (Shields and Oberg, 2000a). Others suggest that year-round calendars may result in greater job satisfaction for school staff (Stenvall, 2001).

However, not all the comments were positive. Because school calendar change has not been imposed nationally, school term times can vary a great deal. Those who work in one system but have children in another may experience great difficulty. Some authors argue therefore that teachers and school staff do not object to calendar change on educational grounds but on social ones (Davies and Kerry, 1999).

In their study, Davies and Kerry (1999) used a variety of research methods including open-ended questionnaires to investigate teachers' opinions about the five-term year in two schools that had already implemented this calendar and two that were considering it. Those who had experienced the new calendar were generally positive about the experience. In another report written about the same research, they elaborate on this, explaining that teachers say they experienced better holidays and were able to plan and manage their time

better (Davies and Kerry, 2000). There were however, others who had not yet experienced a five-term year who perceived longer working hours hidden in the rhetoric (Davies and Kerry, 2000).

4.5 Overview and quality of the evidence of the impact on staff, curriculum and teaching

- The impact of calendar change on staff, curriculum and teaching has not been explicitly researched. What evidence there is has been presented by researchers who have been examining other factors such as impact on student achievement.
- Most literature relates to teachers and to a lesser extent headteachers and other school administrators.
- Although it would appear that single-track programmes have less impact on staff, there is insufficient research evidence to support this.
- Stress and attendance are not well researched or documented. Most accounts are speculative and complicated by the lack of differentiation between single and multi-track models.
- The views of impact of calendar change on staff are mixed. They range from those who believe there are problems for teachers who are also parents and work in different systems from those their children attend, to others who believe that staff can only benefit from alternative calendars.

5 What is the evidence of the impact of calendar change on parents?

5.1 Evidence of the impact of calendar change on parents

There is very little written about the impact of calendar change on parents. The non-research-based literature suggests the impacts can be both positive and negative (Wallace, 1999). The positive impacts associated with YRE are the greater options for taking holidays rather than just during the long summer break (Stenvall, 2001). The negative consequences are the difficulties with childcare arrangements, particularly for working parents and those whose children attend schools on different calendars (Wallace, 1999).

The published literature in this area within the time period of this review includes six research-based reports (Price, 2000; Davies and Kerry 1999, 2000; Shields and Oberg, 2000a, 2000b, 2000c). In these studies the impact on parents was not of central concern but a secondary research question. The report by Davies and Kerry (1999) surveyed parents in four English schools about the impacts they felt a five-term year would have on their children. In two schools the response rates were high and parents were positive about the impact, (see section 4.4).

Shields and Oberg (2000a, 2000c) investigated the impact of year-round education on Canadian pupils, teachers and parents. They found that parents thought the benefits of an alternative calendar system outweighed the negative aspects. The positive outcomes were changes they saw in their children such as reduced boredom and stress. The negative outcomes related to them as parents. These included disruption to family routines and problems arranging holidays and finding childcare for parents who had children in more than one system.

Shields and Oberg (2000b) also conducted a study to investigate the calendar reform process in a Canadian district from the perspective of key stakeholders. They found that parents involved in the decision-making process came with different views dependent on previous experience they had of YRE. Those parents with experience were more likely to be in favour of the changes.

5.2 Overview and quality of the evidence of impact of calendar change on parents

- The impact of year-round patterns of education on parents is not well documented and insufficient to permit conclusions.
- Although parents feature in research-based studies, they are often not the primary concern of the study.
- Research-based studies have tended to focus on asking parents to comment on the impact they perceive on their children, rather than the influence of calendar change on themselves.

6 Why have schools opted for change and how have they implemented it?

This section aims to explain why schools, colleges or regions have opted to implement calendar changes and how they have approached this. In addition, it considers who has been involved in making decisions, how resources have been affected and what LEAs in the UK have done.

The types of literature relevant to these issues tend not to be research-based. This section therefore draws on first-hand descriptive accounts, from various sources, of the process of implementing a new calendar (such as those from headteachers). Because of the nature of the material, the main arguments are presented and illustrated through examples of actual practice.

6.1 Why have schools/colleges opted for alternative calendars?

There are many different reasons why schools and colleges have opted to change the pattern of the school year. Important factors are the locations and individual circumstances of each school or district.

Some areas of the USA and Canada face a rapidly growing demand for school places. Given that the heavy demand may well be temporary (for example, due to fluctuations in population growth) the situation often requires a more creative use of existing resources rather than the building of new schools (Shields *et al.*, 1999). In these cases it is common for schools to turn to multi-track systems combined with year-round education, which allow schools to increase enrolments yet still use their existing buildings. Shields *et al.* describe a school that was forced to adopt a multi-track year-round calendar to tackle overcrowding. The district had planned for the changes to be permanent, but in response to community pressure the school returned to a traditional pattern once the demand for places had eased.

There are other issues that may lead a school or region to implement an alternative calendar. For example, this could be in response to teacher dissatisfaction with their school's use of time (Lewis and McDonald, 2001). In the case described by these authors, teachers in a school in Virginia, USA felt they had to squeeze the curriculum into the calendar year. They therefore decided to change to a year-round schedule that allowed greater modularisation of the curriculum to address this issue.

In the UK, the main reasons for the proposed changes to the school calendar are to:

> *reduce pupil and teacher stress, reduce social exclusion, especially in the transition from school to higher education and [create] a smoother process of learning, assessment and transfer.*
>
> (Price, 2000, p. 11)

6.2 How have schools and school districts (in the USA and Canada) put their plans into action?

The literature provides accounts of how school districts and schools have approached the process of change. This section presents the main approaches and illustrates these with more specific examples where possible.

6.2.1 According to the literature, how have school districts put their plans into action?

The strategies employed by districts in changing the pattern of the school year include three phases: involving stakeholders in decision making; preparation for change and implementing change.

Involving stakeholders in decision making

All accounts of districts' planning to implement calendar change stated that there was a process of consultation with all stakeholders. The purpose was not always simply to communicate the changes but to involve stakeholders in decision making.

Some areas chose to survey stakeholders or introduce voting systems to include all stakeholders in decision making (Shields and Oberg, 2000a). Some areas created 'think tanks' that included representatives from all stakeholder groups (Lewis and McDonald, 2001). Some areas held meetings, chaired by a neutral person. Ballinger (1999) suggests these are more effective when kept small. Some areas created community task forces which continued to link communities and districts throughout the process of change and took responsibility for gathering baseline data for monitoring purposes (Lewis and McDonald, 2001).

Preparation for change
Shields and Oberg (2000a) claim that the 'right people' should be in charge of implementation. They also say that the goals must be clarified, particularly financial goals. George (2000) talks about three main areas where headteachers can influence change: setting school goals and keeping flexibility at the heart of designing calendars to suit schools; facing the fact that teachers and parents will object on the grounds of tradition; arranging staff development training to help teachers to better understand how the use of time can impact positively on teaching and learning.

Implementing change and making it 'normal'
The next challenge is implementing the change and ensuring it becomes incorporated into school life. In this phase, districts need to be clear about goals (George, 2000) and consider the possibility of implementing change slowly, for example, using pilot projects in year groups or grades before implementing the changes uniformly across the entire school or college (Fallows and Symon, 1999). They should also conduct ongoing monitoring and evaluation, establish baseline data at the start of the process (Shields and Oberg, 2000a) and finally, ensure that leadership remains accountable (Shields *et al.*, 1999).

6.2.2 How are English LEAs approaching changing the pattern of the school year?

As mentioned earlier, 12 English LEAs are implementing the standard school year in September 2004. All of these LEAs have made public their approach via their websites, though the amount of information given varies.

Under the aegis of the LGA, LEAs have participated in a process of consultation in their areas. The aims of these consultations have been:

- to raise awareness of the standard school year
- to explain the benefits expected from the changes
- to explain how the changes are likely to affect people
- to explain to stakeholders what happens after the consultation
- to seek views on these changes

It is common for these consultations to involve many stakeholder groups, including: headteachers, teachers, school staff (in both maintained and independent schools), college staff, pupils, parents, governors (including parent governors), early years educators, childcare professionals, representatives from lifelong learning partnerships, other LEAs and LEA staff, local dioceses, professional associations (including Trade Unions), community representatives and local business people. One particular LEA (Bracknell Forest Borough Council) chose to use three distinct questionnaires to gather feedback from these groups, one aimed at those involved in education, another for education department staff and finally, one for other stakeholders, such as parents, community members and business people.

Furthermore, some LEAs have been making information on the standard school year available to stakeholders via their websites, schools and local libraries (Oxford County Council and Birmingham County Council, for example).

6.2.3 According to the literature, how have schools put their plans into action?

The strategies employed by schools changing the pattern of the school year fall broadly into the same three phases: involving stakeholders in decision making, preparation for change and implementing change. The approaches adopted by schools are not always different from those adopted by districts or areas.

Involving stakeholders in decision making
Some schools also chose to survey stakeholders, hold meetings and use voting systems to include, in particular, school staff and parents in decision making (Lewis and McDonald, 2001). Some schools assessed their individual needs or challenges in collaboration

with stakeholders, diagnosing the problems the calendar needed to address and customising calendars to suit individual needs. For example, Shields and Oberg (2000b) describe two elementary schools in Canada that customised YRE to suit their own needs. One was a small, rural school that opted for a standard single-track year-round program. The other was a larger, urban school that chose to create two tracks, one traditional and one year-round that would run simultaneously. The Funding Agency for Schools (1999) describes how two London schools conducted feasibility studies themselves to see if implementing five-term years would suit their individual needs. Both schools opted for slight modifications of the usual five-term pattern. The first chose a four-track version and the second chose a two-track system. Rasmussen (2000) describes something similar. An elementary school in USA chose to adopt a year-round calendar that allowed them to teach the compulsory curriculum only four days a week. This meant that one day was set aside for enrichment and remedial teaching.

Preparation for change
After the planning stages, some schools have embarked on a process of preparation. For example, Radcliffe *et al.* (2002) surveyed 61 principals and 193 teachers from 140 rural schools in three USA states. They asked about the strategies schools had adopted to implement calendar change. Half had undertaken professional development training and approximately two thirds had visited another school. The respondents felt that this had enabled staff to see advantages and reasons for changes.

Implementing change and making it 'normal'
The role of schools at the implementation stage is closely associated with leadership (George, 2000). In the same way that districts must remain accountable, be clear about goals and ensure staff have received and continue to receive the training they need, the headteacher must also ensure these criteria are met (George, 2000).

6.3 Who has been involved in decision making?

According to the literature, the key roles in decision making lie within the remit of the headteacher and the LEA or district staff responsible for change in any given area. Stenvall (2001, p. 21) states that the role of the headteacher is very important, as initial resistance can be expected from all levels. She asserts that strong leadership is needed to initiate change. This does not mean that leaders should make all the decisions, but that they should create an environment where all stakeholders can participate in making a collective decision.

The study by Shields *et al.* (1999) discusses the importance of staff at district level. They examined the role of district leaders in calendar reform in four districts of Florida. The overarching message from this study, according to authors, was that district leaders played a 'pivotal role in successful change initiatives' (p. 20).

The literature also presents a strong case for including all other stakeholders in the process of decision making, too. Lewis and McDonald (2001, p. 24) give this advice: 'include everyone in the change process - especially those who don't agree'. Predominantly, these stakeholders are schools and their staff, parents and the wider community. They may also include other interest groups such as religious denominations, local businesses and tourist boards.

6.4 Have calendar changes affected resources?

According to the accounts presented in the literature reviewed for this study, the main impact on resources is found when schools adopt multi-track schedules. Multi-tracking requires the school premises to be used year-round, with the school occupied for the entire year. This means that multi-track schools require more staff, changes in communication structures and re-allocation or redevelopment of the available space (Kneese, 2000b).

Single-track schedules, such as those proposed in England, do not make extensive demands on resources (Kneese, 2000b). There are still holiday periods for building and maintenance work to be carried out. With the summer holiday only being slightly shorter than in the traditional calendar this is still likely to be the most popular time for such work to take place. Post implementation the changes should therefore have very little impact on schools and LEAs resources in England.

6.5 Overview and quality of the evidence relating to decision making, strategies and resources

- Much of the evidence on the decision-making process comes from personal accounts of individuals who have been involved in implementing calendar change.
- There are a variety of reasons why schools, colleges or regions may opt to change the pattern of the school year. These include concerns about the pattern and seasonality of learning and holidays and high demand for school places.
- Many strategies have been used by districts and schools to include stakeholders in decision making.
- LEAs in England have adopted a number of the practices detailed here, for example, embarking on consultations, surveying local community members and seeking to involve all stakeholders.
- Headteachers and local leaders play an integral role in change. Their ongoing support and leadership is essential in making the changes become 'the norm'.
- Professional training and visits to other schools are popular ways for teachers and school staff to prepare once the decision to change has been made.
- There is no evidence that specifically addresses the impact of alternative calendars on resources. The opinion-based literature suggests resources are most affected by changes involving multi-tracking.

7 Conclusions and recommendations

As stated earlier in the report, this review covered the time period 1999 to 2003 in order to build on the findings of an earlier review (Sharp, 2000). Although this is a relatively short (and recent) time span it is important to state that the findings of this review do not differ from those presented in the earlier report. Both reports faced similar challenges in that most of the literature is from USA or Canada which limits its comparability because of the different education policy contexts.

The aim of this section is to highlight the key messages that this review has found. The review set out to consider the evidence for the impact of changing the school year, to review the research evidence on the process of changing the school year and to report on the quality of the evidence available and to identify areas for further research.

7.1 Overview: what are the key messages?

In answer to the first research question, 'What is the evidence for the impact of changing the school year?' two key messages emerge. The first is that the review found very little hard evidence. The second is that where evidence has been available its quality has been less than ideal or not statistically significant.

7.1.1 Impact of calendar change on students

- The impact on students is the most widely covered of the research questions of interest to this review.
- The evidence presented here suggests there is little or no impact of calendar change on student test scores and general performance. However, the quality of the evidence overall is poor because it employs methods that are not always rigorous and does not distinguish clearly between different types of calendars.
- The material relating to the impact of calendar change on student motivation, attendance and social exclusion was insufficient to constitute an evidence base.

7.1.2 Impact of calendar change on staff, curriculum and teaching

- Many of the areas of interest to this review concerning the impact on staff stress, attendance and motivation have not been explicitly researched. What literature there is, tends to be opinion rather than research-based.
- It is argued that year-round calendars result in greater modularisation of the curriculum and ease planning and time management for staff, but this has not been explicitly researched in any of the studies that form part of this review.

7.1.3 Impact of calendar change on parents

- There is little evidence about the impact of calendar change on parents.
- Where research has investigated the impact of calendar change on parents, this has not been a primary concern of the study.

7.1.4 Decision making, strategies and resources associated with calendar change

- Most of the documentation on decision making, strategic and resource issues in relation to changing the pattern of the school year comes from anecdotal accounts rather than research-based studies.
- Many of the strategies described in the literature from USA and Canada are reflected in what English LEAs have also undertaken.

7.2 Overview of quality: how far can we rely on the evidence?

The quality of the evidence presented here is weak for a number of reasons. These include the following.

- Overall, the literature identified for this review does not distinguish clearly between different types of

calendar models. This is evident where the effects/impacts of multi- and singe-track schedules are not disaggregated in the research. For example, studies like that carried out by Kneese (2000a), which used secondary analysis of test data for large numbers of students, do not or cannot distinguish between different types of YRE.

- The design and methods employed by research studies are not always suitable to address the questions. For example, studies may ask teachers and parents what the impacts of calendar change are for pupils, rather than ask pupils directly.
- Most of the research-based work has been conducted in USA and Canada. This limits the potential for direct comparison with the English context.
- A large amount of literature written on calendar change has been written by advocates of alternative calendars. This introduces the problem of bias into the research evidence, (see section 2.3).

7.3 What kind of research is needed for the future?

The final aim of the review was to highlight the kind of research that is needed for the future. In light of the above findings more relevant and more rigorous is needed.

- Research needs to distance itself from advocacy and assumptions.
- Research needs to use suitable designs to address specific research questions.
- Both qualitative and quantitative research are needed. In the latter case, it would be desirable to encourage the use of control or comparison groups in order to answer the question: what difference does calendar change make to student outcomes?
- Further research is needed to look at issues beyond the impact of calendar changes on pupil test scores. Areas for study might include the impact of calendars on:
  - motivation, attendance and social exclusion of pupils
  - motivation, attendance and stress of teachers and staff
  - curriculum and teaching
  - parents.
- Research is also needed to document the process of change, in order to inform decision making.
- More research conducted in the UK is needed to address the lack of information and data in the UK context.

Appendix: Project aims and methodology

Project aims

The main purpose of this review was to consider the existing research evidence on changing the school year in order to provide helpful information for policy-makers and practitioners and to inform further empirical research.

This review aimed to:

- review the research evidence on the process of changing the school year
- consider the evidence for the impact of changing the school year
- report on the quality of the evidence available and to identify areas for further research.

Consideration of the process of changing the school year included the factors important to policy-makers; involvement of key stake holders in decision making; strategies and approaches adopted (including the pattern of school terms). It looked at the resources required and considered unforeseen consequences of changing the school year. This part of the review also focused on responses to the change process from different stakeholder groups and considered the nature of people's experiences.

The review sought evidence of the impact of changing the school year on different stakeholder groups (e.g. staff, pupils, parents, policy makers). It considered the impact on curriculum planning and delivery, including assessment. It sought evidence of different kinds of impact on staff (e.g. in relation to motivation and stress) and pupils (e.g. on pupil performance, stress, motivation, attendance and exclusion) and also considered the impact on pupils with different individual or family characteristics (e.g. low attainers; young people from deprived backgrounds). It also sought evidence of impact on different types of learning and on learning in different subject areas.

Research methodology

Parameters

The review began by defining parameters. These established criteria for the selection of material. It was decided to include published studies, conference reports, policy documents, committee reports, unpublished papers and opinion pieces, for example news articles and non-research-based accounts. These items could be concerned with any level of education from primary up to further education. It was also decided that literature items written between the start of 1999 and end of 2003 would be included. Earlier literature would have duplicated information already available in a previous report (Sharp, 2000). Studies of most interest were those with a UK focus but because a large amount of information originates elsewhere, particularly the United States, it was decided to include other English speaking countries. The different policy contexts of these counties would be taken into account. Student theses or dissertations were excluded from the study.

Searches

The main method used to identify relevant material was to conduct searches of electronic and online databases. Keywords were used systematically, for example, 'year round education', 'school year' and 'restructuring the school year'. The following data bases were searched: ERIC, CERUK, CBCA, ASSIA, PsychINFO, AEI, BEI, CHILDDATA, the NFER library databases and key websites. In addition to this the team also contacted the DfES and Ofsted to enquire specifically about data relating to attendance and school exclusion. In total these initial searches yielded in excess of 250 pieces of material that fell within the date parameters of the review. Using the review parameters as a guideline 66 of these items were requested (26 per cent). As the books and references arrived secondary reference searching was carried out and a further 22 items were identified and requested. In total 72 items were summarised, it was not possible to locate and/or obtain the remaining 16 items within the time frame.

The progress of prioritising, requesting and reviewing literature was recorded in a 'tracking document'. Materials that were requested were logged alphabetically by author. The title, date, source of reference and priority, were also noted.

Analysis of the research literature

All retrieved materials were scanned and prioritised according to their applicability to the research questions. High priority was assigned to material that appeared most relevant to the areas of interest. At this stage several items were rejected on the basis that they did not fall within the scope of the review. In most cases rejections were made because the focus was on *extended* school years or scheduling changes that involved reorganising the *use of time during the day* rather than across the year.

Each item was reviewed using one of two standard frameworks. The first was used to review material that contained a research element:

- authorship, dates and full-source details
- focus of the item and project description if applicable
- type of study and methodological details, including sample size and characteristics
- overview of the findings, key conclusions and the implications of the research suggested by authors
- reviewer's comments.

The second was used to review those items that were not research based:

- authorship, dates and full-source details
- focus of the item
- description, including the implications of the research suggested by authors
- reviewer's comments

General overview of the material

- Most of the material originated in the USA, England, Australia or Canada respectively.
- The literature covered a wide range of alternative calendar patterns.
- The material addressed many levels, although material focusing on primary/elementary education (years 1 to 6) was the most common.
- Predominantly research based, the materials also included opinion pieces, conference papers and policy documents. Some were written by academics active in this field of research and others written by headteachers who had first hand experience of calendar change.
- Non-research based literature was predominantly written by proponents of calendar change.

Database searches

A range of different educational, sociological and psychological databases were searched. Search strategies for all databases were developed by using terms from the relevant thesauri (where these were available), in combination with free text searching. The same search strategies were adhered to as far as possible for all the databases. The NFER Library's own internal databases were also searched, as well as CERUK (Current Educational Research in the United Kingdom).

The database searches were supplemented by scanning the reference lists of relevant articles, thus identifying further studies. The team also searched relevant web-sites and downloaded documents and publications lists.

The bibliographic details of all papers identified through database searches and the potentially relevant papers found by hand, website and bibliography searching and through personal contact were entered onto a ProCite bibliographic database.

The keywords used in the database searches, together with a brief description of each of the databases searched, are outline below. All searches date from 1999 to 2003.

Applied Social Sciences Index and Abstracts (assia)

ASSIA is an index of articles from over 600 international English language social science journals. The database provides unique coverage of special educational and developmental aspects of children.

#1 School Year (ft)
#2 Extended Year School (ft)
#3 Year Round Education (ft)
#4 Year Round Schooling (ft)
#5 Summer Learning Loss (ft)
#6 Timetab* (ft)
#7 School Calendar* (ft)
#8 School Schedul*

(ft) *Denotes free-text searching*
* *Denotes truncation of search terms to account for plurals (e.g. principal, principals)*

British Education Index (bei)

BEI provides bibliographic references to 350 British and selected European English-language periodicals in the field of education and training, plus developing coverage of national report and conference literature.

#1 Extended School Year
#2 Timetables (School)
#3 Flexible Scheduling
#4 Time Factors (Learning)
#5 School Calendars
#6 School Schedules
#7 Summer Learning Loss (ft)

(ft) *Denotes free-text searching*
* *Denotes truncation of search terms to account for plurals (e.g. principal, principals)*

Canadian Business and Current Affairs (cbca)

CBCA provides indexing and full-text access to the principal educational literature publications in Canada, covering all significant reports of government departments, faculties of education, teachers' associations, large school boards and educational organisations. Over 150 educational periodicals, plus educational articles in over 700 general journals and newspapers are indexed.

#1 School Year
#2 Summer Learning Loss
#3 Year Round Education
#4 Multi-Tracking (ft)
#5 Timetabling (ft)
#6 Extended Year School* (ft)
#7 School Calendar* (ft)
#8 School Schedules (ft)
#9 Flexible Scheduling
#10 Quarter System
#11 Semester System
#12 Trimester System

(ft) *Denotes free-text searching*
* *Denotes truncation of search terms to account for plurals (e.g. principal, principals)*

ChildData

ChildData is the National Children's Bureau database containing details of around 35,000 books, reports and journal articles about children and young people.

#1 School Year (ft)
#2 Extended Year School (ft)
#3 Year Round Education (ft)
#4 Year Round Schooling (ft)
#5 Summer Learning Loss (ft)
#6 Timetabl*
#7 School Calendar*
#8 School Schedul*

(ft) *Denotes free-text searching*
* *Denotes any number of characters eg. Timetables, Timetabling*

ERIC

ERIC is sponsored by the United States Department of Education and is the largest education database in the world. It indexes over 725 periodicals and currently contains more than 7,000,000 records. Coverage includes research documents, journal articles, technical reports, program descriptions and evaluations and curricula material.

#1 Year Round Schools
#2 Year Round Programs
#3 Extended School Year
#4 School Schedules
#5 Flexible Scheduling
#6 Quarter System
#7 Trimester System
#8 Multitrack (ft)

(ft) *Denotes free-text searching*
* *Denotes truncation of search terms to account for plurals (e.g. principal, principals)*

PsychINFO

This is an international database containing citations and summaries of journal articles, book chapters, book

and technical reports, as well as citations to dissertations in the field of psychology and psychological aspects of related disciplines, such as medicine, sociology and education.

#1	School Year
#2	Summer Learning Loss
#3	Year Round Education
#4	Multi-Tracking
#5	School Timetabl*
#6	School Calendar*
#7	Extended Year School*
#8	School Schedules (ft)
#9	Flexible Scheduling (ft)
#10	Quarter System (ft)
#11	Semester System (ft)
#12	Trimester System (ft)

(ft)	*Denotes free-text searching*
*	*Denotes truncation of search terms to account for plurals (e.g. principal, principals)*

Author searches

Kerry, Trevor

Internet web sites

ATL
NASUWT
NAYRE
NUT

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