

The Sands of Time: The allocation and use of instructional time in English and Mathematics in private and public schools in England and Dubai.

by Fiona M. Sayer

Student Number 60119

A dissertation submitted to
The School of Education of British University in Dubai
in part fulfillment of the requirements for the degree of
Master of Education in International Management and Policy.

Dr. Clifton Chadwick

This dissertation consists of 15,725 words excluding tables and figures.

Date of Submission: 23.12.07

“Pupils deserve to have access to concentrated and focused periods of uninterrupted learning time.”

Stoll et al (2003 p. 74)

(i)

Table of Contents

<u>Chapter</u>	<u>Title</u>	<u>Page</u>
----------------	--------------	-------------

The Sands of Time

		<u>number</u>
	Title page	i
	Table of contents	Ii,iii
	Table of figures	iv
	Acknowledgements	v
	Abstract	vi
Chapter 1	Introduction	1
1.1	Rationale	3
1.2	Area of interest.	4
1.3	Context and background	6
Chapter 2	Literature review introduction	9
2.1	Conflicting research concerning the relationship between instructional time and achievement	10
2.2	Factors that reduce instructional time.	12
2.3	Breaks and Transitions.	15
2.4	Time on Task	15
2.5	Inequalities in allocated instructional time	17
2.6	Quantitative data concerning non-instructional time	17
2.7	Literature concerning the process and quality of instruction.	18
2.8	Literature concerning theories of educational time factors.	20
2.9	Literature concerning instructional models that address the use of time.	21
2.10	Literature concerning interruptions, disruptions and distractions in classrooms.	22
2.11	Literature concerning classroom management.	24
Chapter 3	Research Methodology	26
3.1	Location	27
3.2	School access and permission	27
3.3	Participants	28
3.4	Materials	28
3.5	Procedures	30
3.6	Restrictions and limitations	31

Table of Contents (continued)

Chapter 4	Results	35
4.1	Results	36
4.2	Discussion of results	53
4.3	Unexpected but significant outcomes	57
Chapter 5	Conclusion	61
Chapter 6	Recommendations	63
6.1	Recommendations for policy makers.	65
6.2	Recommendations for school leaders	65
6.3	Recommendations for class teachers.	66
	In Summary	67
	References	68
	List of Appendices	74

(iii)

Table of Figures

Model 1	Schooling Exposure and Achievement by Wiley and Harnischfeger (1974)	Chapter 2 Page 14
---------	--	----------------------

The Sands of Time

Model 2	Model of Time Management by Wragg (1984 p.27)	Chapter 2 Page 16
Model 3	Model of time use and achievement	Chapter 2 Page 21
Table 1	Mathematics- lesson length in minutes	Chapter 4 Page 37
Chart 1	Mathematics- percentage of instructional time	Chapter 4 Page 38
Chart 2	Mathematics	Chapter 4 Page 38
Table 2	English	Chapter 4 Page 39
Chart 1	English-lesson length	Chapter 4 Page 40
Chart 2	English-percentage of instructional time	Chapter 4 Page 40
Table 3	Mean instructional time for English and Mathematics	Chapter 4 Page 41
Table 4	Estimated instructional time compared with actual instructional time	Chapter 4 Page 42
Chart 3	Estimated instructional time compared with actual instructional time	Chapter 4 Page 43
Table 5	Frequencies of coded activities for each teacher	Chapter 4 Page 44
Table 6	Class size and instructional time	Chapter 4 Page 44
Chart 4	The average amount of time spent engaged in “Teacher talk” for both subjects.	Chapter 4 Page 45
Chart 5	Class size	Chapter 4 Page 46
Chart 6	School type and class size	Chapter 4 Page 46
Table 7	Analysis of calendar and timetable information	Chapter 4 Page 47
Chart 7	Allocated daily instructional time	Chapter 4 Page 48
Chart 8	Allocated annual instructional days	Chapter 4 Page 48
Chart 9	Total instructional minutes allocated per year	Chapter 4 Page 49
Chart 10	Estimated enacted instructional minutes per year based on observations	Chapter 4 Page 49
Table 8	Class management strategies-observed examples	Chapter 4 Page 50
Model 4	Model showing observed discipline structures	Chapter 4 Page 52

Acknowledgements

The Sands of Time

I wish to express my thanks my supervisor, Professor Clifton Chadwick who offered both inspiration and guidance in the writing of this study. I would also like to thank Solidad Valenzuela who offered help and support in the early stages.

I would like to express my gratitude to the head teachers at the participating schools for allowing me to carry out my research and those teachers who agreed to be observed.

I want to thank my two sons Angus and Jacob, who have had to share me with the computer and vice versa over the past year. Lastly, I am grateful to my husband, Neil, who agreed to give me the financial and emotional support in my further education.

Abstract

This research identifies classroom activities that are related to high levels of instructional time. In the summer term of 2007, ten teachers and their year four classes were observed and their activities were coded. Results showed that teachers and their use of time differed significantly and that this had a greater effect on pupils' access to learning opportunities than allocated time. Large variations in instructional time appeared to be the result of many variables, in particular, classroom management factors.

Existing research concerning instructional time reports a significantly small proportion of allocated time as being dedicated to instruction.

“Researchers have found that only 45 to 50 percent of the total school day is spent in instruction.”

Delzell (1987 p. 44)

The aims of the research were to calculate the amount of instructional time allocated in three types of school; English independent, English state and Dubai private, to quantify the amount of enacted instructional time in classrooms and to examine teaching strategies that maximised instructional time.

Data were collected using an observational instrument involving a time sampling technique developed to measure the teacher's use of time.

This study builds on the controversy concerning the relative importance of the quality or the quantity of instructional time and pupil achievement. It concludes that quantity and quality are both necessary but that the debate is sidelined when factors ultimately dependent on the managerial abilities of the classroom teacher are considered.

Chapter 1

1.0 Introduction

The opportunity to learn is a fundamental right. It is widely believed that the more instruction that pupils receive, the more they will learn. Squeezing learning time from an increasingly crowded timetable has become a common pursuit of teachers. Despite these widely held beliefs, instructional time is a subject that has historically received only spasmodic and limited attention by educators and policy makers.

Four research questions were addressed in this study:

- How much time is allocated for instruction in primary schools?
- How does the amount of time for instruction vary between Dubai and England?
- How does the use of this instructional time vary between primary teachers in core subjects?
- What strategies, if any, do teachers use to minimize disruption and maximise instructional time?

The central hypothesis was that the quantity and effective use of instructional time does not reflect time allocated for instruction.

The amount of enacted instructional time is affected by the amount of time allocated to it. The aims of the study were to:

- Identify and isolate the main factors that direct instructional time.
- Filter from these the factors that are within the school's and class teacher's control.
- Make recommendations concerning how educators can maximise quality instructional time.

A summary of existing research

Research into the significance of variables associated with instructional time is fragmented and at best inconclusive. Controversy and debate exist concerning the significance of quantity (Harnichfeger & Wiley, 1976) or quality. (Karweit ,1985) which has stagnated the progress of research concerning how teachers generate, exploit and manage available instructional time within the classroom.

The rationale of this study assumes that both quality and quantity are important and necessary factors involved in student achievement. It asserts that by restricting or wasting instructional time we are limiting the achievements of pupils before they have even opened a book or picked up a pencil.

“...time cannot be saved, borrowed, or recovered; however, it can be used wisely...One of teaching’s greatest pleasures is the satisfaction that comes from watching our students learn. The reverse is also true, however: one of teaching’s greatest vexations is the frustration that stems from seeing time wasted - resulting in failure to accomplish instructional goals.”

Delzell, 1987 p.43

This study argues that research provides adequate verification confirming that with sufficient worthwhile teaching, students will achieve. It reflects attempts to increase time for learning and concludes that a more effective solution would be to consider ways of saving and exploiting existing time.

Outline

The second chapter of this study will bring the aforementioned issues further under the microscope, firstly by considering existing data relating to instructional time around the globe then evaluating past literature and research pertaining to time in schools. The methodology used to carry out the research is described and evaluated in chapter three. The results are detailed in the first half of chapter four and the findings subsequently examined and analysed. A concise conclusion is presented in chapter five and chapter six offers recommendations for those involved in education.

1.1 Rationale

This study moves away from abstract models and theories, attempting to interpret results in a practical way for educators.

Each nation attaches great importance to the education of future generations. The degree of importance can be assessed by examining factors that include among others; expenditure, organisation, support frameworks, assessment, accountability, expectations and time allocation. Policies are formulated to allocate resources and create guidelines for the provision of education. Some nations, such as the UK, are more time prescriptive than others in the form of the National Curriculum and make intensive demands on direct instructional time, which has express implications for enacted time and management strategies.

Guidelines concerning years of compulsory attendance, the length of the school year and day have varied historically (see Appendix 15 for timeline.) and differed between and within nations. The organisation and the use of this allocated time are also diverse. The result is that some students are exposed to more learning opportunities than others.

Smith (2000) likens the instructional year to a picket fence, with each day represented by a post. Smith's metaphor is useful in visualising the importance of having equal access to instructional opportunities. Perhaps the analogy of a brick wall more effectively illustrates the influence on achievement. A wall with missing bricks is unlikely to be as strong.

Unlike some studies, it is assumed that the opportunity to learn can only increase achievement and argues that by limiting the amount of time available, we are restricting potential attainment and increasing inequalities.

This study seeks to examine how schools in the region use available instructional time in comparison with other nations, particularly England. The culture and climate in the area are important elements in defining the structure of the school calendar and timetable. Guidelines for schools are issued by the Ministry of Education. The extent of these guidelines and their adoption in schools is explored.

This study begins with a wide look at other nations then narrows its focus to schools in the area compared with England, finally considering specific classroom strategies that optimise the use of time. In maximising the amount of enacted instructional time, we are enhancing

The Sands of Time

students' initial prospects of realising their potential. Wang and Walberg (Winter 1983 p.603) state the importance and necessity of information concerning the effective use of instructional time in order to optimise pupil achievement.

“ Nevertheless, the data base on how to optimally use school time to maximise student learning and the implications for instructional design is limited. Information is needed on those design features and operating conditions of instructional approaches that allow effective allocation and use of school time.”

While a large body of research exists concerning observations of students, particularly instructional time and time on task, very little examines how teachers manage their time in the classroom. This study attempts to shift the focus to teachers in an attempt to inform and promote better practice.

1.2 Area of interest

Private or independent schools, public or state schools differ in the degree of autonomy they enjoy. (Chubb & Moe, 1988) Increased freedom in private schools often results in more diverse provision in terms of curricula, pedagogy, assessment procedures and scheduling. For this reason it might be reasonable to expect schools to differ in their use of allocated and instructional time.

The individual teacher possesses very little opportunity to express preferences and make decisions at this level of policy making. This is particularly evident in nations that have chosen to adopt a national curriculum and assessment structure such as England. Where guidelines and individual philosophy conflict there may be gaps between allocation and actual provision.

Potentially, a teacher's personal approach and ability to manage the classroom will have a direct bearing on the success of this provision in terms of learning opportunities.

Regulations and expectations, whether set by the state or school, will permeate to a greater or lesser degree depending on support structures and accountability measures.

“The time actually available for, and spent in, teaching is indicative of the teacher's ability to organize instructional activities and expedite non-instructional ones such as transitions and discipline.”

Cotton, (1989 p.3)

The Sands of Time

The ability of the teacher and the support mechanisms such as professional development has a direct bearing on events in the classroom and the teacher's ability to provide effective instructional time.

The focus of this study is to compare the provision of time between two systems, public and private and between two nations, Dubai and England. In evaluating the provision and use of time in contrasting systems and regions the identification of patterns and strategies might inform practice and generate greater reflection amongst policy makers, leaders and educators.

In broad terms, the study of time use in schools can be approached in two ways; how time is allocated to learning and how time for learning is used. The research base is wide, which has made it necessary to set clear boundaries to ensure depth of focus. Although these aspects have been researched and are related to the chosen subject, due to time and space limitations, this study will not refer in detail to the following educational time factors:

- Pupil engaged time or time on task. The study assumes that without pupil engagement, learning will not take place and makes the connection between classroom management and time on task. If a class is managed effectively, pupils are more likely to remain engaged. (Nerenz & Knop, Autumn 1982)
- Academic learning time or success time
- Absenteeism
- Homework
- Extended school days
- Extended, rescheduled academic year, year-round single and multitrack schools

1.3 Context and background

The historical perspective of instructional time

The importance of instructional time from a historical perspective is explored by Silva (January 2007 p.3). Factors that include the agrarian calendar, war, growing demand for foreign vacations, industry, economy and politics, have influenced the length and organisation of the academic calendar. The demands of the curriculum, teachers and the needs of the learners themselves have not traditionally been a major concern in allocating instructional time, and this phenomenon seems to be continuing.

The importance that society attaches to education is often translated in a more concrete form into policies concerning time and money created at higher levels which cascade down through the system. (Cummings, Nov. 1999) The amount of time allocated by teachers, schools, districts, and governments is indicative of their collective and personal values and ideals. Allocated learning time varies across and between nations and can be expressed as annual days per year, or hours per year.

In the review of information given by the International Bureau of Education (IBU) Benavot summarises:

“It is estimated that most countries in the world allocate between 700 and 800 yearly hours of instructional time for pupils in grades 1 to 4 and between 800 and 900 yearly hours in grades 5 to 8.”

Benavot A. (Nov 2004) p. 8

This seems to be somewhat less than figures reported by Chalker & Haynes (1994) (see Appendix 1,2 and 3), and highlights the need for clarity when expressing research boundaries, without which, comparisons are futile. It is unclear from these measurements whether the figures have been collated by researchers, whether they are self-reported and unregulated, or whether one year or an average of many have been reported.

Despite these difficulties, these data are useful starting points for studies such as this. Generally, comparative figures indicate that the nations with the most allocated time are developed Asian countries, while Europe has around the average amount of instructional time. Developing nations have the least. (See Appendix 1,2 and 3 for global figures.) The USA and the UAE have fewer instructional days than Europe and less than the mean.

The Sands of Time

In the USA, researchers like Stevenson & Stigler (1992) held strong beliefs that the higher attainment of pupils in Japanese schools was due to the length of the academic year. It is generally accepted that learning is simultaneously affected by a range of complex variables and the dangers in attributing educational achievement to one factor were played out in the USA, as discussed below. Even though the present study did not include American schools it is useful to observe the effects of giving one variable, such as instructional time the highest political and educational priority.

A report by the National Commission on Excellence in Education (1983 *A Nation at Risk*) set out wide global variations in the amount of allocated instructional time. Suggested solutions included increasing the school day and academic calendar.

In 1994 the National Education Commission on Time and Learning produced their report entitled “Prisoners of Time.” This gave schools the metaphor of “time prisons”. It named factors that might be responsible for affecting achievement in top scoring nations, namely cultural factors such as high expectations and rigid assessment procedures, some of which are described by Ai Zhang (2004) and O’Connor Petruso (2004). One of its recommendations was to increase the amount of time available for schools and to make more effective use of it.

The No Child Left Behind Act in 2001 continued calls for extra instructional time in American schools but moved the focus slightly to target growing concerns over impoverished inner city schools. Extra instructional time was targeted for low-achieving pupils.

The debate continued with the publication of the Third International Mathematics and Science Study (TIMSS 2003). This compared the achievement of students around the world in two subjects. It found a positive relationship between instructional time and achievement. Students in Asia achieved consistently higher results in these subjects than the USA. It calculated that the number of days spent in instruction differed by 60 per year.

As a result of these reports and studies, a reactive wave of scheduling alterations began and are ongoing, such as longer days (Levin, 1988), year round schools (Frazier & Morrison, April 1998), summer schools (Glass 2004), and block scheduling (Johannessen & Lorenz Oct 2001, Orellana & Thorne, 1998, Cooper et al.,1996). Recently, New Jersey negotiated a longer day and academic year with teacher’s unions (NJSBA 2000). Minnesota increased the academic year from 175 to 200 days in 2006 (Silva 2007 p.1). It is interesting to note that Japan recently reduced their instructional hours.

The Sands of Time

It can be seen from this journey of instructional time that the factors prompting change have been far removed from the classroom. These continual policy changes indicate a belief that more instructional time will increase pupil achievement. Despite the available evidence, the existing research to prove this hypothesis is contradictory. Possible reasons for this are put forward in chapter two.

Chapter 2 Literature Review

2.0 Introduction

The literature reviewed below will be presented as a series of related elements. Wherever possible, research within each topic will be ordered in time sequence from the first to most recent.

For the purposes of this study it is important to define terminology and vocabulary used in this study. The clearest definitions come from Cotton (1989 p. 2 & 3) which are taken from those initially used by Anderson, Bloom and Fisher.

“Allocated time is the amount of time specified for an activity...referring to one of the following...school time, classroom time and instructional time.”

“Engaged time or time on task, refers to portions of time during which students are paying attention.”

“Dead time refers to periods...where there is nothing students are expected to be doing.” This is often referred to as down time or evaporated time (Bennett, 1995)

Wyne and Stuck (1982 p. 69) also refer to Academic learning time which:

“...is that proportion of time on task during which the learner is experiencing a high rate of success.”

From the terminology above it can be deduced that some aspects of instructional time are more suited to controls through policy regulation. Others are more closely related to the attitude and approach of the class teacher. It may perhaps be logical to suppose the greatest variations to exist at classroom rather than policy level. Wiley and Harnischfeger believe that even at the policy level there are inequalities.

The Sands of Time

“It seems to us that the one variable currently most amenable to important policy modification is that of Total Allocated Exposure Time. This is because there is wide variation in the amounts of exposure allocated to pupils within classes, between classes, between schools, and between districts. “

Wiley and Harnischfeger (1974)

2.1 Conflicting research concerning the relationship between instructional time and achievement

Before examining research concerning variables that reduce instructional time it is important to consider the research evidence linking instructional time with student achievement. Considerable disagreement exists between researchers regarding the relationship between the amount of instructional time and pupil achievement. The main reasons for these discrepancies seem to be differences in terminology, methods of research and reporting procedures. Wyne and Stuck (1982 p. 69) who address this issue in their review of research into time and learning state that:

“Even among the studies that employed direct observation, there are large differences in the amount of behavior and length of time sampled and the techniques used to record and analyse observational data.”

The two sides of a debate that took place between twenty and thirty years ago were led by Wiley & Harnischfeger and Karweit.

Wiley & Harnischfeger (1974) studied a sample of forty elementary schools in Detroit drawn from a large study entitled the Equality of Educational Opportunity Survey and found that time was positively related to and an important vehicle for achievement.

Karweit (1976) criticised the work of Wiley and Harnichfeger to which they replied:

“It is inconceivable that more schooling...will not produce more learning.” (1976 p.18)

They accepted that more research was needed but wrote that:

“Karweit has not convinced us that quantity-of-schooling is a policy variable that we can afford to neglect...” (1976 p.18)

The Sands of Time

Karweit & Slavin (1981) examined the teaching of mathematics in four elementary schools. They measured the amount of non-instructional time and pupil time on task. Their results showed that the amount of allocated time had no effect on achievement but that the amount of pupil time on task increased achievement.

Later, Harnischfeger & Wiley (1984) studied schools in California and New York. They found that when more time was spent in school achievement increased.

Brown and Saks (1986) used information from the Beginning Teacher Evaluation Study (BTES). Their findings introduced another aspect to the debate when they found a positive relationship between allocated time and achievement for low-attaining pupils.

Karweit (1988) later developed the new term “productive time” meaning academic learning time which she described as the key to achievement (as opposed to increased instructional time).

Cotton (1989) stated an alternative point of view somewhere in the centre of the debate:

“Obviously, if there is no time at all allocated for learning a particular subject, then learning will not take place. But what the...research indicates is that when students experience greater quantities of allocated time, their achievement is only very slightly better than those experiencing lesser quantities.”

Cotton K. (November 1989 p.6)

Cotton reviewed a large body of research and found a strong positive relationship between achievement and academic learning time, but not between achievement and allocated time. Academic learning time refers to instruction where a pupil is experiencing a high degree of success. Cotton joined Karweit in arguing that quality, not quantity, was a more significant factor affecting pupil achievement.

Aronson et al (1998) found a small positive relationship between achievement and instructional time. Their findings echoed the work of Cotton on allocated time and academic learning time. The authors concluded that time management was a better solution to increasing learning opportunities than increasing the number of school days or the length of the academic year.

The Sands of Time

The debate did not seem to move knowledge onwards but only involved semantics. It simply suggested that more time alone would not affect achievement unless it involved quality teaching. Despite the debate, most researchers agree that a positive relationship of some degree exists between the amount of allocated instructional time and achievement. (Wyne and Stuck, 1982; Anderson, 1984; Brown & Saks, 1986; Fisher & Berliner, 1985; Karweit, 1976, 1985.)

It is this author's view that the debate should evolve from agreeing that quality is important to identifying how learning opportunities are reduced and investigating how to achieve quality within allocated time.

2.2 Factors that reduce instructional time.

Certain factors, listed below, can reduce instructional time (Karweit, 1984)

These are referred to in various studies and research.

- Student/teacher absenteeism. (Abadzi, 2007. Delzell, 1987 p. 44, quotes "Up to 15 percent in some high schools")
- Student/teacher lateness or tardiness
- Disruptions such as behavioural and discipline issues
- Organisational issues such as dead time, late starts, early dismissal, movement between rooms or changeover between activities, classroom and resource organisation. (Smith Dec. 2000)
- School closure due to strike action, weather, national days (Benavot et al., 1995)
- Extra lessons such as SEN programmes or music
- Extra-curricular activities such as sport fixtures
- Waiting for the teacher's attention

More recently Gerleman (1987) completed an observational study of small group teaching of mathematics in grade four classrooms. She examined grouping and student/ teacher interaction. Her study led to the conclusion that the amount of time allocated and used for study varied a great deal. Of the fifteen teachers observed most were good at reducing the amount of time spent waiting for the teacher. Two, however, were particularly poor at this. This pattern of inconsistency between teachers ability was repeated with regard to classroom management and disciplining skills.

The Sands of Time

Recent research on instructional time was carried out by Smith (2000). Results highlighted the ways in which time was wasted in schools, especially in inadequate management strategies and disruptions. Examples included supply or substitute teacher days and weak starts due to teachers locating resources and familiarising themselves with requirements and the curriculum. These aspects are particularly relevant in this region with a large proportion of teachers who are new to the country.

Absenteeism

“The actual use of scheduled time depends on many other factors, including the student’s school attendance and the erosion of instructional time by nonacademic activities and events.”

(Karweit, 1985 p.10)

Wiley & Harnischfeger (April 1974 p.8) calculated the average amount of schooling by multiplying average daily attendance by the average number of hours in the school day by the days in the academic year. Using this formula they calculated that schools in Detroit offered from 710 to 1150 hours of instruction. Their concern was the relatively ignored effect that absence has on learning. They state (p.8)

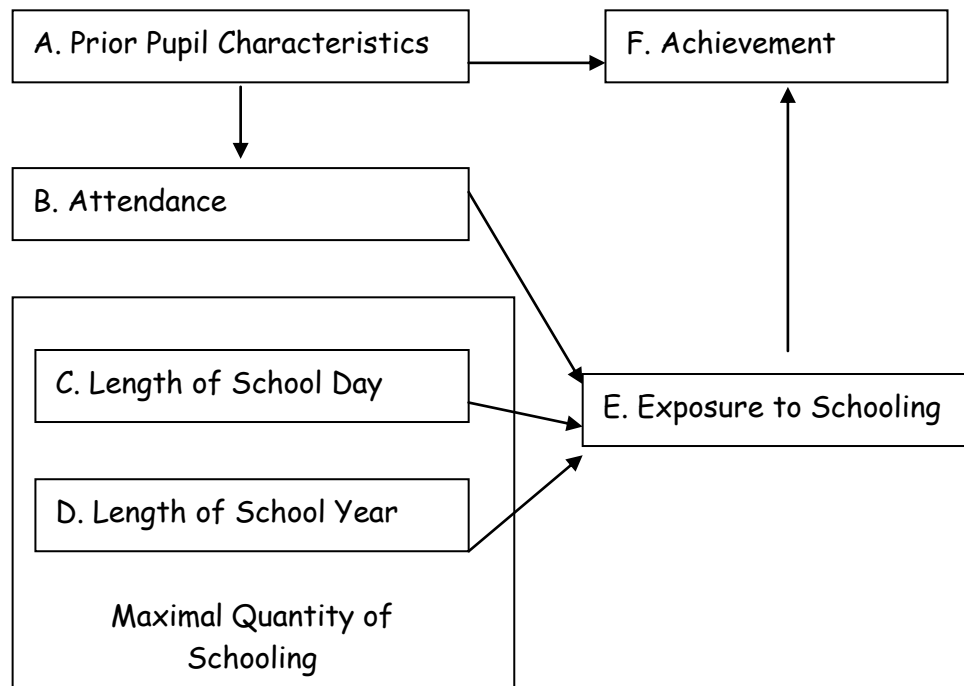
“If this variation is not taken into account, the consequences of teacher and school characteristics for achievement will be obscured.”

They develop a useful model entitled “Schooling Exposure and Achievement” in which attendance is given equal value as pupil characteristics. This is particularly relevant to this study as it highlights the importance of allocated time (as shown in the large rectangle below) and enacted instructional time, referred to below as “Exposure to Schooling”. It illustrates and adds weight to the central issue of this study, that, although many variables affect achievement, allocated and enacted instructional time are crucial.

Although absenteeism is not considered in depth here, Wiley and Harnischfeger’s findings have important implications when considered with the results of the present study. Student tardiness and absenteeism can be a significant cultural factor reducing the amount of time available for learning.

The Sands of Time

Model 1



Wiley & Harnischfeger go on to set out the affect of management efficiency on the amount of enacted instructional time which they term “usable time,” and state that it is an aspect often ignored in theories and models of instruction. This study examines management strategies used by teachers who are able to effectively maximise instructional time.

2.3 Breaks and transitions

Within the school timetable itself, there are proceedings which can eat into the amount of instructional time available, as Alexander (2000 p.187) states:

“All five countries have officially declared norms for the total time a child at a given stage of education must spend in school...but other events than lessons may punctuate the day, and some of these may consume amounts that are by no means insignificant: play, break or recess; lunch; whole school activities such as assembly.”

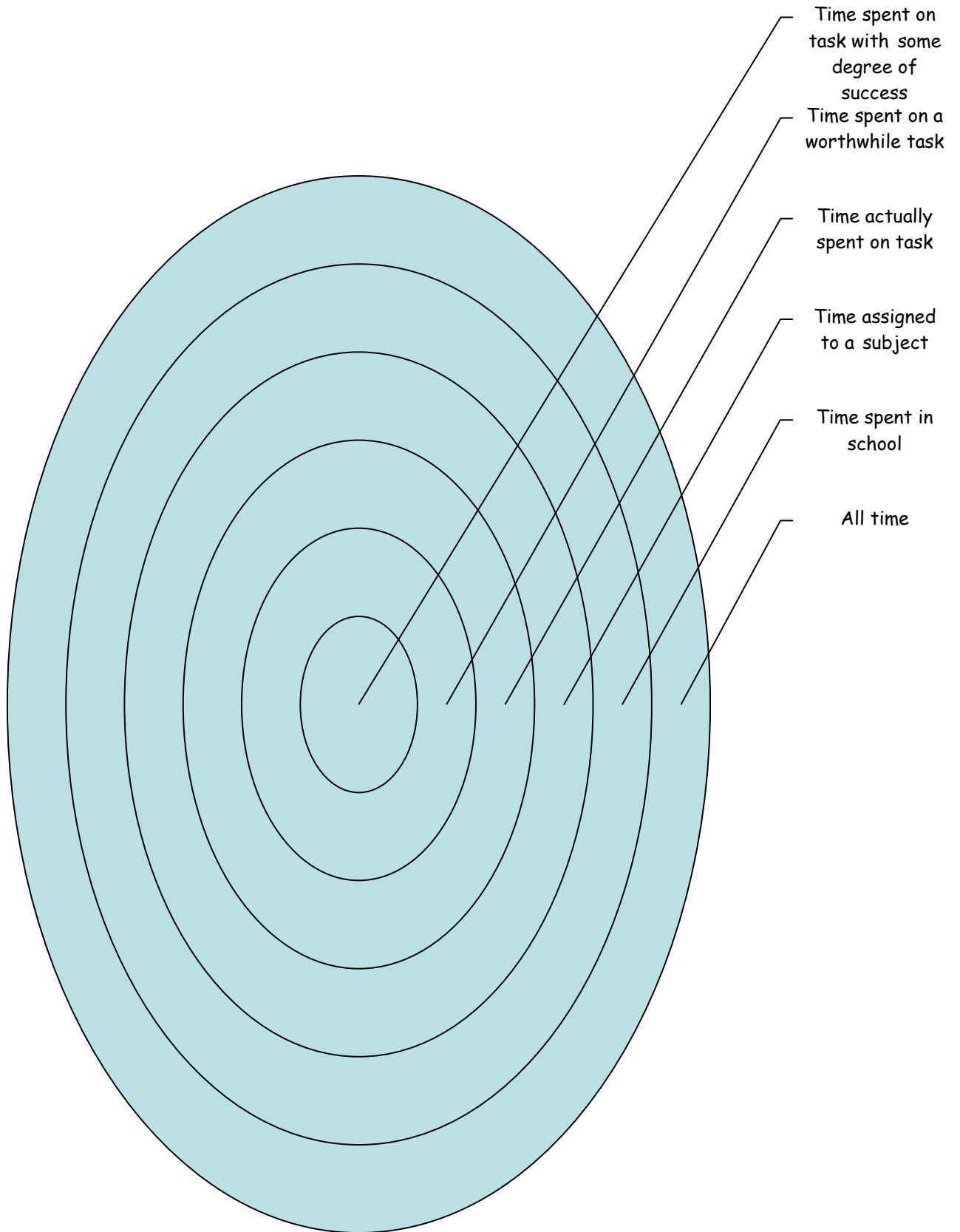
One of the difficulties of analysing the existing research has been the varying parameters of the studies. Some, like Alexander, have described non-instructional time throughout the school day. While a percentage of these time-erosive factors are beyond the teacher's control, some are a necessary part of the school day. This study makes core instructional time the focus for observations and examines the nature of non-instructional activities. Whilst transition time was not a focus of the present study its reducing effect is relevant when considered in the context of inequalities in instructional time as described later in Chapter 4.

2.4 Time on task

Wragg (1984 p.27) developed a model to describe the management of instructional time in school, which helps to show how the total amount of allocated time is not a true estimate of opportunities for learning.

The three outer rings concern allocated time. This is an important aspect of the study because these form the “quantity” aspect of the instructional time debate referred to earlier. The three central rings concern pupil time on task and academic learning time. These are not considered in depth in the present study but form the focus of a large body of existing research concerned with the “quality” aspect of the instructional time debate. From the model it can be deduced that enacted instructional time is that which is left after filtering through the factors that surround and erode it.

The Sands of Time



Model 2 Time Management Wragg, 1984 p.27

2.5 Inequalities in allocated instructional time

Berliner (1979) found that the amount of time given to learning mathematics differed a great deal in American schools.

“...the average daily time allocated for second-grade math ranged from a low of 24 minutes to a high of 61 minutes. The range for second grade reading was from 32 to 131 minutes. Some students received as much as four times more instructional time in a given subject than other students in the same grade.”

Berliner, 1979 in Good T.L. & Brophy J.E. (2003) p.28

The inequalities described in the paragraphs above call for more enquiries into why such great discrepancies exist. Rather than examining why some teachers are less effective, it might be more constructive to investigate the practice of more effective teachers in order to gain more knowledge about managing instructional time.

2.6 Quantitative data concerning non-instructional time

Holley and Ligon (1979) report that in 1976 the Office of Research and Evaluation in the Austin independent school district of the United States began a study concerning the amount of allocated and instructional time in a variety of schools. They found that half of the school day was spent in non-instructional activities. A programme was successfully instated to find ways of encouraging teachers to make better use of their time and the financial resources invested in it.

Smith (2000) completed a study into the amount of instructional time that was used in core subjects. Data were collected in the form of observations, notes, interviews with teachers and supporting documents such as calendars and timetables. Her findings indicated that instead of the allocated 300 minutes of instruction, pupils received less than 240 minutes.

The research listed above shows that there are considerable differences and inequalities in the opportunities provided for students to learn. It is encouraging to note that having identified inequalities in this area it is possible to successfully intervene and improve practice.

2.7 Literature concerning the process and quality of instruction

In order to observe and analyse the use of instructional time, it is useful to have a clear understanding of instructional styles and approaches, as these will affect the use of time. Teaching methods, organisational styles and management strategies vary considerably. The language used in these studies is useful in describing classroom observation.

Bell and Davidson (1976) found that teacher behaviour had a greater effect on pupil time on task and achievement than I.Q. These findings are striking given the current preoccupation with testing and benchmarking. They are also significant because teachers traditionally cite student I.Q. as one of the major factors affecting achievement, rather than their own performance.

Galton (1979 p.199) refers to teaching tactics and teaching style. He uses data from the ORACLE study which identified four main teaching styles with corresponding strategies and tactics. Simon & Galton (1975) set out the five elements of teaching in which management strategies are situated within the three central essentials:

- Aims
- Strategy (Organisational curriculum teaching)
- Tactics (Control, cognitive, social)
- Pupil Behavior (time on task, routine activity, distraction)
- Products (Tests, records etc).

These are described as a cycle. Management factors are given high priority in order for learning to take place effectively.

Bidwell & Kasarda (1980 p. 408) distinguish between “lecture recitation” and “task differentiation” classrooms. Lecture recitation involves whole class teaching, less differentiation and pupil interaction. The pupils receive equal amounts of time, which is allocated by the teacher. Task differentiation involves group work, more differentiation and social interaction. The amount of teacher time that pupils receive is unequal and pupils control the use of time. The chosen strategy will have an affect on the amount of time that is available for learning. Certain teaching styles will dictate differing amounts of time for learning. This study illustrates the range of teaching philosophies that underpin preferred approaches. They have a fundamental effect on instructional time and judgements frequently driven by teachers might benefit from more consideration of the learners needs.

The Sands of Time

As previously stated, a great deal of research refers to the quality of instruction. Wyne and Stuck (1982 p. 71) state this most clearly:

“Thus it is not simply the total quantity of time spent that has the greatest impact on student achievement, but the quality of the quantity of time spent learning.”

Based on their review of existing research the authors go on to suggest that five areas are central to studies of teaching quality. These are:

“...the learning task, learner feedback, student accountability, content taught and tested, and teacher modeling. “

The learning task must be well matched and should be made clear to pupils so that their achievement can be assessed. This is referred to by Bloom (1976) in his mastery learning theory mentioned elsewhere in this study. He describes an instructional method that aims to ensure that all students have access to the curriculum and achieve greater self-esteem.

Stallings (1980) found that less-formal teaching methods rather than formal lecturing resulted in more learning. She stated that the quality of instruction directly affected achievement, especially those that involved participative teaching strategies.

Fisher & Berliner (1985) directed research entitled The Beginning Teacher Evaluation Study (BTES). This study was in three parts and involved research into teacher effectiveness. They found that the highest gains in student achievement occurred when the instruction was well matched to ability and encouraged greater time on task.

O'Neill (1988 p.164) attempted to list instructional factors covered by previous research. Among other aspects, he identified:

- The preactive stage, such as teacher organisation
- The interactive stage, such as classroom management, clarity, advance organisers and instructional mode.
- The post-active stage, such as praise and criticism.

The Sands of Time

Each stage contains important elements of management skills and reflects the centrality of instructional time. The underlying theme of the quality versus quantity debate hinges on the importance given to learner driven philosophies and methodologies, which have a direct bearing on instructional time. These contrast directly with process driven methodologies which can reduce learning opportunities, factor identified during observations discussed later in the study.

2.8 Literature concerning theories of educational time factors

Carroll (1963) is often considered a founding father of research on time. The model of school learning that he developed described the amount of learning as a result of two factors; the time spent learning divided by the time required to learn. The amount of time required for learning depended on aptitude (which concerned intelligence and verbal ability and was expressed as the amount of time needed for learning under the most favourable conditions) and the quality of instruction. He proposed that the amount of time spent learning depended on allocated learning time and time on task or the pupil's ability to persevere. His theory can be expressed as a formula:

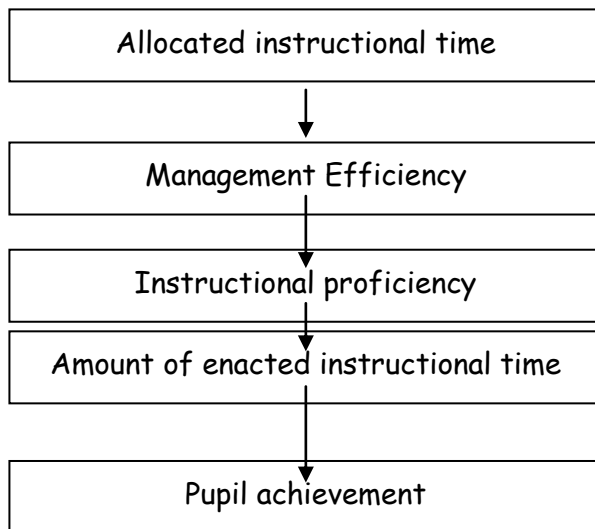
$$\text{Degree of learning} = f \left(\frac{\text{time actually spent}}{\text{time needed}} \right)$$

This model is often quoted as it uses a common-sense approach to describe the process of instruction and achievement. If time is not sufficiently allocated to pupils, they will not achieve. The model does not account for all factors involved in the instructional process and many researchers have taken one aspect of the model and developed it further. Carroll (1985) himself, acknowledged that the model did not account for all the factors affecting learning. This study is concerned with the time spent learning, and relates this to the quality of instruction. It extends the concept of quality of instruction to include the management of instruction and classroom organisation.

A model developed for this study, related to the factors described by Carroll but based on models developed by Wiley and Harnichfeger (1974) is presented below.

The Sands of Time

Model 3 Time use and achievement



From the above model one can see how Carroll's notion of time actually spent learning is directly affected by quality of instruction, which in turn affects the degree of learning.

2.9 Literature concerning instructional models that address the use of time

Barr & Dreeben (1977 p.115) describe the mastery learning model in which:

“each student takes the time he or she needs to reach an absolute criterion of mastery...to provide experiences that permit even the slowest learners to reach mastery within the time allotments that formal schooling makes available.”

This instructional model was developed by Bloom (1968) directly based on Carroll's theories (1963) referred to above. His theory of mastery learning recognises differences between pupils, in terms of their abilities and the time they need to learn and individualises instruction. Bloom asserts that over time the gap between the most and the least able will decrease and the time required for learning will be reduced. This method is often recognised as being effective with low-attaining pupils. It could be criticised as being unrealistic because, although it recognises the importance of time in learning, it does not recognise factors that are not within the teacher's control, such as allocated time and class size. It is an example of theory over practicality.

The Sands of Time

Wang and Walberg (1983) describe the performance of the Adaptive Learning Environments Model, which was developed at Pittsburgh University, to use instructional time efficiently and increase the time that pupils profitably learn. The central concern was the amount of time that pupils spent off task or not engaged. This is often referred to in research as time on task. The model was developed to adapt to, or match, the amount of time pupils needed to learn. It is a wide field of educational research and there is no room to examine it in any depth in this study, although relevant, because it refers indirectly to the factors identified by Carroll. It also develops the notion of the learner and instructional time as central issues.

Apart from the name, this research does not seem to develop new concepts. Streaming, smaller classes, trained support staff, increased assessments and differentiation of the curriculum are methods that are currently and successfully used by effective teachers. It makes use of cross-phase teaching which is often a successful method currently used in smaller schools. It hasn't been widely adopted as, although it helps younger pupils, it often limits the achievement of older pupils. Rosenshine (1979) is the leading researcher in this area. His findings, as well as others, are that students are inattentive during a large proportion of their learning time. Although these approaches might seem unworkable in their entirety today, elements from them might help to highlight the importance of the learner when making choices regarding instructional time.

2.10 Literature concerning interruptions, disruptions and distractions in classrooms.

Behnke et al. (1981 p. 136) offer a definition of classroom distractions as:

“ those events which take teachers and/or their students off the intended instructional tasks...many distractions come from the students...outside sources...or nonhuman sources.”

They describe methods of coping as being

“verbal or non-verbal” and “preventative” or “reactive”

In a research study on distractions set up for “in-service and intervention”, a histogram (p.145) was created based on observations of teachers. A range of “coping techniques” were listed. The most common were “direct command or instruction (telling)” (48%), “body language, gestures and...expressions” (10.2%) and the “clarifying of rules” (8.9%). The least common were “using the students” (1.3%) and “other adults” (1.2%) to “resolve distractions”.

The Sands of Time

This approach would seem to have limited use with younger pupils, but may be a fairly untapped resource with older pupils.

Behnke et al. (1981 p. 151) found that one eighth of the observation time was spent on coping with and resolving distractions. They suggested that teachers can reduce the amount of time lost in distractions by using a range of coping techniques. These are explored later and developed into a model with practical suggestions for teachers.

Bohn et al (2004 p.269) observed primary school teachers and found that the most effective teachers spent more time setting up “routines and procedures at the beginning of the year.” In contrast, the least-effective teachers were obliged to waste valuable time constantly restating class rules. Examples of these routines included community values, high behavioural and academic expectations, appropriate use of praise, agreed rules and responsibility.

“the classroom management in very effective classrooms is so good that there is rarely a disciplinary event and the class functions so smoothly that it is often difficult for an observer to know what the management plan is.” p..270

They point out the importance of finding a balance between the time spent on establishing and carrying out procedures, and time spent on instruction.

Arlin (1979) refers to the concept of “time flow” which is developed from Kounin’s (1970) research into classroom management. Arlin’s research found that pupils were more disruptive during transitions between activities. He suggested that the nature of transitions can be important indicators of the teacher’s time management abilities. His suggestions were that by keeping transitions to a minimum, time available for learning could be increased.

As shown above, previous research indicates that smooth lessons with clear expectations, sound management strategies and limited disruptions can increase time on task. These are not novel concepts, although information concerning the creation of the classroom dynamics responsible for generating these circumstances is not generally available to teachers. The need for clear and helpful guidelines is clear.

2.11 Literature concerning classroom management

Many research studies find a relationship between effective management and pupil achievement.

Goodman & Pendergrass (1977) describe how there is little guidance available to help teachers develop classroom management skills. Despite this, they list the importance of the teacher's skills and abilities in making decisions, taking action and monitoring their effect on students.

Stallings (1980) found that teachers spent approximately one quarter of their class time on management and administrative tasks. A series of PowerPoint slides were produced by Stallings & Knight described a teacher training study that took place between 1996 and 2000 in three inner-city schools in the USA. It involved 108 teachers and 90 student teachers. They compared an average teachers' and effective teachers' use of time. An average teacher would devote 12% to active instruction, 50% to monitoring seatwork and 38% to organising. An effective teacher would devote 50% to active instruction, 25% to monitoring seatwork and 15% to organising. It is unclear where the authors draw the line between average and effective, and their empirical basis is not described on the slide. Despite this, the figures provide an interesting starting point for this study, as the amount of organisational and instructional time can be compared directly with the results of the classroom observations.

The results of this study propose the figures referred to above underestimate the percentage of instruction possible with effective management strategies. The slides are also relevant because the method used for collecting the information was adapted and used for this study. Variables that were coded in this instance, included materials, activities, off-task behaviour and grouping arrangements.

Observations were made every five minutes and based on these results a teacher profile was developed. This was used to formulate a "treatment" that consisted of training to improve their use of time. The ensuing "post-test" took place in the form of a further observation. Active teaching increased from 67 to 77% and student pass rates improved by 17%. This improvement seems disappointingly low and even when the improved percentages are compared with those teachers observed in this study; they are considerably lower than the most effective teacher. Apart from methodology, reasons for differences might concern the sample and differences in pedagogy.

The Sands of Time

The schools in Stalling's study were inner-city state schools and the results reflect those gathered from observations of English state schools for this study. However they differ a great deal from those observed in private schools in Dubai and England. In reviewing findings from research and in comparing results it is important to consider differences in the sample.

Wyne & Stuck (1982) reviewed existing research into time and learning in order to form practical implications for teachers. Their recommendations included accurate timekeeping in order to ensure that available time for learning was used, keeping time wasted in transitions to a minimum, reducing distractions and time wasting by using rules and management strategies, monitoring the behaviour and learning of the students as described in Evertson's research below.

Evertson et al (1983) carried out research as part of the Classroom Management Improvement Study to examine whether a manual containing guidance helped new teachers to establish more effective management strategies.

“Effective classroom managers established rules and procedures that guided student behaviors...[they] carefully taught these procedures...and consistently used their rules...and communicated them clearly...[they] monitored student behavior...and provided feedback.”

Everson et al. p.174

Eighteen teachers were observed and then given the treatment or training. They were later observed again. The results indicated that those teachers who received the training performed better than those who did not and highlighted the need for more initial teacher training on the subject.

This highlights the centrality of classroom management and the general lack of training in practical aspects offered within the degree course structure. It shows that with adequate support, teachers that are less effective in this area can improve. The focus lends itself well to ongoing classroom-based research as part of professional development programmes or personal action research with a critical friend.

Silcock (1992 p.164) more recently points out the importance of management and routines in an era when teaching time is being squeezed by the demands of the 1988 Reform Act and National Curriculum. However he points out that teachers should not be tempted to abandon

The Sands of Time

the more pastoral aspects of their role. He claims that time should be found for the peripheral and the instructional. This study focuses on core academic instruction and in response to Silcock suggests that peripheral and pastoral issues should be included but not within allocated core academic instructional time.

Chapter 3 Methodology

3.1 Location

Three of the schools that agreed to take part in the study were private British or International schools in Dubai, three were small private or independent preparatory schools in the South of England and four were public or state schools in the South of England.

The difference in the location of the samples introduced the opportunity for comparison of differences in the organisation of instructional time, in:

- private and public schools
- schools in Dubai and England

Unfortunately, due to a number of schools refusing to participate, timing difficulties and time constraints (detailed later in the study) it was not possible to match the number of schools observed in each location by visiting state schools in the UAE. Despite this, it was possible to identify clear patterns and pertinent issues that were central to the research questions.

3.2 School access and permission.

A letter requesting permission to carry out the study was issued to the head teachers of four private primary schools in Dubai, four state and four independent schools in the UK, asking permission to observe one grade four primary school teacher. Teachers were selected by the head teacher on a voluntary basis. Arrangements were made regarding dates and times in addition to permission to be absent from work. Those taking part were assured that they would remain anonymous. In order to protect the identity of the participants, schools are referred to hereafter alphabetically and teachers numerically.

Permission was granted to observe teachers and carry out small scale interviews.

Lessons with specialist teachers and non-core subjects were not included in the parameters of the study.

The observations took place in the second half of the summer term.

3.3 Participants

The participants were ten year four teachers (3 male and 7 female). Their Mathematics and English lessons were observed at ten co-educational schools located in either Dubai or the South of England. All the teachers had at least three years of teaching experience and possessed a teaching degree or qualification. The classes ranged in size from 12 to 33 pupils. Year four was specifically selected as this might show the most direct instruction as opposed to seat work or play activities associated in older or younger classes. Ten schools out of a possible fifteen agreed to take part in the study.

The nationality of the pupils varied although a high proportion of pupils in classes in England were British. The pupils in Dubai were of mixed origin but the majority spoke English fluently. The ability range of the pupils varied. None of the schools observed selected their pupils with entrance tests although some required an interview with the parents and child.

A total of two lessons were observed in each of the ten classrooms. Each observation lasted for the entire lesson and focused on the teacher rather than the pupils. A brief interview with the teacher took place directly after the lesson in order to establish their own thoughts regarding their use of time.

3.4 Materials

In order to answer the research questions it was necessary to gather data concerning the following aspects:

- Allocated or scheduled minutes per day
- Actual scheduled lesson minutes per day
- Actual minutes of instruction per day
- Percentage of teaching in allocated lesson time
- Percentage of teaching in actual lesson time
- Lost or dead time per lesson
- Lost time due to administration, disruption and distractions

Data regarding allocated time came from the school academic calendar. Details regarding actual scheduled minutes of lesson time came from the class timetable.

The Stallings snapshot was identified and selected as a basis for the observations although it was necessary to make some alterations to answer the research questions. These are detailed below.

The Sands of Time

The snapshot is a time sampling technique which standardises observations by specifying when they take place. This method was selected as events occur quickly and simultaneously in primary classrooms and it would be extremely difficult to record everything that transpired.

The snapshot is based on recording observations rather like a camera at five minute intervals. After a pilot, it was decided to alter the frequency to three minute intervals as changes in the classroom took place at a rapid rate. The Stallings method was created to observe pupils. The observer takes a snapshot of each pupil in turn every five minutes, moving around the classroom. This instrument was altered to focus only on the teacher as he or she moved around the room. The snapshot also categorises aspects that do not relate specifically to the teacher, such as materials that are used. Since the focus of this study was the teacher, the instrument was adapted to include their position, and interaction as well as activity. The observation period was the total time devoted to mathematics and English lessons.

A chart was created separating activities into instructional and non-instructional activities. In general, instructional activities were those that contained an opportunity for learning, whether this related to academic learning or not.

Non-Instructional coded segments:

- Paper management
- Administration activity
- Organisational activity
- Classroom management
- Ancillary staff management
- Personal management

Instructional coded segments:

- Behaviour management
- Reading
- Writing
- Talking
- Monitoring/supervising
- Procedural/review
- Assessing with child

The Sands of Time

The coding details were listed on a separate chart and taken to each observation for reference (see Appendix 4). The codes were selected considering the research covered in chapter two, personal experience and the specific focus of the study. Some of these were based on codes used by Tarricone & Fetherston (2002). They were altered following discussions and advice for maximum agreement. A system of simple symbols was devised for use during the observations for ease, speed and accuracy (see Appendix 9 for example). The amount of academic content or successful pupil learning was not measured in this study.

An audio recording was necessary in order to gather precise information regarding specific examples of effective time management strategies. The transcriptions were also used to check the reliability of the coding with a third party.

Informal teacher interviews were carried out after the observations in order to evaluate how teachers perceived the amount of time provided for learning. Although the interviews were informal, these were standardised into a set of questions on a chart for ease of comparison.

3.5 Procedures

A letter requesting permission to carry out the study was issued to the head teachers in the schools concerned. Teachers were selected by the head teachers on a voluntary basis. Teachers were told of the intentions of the study and asked to use their normal teaching procedures and methods. The observer sat at the back of the room in order to minimise the reactivity effect.

A trial of the observational time sampling instrument took place at a non-participating school in order to check the accuracy of the system. Subsequently it was necessary to make some small adjustments to the recording system.

Each observation coincided with the start and finish, and lasted for the entire Mathematics and English lesson. Two observations were made of each teacher. Ten teachers were observed, making a total of twenty observations. These were recorded and later transcribed.

Using the time-sampling method, the observer watched and recorded the behaviour of the teacher at three minute intervals. Each snapshot was coded on the adapted instrument sheet.

The Sands of Time

Data from these were subsequently entered into a chart and scores were converted into percentages in order to calculate the amount of instructional and non-instructional time during each lesson. The same procedure took place with the data gathered from the interviews, questionnaires, calendars and timetables. The data was then aggregated in the form of a table for analysis. Means were calculated and studied for possible patterns or correlations.

3.6 Restrictions and limitations

Year Group

The study was based on only one year group. Results may well differ with other year groups as the demands of teaching diverse age groups will vary considerably.

Core subjects

The study involved observations in mathematics and English only.

Yair (2000) found that students were more attentive in hierarchical subjects such as mathematics. Although the focus of this study was on the teacher rather than pupil time on task, this research agrees with the results of Yair's study. The results obtained may vary as styles and approaches differ with subject.

Teaching method

The study uncovered a number of instructional variables affecting peripheral but significant aspects during observations. Differences in teaching method (chalk and talk, discussion, practical activity, partner or group work, individual work, presentation, watching television or whiteboard) seemed to have a great effect on the amount of instructional time offered. This aspect would make an interesting subject for a subsequent investigation.

The effect of student engagement

A large amount of research exists on this particular aspect and it was necessary to focus the study on one specific area. For this reason, a decision was taken not to carry out research into student engagement. However, teacher activities are closely related to student learning and behaviour, and it is impossible to separate the two. Further study of teacher behaviour and use of time in relation to pupil time on task may be a useful topic for further research.

The Sands of Time

The amount of instructional time may be an over-estimation as pupils have been shown in many studies to spend a large proportion of time off task.

“Given that students pay attention to instruction about 80% of the time, these time allocations suggest that students spend about 190 minutes per day engaged with academic or non-academic instruction. Of these 190 minutes, about 135 minutes per day would be engaged with academic instruction, or about 38% of the school day.”

(Karweit, 1985 p.11)

This aspect must therefore be taken into account when considering the results.

A central issue to the validity of these results is whether they measure time management or pupils' willingness (or readiness) to learn. In classes that are less attentive there might be more disruptions and time spent on pastoral issues than in classes where the majority of children are motivated. Factors such as family background, culture and socio-economic status will all have a bearing on the amount of time spent on management issues.

It would be interesting to compare these results with regions with lower-achieving students. This factor was identified by Stevenson (1983) who performed a study of first grade pupils and found that time was a less important indicator of achievement than cultural values. This may also explain some of the differences in the global comparative studies referred to in the literature review.

Coding

As there was only one coder for the observations, it is difficult to say whether another coder would have found the same results, but as the study is ultimately concerned with instructional or non-instructional activities, the precise coding variability within these broad categories is not of fundamental significance to the overall results.

A more positive effect of using one coder for all teachers is that the inter-teacher comparisons are more likely to be accurate.

A certain amount of subjectivity was necessary in order to develop the coding system but this was carried out with advice from the university to ensure maximum agreement. Instruction was defined as those activities involving learning opportunities, as opposed to non-instructional activities that were not focused on learning.

Determining the focus of the observations without subjectivity

Before the classroom observations began it was imperative that there was a defined and specific centre of attention. As the subject of the observations was selected personally there could have been inherent subjectivity. In order to avoid this, detailed accounts are also included in this chapter. (Weade & Evertson, 1991).

The coding system and instrument helped to limit the observer's values from affecting the accuracy of the observations. The identification of instructional (as opposed to non-instructional) activities was straightforward although further investigation into activities that could be considered academic (as opposed to non-academic) might provide an interesting study for the future, specifically as "A Nation At Risk" (NCEE, 1983) identified the inclusion of more pastoral aspects of learning as a major cause of the erosion of instructional time.

The ability of the pupils to attend to, or understand the instruction was not a focus of the study.

It was necessary to record rather than make judgements concerning approaches adopted by the teacher. The informal interview with the teacher was carried out in order to clarify any unclear or unexplained events that were observed.

Reactivity

The teachers were given a concise explanation for the purpose of the study and the central focus of the observation was described. After a brief introduction to the class, the observer remained out of sight and detached, so that normal classroom procedures were not affected.

Sample size

A possible fifteen schools in total were contacted and the details of the study were issued and explained. Out of these fifteen, only ten agreed to take part in observations. The reasons stated for declining to participate included lack of time, lack of willing teachers, "closed school policy" and the inappropriate focus of the study. For some schools it was simply too close to the end of term to observe usual mathematics and English lessons.

The small sample size affected the ability to generalise from the research findings.

In the future, another more specific investigation into instructional provision in one region or educational system may provide deeper insights into instructional time.

Timing

In order to leave time to review, evaluate and document the findings, the main block of available research time fell over the summer vacation. This, coupled with the comparatively early end of term in Dubai meant that there was pressure to swiftly arrange dates and times with schools before the end of term. Some schools were simply too busy but some had already finished for the summer vacation. The timing of the observations meant that the lessons may not have been “normal” procedure due to a relaxing of demands and expectations so close to the summer vacation.

With this in mind the measures of non-instructional time could be taken as over-estimations.

It would be useful to repeat this study at the beginning and the middle of the school year in order to compare results.

Length of observations

The original intention of this study was to observe an entire school day in order to calculate time lost in transitions. It became apparent that due to the dissimilar organisational and scheduling nature of the schools, the forming of any definitive conclusions would be too complex. The focus of this study was therefore altered to concentrate on time within specific core subjects. This highly specific focus may have limited the ability to generalise as the results may not apply to other subjects across the curriculum.

Instrument

The time sampling instrument developed for the study did not summate total time for every activity throughout a lesson. Its purpose was to provide a snapshot of activities taking place at regularly sampled intervals throughout a lesson. It is important to remember that the results are descriptive rather than summative in nature.

Triangulation

The study makes use of qualitative and quantitative aspects of measuring instructional time, involving semi-structured informal interviews with teachers, observations based on a time sampling method, and data regarding calendars, schedules and timetables. Agreement between these ensure the validity and reliability of any find

Chapter 4 Results

These are presented below in landscape format.

4.1 Results

Percentages were calculated based on the frequency of coded observations per teacher during mathematics, then English. Tables 1 and 2 present the percentage of instructional and non-instructional time per teacher. They also give information on class size, lesson length and the percentage of the lesson devoted to the two most common codings for non-instructional and instructional activities.

Instructional time in Mathematics.

The first set of results relate only to the mathematics lessons observed.

The average mathematics lesson was 55 minutes but lessons ranged from 30 to 80 minutes. In Mathematics the percentage of instructional time ranged from 63% to 90% of the lesson.

The average percentage of instructional time was 77%. The difference between the range was 27%.

The teacher with the most instructional time also had the lowest percentage of teacher talk of those observed.

All results have been rounded to the nearest whole number.

The Sands of Time

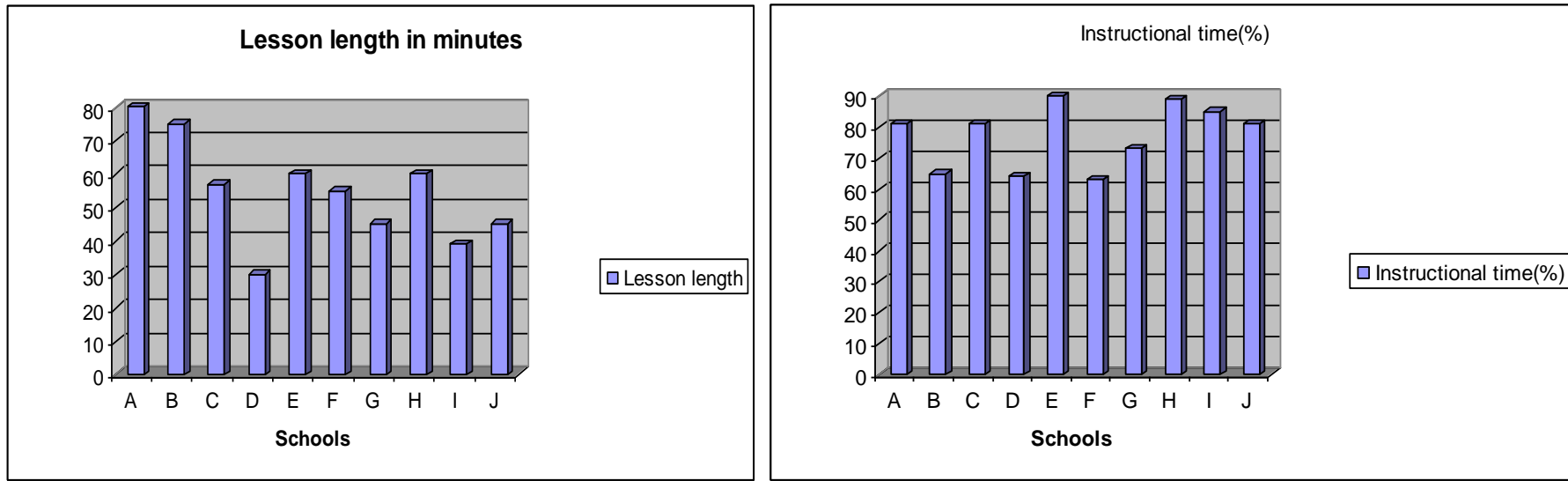
Mathematics.

	A	B	C	D	E	F	G	H	I	J	Mean
Class size	22	23	20	12	12	32	20	33	24	30	23
Lesson length	80	75	57	30	60	55	45	60	39	45	55
Instructional time(%)	81	65	81	64	90	63	73	89	85	81	77
Non-instructional time(%)	19	35	19	36	10	37	27	11	15	19	23
Organisation percentage of non-instructional time	60	78	50	50	100	100	100	100	100	100	84
Talking as a percentage of instructional time	86	53	59	29	26	67	36	76	54	31	52

Organisation as an activity accounted for at least a half of those activities counted and coded as non-instructional during observed lessons. The amount of instructional time used for “teacher talk” ranged on a large scale from as little as a quarter of the observations to 86 percent of the observations.

The Sands of Time

Mathematics



Lesson length ranged from thirty to eighty minutes which would equate with a single or double lesson or period.

Some teachers delivered one third more instructional activities than others.

The Sands of Time

Instructional time in English

These results relate only to the English lessons observed. The average English lesson was 50 minutes but they ranged from 30 to 78 minutes long. The percentage of instructional time ranged from 55 to 95%.

The average percentage of instructional time was 76% which was roughly the same result as Mathematics.

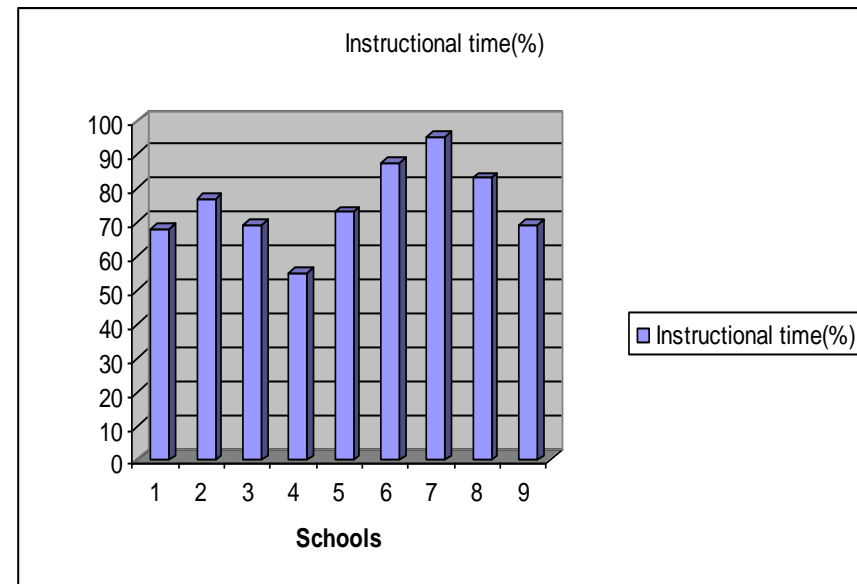
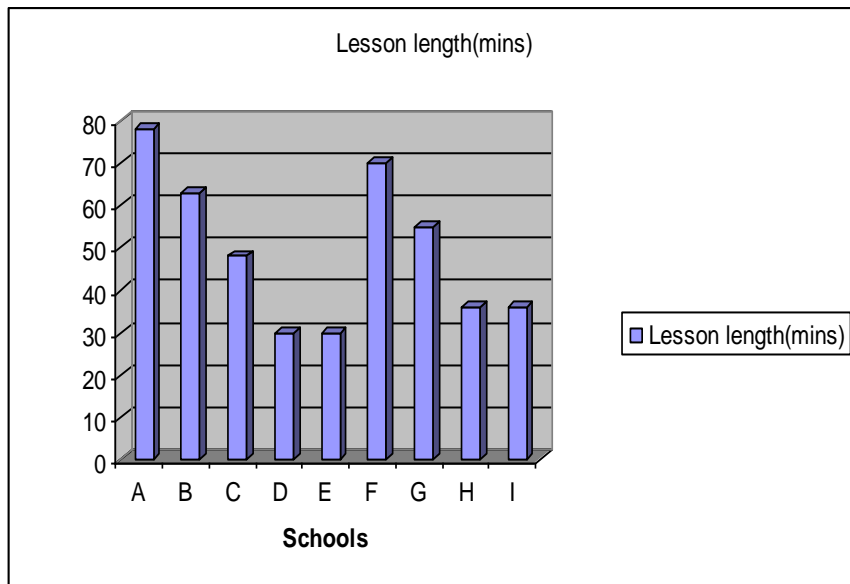
The difference of the range is 40% is almost a half.

English

	A	B	C	D	E	F	G	H	I	J	Mean
Class size	22	23	20	12	12	32	20	33	24	30	23
Lesson length(mins)	78	63	48	30	30	70	55	36	36	52	50
Instructional time(%)	68	77	69	55	73	87.5	95	83	69	81	76
Non-instructional time(%)	32	23	31	45	27	12.5	5	17	31	19	24
Organisation as a percentage of non-instructional time	50	60	60	40	100	100	100	100	75	100	79
Talking as a percentage of instructional time	29	24	64	33	63	43	11	90	33	62	45

The Sands of Time

English



As with Mathematics, some teachers taught single or double periods. The range in the amount of instructional activities counted and coded was vast. The teacher with the greatest instructional time offered almost double the amount of instructional time compared with the amount of coded observations counted in the lesson with the least.

The Sands of Time

Table 3 Instructional time in Mathematics and English- Average per teacher

These results show the differences between teacher as opposed to individual subject because their scores over two lessons have been averaged.

The average instructional time spent on both English and Mathematics was 52 minutes.

The averages ranged from 30 to 79.

	A	B	C	D	E	F	G	H	I	J	Mean
Class size	22	23	20	12	12	32	20	33	24	30	23
Lesson Length (mins)	79	69	53	30	45	63	50	48	38	49	52
Instructional time (%)	74	71	75	60	82	75	84	86	77	81	76
Non-instructional time(%)	26	29	25	41	19	25	16	14	23	19	24
Organisation as a percentage of non-instructional time	55	69	55	45	100	100	100	100	88	100	81
Talking as a percentage of instructional time	58	39	62	31	45	55	24	83	44	47	49

The Sands of Time

	A	B	C	D	E	F	G	H	I	J	Mean
Estimated Instructional Activities	80%	90%	50%	82%	96%	98%	95%	<u>No data</u>	65%	70%	81%
Estimated Non-instructional Activities	20%	10%	50%	18%	4%	2%	5%	<u>No data</u>	35%	30%	19%
Actual Instructional activities	74%	71%	75%	60%	82%	75%	84%	86%	77%	81%	76%
Actual non-instructional Activities	26%	29%	25%	41%	19%	25%	16%	14%	23%	19%	24%

It can be seen from the chart above and the graph below that teachers had varying knowledge of the way they spent their lesson time. Six out of nine teachers who agreed to comment under-estimated the amount of time they spent on non-instructional activities. The remaining teachers spent roughly fifty percent less time than they estimated on non-instructional activities. Apart from teacher 1 at school A, the teachers had difficulty in accurately describing their use of time.

The Sands of Time

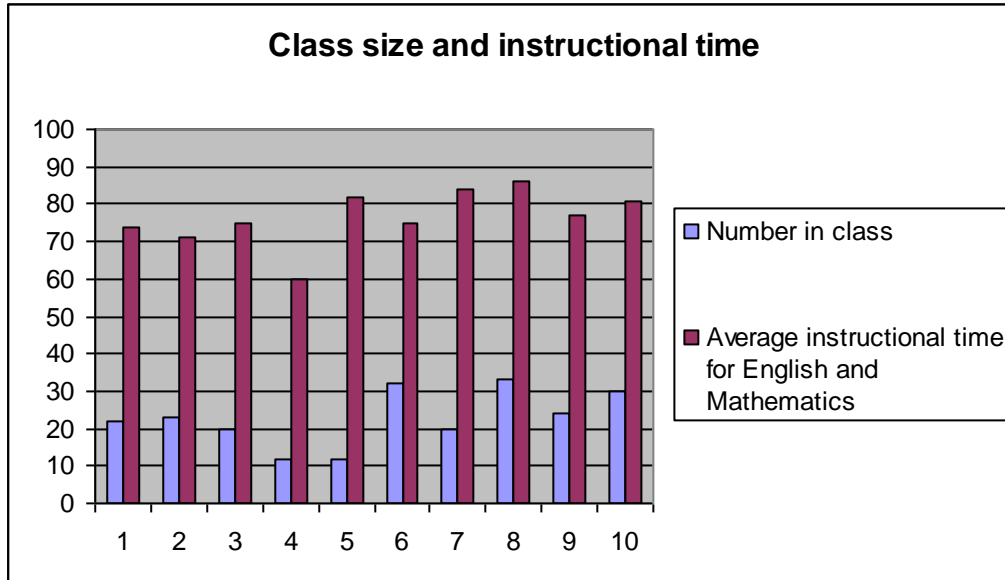
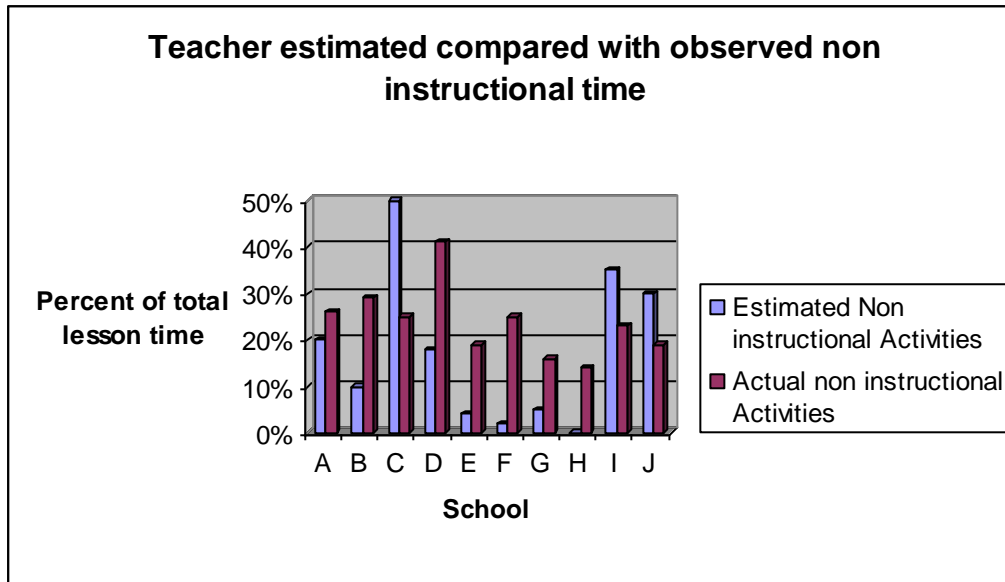


Table 5 & 6

The Sands of Time

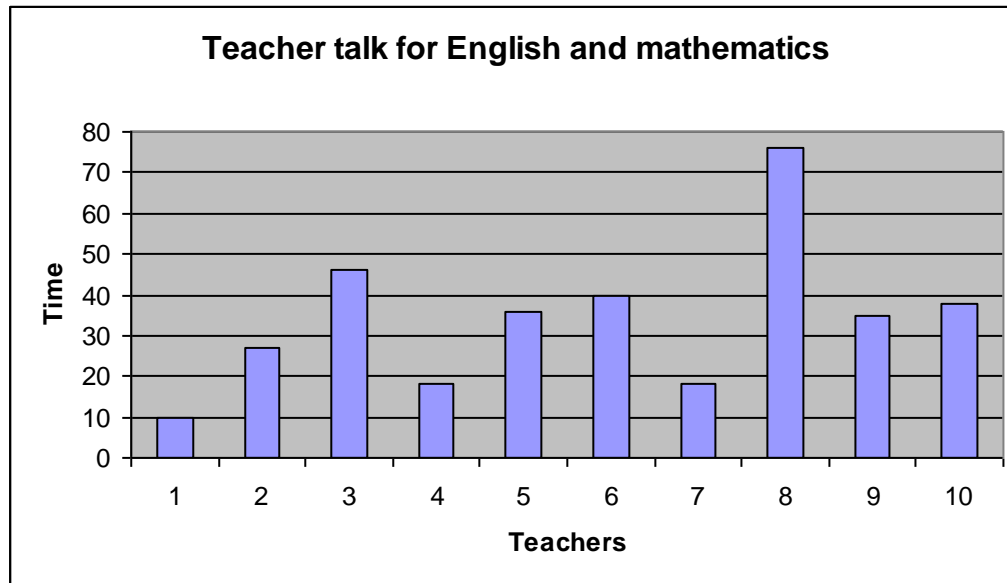
Frequencies of coded activities for each teacher

These results have been calculated by adding the number of observations for each activity for both English and Mathematics and expressing them as a percentage of both lessons taught by that teacher.

Frequencies are expressed above and percentages below. The type of activity that featured most prominently is highlighted in bold.

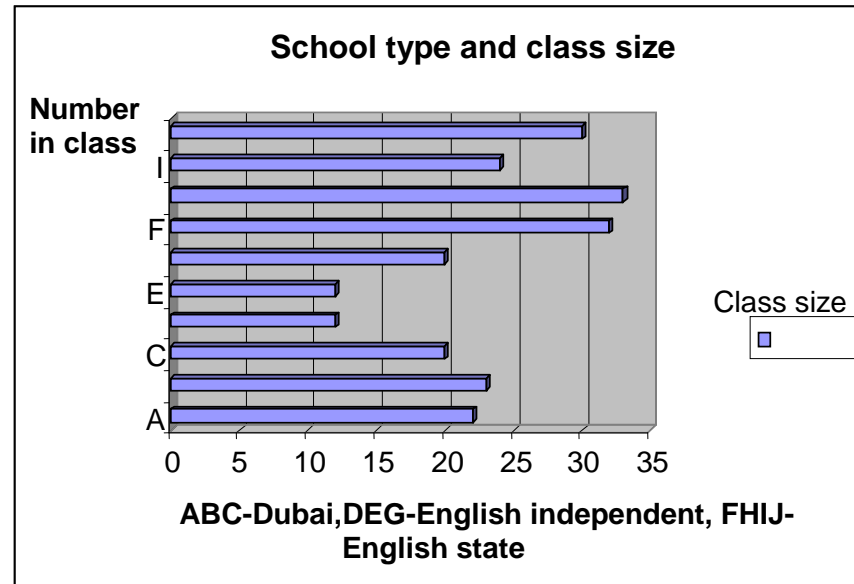
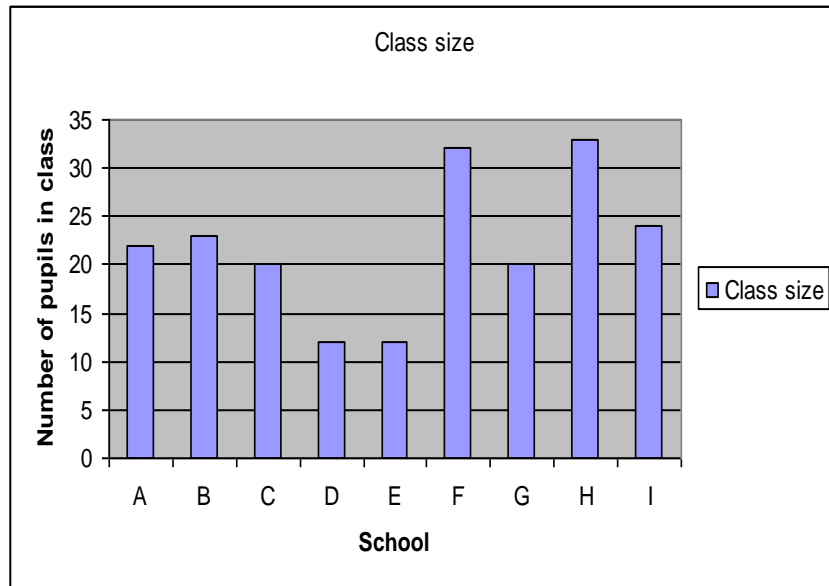
	A	B	C	D	E	F	G	H	I	J
Class size	22	23	20	12	12	32	20	33	24	30
Paper management	0	0	0	1/22 5%	0	0	0	0	0	0
Administration	5/52 10%	2/48 4%	0	1/22 5%	0	0	0	0	0	0
Organisation	7/52 13%	11/48 23%	5/37 14%	4/22 18%	5/32 16%	10/43 23%	5/34 15%	4/31 13%	5/26 19%	5/32 16%
Classroom management	0	0	2/37 5%	0	0	0	0	0	1/26 4%	0
Ancillary staff management	0	0	0	2/22	0	0	0	0	0	0
Personal management	1/52 2%	1/48 2%	2/37 5%	1/22 5%	0	0	0	0	0	0
Behavior management	5/52 10%	1/48 2%	1/37 3%	1/22 5%	0	1/43 2%	0	1/31 3%	1/26 4%	4/32 13%
Reading	0	0	0	0	0	0	0	0	0	0
Writing	1/52 2%	0	2/37 5%	0	3/32 9%	0	0	0	1/26 4%	1/32 3%
Talking	5/52 10%	13/48 27%	17/37 46%	4/22 18%	10/32 31%	17/43 40%	6/34 18%	22/31 71%	9/26 35%	12/32 38%
Procedural/organisational	23/52 44%	8/48 17%	4/37 11%	0	0	0	1/34 3%	0	0	0
Monitoring/Supervising	3/52 6%	7/48 15%	0	5/22 23%	11/32 34%	15/43 35%	6/34 18%	4/31 13%	7/26 27%	8/32 25%
Assessing with child	1/52 2%	5/48 10%	4/37 11%	3/22 14%	3/32 9%	0	16/34 47%	0	2/26 8%	1/32 3%

The average amount of time spent engaged in “Teacher talk” for both subjects.



The proportion of time that each teacher spent talking varied a great deal. This depended on the type of lesson and the phase in the learning cycle. Some teachers spent seven times more time talking than others.

Charts 5 and 6 Class sizes



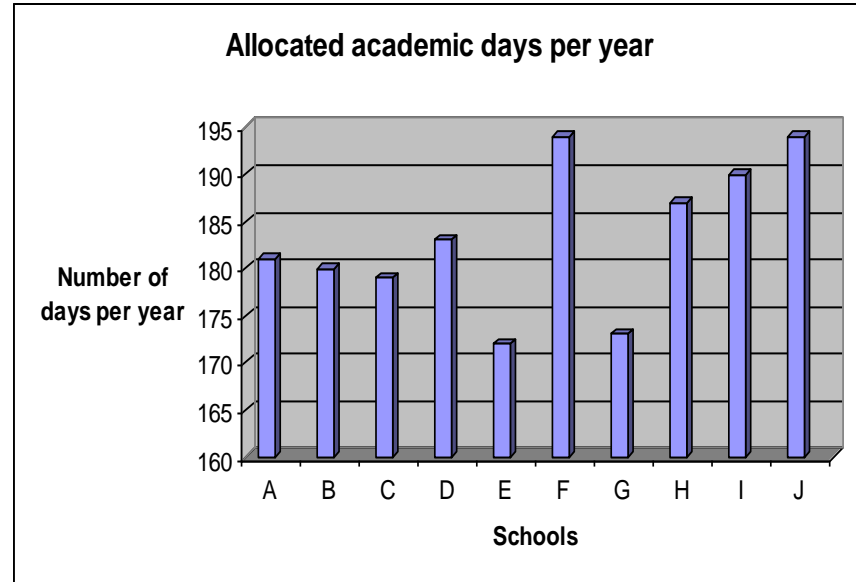
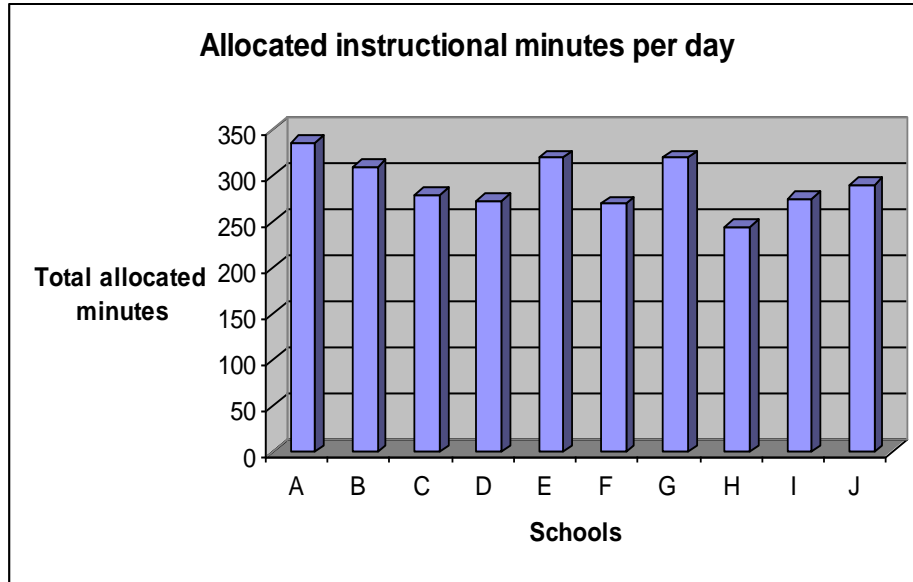
There was a considerable range in class sizes. The smallest, shown in the middle of the chart, were the English independent schools. The largest classes were the four English state schools with thirty or more pupils in the class, shown at the top of the chart. The three Dubai private schools had class sizes of a mid-range of twenty or just over twenty children, shown at the bottom of the chart.

The Sands of Time

Table 7 Analysis of calendar and timetable information

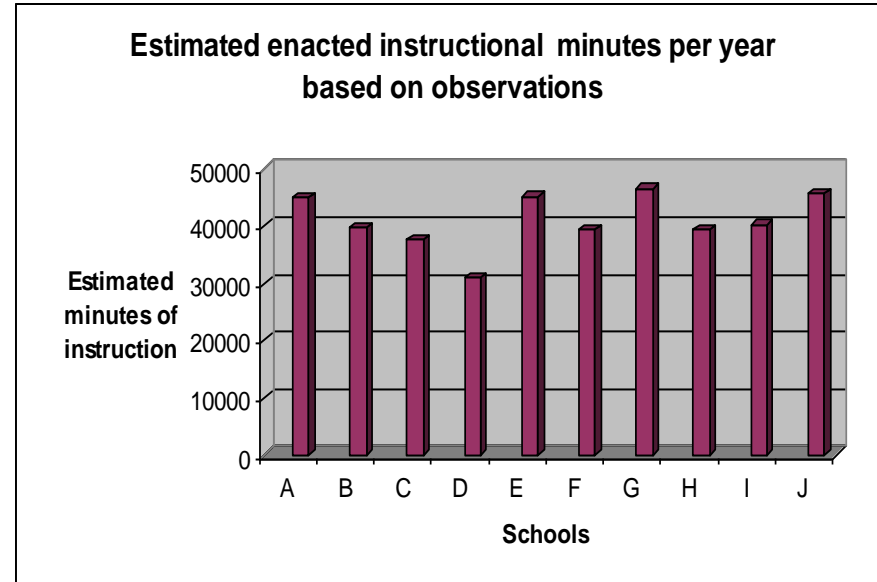
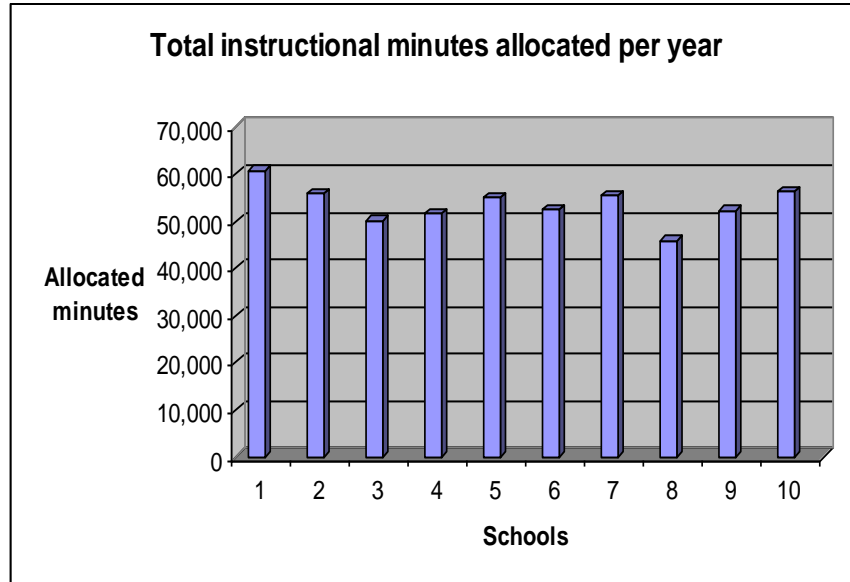
	A	B	C	D	E	F	G	H	I	J
Average minutes of instruction per day taken from class timetable.	336	310	280	273 (Not including PE every day)	320	270	320	245	275	290
Total Minutes of instruction per week minus assembly time.	1680	1550	1400 (With early home time.)	1640 (Does not include afternoon P.E. every day)	1600	1330	1600	1225	1375	1450
Total Instructional days in school year taken from school academic calendar.	181	180	179	183 (Including half day Weds and Sat.)	172	194	173	187	190	194
Instructional minutes in school year. (Average mins per day x total instructional days per year)	60,816	55,800	50,120	51,510 (Not including PE every day)	55,040	52,380	55,360	45,815	52,250	56,260
Average percentage of observed instructional time in English and Math.	74%	71%	75%	60%	82%	75%	84%	86%	77%	81%
Average enacted instructional minutes in lessons per year presuming English and Mathematics score.	45,004	39,618	37,590	30,906	45,133	39,285	46,502	39,401	40,233	45,571

The Sands of Time



It can be seen from the graphs that those schools with the shortest academic year have longer instructional minutes per day. Schools A, E and G have the longest day but the shortest academic year. Schools I, F and J have a relatively short school day but the longest academic year.

The Sands of Time



Those minutes originally allocated have decreased a great deal after having been adjusted for loss of instructional time based on the observations of teachers teaching core subjects. This loss will be an over estimation for other subjects as the majority of instructional time is usually reserved for core subjects. The estimated loss of instructional time could be equal to approximately one to two fifths of the total time.

The Sands of Time

Class management strategies.

Teachers differed in the strategies they used to minimize disruption and disturbances in the classroom. Some of these strategies demanded instructional time. These strategies were observed during lessons and have been arranged in the chart below, showing the quickest, least demanding solution at the top and the most time consuming at the bottom. Many of these strategies are based on elements described by Cochran (1983) and Gordon (Sept 2001). The use of these strategies is considered later in the study.

Strategy	Observed example	
	Negative	Positive
Pre-emptive	I'm going to choose, not you.	
Look	Glare, frown, hold gaze,	
Gesturing	Pointing with a stick	Pointing
Noise	Shhhh, ahh..., em...	
Naming	Caroline and Ann...	
Short polite request	Quiet please, Excuse me, Get on please, Hush please. Calm down please. Quite enough thank you.	
Statement	Someone is talking. I am having to shout. You are talking again. I'll have to stop. Too much noise. You are not thinking. I don't remember saying shout.	
Humorous statement		I have got a wiggly worm.(Queue)
General question to class	Who is talking? Are we getting on?	Who is sitting nicely?

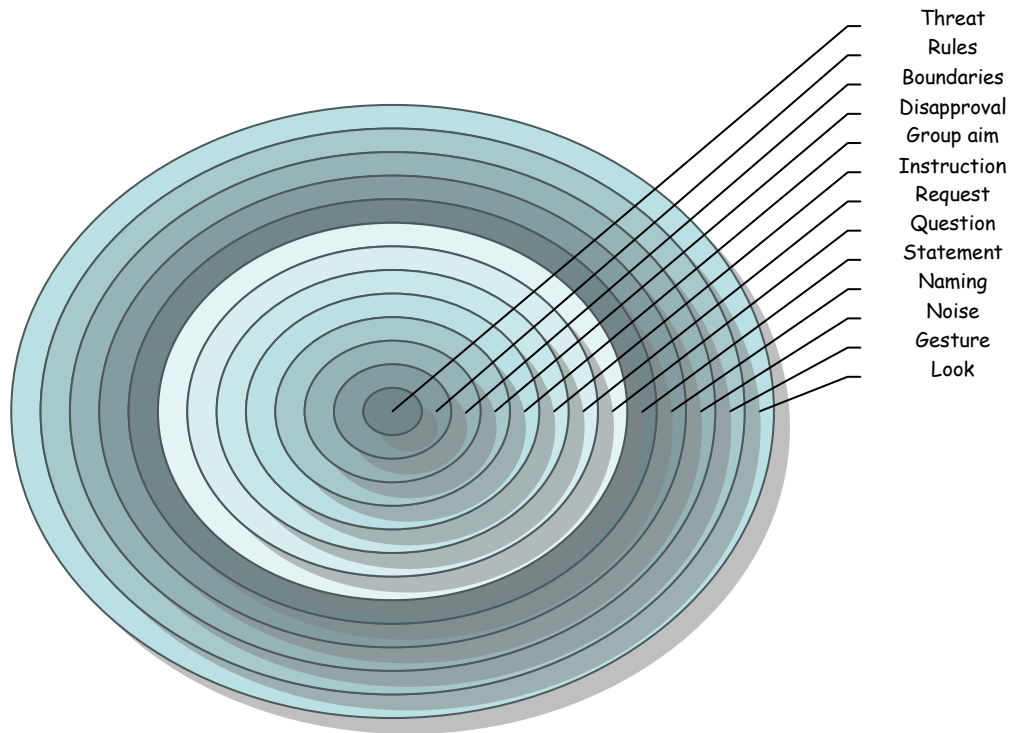
The Sands of Time

General question with identification	Who is talking in that group? Is it that table?	
Statement with identification	That group is making a noise. You have interrupted. The noise is coming from there. You are distracting... You need to listen. You need to get on. You are not listening. You need to stop talking. You are fiddling. You haven't even started. You have been busy trying to distract...	Well done you are all working hard over there.
Direct question to individual	Why are you fussing? Are you supposed to...? Can you stop that? Have you done what I asked? Have you finished?	
Imperative instruction	Stop! Stop that! Working! Work by yourselves, Quiet! Don't shout out! Put your hand up! Settle down! Let me finish! Stop fiddling and...	
Imperative instruction with reasons.	Calm down so they can concentrate.	
Longer polite request.	Please don't stop me again, Don't shout out please, Everybody getting on quietly please, Can you work quietly please?	
Restating the group/task aim	We all want to...	
Stating approval/disapproval	I'm quite disappointed.	
Restating the teacher's boundaries	I am not going to accept... We can't keep doing this.	
Restating the rules	You are not allowed to talk. You put your hand up.	
Restating the rules with reasons	When you call out, you are preventing...	
Threat without intended action	This is the last time I'm going to tell you. Last warning.	I hope you're working hard or you might have to work alone.
Threat with intended action	If you continue, I will...	

The Sands of Time

Model showing observed discipline structures.

The model has been developed based on Time Circles: a Model of Time Management developed by Wragg (1984 p.27).



Wragg's original model shows time, enacted time and mastery time in the centre. This model shows methods used to discipline the class and keep disruptions to a minimum. As the circle widens, it involves more of the class, creates more disturbance to others and demands a greater amount of time.

In well managed classrooms where the teacher has taken time at the beginning to set clear boundaries, guidelines and expectations, the teacher will rarely have to use strategies in the outer circles. In less well managed classes the teacher will need to use strategies that are in themselves disruptive and take time.

4.2 Discussion of results

This study set out to:

- Identify and isolate the main factors that guide instructional time.
- Filter from these the school and classroom factors that are within the school's and class teacher's control.
- Make recommendations concerning how educators can maximise quality instructional time.

The original hypothesis

The results of the study showed that instructional time does not reflect the amount of time allocated to it. Whilst the results did not uncover identifiable patterns, they showed that large variations exist in the amount of enacted instructional time in classrooms.

The research focus

In isolating the main factors affecting instructional time, this study revealed that many variables simultaneously affect it. Some have more effect than others, depending on each situation. Instructional time is difficult to separate from a jumble of variables concerning pupil time on task, home and cultural background, pupil ability, teaching experience, curriculum, and resourcing to name only a few. Despite such a complex situation the study has illuminated subjects that can be pursued and acted upon.

The decision to direct the focus of the observations to classroom management was not only based on a pattern that emerged from the study, but also a belief that it might offer a practical solution to some problems that were identified. The ability of teachers to manage their classroom effectively and limit disruptions alters their ability to maximise instructional time. Past research suggests that between one third and half of the day is actively used for instruction. Denham & Lieberman (1980) Karweit & Slavin (1985 p. 10)

This study aimed to do more than highlight the complex nature of the education process. It sought to identify weaknesses that could be targeted for positive input and improvement.

Findings

How much time is allocated for instruction in primary schools?

The amount of allocated instructional time was regulated although not necessarily enforced by the government of each country. A certain number of instructional days were decreed by law although a definitive figure was difficult to obtain. The cultural issue of access to data is described by Crossley & Watson (2003). It was clear that there was a certain amount of manipulation of instructional time guidelines and that schools interpreted them differently. Despite this total minutes averaged out fairly evenly after consideration of the academic calendar and daily timetable.

In cases where schools have adopted curricula from other countries, there could be a discrepancy between the amount of time required in order to complete the course and the amount of time available. This is particularly the case where there is a national curriculum with specific guidelines regarding time allocation. Some schools in Dubai have a difficult task squeezing the British curriculum into a short time scale. One of the reasons for the difference lies in the number of allocated days, shorter Thursdays and cultural or religious factors. The number of instructional days available is in line with the recommendation of 172 days specified by the UAE. It is not in line with a curriculum devised for a British system.

Instructional time

A significant finding is that the schools that attained above average instructional time were not part of an identifiable group. Neither the independent English schools, private schools in Dubai nor English state schools as a group created particularly more or less instructional time. However, the amount of instructional time depended principally on the individual teacher's approach to setting up classroom management strategies in the class and the expectation of high standards from the teacher and pupils. Findings agreed with Smith (2000) that approximately four fifths of allocated time was given to instruction (See table 3 page 41). Good & Brophy (2003, p.28) cite the work of Berliner (1987) and found that some students received up to four times the amount of instruction than others in the same year group. Although the results of the observations did not vary as widely as these, some students received twice as much instructional time as others

The Sands of Time

(See Table 7 page 47). Reasons for these differences could be the subjects studied and the timing of the observations which were for two core lessons rather than whole school day.

Some of the observations gave results that showed similarities to those of Stallings & Knight, in which average teachers spend 12% of time in active instruction, 38% organising and 50% in seatwork. The findings generally fell somewhere between this and Stallings & Knight's notion of effective use of teacher time with 50% on active instruction, 15% on organising and 35% on seatwork (See Table 5 page 44).

How does the amount of time for instruction vary between Dubai and England?

The statutory guidance for the UK is 23.5 hours of instruction per week. The number of instructional days is 11 days shorter in school C (Dubai) than the UK guidance. Wiley & Harnichfeger's (1974) findings seem to be applicable locally as there also exists:-

“...wide variation in the amounts of exposure allocated to pupils within classes, between classes, between schools and between districts.”

How does the use of this instructional time vary between primary teachers in core subjects?

The timetable or scheduling system that a school adopted affected the amount of instruction that pupils received. Core subjects were affected by including many pastoral and academic subjects within a limited amount of time. This was the case in school A in Dubai (See Appendix 17) where the teaching of many languages had been added to the timetable.

Great variations in the use of instructional time were observed and this appeared to frequently depend on educational philosophy and pedagogy. The central question that was purposely omitted at the beginning of the study was: Is instructional time important? The assumption was that it was highly important. In some classrooms it was clear that the pastoral element of the school day was of equal importance to instruction and a percentage of instructional time was devoted to these issues.

Instructional time and related finding

The Sands of Time

The central hypothesis of this study was that the quantity and effective use of instructional time does not reflect the time allocated for instruction. The results showed that this was indeed the case; however, results highlighted a range in how effectively teachers used instructional time. The teacher whose lesson created the most instructional time had a clear expectation of the class. Teacher talk was kept to a minimum and the task was split into small progressive steps through which the teacher led the children.

One way of expressing the findings for instructional time in mathematics is that some mathematics lessons observed contained a quarter more opportunities for instruction and learning than others. This relates to the findings of Berliner who reported that some students received four times more instruction than others. It is interesting to note that in mathematics, the teacher with the most instructional time also had the lowest percentage of teacher talk of those observed. In this lesson, each small session of direct teaching was followed by related student tasks. These were constantly monitored and instant feedback was offered. The pace of the lesson was swift and the children were expected to complete each task in the time given. Disengagement from the direct instruction would have resulted in being unable to complete the task. (Appendix 11 School E)

One way of expressing the findings for English instructional time is that some English lessons offered roughly one half of the instructional time of others. These findings are in line with research that suggests that hierarchical subjects such as mathematics (Yair 2000) tend to have more time on task.

As with mathematics, the teacher with the greatest percentage of instructional time in the observed English lessons was also the teacher with the least percentage of teacher talk. This would indicate that long rambling unclear introductions, explanations and instructions do not make best use of instructional time. In an informal discussion with one teacher she described her aim for instructions to be so precise and well matched that there would be no need for repetition. (Appendix 11 School G)

The study highlighted the fact that most of the teachers observed found it very difficult to accurately estimate their use of instructional and non-instructional time. One teacher thought it was far too difficult even to attempt to carry out the estimating exercise. All teachers interviewed found the task difficult and offered a range of reasons, primarily, dissimilar lesson structure for different subjects or tasks. Despite this, the results suggest that it may be useful for teachers to measure the amount of time they spend on certain activities in order to inform and improve their practice.

What strategies, if any, do teachers use to minimise disruption and maximise instructional time?

A number of strategies were employed by the teachers and these are shown above in the circular diagram in Chapter 4.1. These strategies demanded varying amounts of the teacher's time to instigate in order to minimise disruptions and disturbances and to keep the lesson "on track". Those teachers who achieved the highest amount of instructional time employed the most time management strategies, as shown in the data in the previous chapter.

Behaviour management

This study highlighted the issue of teacher expectation. In some schools clear behavioural expectations were laid down (Schools D, E and G). This can increase the amount of instructional time not only by saving time wasted in reprimanding students or reminding them of rules and expectations, but also in increasing student time on task. Many studies have shown that when students are more attentive there is less disruption and therefore more instructional time. Some teachers were more effective than others at employing strategies to avoid behavioural distractions in order to maintain the flow of instruction. This is in line with the findings of Erickson et al (1980).

The findings were similar in some cases to those observed by Behnke et al. (1981 p. 151) where approximately one eighth of the lesson was spent resolving distractions.

Two teachers (Schools H and J) spent at least double the amount of time on behaviour management than other teachers. In these cases the teachers were spending instructional time restating rules and bargaining with students in order to encourage the desired behaviour. In both cases the students were not yet aware of the teacher's expectations. The methods being used were inconsistent and there were no clear sanctions in place for poor behaviour or rewards for good behaviour. This was similar to the findings of Musingarabwi (2006 p.16) in which there must be a balance between time spent giving rewards and sanctions, and on maintaining the flow of the lesson. It is also agrees with the theories of Wheldall & Glynn (1989) and Bohn et al (2004) that strategies such as

restating rules, praise and sanctions can limit disruptions and maximise pupils' time on task.

4.3 Unexpected but significant outcomes

Due to the nature of comparative research and the high quantity of data-rich findings, this study uncovered additional factors that were not part of the main investigation. This issue is highlighted by Crossley & Watson (2003).

The additional results are included here because, as stated by the authors, narrative data can be as useful as hard scientific fact. Figures can be open to manipulation, but when taken with narrative data may give a truer picture.

These findings may have occurred because of the difficulty of separating variables that often arise at the same time in teaching and are not easy to separate (Anderson & Burns 1989 p. 8). Despite this, they are worthy of being mentioned and are covered below.

Class size

There was a considerable range in class sizes. The smallest tended to be the English independent schools, the largest were the English state schools, with Dubai class sizes in the mid-range of just over twenty children. This created considerable differences in the way the teachers used their time. In larger classes pupils spent more time waiting and received less attention from the teacher. In smaller classes, children received more one to one attention from the teacher and did not spend a great deal of time waiting.

Class size also affected the organisation of the class, including desk arrangements (see Appendix 16) and pupils' waiting time. Two of the three independent schools in England (schools D and G) favoured individual pupil desks rather than groups and had low pupil waiting times. Larger classes had the longest waiting time and tended to have groups or lines of desks (See Appendix 16 for classroom plans).

The desk arrangement findings are in line with the writings of Whelldall & Glynn (1989 p.51) in which the origin of grouped desks are traced back to The Plowden Report of 1967 where mixed abilities were believed to help lower ability students. As Alexander (2000) points out, it is still a common classroom arrangement despite the prevalence of whole class rather than group teaching.

Student profiles

The Sands of Time

Schools with the highest number of children with SEN tended to be the English state schools. The English independent schools had the lowest number, and Dubai had a mid-range of SEN children. It is interesting to note that the English state schools tended to have the largest classes and the highest number of children with Special Needs.

The Dubai schools had the most children with EAL or EFL. One of the classes observed had an assistant but she was assigned to that class and funded specifically for one child with Special Needs (Appendix 11 School C). There was no extra provision for these children to learn English. One of the schools with the highest number of EFL students offered the greatest range of additional languages on the timetable (School A Appendix 17).

Teaching Assistants

There seemed to be no singular rule for the year four classes observed; some had no assistant, some had an assistant for some of the timetable, others had a full time assistant. The assistants were involved in instructional and non-instructional activities during the lessons observed. Generally, most of the full time assistants were observed in the English state schools and these were often assigned to work with individual students or groups. The English independent schools had a range of situations. Those with the help of assistants tended to use them for instructional purposes. The Dubai schools tended not to have an assistant, apart from the case stated above.

A teaching assistant can help to increase the amount of instructional time particular children receive, or release the teacher to give individualised instruction. This is line with Kutnick's (1988 p. 19) suggestion that with increasing demands on teacher time, the setting up of routines and structures such as group work is vital.

Teacher position

Most of the teachers taught from the front of the class, either beside the board or their desk. Very few moved around the room. Occasionally those children at the back of the

The Sands of Time

room, especially in the larger classes of the English state schools, became disconnected from the lesson.

Most teachers did not sit at their desks during the lessons. Those who did tended to use it as a base for marking and assessing work. In one school the teacher did not use her desk at all (Appendix 16 school G).

It was evident that some Dubai teachers in very large schools needed to position themselves at their desk in order to communicate with other staff by e-mail (schools A and C). This shows that technological developments may save time but may amount to yet another distraction (similar to dealing with interruptions by pupils and adults on administrative errands).

Pedagogy

Most of the observed teachers taught the whole class simultaneously, and then answered calls for extra help by the pupils. In many schools there was very little group or practical work, despite the availability of another adult. These findings echo those of Bidwell & Kasarda (1980) who describe “lecture recitation” and “task differentiation” teaching methods. This finding was surprising considering the amount of available research on the many methods of learning (Anderson, 1984 Gardner, 1993) and the benefits of using practical tasks to improve student engagement. (Stallings 1980. Yair, 2000) The nature of the lessons differed a great deal, reflected in pedagogy and philosophical approaches. Despite this, most lessons devoted a great deal of time to formal lecture-style activities.

A large body of research states that activities that are more practical in nature increase student engagement. Rosenshine (1979) found that participative methods were only used 7.9% of the time in observed lessons, and lecture based teaching was identified in 72.5%

The Sands of Time

of lessons. His suggestion was that teaching style was more important than time in increasing student attainment.

Lesson Length

Lesson length ranged considerably, and the length of some lessons did not seem to have a bearing on the class timetable. This again reflects the timing of the observations. Generally, the lessons were singles or doubles ranging from 20 to 40 minutes, or 30 and 60 minutes respectively.

Organisation

Many teachers spent their non-instructional time on organisational activities. This is frequently inevitable, but some of these were time consuming and could have been avoided through greater planning and forethought. Some activities were disruptive, and, because many occurred after the instruction had taken place, some students had forgotten the nature of the task by the time they had completed the organisational task.

Chapter 5 Conclusions

The two main aims of the research were to quantify the amount of allocated instructional time and to study the amount of enacted time during classroom observations. It was hoped that those teachers with higher percentages of instructional time might present strategies for those seeking ways to maximise their existing use of time.

The research was carried out using an observational time sampling method adapted from an instrument referred to as the Stallings snapshot. Qualitative data was gathered in the form of questionnaires and interviews from teachers. Quantitative data from timetables and calendars was used to gather information concerning allocated time.

The amount of allocated lesson time dedicated to instruction varied a great deal between the ten teachers who were observed. Due to the complex nature of primary classrooms it was difficult to pinpoint specific variables that may have affected the use of time. Despite this, certain patterns were noted as belonging to those teachers who had the highest measures of instructional time. These routines involved classroom and organisational strategies which minimised disruption and distraction and kept lessons on track. These provided the most practical results of the study.

Three types of schools were observed; public and private schools in England and Dubai. The amount of time allocated to instruction varied between the schools, although no particular pattern was noted in the figures that were obtained. The amount and organisation of allocated time differed between schools, irrespective of region. This was contrary to the hypothesis that a pattern of allocated and enacted time would emerge from the three groups.

Implications for further research.

The discovery that, despite policy regulation, schools and teachers interpret time guidance independently, is in itself interesting. It implies that in choosing a school, parents might need to consider philosophies concerning the length and organisation of the school year and day. It also implies that those in policy making positions may need to carry out further research into the organisation and use of enacted instructional time in schools.

The Sands of Time

The conclusions of this study have been reported by other researchers, although the proportion of instructional time in the lessons was often reported to be lower. This may be due to two main factors, namely, two core subjects only were observed rather than the whole day, and the time sampling method may not be directly comparable to other research methodologies.

The most useful findings were recorded in the transcriptions of the lessons (see Appendix 12) relating to strategies employed by teachers to maximise instructional time. These strategies were also noted in previous research.

Further research into the extent that teachers' management and organisational abilities can be altered through the use of a treatment or training course might be enlightening. Action research based on methodically increasing the provision of instructional time through the use of research-based training may be a useful approach. A study involving an experimental treatment based on elements observed and suggested relating to classroom management strategies may generate deeper and more specific findings.

It is clear that classroom management skills are a key factor in maximising instructional time. The results indicate that the teacher, rather than the policy maker, is ultimately responsible for the amount of time devoted to learning. These findings indicate that educational provision is not equal and to a certain extent is unavoidably unfair. (Anderson, 1984 p.1.) The amount of instruction a pupil receives is dependent not on policy or even decisions made by school leaders. According to the small sample of teachers observed in this study, the amount of time devoted to learning is determined by each teacher's individual capacity and dedication.

The future

Rather than finding ways to increase the effectiveness of teachers who are already over-stretched (Silcock ,1992 p. 164) perhaps we should now focus on restructuring our current notions of school time so that they are less teacher-intensive and more learner-intensive. Research into alternative educational structures involving students progressing at a matched individualised pace, where teachers "facilitate" rather than lecture, where "sharing" teacher time is a redundant issue, where teachers are given the apparatus they require to succeed (Stoll and Fink, 1986) and where school timetables and calendars match the learners' needs, may provide the key to more effective instruction. Having established a link between instructional time and achievement in this modern age we can

The Sands of Time

afford to analyse new approaches that maximise the use of this resource (Bennett, 1995 p.278).

The UAE is well placed with newly emerging educational policies to re-assess and re-evaluate the allocation of instructional time and to create new structures that exploit learning opportunities to the full. In an age of increased technical possibilities perhaps it is time to ask whether the old structures currently meet our requirements (Stoll et al., 2003 p.56). Perhaps the sands of time have finally run out for our existing educational structures and what is now required is instructional restructuring in the light of what we now know about teaching and learning.

Chapter 6 Recommendations

These recommendations may provide a starting point for teachers wishing to consider and reflect upon their own practice. Teachers are involved in making a number of decisions regarding time allocation, classroom arrangement and teaching strategies (Arends,1991).

In order to optimise learning it can be useful to inform these decisions with relevant literature, research and personal reflection.

“classrooms are busy places, and teachers (and students as well) are so busy responding that they have little time to think about what they are doing. Many factors contribute to classroom complexity. Second, teachers are seldom observed systematically, so they rarely receive valuable information about ways to increase their effectiveness.”

Good. & Brophy. (2003) p48

The following recommendations are not an exhaustive list but apply to the findings from this study only. Some of the findings relate directly to the original research questions. Some were unexpected outcomes.

“In allocating instructional time, it can be useful as a starting point to consider the percentage of time in non-instructional activities lost in unnecessary disruptions and distractions. Wherever possible, training and support can be provided for less efficient teachers.”

(Stallings & Knight, Evertson ,Nov. 1983)

The Sands of Time

The amount of learning opportunities and instructional time provided has been shown to have an effect on achievement. If we limit the provision of instructional time for some students, their opportunities to learn will be more restricted than others. When applying this basic assumption to our globalised and competitive world, we can see that if a nation sets a comparatively lower number of annual instructional days, their policy makers are limiting the comparative potential achievement of their future generation and work force. In many countries including the UAE, religious and cultural events play an important part in the curriculum. It is worth noting that in 1952 apart from Koranic recitation schools for boys,

“there was not a single school in any of the Emirates.”

(Cameron et al., 1983 p.891)

In fifty five years the region's educational provision has soared and Islamic characteristics, as with other Moslem countries, remain important (Benavot et al Feb. 1991). This is evident in the legal requirement of Islamic studies for all Arabic first language pupils in the region, whether attending public or private schools.

In the light of this study's findings, the implications of the loss of 2 hours of instruction per day or ten hours per week require further research. Many schools operate on a considerably shorter school day during certain religious periods. Several schools finish earlier on the last day of the week. Policy makers and those in leadership roles need to consider how this affects the provision of instructional time and how those lost hours can be regained or recouped.

It is also necessary to consider that pupils will not always remain on task. Yair, who completed one of the most recent research studies in this field, found that pupils were off task for roughly half of the time (Yair, 2000 p.486). When these three factors are grouped together with the findings of this study it can be seen that instructional time is indeed a precious resource and should not be overlooked by those formulating and carrying out policies.

An important issue highlighted by these figures is not only whether learning opportunities are restricted by fewer instructional days but whether it is possible for private schools to teach a curriculum designed for a longer academic year. For example, the British curriculum includes literacy and numeracy hours, which are run on a strict plan of weeks or days, allotted to each skill or concept to be taught. Where there is less

The Sands of Time

time available, there will be considerable pressure to complete the curriculum within a given time. The ten days missing from the allocated time represents two weeks of literacy and numeracy planning to be compressed into the year.

Time and its implications for teacher training.

Training has been shown to be a useful way of helping teachers to maximise instructional time in classrooms (Stallings). To save time in the long term we must invest time in the short term for the training and professional development of teachers.

“Some curriculum restructuring will be needed in order to support the re-skilling of teachers. Time will be needed to focus on a wider repertoire of teaching/learning styles and on the development of learning behaviors. The longer the time unit, the more time staff will have to plan together and to practice different teaching approaches. Different lesson lengths might be necessary to support teachers in the process and practice of re-skilling.”

Hopkins 2001 p.169

The findings, implications and recommendations of this study are summarised below.

6.1 Recommendations for policy makers.

- Generally, the academic year here is shorter but the school day is longer. This does not take account of shorter days and weeks due to religious and cultural events. At present there does not seem to be a definitive law regarding instructional time in the region. In conversations with officials at the education office, various numbers were given and there seemed to be confusion over the issue. The number appears to change every year which increases confusion. It can be seen from the results of the research that there is considerable leeway and freedom for schools to interpret the current guidelines. This is an area that warrants further clarification and study.

6.2 Recommendations for school leaders.

- The provision of professional development opportunities is vital for those teachers experiencing difficulty in reaching learning goals within the time available. The Stallings method has been demonstrated to increase instructional time and therefore learning opportunities. Personal research carried out by

The Sands of Time

individual or small groups of teachers may also highlight areas for improvement and suggest ways forward.

- Previous research and the results of this study show that clear expectations and behavioural guidelines given on behalf of the teacher in the first few weeks of the year are vital in avoiding wasted time later in constantly restating and reminding pupils of rules and expectations.
- School policies should recognise and reflect the value of devoting time in the first part of the school day to the teaching of core subjects. The pupils will benefit in two ways. Not only will they be more alert, but in prohibiting unimportant interruptions and in keeping disruptions to an absolute minimum, the children will gain uninterrupted periods of instruction.
- The research shows that smaller classes help to increase the quality and amount of time available for each pupil. Certain time consuming strategies are necessitated by larger classes. It would be interesting to compare how much time individual pupils receive in smaller and larger classes using a similar method used in this study. Two separate observations showed (see Appendix 11 schools A and F) that some pupils did not receive any individual help or attention from the teacher at all during one particular lesson. It could be argued that without knowledge of each pupil's ability to carry out the central task of each lesson, the teacher will be unable to accurately plan and carry out the next learning steps for all pupils.
- This study highlighted very different approaches to the use of support staff. In the UAE, support staffs were often unqualified and inexperienced. In English schools, teaching assistants were able to help in maximising instruction for less able pupils, or in providing support to the teacher so that they were free to match instruction to need.
- This study highlighted considerable differences in timetabling between schools. Further research is necessary to ascertain optimal concentration expectations for pupils. Previous research has shown positive effects of "blocking" certain subjects together so that the previous lessons are not forgotten.

6.3 Recommendations for class teachers

- This study highlighted that a considerable proportion of each lesson was spent on organisation. Efficient planning and resourcing can make better use of instructional time.

The Sands of Time

- Despite a considerable amount of research documenting the importance of student participation in lessons, the majority of lessons observed contained a high proportion of “lecture” style teaching. In their planning, teachers should consider whether there is any requirement for lengthy periods of teacher talk, in order to ensure that their explanations are clear and instructions are precise, thus avoiding the necessity to restate and clarify.
- Greater investigation may be necessary and a wider study commissioned into the effect of pace on student learning. Some teachers observed were able to communicate lesson goals to the children and set up an expectation that these should be achieved within the given time. In these lessons, more time was given to instruction and generally, the pupils showed a greater desire to remain on task.

In summary

From the initial research questions and the subsequent classroom observations it was possible to identify inequalities in the provision of instructional time. This prompted further questions concerning the reasons behind the variation and methods employed by those teachers who generated and sustained instructional time. From detailed transcriptions it was possible to identify three main differences:

1. Teachers expected more from their pupils and communicated this through clearly defined rules and boundaries.

The Sands of Time

2. Teachers kept class distractions and periods of teacher talk to a minimum by maintaining a swift teaching pace and low tolerance of disruption.
3. Teachers were more concerned with pupil success than the process of lesson delivery.

Specific methods to attain this are given in the table on page 52. These provide detailed recommendations and answers based on actual observed practice for those wishing to investigate and improve their own time management skills.

Those in leadership or policy making positions who have an interest in this field ought may wish to reflect on the current provision of classroom management training and on policies concerning the allocation of instructional time.

When so many variables restrict the opportunity for change and improvement, it seems logical to begin by examining an area that is comparatively uncomplicated. Perhaps small adjustments such as these are what is required to shore up the sands of time to prevent them from being blown away by the more inconsequential and insignificant aspects of school life. Or perhaps we need to leave a system that is already crumbling and construct a stronger one, more suited to the existing educational climate and conditions.

References

- Abadzi, H., Absenteeism and Beyond: Loss and Costs of instructional Time in Schools. Draft document for the World Bank. Available from: http://econ.worldbank.org/external/default/main?pagePK=64165259&piPK=64165421&theSitePK=469372&menuPK=64166093&entityID=000158349_20071011084130 [Accessed 8 May 2007]
- Alexander, R., 2000. *Culture and Pedagogy: International Comparisons in Primary Education*. Malden USA: Blackwell Publishing
- Anderson, L., 1981. Instruction and Time-on-Task: A Review. *Journal of Curriculum Studies* 13 pp 289-303
- Anderson, L.W., 1984. *Time and School Learning Theory, Research and Practice*. London and Canberra: Croom Helm
- Anderson, L.W. and Burns R.B., 1989. *Research in Classrooms. The Study of Teachers, Teaching and Instruction* Oxford: Pergamon
- Arends, R.I., 1991. *Learning to teach*. 2nd ed. New York: McGraw-Hill Inc.
- Arlin, M., Winter 1979. Teacher Transitions Can Disrupt Time Flow in Classrooms. *American Educational Research Journal* 16 (1) pp 42-56
- Aronson, J., Zimmerman, J., and Carlos, L., 1998 Implications of research *West Ed*. Available from: www.wested.org/online_pubs/timeandlearning/4_implicationshtml [Accessed 4 June 2007]
- Barr, R., and Dreeben, R., 1977. Instruction in Classrooms. *Review of Research in Education* 15, pp 88-162
- Behnke, G., et al, Jan 1981. Coping with Classroom Distractions *The Elementary School Journal* 81(3), pp 135-155
- Bell, M.L., and Davidson, C.W., 1976 Relationship between pupil-on-task performance and pupil achievement. *The Journal of Educational Research* 69 pp172-176
- Benavot, A., et al., 1991. Knowledge for the masses: world models and national curricula, 1920-1986 *American Sociological Review* 56, pp 85-100
- Benavot, A., Knight, S., and Stallings, J., 1995. The Economics of Classroom Time: How to help students spend more time learning? presentation. Available from: <http://info.worldbank.org/etools/docs/voddocs/406/923/stallings.ppt> [Accessed 15 October 2007]

The Sands of Time

- Benavot, A., Nov 2004. A Global Study of Intended Instructional Time and official School Curricula, 1980-2000.: *Background paper commissioned by the International Bureau of Education for the UNESCO-EFA Global Monitoring Report (2005): The Quality Imperative.*
- Bennett, N., 1995. Managing time in *An Introduction to Teaching. Psychological Perspectives.* Ed. Desforges C. Oxford U.K. Cambridge U.S.A.: Blackwell
- Bidwell, C.E., and Kasardra, J.D., August 1980. Conceptualizing and measuring the effects of school and schooling. *American Journal of Education* 88 pp 401-430
- Bloom, B.S., 1976. *Human characteristics and school learning.* New York: McGraw-Hill
- Bohn, C., Roehrig A., and Pressley M. 2004. The First Days of School in the Classrooms of Two More Effective and Four Less Effective Primary-Grades Teachers *The Elementary School Journal* 104 (4), pp 270-287
- Brown, B.W., and Saks D.H., 1986. Measuring the effects of Instructional Time on Student Learning: Evidence from the Beginning Teacher Evaluation Study. *American Journal of Education* 94 (4), Aug pp 480-500
- Cameron, J., et al., 1983. *North Africa and The Middle East. International Handbook of Education Systems* 2 Section B. Chichester U.K.: John Wiley & Sons Ltd.
- Carroll, J. Jan/Feb 1989. The Carroll Model: A 25-Year Retrospective and Prospective View. *Educational Researcher* pp 26-31
- Chalker, D.M., and Haynes R.M., 1994. *Defining a world class standard for time on task. Chapter 4 World Class Schools. New Standards for education* Pennsylvania USA : Technomic
- Chubb, J.C., and Moe, T.M., Politics, Markets and the Organisation of Schools. Dec 1988. *The American Political Science Review* 82 (4), pp 1065-1087
- Cochran, K.H., Dec 1983. Prescription for Discipline. *Music Educators Journal.* 70 (4), pp 32-36
- Cooper, H., et al., Autumn 1996. The Effects of Summer Vacation on Achievement Test Scores: A narrative and Meta-analytic Review. *Review of Educational Research* 66 (3) pp 227-268
- Cotton, K., November 1989. Educational Time Factors . *OERI Office of Educational Research and Improvement.* Available from: www.nwrel.org/scpd/sirs/4/cu8.html [Accessed 11 May 2007]

The Sands of Time

- Crossley, M., and Watson K., 2003. *Comparative & International Research in education: Globalization, Context and Difference*. London: Routledge Falmer
- Cummings, W., 1999. The institutions of education: Compare, compare, compare! *Comparative Education Review* 43, pp 413-437
- Delzell, J., April 1987. Management For Quality learning. *Music Education Journal* pp 43-47
- Erickson, G., Hawkhead, K., and Moody, P., Sept 1980. Dealing with Classroom Distractions *The Elementary School Journal* 81(1), pp 40-45
- Evertson, C.M., et al., Nov. 1983. Improving Classroom Management: An Experiment in Elementary School Classrooms *The Elementary School Journal*. 84 (2), pp172-188
- Fisher, C.W., and Berliner, D.C., 1985. *Perspectives on Instructional Time*. New York: Longman
- Frazier, J.A. and Morrison, F.J. April 1998. The Influence of Extended-year Schooling on Growth of Achievement and Perceived Competence in early Elementary School *Child development*. 69 (2), pp 495-517
- Galton, M., 1979 Strategies and Tactics in Junior School Classrooms *British Educational Research Journal* 5 (2), pp 197-209
- Gardner, H., 1993. *Multiple intelligences: The theory in practice* New York: Basic Books
- Gerleman, S., 1987. An Observational Study of Small-Group Instruction in Fourth-Grade Mathematics Classrooms. *The Elementary School Journal* 88 (1), pp 3-19
- Gettinger, 1984., Achievement as a function of Time Spent in learning and Time Needed for Learning. *American Educational Research Journal* 21 (3) pp. 617-628
- Glass, G.V., School Reform Proposals: Time for School: Its Duration and Allocation. Available from: <http://eps1.asu.edu/epru/documents/EPRU%202002-101/Chapter%2004-Glass-Final.htm> [Accessed 12 May 2007]
- Good, T.L., and Brophy, J.E., 2003. 9th ed. *Looking in Classrooms* Boston: Pearson Education Inc.
- Goodman, G., and Pedergrass, R., April 1977. Classroom Management: A Model for the Identification, Development, and Assessment of Competencies. *Peabody Journal of Education* pp 196-200
- Gordon, D.G., Sept 2001. Classroom Management: Problems and Solutions. *Music Educators Journal* 88 (2), pp 17-23

The Sands of Time

- Harnischfeger, A., and Wiley, D.E., 1976 Exposure to schooling: Method, conclusion, policy. *Educational Researcher* 5(2) pp 18
- Holley, F.M., and Ligon G.D., May-Jun., 1979. Time: Today It Translates to Dollars *Educational Evaluation and Policy Analysis* 1 (3), pp. 109-112
- Johanressen, J., and Lorenz H., Oct. 2001. Block Scheduling Revisited. *The French Review*. 75 (1), pp 142-147
- Karweit, A., 1976 Reanalysis of the effect of Quantity of Schooling on Achievement. *Sociology of Education*. 49 (3) pp 236-246
- Karweit, N., and Slavin, R.E., Summer 1981. Measurement and Modelling Choices in Studies of Time and Learning. *American Educational Research Journal* 18 (2) pp 157-171
- Karweit, N., June/July 1985. Should We Lengthen the School Term? *Educational Researcher* John Hopkins University Baltimore, Maryland pp 9-15
- Karweit, N., 1988A Time-on task: The second time around. *NASSP National Association of secondary School Principals Bulletin* 72 (505) pp 31-39
- Karweit, N., Nov. 1988. Quality and Quantity of Learning Time in Preprimary Programs *The Elementary School Journal* 89 (2) Special Issue: Early Childhood Programs in Public Schools. pp 118-133
- Kutnick, J.P., 1988. *Relationships in the primary classroom* London: Paul Chapman
- Lee, Edwina M., October 29 2000. NJSBA executive director quoted in :*New Jersey School Boards Association Negotiation Yielding More Instruction Time* Available from: http://www.njsba.org/press_releases/CONT2000.HTML [Accessed 4 May 2007]
- Levin H.M. Summer 1984. About Time for Educational reform. *Educational Evaluation and Policy Analysis* 6 (2) pp. 151-163
- Levin, H.M., 1988. Cost-effectiveness and educational policy. *Educational Evaluation and Policy Analysis*, 10 (1) pp51-69
- Musingarabwi.,2006. The Effectiveness of praise Versus Punishment as a Behaviour Management Strategy in Primary and Secondary Schools. Dissertation: DissED2006MED/MBib ID 2564062 U.K.:University of Birmingham
- Nerenz, A., and Constance K., . Autumn 1982. A Time-Based Approach to the Study of Teacher Effectiveness. Foreign Language Teacher Effectiveness *Modern Language Journal* 66 pp 243-254

The Sands of Time

- Orellana, F. and Thorne B., Dec.1998. Year Round Schools and the Politics of Time *Anthropology and Education Quarterly* 29 (4) pp 446-472
- O'Connor-Petruso, and S. Miranda, K., 2004. Gender Inequalities among Top Scoring nations, Singapore, Republic of Korea & China Taipei, in Mathematics Achievement from the TIMSS-R Study. Available from:
http://www.iea.nl/fileadmin/user_upload/IRC2004/OConnor-Petruso_Miranda.pdf
- O'Neill, P., 1988. Teaching Effectiveness: A Review of the Research *Canadian Journal of Education* 13:1 pp162-185
- Peterson, P.L., and Fennema, E., Fall 1985. Effective Teaching, Student Engagement in Classroom Activities, and Sex-related Differences in learning Mathematics. *American Educational Research Journal* 22 (3) pp 309-335
- Rosenshine, B., 1977 . Evaluation of Classroom Instruction. *Review of Educational Research* 40 (2), pp 279-300
- Rosenshine, B.V., 1979. *Content, time and direct instruction*. In: P.L. Peterson and H.J. Walberg Eds, *Research on teaching: Concepts, findings, and implications* Berkeley, CA:McCutchan Publishing Corp. pp28-56
- Silcock, P., May 1992. Primary School Teacher-Time and the National Curriculum: Managing the Impossible *British Journal of Educational Studies* XXXX (2),
- Silva, E., January 2007. On the Clock: Rethinking the way schools use time. *Education sector Reports*. Available from:
http://www.educationsector.org/research/research_show.htm?doc_id=442238
[Accessed 7 October 2007]
- Smith, B., 2000. Quantity Matters: Annual Instructional Time in an Urban School System. *Educational Administration Quarterly* 36 (5) pp 652-682
- Stallings, J., and Knight, S.L.,. "Effective Use of Instructional Time" *Texas A. & M. University slides*
- Stallings, J., 1980. Allocated academic learning time revisited, or beyond time on task *Educational Researcher* 9 pp 11-16
- Stevenson, H.W., and Sigler, J.W., 1992. *The learning gap*. New York: Touchstone
- Stoll, L. and Fink, D., 1986. *Changing Our Schools*. Maidenhead: Open University Press
- Stoll, L., Fink D., and Earl, L., 2003. *It's About Learning (and it's about time) What's in it for schools?* London & New York : Routledge/Farmer

The Sands of Time

- Szreter, R., 1964. The origins of Full-time Compulsory Education at Five *British Journal of Educational Studies* 13 (1), pp16-28
- Tarricone, P., and Fetherston, T., 2002. Teachers and the Temporal Centre for schooling and learning technologies. *School of Education. Edith Cowan University, Australia*. Available from: www.aare.edu.au/02pap/tar02064.htm [Accessed 25 May 2007]
- USA. National Commission on Excellence in Education (NCEE). 1983A. Nation at Risk: The imperative for educational reform. Washington, D.C:U.S. Government Printing Office
- USA. National Education Commission on Time and Learning (NECTL) 1994. Prisoners of Time
- USA. New Jersey School Boards Association (NJSBA) October 29 2000. Negotiation Yielding More Instruction Time Available from: http://www.njsba.org/press_releases/CONT2000.HTML [Accessed 4 May 2007]
- Walberg, H, and Frederick, W.C., 1983. *Instructional time and learning*. Encyclopaedia of Educational Research pp 917-924
- Walberg, H.J., 1988 Synthesis of research on time and learning. *Educational leadership*, 45 (6) pp76-85
- Wang, M.C., and Walberg, H.J., Winter, 1983 Adaptive Instruction and Classroom Time *American Educational Research Journal* 20 (4) pp 601-626
- Weade, G., Evertson, C., Winter 1991. On What Can Be learned By Observing Teaching. *Theory Into practice*. XXX (1) pp37-45
- Wheldall, K., and Glynn, T., 1989. *Effective Classroom Learning A Behavioural Interactionist Approach to Teaching*. Oxford U.K.:Basil Blackwell Ltd
- Wiley, D.E., and Harnischfeger, A., 1984. Explosion of a myth: Quantity of Schooling and Exposure to Instruction, Major Educational Vehicles. *Educational Researcher* 3 pp7-12
- Wragg, E.C., 1984. *Classroom Teaching Skills: the research findings of the Teacher Education Project*. London: Routledge
- Wyne, M., Stuck, G., 1982. Time and Learning: Implications for the Classroom Teacher. 1982 *Elementary School Journal* 83, pp67-75.
- Yair, G., October 2000. Not Just About Time: Instrumental Practices and Productive Time in School *Educational Administration Quarterly* 36 (4), pp 485-512

The Sands of Time

- Zhang, A., November 2004. Syracuse University A Cross-National Examination of Chinese and U.S. Classroom Culture. A paper presented at The National Communication Association's 90th annual conference in Chicago. Available from: <http://www.c4qi.org/qi2005/papers/zhang.pdf> [Accessed 10 August 2007]

The Sands of Time

List of Appendices

<u>Number</u>	<u>Title</u>
1	Global average hours of instruction in a school year
2	Global average minutes of instruction per school day
3	Number of years of compulsory attendance among ten nations
4	Codes
5	Lesson observation blank adapted snapshot
6	Questionnaire
7	Observation list
8	Sample letter
9	Teacher activity snapshot- observation lessons
10	Teacher interview results
11	Lesson transcripts
12	Class management- range of observed discipline structures
13	Model showing observed discipline structures
14	Discipline strategies
15	Timeline
16	Classroom plans
17	Timetables- samples from schools A-C
18	Sample of calendar and timetabled time

The Sands of Time

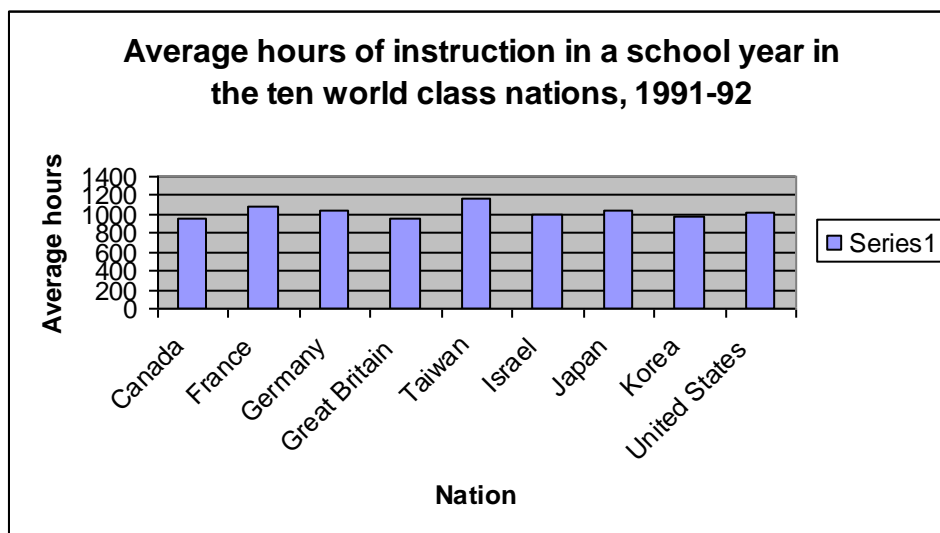
Appendix 1

Global average hours of instruction in a school year

Average hours of instruction in a school year in ten world class nations. (1991-92)
 N.B. This does not include time given to extra studies in the form of schooling or homework. It does not include absence data.

Taken from: Chalker & Haynes (1994 p. 56)

Country	Average hours	Notes
Canada	952.5	
France	1,073	
Germany	1,050	
Great Britain	960	
New Zealand	n/a	
Taiwan	1,177	As well as this children receive 4 times as much homework as the U.S.
Israel	996	
Japan	1,050	Japanese mothers take notes for absent children.
Korea	978	
United States	1,014	
Mean	1,033	



The Sands of Time

Appendix 2

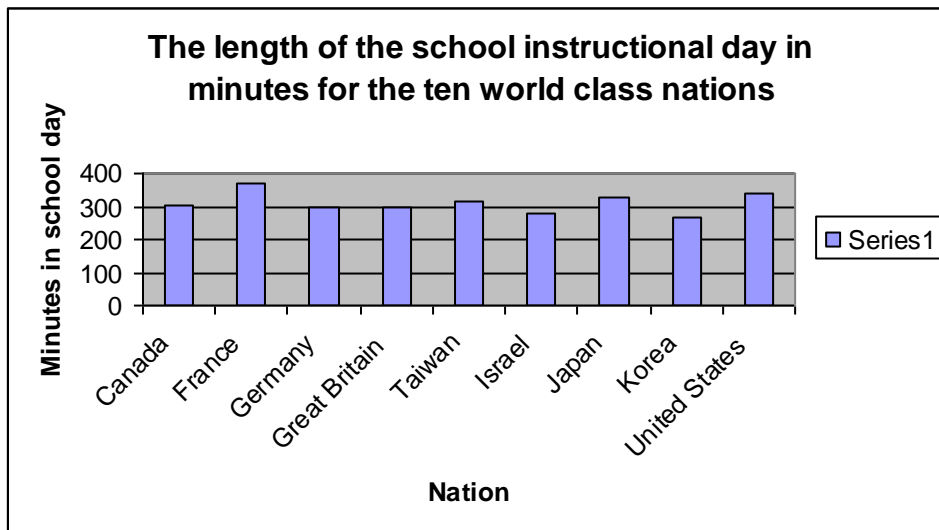
Global average minutes of instruction per school day

The length of the school instructional day in minutes for the ten world class nation,
1991-92 school year.

Taken from: Chalker & Haynes (1994 p. 54)

N.B. This information does not show the amount of enacted instructional time, merely the amount of allocated instructional time. Some days may be given to non academic, cultural, religious events or extra curricular learning. The figures do not take extra classes and homework into account.

<u>Country</u>	<u>Average minutes</u>	<u>Notes</u>
Canada	304	
France	370	
Germany	300	
Great Britain	300	
New Zealand	n/a	
Taiwan	318	
Israel	278	Recently lengthened.
Japan	330	
Korea	264	
United States	338	
Mean	311	

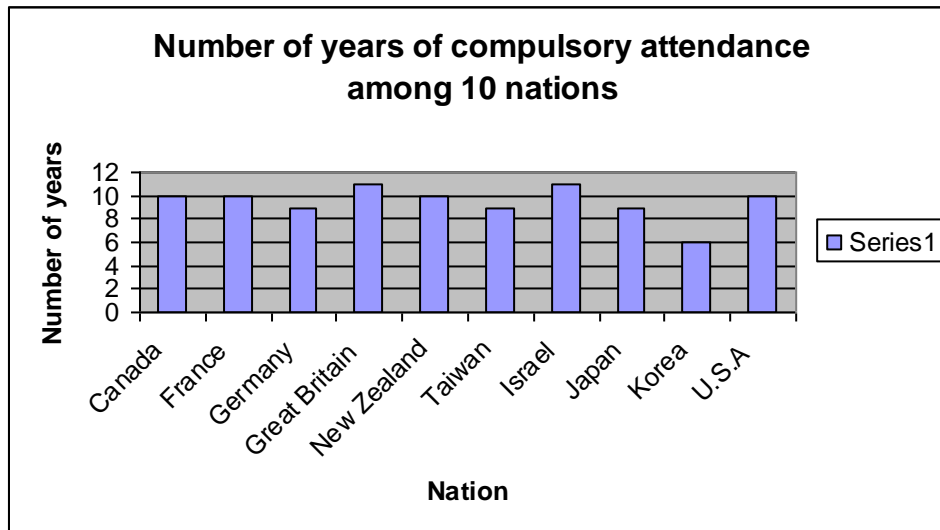


The Sands of Time

Appendix 3

Number of years of compulsory attendance among ten nations.
 Taken from: information from Ministry of Department of education publications
 for each nation in World Class Schools Chalker D. Haynes R. Techomic:
 Lancaster Pennsylvania 1994 p.57

Nation	Age span	Number of years	Notes
Canada	6-16	10	
France	6-16	10	
Germany	6-15	9	Students required to continue school part time until age 18.
Great Britain	5-16	11	
New Zealand	5-15	10	
Taiwan	6-15	9	
Israel	5-16	11	
Japan	6-15	9	
Korea	6-12	6	Leaving age rose to 15 in 1988.
United States	6-16	10	Varies between states. See below.



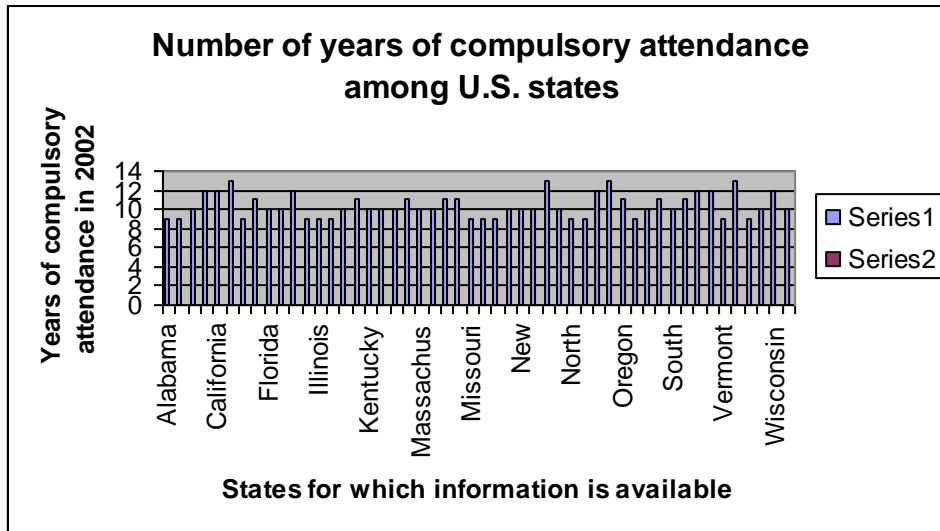
Appendix 3

Compulsory attendance in U.S. states in 2002.

Taken NCES Digest of education Statistics Tables and Figures 2005

http://nces.ed.gov/programs/digest/d05/tables/dt05_147.asp

Acc. 26/5/2007



Although the average is 10.4 years, the situation regarding compulsory attendance is complex:

“The figure varies some state-by-state, although the practice includes the years shown. In North Carolina, for example, compulsory attendance covers ages seven to sixteen, yet the state funds programs from kindergarten (age five) up. In excess of 98 percent of the students in public school first grade attended public kindergarten (North Carolina Statistical profile, 1992). Chalker and Haynes (1994 p.57),

The Sands of Time

Appendix 4

Non instructional codes

Instructional codes

Activity	Example	Behavior management	Refocusing, Praising, Approving, Encouraging Reprimanding, Criticizing, Dealing with distractions/ interruptions
Paper management	Giving out, organizing, collecting assignments	Reading	Aloud, textbook, class reader
Administration	Registration, Announcements, Collecting reply slips, Making arrangements, Coordinating homework and/or diaries, Informing ,	Writing	Board, book, poster
Organization	Lesson preparation, tidying up, sorting out. Pupil or Furniture Rearrangement, Regrouping, Lining up, Resource Organization, Setting Up, Directing.	Talking	Instructing, Lecturing, Describing, Demonstrating, Explaining, Presenting, Guiding, Questioning, Responding, Probing/prompting, Extending, Repeating/rephrasing, Clarifying, Introducing, Summarizing
Classroom management	Marking without child.	Monitoring/supervising	Watching/listening/checking as students complete seatwork, produce a product e.g. essay, poem , map, project
Personal management	Internal e-mails, checking lesson plans	Assessing with child.	Marking, approving, evaluating, rejecting
Ancillary staff management	Organizing, explaining procedures, feedback		

The Sands of Time

Appendix 5

Lesson observations Blank adapted snapshot

Teacher activity snapshot: Observation

School letter: Year group: 4 Teacher no.

No. of pupils: Subject: E.F.L.: % S.E.N.: % Time:

Lesson length: mins Location:

\$=teacher with group. S= teacher with 1 student.

A= Other adult involved.

T= Teacher alone.

C=Teacher with whole class

Position	Front	Carpet	Door	Board (w/i/ch)	Teacher Desk	Pupil Desk	Moving Around
Non Instructional Activity							
Paper Management.							
Administration							
Organization							
Classroom management							
Ancillary staff management							
Personal management							
Unspecified							
Instructional Activity							
Behavior management							
Reading							
Writing							
Talking							
Procedural/organizational							
Monitoring/Supervising							
Assessing with child							
Unspecified							

The Sands of Time

<u>Total observations:16</u>	<u>% Non instructional</u>	<u>% Instructional</u>
<u>Frequency within lesson</u>		
<u>% within lesson</u>	%	%
<u>% Most common activity</u>	%	%

Appendix 6

Questionnaires with teachers.

Based on Exercise 9: Use of time analysis Everard, K. Morris G. & Wilson I. (2004) Effective School management. Fourth Edition Paul Chapman: London P. 136

- *This informal interview is intended to help focus on how time is used currently, and how you would like to spend your time.*
- *I would like you to estimate the amount of time you spend on each of these activities during a typical lesson, expressed as a percentage of your total working time.*
- *Then of that instructional/non instructional percentage, try to break down the activities into percentages.*
- *Use the first column for recording your estimates.*

The Sands of Time

Non instructional activities:%

Activity	Estimate time From 100%	Example	Actual time
Paper management		Giving out, organizing, collecting assignments	
Administration		Registration, Announcements, Collecting reply slips, Making arrangements, Coordinating homework and/or diaries, Informing ,	
Organization		Lesson preparation, tidying up, sorting out. Pupil or Furniture Rearrangement, Regrouping, Lining up, Resource Organization, Setting Up, Directing.	
Classroom management		Marking without child.	
Personal management		Internal e-mails, checking lesson plans	
Ancillary staff management		Organizing, explaining procedures, feedback	
Unspecified			

The Sands of Time

Instructional activities.....%

	Estimate time From 100%		Actual time
Behavior management		Refocusing, Praising, Approving, Encouraging Reprimanding, Criticizing, Dealing with distractions/ interruptions	
Reading		Aloud, textbook, class reader	
Writing		Board, book, poster	
Talking		Instructing, Lecturing, Describing, Demonstrating, Explaining, Presenting, Guiding, Questioning, Responding, Probing/prompting, Extending, Repeating/rephrasing, Clarifying, Introducing, Summarizing	
Monitoring/supervising		Watching/listening/checking as students complete seatwork, produce a product e.g. essay, poem , map, project	
Assessing with child.		Marking, approving, evaluating, rejecting	
Unspecified			

The Sands of Time

Please answer the following six questions:

- 1) Do you feel there is enough time available for teaching and learning at school?
- 2) Can you identify an obstacle (if any at all) that you see preventing you from having the amount of time you would ideally like in your job?
- 3) Is there anything you would like to change to increase the time available?
- 4) Is there anything that others can do to make it possible to have more time?
- 5) Do special events have a bearing on your time?
- 6) Can you identify a time saving strategy that you use?

The Sands of Time

Appendix 7 Observation list

Observation data to be collected during class visits:

- Total time available per day,
- Class timetable,
- Schedule of the day,
- Lesson plans if possible,
- Sketched class floor plan,
- Attendance records if possible.
- Newsletters if possible
- School brochure if available

To be taken on each class visit:

- Voice recorder
- Multiple copies of observation tool using an adapted version of the *Stallings Classroom Snapshot instrument* to describe particular aspects of teacher behavior.
- Coded details of instructional and non-instructional segments.
- Teacher semi structured interview sheet

The Sands of Time

Appendix 8

Sample letter to School

12th May 2007

Dear...

In fulfillment of the requirements of her Masters degree programme, Fiona Mary Sayer with ID number 60119, a full-time student for the Master of Education programme at The British University in Dubai, requests your cooperation in carrying out research for her final dissertation on:
"The multi-faceted role of the primary school teacher."

This requires the student to carry out classroom observation and later, questionnaires with class teachers.

Any information given will be used solely for academic purposes.

For further information please contact the module tutor, Dr Clifton Chadwick.
(Clifton.chadwick@buid.ac.ae)

Your support would be much appreciated. This letter was issued at the student's request.

Yours faithfully

Lorna Nairn

The Sands of Time

Appendix 9

Teacher activity snapshot: Observation lesson 1

School letter: A Year group: 4 Teacher no. 1

No. of pupils: 22 E.F.L.: 18% S.E.N.: 5% Subject: English Time: 7.55-9.13

Lesson length: 78 mins Location: Classroom

\$=teacher with group.

S = teacher with 1 student.

A= Other adult involved.

T= Teacher alone.

C=Whole class

Position	Front	Carpet	Door	Board	Teacher Desk	Pupil Desk	Moving Around
Non Instructional activities							
a. Paper Management.							
b. Administration		C			CC		
c. Organization	AC		A				C
d. Classroom management							
e. Ancillary staff management							
f. Personal management					T		
g. Unspecified							
Instructional activities							
h. Behavior management	C	C		C			C
i. Reading							
j. Writing							
k. Talking		CC		CCC			
l. Procedural/ review		CC		CC			
m. Monitoring/ Supervising						S	CC
n. Assessing with child					S		
o. Unspecified							

Total observations: 25

The Sands of Time

Lesson 1 English

Activity

<u>Total observations:16</u>	<u>% Non instructional</u>	<u>% Instructional</u>
<u>Frequency within lesson</u>	8	17
<u>% within lesson</u>	32%	68%
<u>% Most common activity</u>	Organization -50% of non-instructional time	Teacher talking-29% of instructional time

Lesson 1 English

Teacher position

	<u>Front</u>	<u>Carpet</u>	<u>Door</u>	<u>Board</u>	<u>Teacher desk</u>	<u>Pupil desk</u>	<u>Moving Round class</u>
Frequency	3	6	1	6	4	1	4
Percentage	12%	24%	4%	24%	16%	4%	16%

Lesson 1 English

Teacher interaction

	Teacher with class	Teacher with group	Teacher with 1 student	Other adult involved	Teacher alone.
Frequency	<u>20</u>	<u>0</u>	<u>2</u>	<u>2</u>	<u>1</u>
Percentage	<u>80%</u>	<u>0%</u>	<u>8%</u>	<u>8%</u>	<u>4%</u>

Analysis of English lesson 1 interaction.

- More than three quarters of the time was spent in front of the whole class or moving around, monitoring the whole class.
- One sixth of the time was spent at the desk, marking work or helping individual children.
- Some of the time was spent with a visiting adult dealing with administrative issues.
- A small amount of time was spent at the pupil's desk working with individual children.
- None of the lesson was given to group work.

The Sands of Time

Conclusion of English lesson 1 interaction.

- The teaching style was whole class with very little individual differentiation or matching task to ability.
- The queue was created by the range of ability in the classroom. The task had been directed to the mid-ability range which meant that the least able were queuing for help and the most able had completed their work. Differentiated tasks not only make better use of learning opportunities but also limit the amount of time the children spend waiting to get help or have their completed work checked.
- The visitor need not have disrupted the lesson and taken the teachers time. She could have used the break as a time to pass on the workbooks. This suggests a policy issue for the school. Making rules limiting disturbances not only maximizes instructional time but also reflects the high level of importance the school attaches to creating a learning culture or environment.

Analysis of English lesson 1 position

- At the start of the lesson the teacher spent most of her time at the board modeling how the children should set out their work and making lists of brainstormed words.
- During the main body of the lesson the teacher was either monitoring work as she walked around the classroom or sat at her desk going over finished work with individual children. The children waited in a line. At one point there were six children waiting at the desk to see the teacher. Some of these were experiencing difficulties and needed help; others needed to show her their completed work. This form of organization wasted a large proportion of the lesson time. Some of this may have been avoided if the teacher had stationed herself at a group table or if she had marked completed work afterwards.

The Sands of Time

Analysis of English lesson 1 activity

- The teacher spent the first part of the lesson reviewing poetry forms that the children had used in previous lessons. She checked their understanding of the five or six different types and wrote examples on the board. The children were then able to choose one and to write a poem.
- In the second half of the lesson the children were drawn back to the carpet area to brainstorm water words. These were written on the board using the senses as a frame and stimulus. Some of the children experienced difficulty with this and the words they offered were not particularly expressive. The teacher was becoming slightly agitated that there were very few words on the board to use in a poem. It would have been useful to have a prepared list for the less able students, or those with EFL. It might have been challenging for the more able students to have a thesaurus to find some interesting words.
- The students went to their desks to write their own mind map. Many copied the words directly from the board and decorated them.

Conclusion for lesson 1

- With careful planning, time can be put to better use.
- More teacher guidance can save time and increase the amount of learning opportunities. The optimum situation is that the children to generate their own solutions. However, if this does not occur or takes up too much of the lesson, the teacher needs to offer planned support.
- It is clear that teaching style has implications for the way that time is used in the classroom.

The Sands of Time

Teacher activity snapshot: Observation lesson 2

School letter: A Year group: 4 Teacher no. 1

No. of pupils: 22 Subject: E.F.L.: 18% S.E.N.: 5% Maths Time: 9:50-11:10

Lesson length: 80 mins Location: Classroom

\$=teacher with group.

S= teacher with 1 student.

A= Other adult involved.

T= Teacher alone.

C=Whole class

Position	Front	Carpet	Door	Board (w/i/ch)	Teacher Desk	Pupil Desk	Moving Around Class
Non Instructional Activity							
Paper Management.							
Administration					CC		
Organization	CC			C			
Classroom management							
Ancillary staff management							
Personal management							
Instructional Activity							
Behavior management	CC						
Reading							
Writing				T			
Talking	CCCC CCCC CCC			CCCC CC		SS	
Procedural/organizational							
Monitoring/Supervising							
Assessing with child							

Total observations: 27

The Sands of Time

Lesson 2 Mathematics

<u>Total observations:16</u>	<u>% Non instructional</u>	<u>% Instructional</u>
<u>Frequency within lesson</u>	5	22
<u>% within lesson</u>	19%	81%
<u>% Most common activity</u>	Organization-60% each of non instructional time	Talking-86% of instructional time

Lesson 2 Teacher position

<u>Total observations:16</u>	Front	Carpet	Door	Board	Teacher desk	Pupil desk	Moving Round class
<u>Frequency</u>	15	0	0	8	2	2	0
Percentage	44%	0%	0%	6%	19%	12%	0%

Lesson 2 Mathematics

Teacher interaction

<u>Total observations:16</u>	Teacher with class	Teacher with group	Teacher with 1 student	Other adult involved	Teacher alone.
<u>Frequency</u>	24	0	2	0	1
<u>Percentage</u>	89%	0%	7%	0%	4%

The Sands of Time

Analysis of English lesson 1 interaction.

- Almost all of this lesson was given to whole class teaching. Less than one tenth was spent with individual pupils, marking and checking work. The purpose of the lesson was review.
- As some of the children had attained full marks on their homework, they clearly did not need the review time. Their time may have been better spent on completing a mathematical challenge or extension work.
- Those children with lower ability were clearly struggling with some of the main concepts covered in this session, such as place value and division. It may have been better to work with an individual group on targeted problems, whilst the others used the skills they had already gained mastery of.
- In order to do this the teacher would have had to use her time to identify those children needing support. In the interview the teacher stated that she had very little available time for planning.
- The issue of time use and time management has implications not only for teaching time but also preparation time.

Analysis of lesson 2 mathematics position:

- Most of this lesson was oral review of written work.
- Very little was written on the board.
- The teacher spent most of the time at the front of the class, and stopping from time to time with individual pupils who had not written the correct answer.
- The position appeared to match the activity. The nature of the activity is discussed below.

Analysis of lesson 2 mathematics activities:

Most of this lesson was given to instructional activities. Most of this did not involve new concepts or skills. The children were involved in a process of marking their own work and consolidating their learning.

One child sat next to me had clearly spent a great deal of time and effort on his homework. He did not make one mistake. This means that about half of this lesson was non-instructional for him personally. He spent most of his time drawing and coloring in blue felt pen cubes next to his ticks.

The Sands of Time

A large proportion of this lesson was spent in reviewing and marking homework and the previous day's assignments. Very little direct teaching took place.

This was explained as being due to the forthcoming tests. This would be in line with.....findings that a large proportion of learning time is given to review and cramming before tests. Given that the end of term is near, it does not look likely that these children will receive any substantial direct instruction between now and the end of term. It seems that at this particular school, instruction, in terms of direct teaching has ended at the beginning of June. However some children would benefit from targeted group work to solve some of their misunderstandings and to build basic foundation skills.

- The practice of devoting review time to allocated learning sessions is called into question as a result of these findings. These questions are
- Is it necessary for the class to review homework *and* previously completed work in lesson time? Would one of these activities have been sufficient? Behavior worsened towards the end of this long session as time was not split up and activities were not altered.
- Most of the questioning took place with a small group of pupils. Many of the children had answered correctly. Would it have saved time to look through their work and choose some of the more complex questions, that more of the children struggled with?
- Rather than marking their own work, could they have marked another child's work? In this way, they will come across different methods and remain more alert.
- Many children were reluctant to own up when the teacher asked "Who got that wrong?" Marking might have been better with the teacher and one or two children while the rest of the class worked on enrichment or extension activities.
- The purpose of marking is to inform the child but also to inform the teacher about that child's performance and to inform their next step in teaching. This sort of marking did not allow the teacher to gain a clear picture of the type of mistakes that children were making. It was not clear whether the teacher looked through the completed marked work afterwards, but looking through one child's work, it looked unlikely.

The Sands of Time

Conclusion for lesson 2 mathematics

- Only a small proportion of the Mathematics and English lessons were taken up with non instructional activities.
- When time is scarce, the teacher needs to make decisions about how best to use it in terms of learning opportunities. Within the instructional time in these lessons, there was very little learning.
- The teacher's decision to devote the lesson to review was necessary for some but completely wasted on others. This has implications for teaching style and organization. The best method for this sort of activity may not be whole class teaching.

The Sands of Time

Teacher activity snapshot: Observation lesson 3

School letter: B Year group: 4 Teacher no. 2

No. of pupils: 23 E.F.L.: 9% S.E.N.: 22% Subject: English Time: 8:43-9:46

Lesson length: 63 mins Location: Classroom

\$=teacher with group.

S = teacher with 1 student.

A= Other adult involved.

T= Teacher alone.

C=Whole class

Position	Front	Carpet	Door	Board	Teacher Desk	Pupil Desk	Moving Around
Non Instructional activities							
a. Paper Management.							
b. Administration			A				
c. Organization	CCC					C	
d. Classroom management							
e. Ancillary staff management							
f. Personal management							
g. Unspecified							
Instructional activities							
h. Behavior management							
i. Reading							
j. Writing							
k. Talking	CC					\$\$	
l. Procedural/ review	CCC			CCC			
m. Monitoring/ Supervising						CS\$\$	
n. Assessing with child	S					SS	
o. Unspecified							

The Sands of Time

Total observations: 22

Lesson 3 English

Activity

<u>Total observations:22</u>	<u>% Non instructional</u>	<u>% Instructional</u>
<u>Frequency within lesson</u>	5	17
<u>% within lesson</u>	23%	77%
<u>% Most common activity</u>	Organization -60% of non-instructional time	Procedural/Review-36% of instructional time

Lesson 1 English

Teacher position

<u>Total observations:22</u>	<u>Front</u>	<u>Carpet</u>	<u>Door</u>	<u>Board</u>	<u>Teacher desk</u>	<u>Pupil desk</u>	<u>Moving Round class</u>
Frequency	9	0	1	3	0	9	0
Percentage	41%	0%	4%	14%	0%	41%	0%

Lesson 1 English

Teacher interaction

<u>Total observations:22</u>	Teacher with class	Teacher with group	Teacher with 1 student	Other adult involved	Teacher alone.
Frequency	13	2	6	1	0
Percentage	59%	9%	27%	5%	0%

Analysis of English lesson 1 interaction.

- More than half of the time was spent in front of the whole class. None of the time was spent moving around, monitoring the whole class. The teacher moved from student to student stopping at their desk based on either their or her own needs. Movement may have been restricted in this classroom as it was very small. It was not possible to walk around one of the desks as it was very close to the wall.
- Just over one quarter of the time was spent helping individual children at their desks.
- A small amount of the time was spent with a visiting adult dealing with administrative issues.

The Sands of Time

- One tenth of time was spent at the pupil's desk working with groups.
- None of the lesson was given to the teacher alone.

Conclusion of English lesson 1 interaction.

- The teaching style was whole class with individual differentiation and matching task to ability through outcome or intention.
- On only one occasion a queue was created. The teacher sent those children who were waiting back to their desks immediately to complete other work while they waited. The direct teaching had been directed to the mid-ability range but the least able were working on differentiated worksheets based on phonics. Only a few of the most able completed their work as it was a long task. Differentiated tasks not only make better use of learning opportunities but also limit the amount of time the children spend waiting to get help or have their completed work checked.
- The visitor need not have disrupted the lesson and taken the teachers time. She could have used the break as a time to discuss paperwork. This suggests a policy issue for the school. Making rules that limit disturbances not only maximizes instructional time but also reflects the high level of importance the school attaches to creating a learning culture or environment.

Analysis of English lesson 1 position

- At the start of the lesson the teacher spent time at the board reminding the children how to set out solutions to the word game.
- During the main body of the lesson the teacher was at the board, instructing and guiding the children in their advertisement investigation. When the children were assigned their tasks, she monitored their work at their desks. The children were expected to remain in their seats while the teacher worked with those who she had identified or who had requested help. This form of organization saved a large proportion of the lesson for instruction and made sure that the children were engaged and on task for the majority of the lesson. Very little marking took place by the teacher.
- In this class there was no room for a carpet area. During whole class instruction the children remained in their seats.

The Sands of Time

Analysis of English lesson 1 activity

- The lesson had clear sections reflecting the guidance given in the National Literacy document from the National Curriculum of England and Wales.
- The teacher spent the first part of the lesson reviewing a word game that the children had played in a previous lesson. She checked their understanding of how to set them out and wrote examples on the board. The children were then able to continue independently from the examples given on the board. In the second half of the lesson the children were involved in reviewing the previous days work on the main features of advertisements. Two advertisements, one for chocolate and one for soap powder were shown on the interactive whiteboard. The teacher prompted the children into identifying and listing the features, then showed them a checklist. The class experienced little difficulty with the task.
- The students went to their desks to answer questions from a textbook based on the advertisements. There were many questions which increased in difficulty. Very few pupils completed their task.
- The lesson was drawn to a close by asking the children to state their personal preferences with justification.

Conclusion for lesson 1

- The lesson had been carefully planned so that time could be used for instruction.
- The teacher skillfully guided the students to their conclusions and findings about the advertisements, maximizing their learning opportunities.
- It is clear that teaching style has implications for the way that time is used in the classroom.
- A large proportion of the lesson was given to the word game. It was unclear how the word game connected with the main body of the lesson. The objectives of the game were not made clear. In order to maximize learning it is useful to communicate the intended learning outcome and to some degree, measure its success with the children.

The Sands of Time

Teacher activity snapshot: Observation lesson 4

School letter: B Year group: 4 Teacher no. 2

No. of pupils: 22 Subject: E.F.L.: 9% S.E.N.: 22% Mathematics Time: 10:42-11:57

Lesson length: 75 mins Location: Classroom

\$=teacher with group.

S= teacher with 1 student.

A= Other adult involved.

T= Teacher alone.

C=Whole class

Position	Front	Carpet	Door	Board (w/i/ch)	Teacher Desk	Pupil Desk	Moving Around class
Non Instructional Activity							
Paper Management.							
Administration					A		
Organization	CCCC CC		A				
Classroom management							
Ancillary staff management							
Personal management					T		
Unspecified							
Instructional Activity							
Behavior management						S	
Reading							
Writing							
Talking	CCCC CCC			C		\$	
Procedural/ organizational	C			S			
Monitoring/ Supervising						C\$\$	

The Sands of Time

Assessing with child							SS	
----------------------	--	--	--	--	--	--	----	--

Total observations: 26

Lesson 2

Mathematics

<u>Total observations:26</u>	<u>% Non instructional</u>	<u>% Instructional</u>
<u>Frequency within lesson</u>	9	17
<u>% within lesson</u>	35%	65%
<u>% Most common activity</u>	Organization-78% each of non instructional time	Teacher talking-53% of instructional time

Lesson 4

Teacher position

<u>Total observations:26</u>	<u>Front</u>	<u>Carpet</u>	<u>Door</u>	<u>Board</u>	<u>Teacher desk</u>	<u>Pupil desk</u>	<u>Moving Round class</u>
<u>Frequency</u>	14	0	1	2	2	7	0
Percentage	54%	0%	3%	8%	8%	27%	0%

Lesson 4 Mathematics

Teacher interaction

<u>Total observations:26</u>	Teacher with class	Teacher with group	Teacher with 1 student	Other adult involved	Teacher alone.
<u>Frequency</u>	16	2	5	2	1
Percentage	62%	8%	19%	8%	3%

The Sands of Time

Analysis of Maths lesson 4 interaction.

- About one third of this lesson was given to whole class teaching. About two tenths was spent with individual pupils, checking comprehension and giving guidance. Very little was given to marking completed work.
- The activity was an open ended and differentiated mathematical challenge.
- The teacher spent some of the lesson sat with those children of lower ability who were struggling with basic calculations and procedures. She also identified and worked individuals on specific problems, whilst the others worked independently.
- The teacher was aware of those children needing support as once she had given out the task; she immediately positioned herself with some less able students. In the interview the teacher stated that she spent approximately 10 hours per week on assessment, administration, planning and evaluation.
- The issue of time use and time management has implications not only for teaching time but also preparation time. More time made available for preparation generates more time in the lessons for instruction.

Analysis of lesson 4 mathematics position:

- The lesson had three clear phases. It consisted of review, practical work and a game based loosely around the targeted number operation. Most of this lesson was oral review of addition methods.
- The teacher modeled the answers on the board.
- The teacher spent time at pupil's desks either to work on a specific problem with a group or an individual.

- Analysis of lesson 4 mathematics activities:

Most of this lesson was given to instructional activities. Most of this involved the consolidation of addition methods and skills. The task was presented as a challenge and differentiated by ability.

Most of the children remained focused and engaged. One or two became distracted during the direct teaching at the board and this appeared to be due to a lack of understanding due to poor language skills or low ability. During the written assignment, most of the children were on task despite the hum of chatter in the class. The reason for

The Sands of Time

the high level of engagement during the instruction phase seemed to be the method of presentation.

During the written phase it seemed to be due to the matching of task to ability. The teacher devoted a great deal of time to activities that were presented as games.

A large proportion of this lesson was spent in applying their knowledge in a new situation. Their review extended and consolidated their skills in a challenging and fun way, rather than a formal list of problems to be solved. Some children benefited from targeted group work to solve some of their misunderstandings and develop their addition skills.

- Differentiation increased the engagement and level of instruction in the class.
- Marking work was not included in the lesson, although giving feedback was given high priority.
- The teacher had targeted a group and individuals to work with during the lesson.

Conclusion for lesson 4 mathematics

- One third of the Mathematics and English lessons were taken up with non instructional activities.
- The teacher had made plans about how best to use time in terms of learning opportunities. In these lessons, the children were learning in a fun, exciting way.

The Sands of Time

Teacher activity snapshot: Observation Maths lesson 5

School letter: C Year group: 4 Teacher no. 3

No. of pupils: 20 E.F.L.: 45% S.E.N.: 5% Subject: Maths Time: 8:07-9.04

Lesson length: 57 mins Location: Classroom

\$=teacher with group.

S = teacher with 1 student.

A= Other adult involved.

T= Teacher alone.

C=Whole class

Position	Front	Carpet	Door	Board	Teacher Desk	Pupil Desk	Moving Around
Non Instructional activities							
a. Paper Management.							
b. Administration							
c. Organization					TC		
d. Classroom management					TT		
e. Ancillary staff management							
f. Personal management							
g. Unspecified							
Instructional activities							
h. Behavior management					C		
i. Reading							
j. Writing				TT			
k. Talking	C			CCCC SC	AC	A	
l. Procedural/ review							
m. Monitoring/ Supervising							
n. Assessing with child					SSTS		
o. Unspecified							

Total observations: 21

The Sands of Time

Lesson 5 Maths

Activity

<u>Total observations:21</u>	<u>% Non instructional</u>	<u>% Instructional</u>
<u>Frequency within lesson</u>	4	17
<u>% within lesson</u>	19%	81%
<u>% Most common activity</u>	Organization -50% of non-instructional time	Teacher talking-59% of instructional time

Lesson 5 Maths

Teacher position

<u>Total observations:21</u>	<u>Front</u>	<u>Carpet</u>	<u>Door</u>	<u>Board</u>	<u>Teacher desk</u>	<u>Pupil desk</u>	<u>Moving Round class</u>
<u>Frequency</u>	1	0	0	8	11	1	0
<u>Percentage</u>	5%	0%	0%	38%	52%	5%	%

Lesson 5 Maths

Teacher interaction

<u>Total observations:21</u>	<u>Teacher with class</u>	<u>Teacher with group</u>	<u>Teacher with 1 student</u>	<u>Other adult involved</u>	<u>Teacher alone.</u>
<u>Frequency</u>	9	0	4	2	6
<u>Percentage</u>	43%	0%	19%	9%	29%

Analysis of Maths lesson 5 interaction.

- Most of the time was spent on whole class teaching.
- Just under one half was spent marking work or helping individual children.
- The teacher spent one third of the time alone, checking plans, emails and marking work without children.
- A small amount of time was spent working with individual children.
- None of the lesson was given to group work.
- A fairly large proportion of time was spent writing problems on the board for the class to solve. This could have been completed in advance, freeing more instructional time for class, group or individual work.

The Sands of Time

Conclusion of Maths lesson interaction.

- The teaching style was whole class with very little individual differentiation.
- An assistant was available for about a third of the lesson to mark work and help with difficulties. She was stationed permanently at a pupil desk which released time for the teacher.
- Two queues were created by the range of ability in the classroom. The least able queued for help and the most able needed to have their work marked. The children did not have differentiated tasks. They all worked from the examples on the board.
- The assistant disrupted the lesson by speaking directly to the class teacher about personal matters. This was evidence of good working relationships but did not demonstrate dedication to creating a good working environment for the pupils.

Analysis of Maths lesson 5 position

- The lesson began with the teacher at the front, chanting and quizzing the children on their 4 times table.
- At the start of the lesson the teacher spent most of his time at the board introducing the topic on fractions and relating it to decimals. As the teacher gave the pupils examples, he wrote the on the board.
- During the main body of the lesson the teacher sat at his desk going over finished work with individual children or checking planning and administration issues on the computer.
- The lesson style was formal with direct instruction at the beginning, and children completing examples in the middle. The lesson consisted of 2 phases, without an ending.
- The teacher did not spend time with individual groups working on specific concepts.

The Sands of Time

Analysis of Maths lesson 5 activity

- The teacher spent the first part of the lesson revising their knowledge of the 4 times table. The next part of the lesson was spent by the whiteboard introducing the topic on fractions. The children sat in the carpet while the teacher wrote examples on the board that the children were encouraged to think about and try to answer.
- In the second half of the lesson the children were sent to their desks to work on some problems that were written on the whiteboard.

It might have been challenging for the more able students to have their own list of problems to solve and to work with the least able students. The decision not to do so may have been based on the relatively small group and the fact the children had already been separated into ability groups.

Conclusion for lesson 5

- By remaining at the desk the teacher had no indication of how individual children were managing with the task. Some of those who had queued at the desk were told that their examples were all wrong. Their time had been completely wasted, which could have been avoided if time had been taken to monitor the students.

The Sands of Time

Teacher activity snapshot: Observation lesson English 6

School letter: C Year group: 4 Teacher no. 3

No. of pupils: 20 Subject: E.F.L.: 45% S.E.N.: 5% English Time: 12:00-12:48

Lesson length: 48 mins Location: Classroom

\$=teacher with group.

S= teacher with 1 student.

A= Other adult involved.

T= Teacher alone.

C=Whole class

Position	Front	Carpet	Door	Board (w/i/ch)	Teacher Desk	Pupil Desk	Moving Around class
Non Instructional Activity							
Paper Management.							
Administration							
Organization	C				CC		
Classroom management							
Ancillary staff management							
Personal management					TT		
Unspecified							
Instructional Activity							
Behavior management							
Reading							
Writing							
Talking				CCCC	SCC		
Procedural/organizational	CC			CC			
Monitoring/Supervising							
Assessing with child							
Unspecified							

Total observations: 16

The Sands of Time

Lesson 2

English

<u>Total observations:16</u>	<u>% Non instructional</u>	<u>% Instructional</u>
<u>Frequency within lesson</u>	5	11
<u>% within lesson</u>	31%	69%
<u>% Most common activity</u>	Organization-60% each of non instructional time	Talking-64% of instructional time

Lesson 2

Teacher position

<u>Total observations:16</u>	Front	Carpet	Door	Board	Teacher desk	Pupil desk	Moving Round class
<u>Frequency</u>	3	0	0	6	7	0	0
Percentage	19%	0%	0%	38%	43%	0%	0%

Lesson 2 English

Teacher interaction

<u>Total observations:16</u>	Teacher with class	Teacher with group	Teacher with 1 student	Other adult involved	Teacher alone.
<u>Frequency</u>	13	0	1	0	2
<u>Percentage</u>	81%	0%	6%	0%	13%

Analysis of English lesson 6 interaction.

- Almost this entire lesson was given to whole class teaching. This was mainly because the first part of the lesson consisted of a spelling test. However, the patterns of interaction did not differ significantly from the Math lesson that was observed. Less than one tenth was spent with individual pupils, marking and checking work. The teacher spent more than a tenth of the time alone.

The Sands of Time

- The teacher called the spellings for the two (Mars and Jupiter) groups simultaneously. The first question for each group, then the second for each group and so on.
- In the second half of the lesson the class sat on the carpet while the teacher focused on individual words from the list. He checked their understanding of the words and pointed to any similarities or unusual letter patterns.

Analysis of lesson 6 English position:

- Most of this lesson was oral review of written work.
- The children wrote their spellings in their books. After the discussion on letter writing, the children began writing a letter using the formal layout that the teacher had modeled on the board.

Analysis of lesson 6 English activities:

Most of this lesson was given to instructional activities. It began with a spelling test, then the introduction of the next set of words to learn for the subsequent test. The children were not involved in the process of marking their own work.

The introduction of the written activity so close to the end of the lesson seemed to be very short and unconnected with the first part of the lesson. It appeared to be connected with a previous lesson referred to by the teacher. The teacher seemed to be using some spare time available at the end of the lesson for some consolidation and review.

Conclusion for lesson 6 English

- This lesson began much later than timetabled. The teacher was for twenty minutes at the beginning of the lesson. The assistant gave out completed work while the children read silently to themselves. It is unclear whether this was a scheduled timetable change or whether this is simply what occurred on the day.
- A greater proportion of the English lesson was taken up with non instructional activities. Some of this was due to the amount of organization created by the nature of the activities and the three main parts of the lesson.
- The teacher made the best use of instructional time left after the test in the English lessons, thereby optimizing opportunities for learning.
- As there were two spelling groups, the teacher minimized the amount of waiting time by calling out the spellings simultaneously. This may have been distracting for some pupils. It may have been better if the class was split. As the teacher had

The Sands of Time

a full time assistant, he could have worked with one group, while the other children reviewed the new words, or used a dictionary to find their definitions in preparations for the class discussion.

Teacher activity snapshot: Observation lesson 7

School letter: D Year group: 4 Teacher no. 4

No. of pupils: 12 E.F.L.: 8% S.E.N.: 0% Subject: English Time: 9:50-10:20

Lesson length: 30 mins Location: Classroom

\$=teacher with group.

S = teacher with 1 student.

A= Other adult involved.

T= Teacher alone.

C=Whole class

Position	Front	Carpet	Door	Board	Teacher Desk	Pupil Desk	Moving Around
Non Instructional activities							
a. Paper Management.						S	
b. Administration							
c. Organization	C				C		
d. Classroom management							
e. Ancillary staff management					A		
f. Personal management					T		
Instructional activities							
h. Behavior management							
i. Reading							
j. Writing							
k. Talking	C				S		
l. Procedural/ review							
m. Monitoring/ Supervising						S	
n. Assessing with child					SSS		

The Sands of Time

Total observations: 11

Lesson 7 English

Activity

<u>Total observations:11</u>	<u>% Non instructional</u>	<u>% Instructional</u>
<u>Frequency within lesson</u>	5	6
<u>% within lesson</u>	45%	55%
<u>% Most common activity</u>	Organization -40% of non-instructional time	Assessing with child-50% of instructional time

Lesson 7 English

Teacher position

<u>Total observations:20</u>	<u>Front</u>	<u>Carpet</u>	<u>Door</u>	<u>Board</u>	<u>Teacher desk</u>	<u>Pupil desk</u>	<u>Moving Round class</u>
<u>Frequency</u>	2	0	0	0	7	2	0
<u>Percentage</u>	18%	0%	0%	0%	64%	18%	%

Lesson 7 English

Teacher interaction

<u>Total observations:11</u>	<u>Teacher with class</u>	<u>Teacher with group</u>	<u>Teacher with 1 student</u>	<u>Other adult involved</u>	<u>Teacher alone.</u>
<u>Frequency</u>	3	0	6	1	1
<u>Percentage</u>	27%	%	55%	9%	9%

Analysis of English lesson 7 interaction.

- Most of the time was spent with one student only in short 1:1 sessions.
- Just over one quarter was spent marking with the whole class. The teacher spent one tenth of the time alone, checking plans and working on the computer.
- Just under one tenth of the time was spent with other adults.
- None of the lesson was given to group work.
- A fairly large proportion of time was spent monitoring and assessing work as pupils completed unfinished assignments. This reflects the fact that the observation took place very near the end of term.

The Sands of Time

Conclusion of English lesson interaction.

- There was very little whole class teaching as the children were involved in completing assignments.
- An assistant was available during the lesson but was involved in taking down displays and putting up backing paper.
- The pupils either approached the teacher when they needed help or had completed their work. When the teacher was free she called the pupils to her desk to show their work or read.

Analysis of English lesson 7 position

- The lesson began with organizational activities and very little direct instruction. This reflected the fact that the observation took place in the last week of term. However, the teacher sometimes gave instructional support individually as necessary with individual students.
- During the main body of the lesson the teacher sat at her desk working with individual children.
- The lesson did not consist of identifiable phases.

Analysis of English lesson 7 activity

- The opening of the lesson consisted of the stating of the aims. The main part of the lesson was spent either at the teacher's desk or pupil's desk offering help or assessing finished work. The children were encouraged to complete unfinished work on their own.

It might have been exciting to structure the way that those pupils shared their completed work with the whole class. The students could have been involved in the assessment process with a list of prompts to guide their comments. The process may have helped the least able students, given the more able an extra focus and given the ending a clearer focus.

Conclusion for lesson 7

- By remaining at the desk the teacher did not interact with all of the children.
- The lesson lacked focus and clarity but this may have been due to the timing of the observation.

The Sands of Time

Teacher activity snapshot: Observation lesson Mathematics 6

School letter: D Year group: 4 Teacher no. 4

No. of pupils: 12 Subject: E.F.L.: 8% S.E.N.: 0% Math Time: 9:12-9:42

Lesson length: 30 mins Location: Classroom

\$=teacher with group.

S= teacher with 1 student.

A= Other adult involved.

T= Teacher alone.

C=Whole class

Position	Front	Carpet	Door	Board (w/i/ch)	Teacher Desk	Pupil Desk	Moving Around class
Non Instructional Activity							
Paper Management.							
Administration						S	
Organization	C					S	
Classroom management							
Ancillary staff management					A		
Personal management							
Unspecified							
Instructional Activity							
Behavior management	C						
Reading							
Writing							
Talking	CC						
Procedural/organizational							
Monitoring/Supervising	C					SSS	
Assessing with child							
Unspecified							

The Sands of Time

Total observations: 11

Lesson 6 Mathematics

<u>Total observations:11</u>	<u>% Non instructional</u>	<u>% Instructional</u>
<u>Frequency within lesson</u>	4	7
<u>% within lesson</u>	36%	64%
<u>% Most common activity</u>	Organization-50% of total non instructional time	Monitoring-57% of total instructional time

Lesson 6

Teacher position

<u>Total observations:11</u>	Front	Carpet	Door	Board	Teacher desk	Pupil desk	Moving Round class
<u>Frequency</u>	5	0	0	0	1	5	0
Percentage	45%	0%	0%	0%	10%	45%	0%

Lesson 6 Mathematics

Teacher interaction

<u>Total observations:11</u>	Teacher with class	Teacher with group	Teacher with 1 student	Other adult involved	Teacher alone.
<u>Frequency</u>	5	0	5	1	0
Percentage	45%	0%	45%	10%	0%

Analysis of Math lesson 6 interaction.

- One half of the lesson was given to whole class teaching or working with individual students. This was mainly because the children were completing a practical task that required a degree of accuracy and therefore monitoring. In the English lesson, an even higher amount of time was given to individual pupils. This pattern reflects the small class size. It is unnecessary to work in groups

The Sands of Time

when the class itself is very small. Less time is given to discipline and keeping pupils on task because of the smaller class. One tenth was spent with another adult visiting the school.

- This procedure was incorporated into a form of learning. The children were expected to be polite, courteous and well mannered so the disruption was a justifiable disruption rather than a disturbance.
- At no point in the lesson were the class sat on the carpet.
- The children in this small class received a great deal of the teacher's attention which limited the "down time" they spent off task and waiting.

Analysis of lesson 6 mathematics position:

- The lesson was fairly equally divided between instruction and carrying out an activity. The teacher's position was accordingly at the front for whole class instruction or at the pupil's desk for individual instruction or monitoring.

Analysis of lesson 6 mathematics activities:

This lesson was given to instructional activities either direct teaching to the whole class or one to one teaching. It began with a demonstration and explanation, then developed into a practical activity which was meant to reinforce the concepts the children had learned. The children were involved in learning activity for the majority of the lesson.

Conclusion for lesson 6 mathematics

- This lesson was suited to a small amount of pupils. If the class had been larger, the teacher would have had to split the activities and pupils into groups in order to manage the intense demand on her time.
- The lesson had clarity and pace which optimized the learning opportunities for the children. There were no lengthy and rambling explanations. The teacher had a clear purpose for the children and the time was given to achieving it.
- Waiting time was minimized by the nature of the activity rather than management strategies flowed by the teacher.
- An assistant constantly took children from the group to hear them read but this was not allowed to disrupt the flow of the lesson. When the pupils returned they were quickly integrated again.

The Sands of Time

Teacher activity snapshot: Observation lesson 10

School letter: England Private E Year group: 4 Teacher no. 5

No. of pupils: 12 E.F.L.: 0% S.E.N.: 8% Subject: English Time: 12:45-1:15

Lesson length: 30 mins Location: Classroom

\$=teacher with group.

S = teacher with 1 student.

A= Other adult involved.

T= Teacher alone.

C=Whole class

Position	Front	Carpet	Door	Board	Teacher Desk	Pupil Desk	Moving Around
Non Instructional activities							
a. Paper Management.							
b. Administration							
c. Organization	CCC						
d. Classroom management							
e. Ancillary staff management							
f. Personal management							
g. Unspecified							
Instructional activities							
h. Behavior management							
i. Reading							
j. Writing							
k. Talking	CCCC C						
l. Procedural/ review							
m. Monitoring/ Supervising							
n. Assessing with child				CCC			
o. Unspecified							

The Sands of Time

Total observations: 11

Lesson 10 English

Activity

<u>Total observations:11</u>	<u>% Non instructional</u>	<u>% Instructional</u>
<u>Frequency within lesson</u>	3	8
<u>% within lesson</u>	27%	73%
<u>% Most common activity</u>	Organization -100% of non-instructional time	Teacher talking-63% of instructional time

Lesson 10 English

Teacher position

<u>Total observations:20</u>	<u>Front</u>	<u>Carpet</u>	<u>Door</u>	<u>Board</u>	<u>Teacher desk</u>	<u>Pupil desk</u>	<u>Moving Round class</u>
<u>Frequency</u>	8	0	0	3	0	0	0
<u>Percentage</u>	73%	0%	0%	27%	0%	0%	0%

Lesson 10 English

Teacher interaction

<u>Total observations:11</u>	<u>Teacher with class</u>	<u>Teacher with group</u>	<u>Teacher with 1 student</u>	<u>Other adult involved</u>	<u>Teacher alone.</u>
<u>Frequency</u>	11	0	0	0	0
<u>Percentage</u>	100%	0%	0%	0%	0%

Analysis of English lesson 10 interaction.

- The entire lesson was devoted to whole class teaching.
- The lesson consisted of two distinct phases. The first was carrying out the task with then whole class; the last half involved the entire class in marking each other's work together.
- There were no disturbances during the lesson and there was no classroom assistant.
- None of the lesson was given to group or individual work.
- The teacher explained that this sort of activity was not normally timetabled but was an important part of the children's English development. She had

The Sands of Time

chosen this activity as the children had completed their term's work and there was not time left to complete and mark written work.

- Again, the fact that the observation took place very near the end of term influenced lesson content and provision of instructional time.

Conclusion of English lesson interaction.

- The entire lesson was devoted to whole class teaching.
- The teacher monitored the students from the front and did not proceed with the next instruction until they were all ready and had all understood. Some of the children were making mistakes with their directions but no opportunity was made to correct or to teach them. The teacher explained that the aim of the lesson was to listen and make decisions.
- The main expectation was that the children would attend to the instructions.

Analysis of English lesson 10 position

- The lesson began with organizational activities, followed by a whole class activity. The teacher sometimes gave instructional support individually as necessary with individual students from the front of the class or as she monitored their progress.
- During the majority of the lesson the teacher sat or stood at the front of the class. During the second half, the teacher drew on the board so that the children to assess each others work.
- The lesson ended with a reminder of the original purpose, to attend to the instructions.

Analysis of English lesson 10 activity

- The opening of the lesson consisted of the stating of the aims. The main part of the lesson was spent at the front of the class giving instructions or in providing answers for the children to assess each others work. The children were encouraged to complete unfinished work on their own.

Conclusion for lesson 10

- The lesson was not a "normal" lesson as it was so near the end of term but it had a clear focus and aim.

The Sands of Time

Teacher activity snapshot: Observation lesson Mathematics 9

School letter: England private E Year group: 4 Teacher no. 5

No. of pupils: 12 Subject: E.F.L.: 0% S.E.N.: 8% Math Time: 11:50-12:50

Lesson length: 60 mins Location: Classroom

\$=teacher with group.

S= teacher with 1 student.

A= Other adult involved.

T= Teacher alone.

C=Whole class

Position	Front	Carpet	Door	Board (w/i/ch)	Teacher Desk	Pupil Desk	Moving Around class
Non Instructional Activity							
Paper Management.							
Administration							
Organization	CC						
Classroom management							
Ancillary staff management							
Personal management							
Unspecified							
Instructional Activity							
Behavior management							
Reading							
Writing				TTT			
Talking				CCCC C			
Procedural/ organizational							
Monitoring/ Supervising						SSSS SSSS	CCC
Assessing with child							

The Sands of Time

Unspecified							
-------------	--	--	--	--	--	--	--

Total observations: 21

Lesson 9 Mathematics

<u>Total observations:21</u>	<u>% Non instructional</u>	<u>% Instructional</u>
<u>Frequency within lesson</u>	2	19
<u>% within lesson</u>	10%	90%
<u>% Most common activity</u>	Organization-100% of total non instructional time	Monitoring-58% of total instructional time

Lesson 9

Teacher position

<u>Total observations:21</u>	Front	Carpet	Door	Board	Teacher desk	Pupil desk	Moving Round class
<u>Frequency</u>	2	0	0	8	0	8	3
Percentage	10%	0%	0%	38%	0%	38%	14%

Lesson 9 Mathematics

Teacher interaction

<u>Total observations:21</u>	Teacher with class	Teacher with group	Teacher with 1 student	Other adult involved	Teacher alone.
<u>Frequency</u>	10	0	8	0	3
<u>Percentage</u>	48%	0%	38%	0%	14%

Analysis of Math lesson 9 interaction.

- Roughly one half of the lesson was given to whole class teaching and half to working with individual students. This was mainly because the children were attempting to add to their knowledge of multiplication with a new formal written method.

The Sands of Time

- This pattern reflects the small class size. Group instruction was replaced by individual instruction. There was no student collaboration.
- Pupils were expected to remain on task, either attending or completing calculations for the entire lesson.

The teaching assistant was used as a way to increase instruction for individual pupils who were not on task, or were struggling for any reason.

- At no point in the lesson were the class sat on the carpet.
- The children in this small class received a great deal of the teacher's attention and were able to use the majority of the time for learning limiting the "down time" they spent off task and waiting.

Analysis of lesson 9 mathematics position:

- The lesson was fairly equally divided between instruction from the board and with individual pupils at their desk.
- The teacher spent a comparatively large proportion of time writing on the board. This may have been eliminated if pre-prepared resources were used, such as sheets or books. However, the teacher was responding directly to the student's needs and matching the level of instruction to their ability to understand each carefully introduced step. This flexibility and sensitivity may have been lost if standardized material had been used.

Analysis of lesson 9 mathematics activities:

- This lesson was given to instructional activities; either direct teaching to the whole class or one to one teaching.
- It began with a demonstration and explanation, then developed into practical activities which were used to reinforce the concepts the children had learned. The children were involved in learning activity for almost all of the lesson.
- The activities increased in difficulty as the students proved that they were able to assimilate and use their new skills accurately. The next step was not introduced until the teacher was sure they had all understood sufficiently. If the students had not understood, the cause of their difficulty was quickly identified and explained by either the teacher or assistant.

The Sands of Time

Conclusion for lesson 9 mathematics

- This lesson was suited to the range of ability amongst the pupils. By moving around the pupils rather than the pupils coming to the teacher, they were involved in learning.
- The lesson had clarity and pace which optimized the learning opportunities for the children. There were no lengthy and rambling explanations. The teacher had a clear purpose for the children and the time was directed to achieving it through a series of small carefully planned steps.
- Down time was minimized by the nature of the activity. A sense of expectation with clearly stated tasks and goals existed.
- The children understood the clear expectation that they would spend their hour focused on learning and completing their tasks. Disruptions and distractions were not tolerated.

The Sands of Time

Teacher activity snapshot: Observation lesson 11

School letter: England State F Year group: 4 Teacher no. 6

No. of pupils: 32 E.F.L.: 0% S.E.N.: 13% Subject: Math Time: 9:30-10:25

Lesson length: 55 mins Location: Classroom

\$=teacher with group.

S = teacher with 1 student.

A= Other adult involved.

T= Teacher alone.

C=Whole class

Position	Front	Carpet	Door	Board	Teacher Desk	Pupil Desk	Moving Around
Non Instructional activities							
a. Paper Management.							
b. Administration							
c. Organization	CCCC C		C			C	
d. Classroom management							
e. Ancillary staff management							
f. Personal management							
g. Unspecified							
Instructional activities							
h. Behavior management						C	
i. Reading							
j. Writing							
k. Talking	CCCC CCC					S	
l. Procedural/ review							
m. Monitoring/ Supervising						SSS	
n. Assessing with child							

The Sands of Time

o. Unspecified							
----------------	--	--	--	--	--	--	--

Total observations: 19

Lesson 11 Maths

Activity

<u>Total observations:19</u>	<u>% Non instructional</u>	<u>% Instructional</u>
<u>Frequency within lesson</u>	7	12
<u>% within lesson</u>	37%	63%
<u>% Most common activity</u>	Organization -100% of total non-instructional time	Teacher talking-67% of total nstructional time

Lesson 11 Maths

Teacher position

<u>Total observations:19</u>	<u>Front</u>	<u>Carpet</u>	<u>Door</u>	<u>Board</u>	<u>Teacher desk</u>	<u>Pupil desk</u>	<u>Moving Round class</u>
<u>Frequency</u>	12	0	1	0	0	6	0
<u>Percentage</u>	63%	0%	5%	0%	0%	32%	0%

Lesson 11 Maths

Teacher interaction

<u>Total observations:19</u>	<u>Teacher with class</u>	<u>Teacher with group</u>	<u>Teacher with 1 student</u>	<u>Other adult involved</u>	<u>Teacher alone.</u>
<u>Frequency</u>	15	0	4	0	0
<u>Percentage</u>	79%	0%	21%	0%	0%

Analysis of Maths lesson 11 interaction.

- Three quarters of the lesson was devoted to whole class teaching. The rest was spent with an individual student.
- The lesson consisted of two distinct phases. The first was carrying out the starter activity on the computers with the whole class, the second part involved a series of practical activities concerning time.
- There was a classroom assistant who was based with a child with Spina Bifida in the class.
- Very little of the lesson was given to group or individual work.

The Sands of Time

- There was a wide range of ability in the class and the teacher managed this by giving more support for the less able pupils. The more able students spent a lot of time sitting and waiting for the next instruction. One child at the back did not receive any teacher attention at all.
- He spent very little of the lesson on task. The teacher had a large class of varied ability and tended to concentrate her time on those who were experiencing the greatest difficulty.

Conclusion of Maths lesson interaction.

- The majority of the lesson was devoted to whole class teaching.
- The teacher monitored the students from the front and worked with those who were experiencing the greatest difficulty.
- The teacher managed to fit many activities into a lesson most of which were practical in nature.

Analysis of Maths lesson 11 position

- The lesson began with a drill activity based on the computer, followed by a whole class activity. The teacher sometimes gave instructional support as necessary with individual students from the front of the class or as she monitored their progress.
- During the majority of the lesson the teacher sat or stood at the front of the class. During the main body of the lesson, the teacher drew used the interactive whiteboard and practical activities.
- The last section of the lesson combined their work on time in word problems. The teacher managed to incorporate a time challenge into the final organizational activity.

Analysis of Maths lesson 11 activity

- The opening of the lesson consisted of revision of basic skills. The main part of the lesson was spent completing a range of time problems. The children were encouraged to work with a partner and on their own.

Conclusion for lesson 11

- The size of the class limited the amount of time spent with individual children.
- The lesson was packed with instructional opportunities which were delivered by the teacher from the front of the class. and clarity but this may have been due to the timing of the observation.

The Sands of Time

Teacher activity snapshot: Observation lesson English 12

School letter: England state F Year group: 4 Teacher no. 6

No. of pupils: 32 Subject: E.F.L.: 0% S.E.N.: 13% English Time: 11:00-12:10

Lesson length: 70 mins Location: Classroom

\$=teacher with group.

S= teacher with 1 student.

A= Other adult involved.

T= Teacher alone.

C=Whole class

Position	Front	Carpet	Door	Board (w/i/ch)	Teacher Desk	Pupil Desk	Moving Around class
Non Instructional Activity							
Paper Management.							
Administration							
Organization	C		A		A		
Classroom management							
Ancillary staff management							
Personal management							
Unspecified							
Instructional Activity							
Behavior management							
Reading							
Writing							
Talking	CCCC CCCC			C			
Procedural/ organizational							
Monitoring/ Supervising						SSSS SSSS	

The Sands of Time

						SSSS	
Assessing with child							

Total observations: 24

Lesson 12

English

<u>Total observations:24</u>	<u>% Non instructional</u>	<u>% Instructional</u>
<u>Frequency within lesson</u>	3	21
<u>% within lesson</u>	12.5%	87.5%
<u>% Most common activity</u>	Organization-100% of total non instructional time	Monitoring-57% of total instructional time

Lesson 12

Teacher position

<u>Total observations:24</u>	Front	Carpet	Door	Board	Teacher desk	Pupil desk	Moving Round class
<u>Frequency</u>	9	0	1	1	1	12	0
Percentage	38%	0%	4%	4%	4%	50%	0%

Lesson 12 English

Teacher interaction

<u>Total observations:24</u>	Teacher with class	Teacher with group	Teacher with 1 student	Other adult involved	Teacher alone.
<u>Frequency</u>	10	0	12	2	0
Percentage	42%	0%	50%	8%	0%

The Sands of Time

Analysis of English lesson 12 interaction.

- One half of the lesson was given to monitoring individual students. Almost one half was spent direct teaching the whole class.
- This pattern reflects the large class size. Group instruction was replaced by individual instruction as students experienced difficulties. There was a relatively large amount of student collaboration.
- The teaching assistant was based with a child who had Spina Bifida.
- There was a great deal of direct instruction.
- Some of the less able or less motivated children experienced “down time”, time off task or waiting.

Analysis of lesson 12 English position:

- The lesson was fairly equally divided between instruction from the board and with individual pupils at their desk.
- The teacher spent a comparatively large proportion of time writing on the board and talking. The tasks required a great deal of time to set up and explain.

Analysis of lesson 12 English activities:

- This lesson was given to instructional activities; either direct teaching to the whole class or one to one teaching.
- It began with a discussion, then developed into writing activities which were used to reinforce the children’s discussion of the book.

Conclusion for lesson 12 English

- The lesson had a slow and steady pace which optimized the chances of success for the children. There were long instructions and explanations. The teacher had a clear purpose for the children and the time was directed to achieving it through a series of smaller discussions and activities.

The Sands of Time

Teacher activity snapshot: Observation lesson 13

School letter: G Year group: 4 Teacher no. 7

No. of pupils: 16 E.F.L.: 6% S.E.N.: 6% Subject: English Time: 8:50-9:45

Lesson length: 55 mins Location: Classroom

\$=teacher with group.

S = teacher with 1 student.

A= Other adult involved.

T= Teacher alone.

C=Whole class

Position	Front	Carpet	Door	Board	Teacher Desk	Pupil Desk	Moving Around
Non Instructional activities							
a. Paper Management.							
b. Administration							
c. Organization		C					
d. Classroom management							
e. Ancillary staff management							
f. Personal management							
g. Unspecified							
Instructional activities							
h. Behavior management							
i. Reading							
j. Writing							
k. Talking		CC					
l. Procedural/ review							
m. Monitoring/ Supervising							
n. Assessing with child						SSSS SSSS	

The Sands of Time

						SSSS	
						SSSS	

Total observations: 19

Lesson 13 English

Activity

<u>Total observations:22</u>	<u>% Non instructional</u>	<u>% Instructional</u>
<u>Frequency within lesson</u>	1	18
<u>% within lesson</u>	5%	95%
<u>% Most common activity</u>	Organization -100% of total non-instructional time	Assessing with child-89% of total instructional time

Lesson 13 English

Teacher position

<u>Total observations:19</u>	<u>Front</u>	<u>Carpet</u>	<u>Door</u>	<u>Board</u>	<u>Teacher desk</u>	<u>Pupil desk</u>	<u>Moving Round class</u>
<u>Frequency</u>	0	3	0	0	0	16	0
<u>Percentage</u>	0%	16%	0%	0%	0%	84%	0%

Lesson 13 English

Teacher interaction

<u>Total observations:19</u>	Teacher with class	Teacher with group	Teacher with 1 student	Other adult involved	Teacher alone.
<u>Frequency</u>	3	0	16	0	0
<u>Percentage</u>	16%	0%	84%	0%	0%

Analysis of English lesson 13 interaction.

- Most of the time was spent with individual pupils who received an extremely high proportion of the teacher's attention without interruption due to the management strategies that the teacher had set up. None of the time was spent moving around, monitoring the whole class as the children had been trained to work independently. These strategies could be used in any class situation and even adapted for younger children. The teacher called on one

The Sands of Time

student at a time and expected them to be ready with their page open, and having completed their own checks, ready for their conference. Movement was restricted in this classroom as it was very small but also because it was part of the teacher's policy to minimize time wastage.

- A small amount of the time was spent dealing with organizational issues but these periods were developed in a well paced, succinct and clear way so that it was not necessary to repeat or lengthen them. The teacher made use of organizational strategies that were regularly practiced so that the children did not have to learn new structures and minimized explanation time.

Conclusion of English lesson 13 interaction.

- The teaching style was whole class with individual differentiation by outcome.
- Queues were not accepted as part of the class rules. The teacher expected those children who were waiting to complete other work.
- The teacher had given a great deal of thought and planning to establishing rules that limited disturbances and maximized instructional time, reflecting the high level of importance the school attached to independence, diligence and pride in personal achievements.

Analysis of English lesson 13 position

- At the start of the lesson the teacher spent a short time with the children on the carpet reminding them of their task and her expectations for the lesson.
- During the main body of the lesson the teacher was at individual pupil desks, instructing and assessing the children's written work. The children were expected to remain in their seats either at their desk or at the computer while the teacher worked with those who had indicated they had completed and checked their work. This form of organization saved a large proportion of the lesson for instruction and made sure that the children were engaged and on task for the majority of the lesson.

Analysis of English lesson 13 activity

- The lesson had a clear purpose which was to revise completed written work with the children and involve them in the editing and improving process.
- The children had been trained in classroom systems so that they could work independently and make effective choices as to how to use their time

The Sands of Time

- The students worked at their desks. Most pupils completed their task with the teacher during the lesson and progressed to the next phase of the assignment.
- The lesson was drawn to a close hurriedly but as explained by the teacher in an informal discussion later, the proximity to the end of term meant that the whole lesson needed to be dedicated to completing as much work as possible.

Conclusion for lesson 13

- The lesson had been carefully structures so that the maximum time could be used for instruction.
- The teacher skillfully guided the students through the editing process, maximizing their learning opportunities.
- It is clear that time spent setting up classroom systems that encourage independence have implications for the way that instructional time is maximized in the classroom.

The Sands of Time

Teacher activity snapshot: Observation lesson 14

School letter: G Year group: 4 Teacher no. 7

No. of pupils: 16 Subject: E.F.L.: 6% S.E.N.: 6% Mathematics Time: 9:48-10:33

Lesson length: 45 mins Location: Classroom

\$=teacher with group.

S= teacher with 1 student.

A= Other adult involved.

T= Teacher alone.

C=Whole class

Position	Front	Carpet	Door	Board (w/i/ch)	Teacher Desk	Pupil Desk	Moving Around class
Non Instructional Activity							
Paper Management.							
Administration							
Organization	C	CCC					
Classroom management							
Ancillary staff management							
Personal management							
Unspecified							
Instructional Activity							
Behavior management							
Reading							
Writing							
Talking	C	CCC					
Procedural/ review		C					
Monitoring/ Supervising						SSS	CCC
Assessing with child							
Unspecified							

The Sands of Time

Total observations: 15

Lesson 14

Mathematics

<u>Total observations:15</u>	<u>% Non instructional</u>	<u>% Instructional</u>
<u>Frequency within lesson</u>	4	11
<u>% within lesson</u>	27%	73%
<u>% Most common activity</u>	Organization-100% of total non instructional time	Monitoring-55% of total instructional time

Lesson 14

Teacher position

<u>Total observations:15</u>	<u>Front</u>	<u>Carpet</u>	<u>Door</u>	<u>Board</u>	<u>Teacher desk</u>	<u>Pupil desk</u>	<u>Moving Round class</u>
<u>Frequency</u>	2	7	0	0	0	3	3
Percentage	13%	47%	0%	0%	0%	20%	20%

Lesson 14 Mathematics

Teacher interaction

<u>Total observations:15</u>	Teacher with class	Teacher with group	Teacher with 1 student	Other adult involved	Teacher alone.
<u>Frequency</u>	12	0	3	0	0
Percentage	80%	0%	20%	0%	0%

Analysis of English lesson 14 interaction.

- Over three quarters of this lesson was given to whole class teaching. About one fifth was spent with individual pupils, checking comprehension and giving guidance.

The Sands of Time

- The starter activities involved review of units of measurement in the form of practical activities, games and partner work. The small classroom had an attached carpeted area which was made full use of for discussion, paired practical work and games.
- The teacher spent the main body of the lesson with those children who required support with calculations and procedures. These children indicated how they felt about their work by showing a color coded card, green for happy, orange for managing and red for requiring help. This meant that instructional time was maximized and downtime minimized.
- The teacher had invested a great deal of time and energy in setting up systems that would increase the student's independence and release her for the maximum amount of time for instruction.

Analysis of lesson 14 mathematics position:

- The lesson had three clear phases. It consisted of review activities on the carpet, introduction of the task and written calculations based on mass.
- The teacher did not have an interactive whiteboard and a very small classroom and had resolved these issues by making the activities as interactive as possible and using the available space.
- The teacher spent time at pupil's desks to work on specific problems with an individual.

Analysis of lesson 14 mathematics activities:

The written tasks were differentiated by the children themselves. In a subsequent discussion with the teacher it became clear that one of the school's targets was to develop each student's sense of achievement and responsibility for their own learning. This approach involved joint agreement between each student and the teacher, based on their personal goals and their performance in assessments.

Most of the children remained focused and engaged. One or two became distracted during the lesson but this was quickly dealt with so that the behavior did not develop and was not tolerated. The reason for the high level of engagement during the instruction phase seemed to be the children's own desire to complete their task and attain their personal goal.

- The use of games and practical activities increased the engagement and level of instruction in the class.

The Sands of Time

Conclusion for lesson 14 mathematics

- One quarter of the Mathematics lesson was taken up with non instructional activities but this was due to organization made necessary by the use of games activities. Resources needed to be given out and collected in, instructions given and questions asked. The instructions were given clearly without much repetition so that the minimum amount of time was wasted. Time limits were given and the children were expected to carry out transitions quickly, quietly and efficiently.
- The teacher had made systems for the effective use of time in terms of learning opportunities. In these lessons, the children were not only learning in a fun, exciting way but were involved in setting their own targets leading to greater responsibility for their own progress.

The Sands of Time

Appendix 10

Teacher interview results

School A Teacher 1 interview

Estimate of Non instructional activities: ...20%

Estimate of Instructional activities...80%

<u>Non instructional activity</u>	Estimate time From 100%	<u>Instructional activity</u>	Estimate time From 100%
Paper management	1%	Behavior management	5%
Administration	2%	Reading	10%
Organization	14%	Writing	20%
Classroom management	1%	Talking	25%
Personal management	1%	Procedural/ Organizational	5%
Ancillary staff management	1%	Monitoring/ supervising	5%
Unspecified	0%	Assessing with child.	10%

The Sands of Time

School B Teacher 2 interview

Estimate of Non instructional activities: ...10%

Estimate of Instructional activities.....90%

<u>Non instructional Activity</u>	Estimate time From 100%	<u>Instructional Activity</u>	Estimate time From 100%
Paper management	2%	Behavior management	10%
Administration	0.5%	Reading	10%
Organization	5%	Writing	10%
Classroom management	0.5%	Talking	50%
Personal management	1%	Procedural/ Organizational	5%
Ancillary staff management	1%	Monitoring/ supervising	10%
Unspecified	0%	Assessing with child.	5%

The Sands of Time

School C Teacher 3 interview

Estimate of Non instructional activities: ...50%

Estimate of Instructional activities.....50%

<u>Non instructional Activity</u>	Estimate time From 100%	<u>Instructional activities</u>	Estimate time From 100%
Paper management	5%	Behavior management	10%
Administration	5%	Reading	5%
Organization	5%	Writing	5%
Classroom management	5%	Talking	10%
Ancillary staff management	5%	Procedural/ Organizational	5%
Personal management	25%	Monitoring/ supervising	5%
Unspecified	0%	Assessing with child.	10%

The Sands of Time

School D Teacher 4 interview

Estimate of Non instructional activities: ...18%

Estimate of Instructional activities.....82%

Non instructional Activity	Estimate time From 100%	Instructional activities	Estimate time From 100%
Paper management	5%	Behavior management	2%
Administration	2%	Reading	5%
Organization	5%	Writing	10%
Classroom management	2%	Talking	30%
Ancillary staff management	2%	Procedural/ Organizational	5%
Personal management	2%	Monitoring/ supervising	20%
Unspecified	0%	Assessing with child.	10%

The Sands of Time

School E Teacher 5 interview

Estimate of Non instructional activities: ...4%

Estimate of instructional activities...96%

Non instructional Activity	Estimate time From 100%	Instructional Activity	Estimate time From 100%
Paper management	0%	Behavior management	1%
Administration	0%	Reading	0%
Organization	2%	Writing	10%
Classroom management	1%	Talking	25%
Ancillary staff management	1%	Procedural/ Organizational	10%
Personal management	0%	Monitoring/ supervising	20%
Unspecified	0%	Assessing with child.	30%

The Sands of Time

School F Teacher 6 interview

Estimate of Non instructional activities: ...2%

Estimate of Instructional activities...98%

Non Instructional Activity	Estimate time From 100%	Instructional Activity	Estimate time From 100%
Paper management	2%	Behavior management	0%
Administration	0%	Reading	0%
Organization	0%	Writing	0%
Classroom management	0%	Talking	93%
Ancillary staff management	0%	Procedural/ Organizational	0%
Personal management	0%	Monitoring/ supervising	2%
Unspecified	0%	Assessing with child.	3%

The Sands of Time

School G Teacher 7 interview

Estimate of Non instructional activities: ...5%

Estimate of Instructional activities...95%

Non Instructional Activity	Estimate time From 100%	Instructional Activity	Estimate time From 100%
Paper management	1%	Behavior management	10%
Administration	0%	Reading	10%
Organization	2%	Writing	10%
Classroom management	2%	Talking	25%
Personal management	0%	Procedural/ Review	5%
Ancillary staff management	0%	Monitoring/ supervising	10%
Unspecified	0%	Assessing with child.	25%

The Sands of Time

School H Teacher 8 interview

Estimate of Non instructional activities: ...35%

Estimate of Instructional activities...65%

Non instructional activities	Estimate time From 100%	Instructional activities	Estimate time From 100%
Paper management	5%	Behavior management	5%
Administration	5%	Reading	0%
Organization	5%	Writing	5%
Classroom management	10%	Talking	20%
Ancillary staff management	5%	Procedural/ Organizational	10%
Personal management	5%	Monitoring/ supervising	10%
Unspecified	0%	Assessing with child.	15%
		Unspecified	0%

The Sands of Time

School J Teacher 9 interview

Estimate of Non instructional activities: ...30%

Estimate of Instructional activities...70%

Non instructional Activity	Estimate time From 100%	Instructional Activity	Estimate time From 100%
Paper management	10%	Behavior management	10%
Administration	0%	Reading	5%
Organization	5%	Writing	10%
Classroom management	10%	Talking	20%
Ancillary staff management	5%	Procedural/ Organizational	5%
Personal management	0%	Monitoring/ supervising	10%
Unspecified	0%	Assessing with child.	10%
		Unspecified	0%

The Sands of Time

The Sands of Time

Lesson Transcripts

School A Lesson 1 English.

7:55-9:13 (78 minutes)

7:55 Coded: Administration, Whole class, Carpet :

(The teacher is sorting out how many parents will be coming to the forthcoming parent teachers evening and on the fieldtrip. The teacher is collecting names of siblings within the school. She has asked a child how to spell his brother's name.)

Ch: The first one starts with a...r,m,i,n.

T: Armin. Your parents can come twice or three times to the conference. Shhh

When I call your name... come up with your form. If you haven't got your form please bring your form.

(Children come up in line with forms)

T: Shhhhh Alright, (teacher begins to call register.) Arthur?

Ch: Here

T: Alright

Why are you always talking Nellie?

(Teacher calls register, children answer here or present.)

Ok Jimmy has not got his form. Jimmy's form is lost.

Is John here? John? (Continues with register)

T: That's ok

7:58 Coded: Behavior management, Whole class, Carpet:

Who is talking when I'm talking?

Ch: My Mum's coming

T: Your Mum's coming?

Ch: My Dad is coming.

T: Your Dad's coming?

T: (Continues with register) Neil?

T: shhh stop talking... Wow

Ch: My Mum too!

T: I don't think I need sooo many parents.

Some of these parents have not been on a field trip once.

I'm going to choose someone's parent who has not been on a field trip once.

How many parents who haven't given in a slip?

Ch: Oh my God.

T: Counting. 123456789, wow!

You know our problem children is the bus.

Ch: Ah, ohhh

T: We only have one bus and that is for the whole group. Some of you children...

Ok some children are supposed to be doing a new club today. So what we're going to do is, I'll start the new poem when you come back. So what we're going to do is for the first period we're going to choose one of the poems we have already worked on before. And we'll be writing a second one in that style.

So if you want to do another Haiku or another cut and paste, or another shape poem. Right do you remember what a shape poem is? Who can remember what this is...

8:01 Coded: Procedural/Review, Whole class, Carpet:

Ch: Echoic poems...(General discussion.)

T: Ok, let's review

T: Do you remember what a shape poem is?

Ch: Yeeesss

T: Do you all remember? The words you have to write do not have to be on "water" (the class project) It can be on anything ok?

The Sands of Time

So when you all come back I will give you the last kind of poem for today which is called a ...
..(Looking at plan) Sensory poem.

Ch: Sensory?

T: Sensory, yes.

Ch: Hmm Sensory

T : Something to do with the senses. You all know what the senses are?

Ch: We have five senses.

T: Very good. What are our five senses?

Ch: Hear

T: Hear?

Ch: And see

T: See and?

Ch: Smell

T: And?

Ch: Taste

T: And:

Ch: Touch

(Talking to Arabic children)

T: So you children, you will join with us when you come back you will write it with us. Ok? Got it?

Ch: Ok

T: Ok go. The rest of you children you need to do a second poem...ah...do a shape poem. You could do a shape poem right? Ok. What are the other kinds of poem?

Ch: Haiku

T: How do we write Haiku? Yes?

Ch: 5, 7 and 5

T: If you're not sure, everything is in your creative writing books, so you just need to look back and read through what you've done. I'm not going to explain the whole thing to you again alright? What are the other kind of poems you've got?

Ch: Echoic poem.

8:04 Coded: Procedural/Review, Whole class, Carpet

T: Echoic poem, yes, what was the echoic poem?

Ch: Echoic poem.

Ch: It's a pattern.

T: Yes it's a pattern. What is the idea behind an echoic poem? Yes?

Ch: You have a word and a pattern

T: Pattern... pattern, Remember, you don't need to write one of each type again ok? You can choose. What's echo. What do you hear in echo?

So if it was water, the what of water?

Ch: It has sound.

T: Very good and echoic poem has sound. You choose. Give me a topic that you'd like to write on please... A topic.

Ch: Rain

T: Rain, that's like water, rain. Let's get something totally different. Yes?

Ch: An apple.

T: Apple, Ok what are the sounds, what are the sounds you hear when you are eating an apple?

Ch: Crunch

T: Ok crunch, munch. What else?

Ch: Gump

T: Ok when you bite into an apple, what comes into your mouth?

Ch: Water

T: Water, juice

Ch: Juice

T: Ok so what sound do you make when you have the juice?

8:07 Coded: Procedural/Review, Whole class, Board

Ch: Slurp.

The Sands of Time

T: Slurp ok. So ok, so ok, so echoic poems, echoic poems, have... has to have lots of sounds. So if you choose apple, all of the sounds have to do with apple. You can choose one like school. What are the sounds you hear in school?

Ch: Talking

Ch: Tick tock

T: Ok tick tock...

Ch: making sounds...

Scribble, arghh, blahh

T: Ok quiet please.

Ch: Scribble wibble,

T: Ok **123**, so you have to ...think a little bit about the sounds. If you're not sure you can...look in your book. We have this one (pointing to diamante poem) which is a little bit more challenging.

Yes Nellie?

T: We are using verbs

Yes Margo?...*(Silence)*

Ch: Verbs

T: Verbs, adjectives, verbs. It has to be in a diamond shape. What about cut and paste?

Ch: You need to look for words.

T: So if you're doing a topic,..you have cut and paste, for example...give me a topic that you would like to write on.

Ch: Football

T: Football, ok, football. What will we look for in the magazine?

Ch: Anything

8:10 Coded: Procedural/Review, Whole class, Board

T: What are you looking for in the magazine? Ok right, You make up your own poem right.

Ch: Congratulations?

T: Congratulations? Ah...

Ch: *(unclear)*...alliteration

T: Marlon, can you explain alliteration?

Ch: Em... Starting with the same letter.

T: So what we're going to do now, this will be your personal copy of your work. You can fill your book with different poems. You can choose...shape poems...this one, right? *(Pointing at poem)* Using the poem that you have already written for me. You can start the book with the different poem. You can choose one of each kind but it doesn't have to be on water. So for the next few days you will be... and I want you to have finished this by next week when you have your conferences, so we can put them up for your parents to have a look.

Yes Simon?

Ch: Why?

T: Because your parents are coming here...right?

So do you know what you have to do? So in your creative writing books you will do your rough copy.

We'll edit that and then you will copy your best one...copy.

You can use nice colors. As you like, as you like. Yes? John?

Ch: So I can do it how I like it?

T: Any way you want to. Check which one is in a shape. If you want to do a football shape you can write about football. Ok? Any problems?

For your homework you can decorate and make it very nice. Any others?

Ch: What about a shape poem?

T: Ok you can do that, what else can you do for your...

Ch: After you can write...your presentations.

T: Shhh, excuse me, someone is talking here, and you're not supposed to, getting on please.

8:13 Coded: Behavior management, Whole class, Board

T: That's fine. Any questions? When the Islamic children come back we have a sensorial poem right?

So for the next few days or so you'll be just working on this topic. You get your creative writing books and I'll give out the workbooks.

(Movement and organization)

The Sands of Time

T: What you need to decide is which type of poem you're going to be writing. Right? You need to do your first draft.

8:16 Coded: Organization, Whole class, Moving around classroom

(Children settle down at desks with books. Teacher wanders round with workbooks)

T: Now, please...

123 Eyes on me

Ch: (In chorus- 1,2, eyes on you)

T: You need to put your name somewhere in pencil. Ah... write it. Ok

(Teacher continues giving out books.)

8:19 Coded: Behavior management, Whole class, Moving around classroom

T: Shhh

Who is that at that table?

Ok... working.

(Children talking quietly with others in their group as they get on with their poems.)

T: Shhh ...OK?

It is coming from this table.

T: I'm coming around to see which poem you have chosen alright? In your creative writing...Where's your rough copy children?

Ch: (Chorus) In your creative writing.

8:22 Coded: Monitoring/Supervising, Whole class, Moving around classroom

(Children talk quietly as they write their poems.)

T: OK, Here you've coloured in...

(Children get slightly noisier.)

Shh, alright, this is the last time I'm going to ask you, work by yourselves.

(Children work quietly.)

T: What's the first thing you do before you start please?

Ch: Thinking.

(Children work quietly)

A: Hello, here are the books.

T: Hello (unclear)

8:25 Coded: Organization, Other adult, Front

T: Wow (unclear) ok.

T: (At individual desk) What is the title of your poem?...decoration

T: Shhh

Jemima, what's your topic? What are you writing about?

Ch: (Unclear)

(Children talk quietly as they were.)

T: What is your title?

Shape poem..yes?

(Children working)

T: That's a great poem Alison.

T: Alan, very good.

T: Ok, **123 eyes on me.**

Ch: (Chorus)1,2 eyes on you.

T: I'm going to talk about shape poems. What is the first thing you do when you have a shape poem?

Ch: Brainstorm.

T: Yes you've got to brainstorm all your words, right? Don't start the shape. You need to do the first one.

(Teacher moving round desks)

8:28 Coded: Monitoring/Supervising, Whole class, Moving around classroom

T: Yes you got all the words.

(Looking at child)

T: Yes Ron?

Ch: Unclear

T: Unclear

The Sands of Time

(Teacher checking Haiku poem and counting words.)

T: Yes verbs.

Ok you have decided to do this one?

What is a category?

It's a very good topic, it's challenging but a good topic.

This is your rough copy.

8:31 Coded: Monitoring/Supervising, 1 Student, Pupil Desk,

If you're not sure look in your workbook.

Alan...

Ok You choose.

Come on.

Look in your book and choose.

John your alliterations are good. On a turtle?

Ch: Yah

T: Hmm very good. Ok write it down how you think. Finished? This table is finished? Ok.

Ch: Finished

(Children work quietly.)

T: Shhhh, excuse me...

(Teacher at desk with children in queue waiting for her attention. Students working quietly.)

T: You know this verb is...(unclear)

8:34 Coded: Assessing with child, One student, Teacher's desk

(Children moving to see teacher at desk.)

T: Marlon?

Rita?

(Children working very quietly)

T: (To child at desk) You need to write it down...

(Children working quietly, teacher wandering round desks, monitoring work.)

T: Children Jonathan's done a shape poem. It's great. Really nice. You worked hard.

8:37 Coded: Behavior Management, Whole class, Front

T: **Ok 1,2,3, eyes on me.**

Ch: **1,2, eyes on you**

T: Children I've got to stop you now because we've got to look at another sort of poem. Ok? (Unclear)

T: Ok.

(Children move to carpet area.)

T: Now quiet, ...Ok...Marlon...(Teacher holding gaze.)

Now from what I've mentioned what is a sensory poem about?

Ch: About our senses.

Ch: Hear.

T: Hearing, touching, listening as well right?

Touch

Ch: Smell

T: Smelling

Ch: Tasting

T: Tasting and seeing right.

What is a homophone?

Ch: You look in the dictionary.

T: You look in the dictionary for a word with a similar meaning.

Ch: You look for some words, then you can find a word. I found a huge website that had about homophones.

8:40 Coded: Teacher talking, whole class, carpet

T: Anyone like to have a look at that?

Ch: Yey...

T: Ok let's try to get back to this, anybody got their homework, yes children. I'll explain it to you later because you forgot your homework.

Ch: I found 26 homonyms at home

The Sands of Time

T: I'm sorry what are you saying?

Ch: I found 26 homonyms at home.

T: Homophones or homonyms, which ones are we doing?

Ch: Homonyms

T: Homonyms, right, why am I saying homophones?

Ch: Yah right.

T: That was you Alan, right, very confusing. Ok Ah...so...we're looking at the five senses and we have related body parts to them right? So what would hear and listen be?

Ch: Ears

T: Touch and feel?

Ch: Hand

T: Your hand or your...

T: Fingers...or..

T: Your feet. So what will you feel with?

Ch: Your nerves

T: Your nerves are inside. What's on top?

Ch: Your skin.

T: Your skin, very good.

Smell?

Ch: Nose.

T: Tasting

Ch: Mouth

T: And see?

Ch: Eyes.

T: So what we're going to do is think of a water related word, because it's got to do with our projects. We're still working on these words. So our first job is to think of water. So what we're going to do is...actually Miss Kellogg's class did a wonderful job on this....when you think of water, you have to relate it to the five senses, alright, so first of all, what are the sounds that you hear when you bathe in water?

Ch: Splash

Ch: Splish

Ch: Splish,splash

Ch: Drip, drop

T: Drip,drop

Ch: Plop

T: So we're going to do one at a time ok? Excuse me John.

We're going to start with hearing.

8:43 Coded: Teacher talking, whole class, board

So we're going to think about hearing. When you hear water what are the sounds that come across or..it's not like an echoic poem, so splash splash, I'm just going to write one little word. Splashhhhh yes ok?

Ch: shhhh

T: Now that's what you are hearing. Where are going to put the next one?

When you touch water how do you feel?

Ch: Hot

Ch: Cold

Ch: Warm

T: Warm...

Ch: Relax

T: Sorry?

Ch: Relax

T: Ok

Ch: Relaxed.

T: Do you feel relaxed when you touch water?

8:46 Coded: Teacher talking, whole class, board

The Sands of Time

Ch: Yes

T: Ok when you touch water what are the words that come into your mind?

Ch: Soothing!

T: OK right

Ch: cold

Ch: hot

Ch: Cold and hot.

T: Ok I'm not going to write all the words we are brainstorming

T: Ok. All the smells related to water

Ch: Salt.

T: You smell salt, ok salty

Ch: Chlorine

T: Did you say Chlorine? Very good. When we go swimming at school we can smell that right? So we are brainstorming words about smelling water. What are we doing next?

Ch: Taste

T: Taste

Ch: Salty

T: Ok salty again

Ch: Fresh

T: Fresh

Ch: Soft

T: Ok so what is soft?

Ok water is soft. Let us think.

Ch: Just soft.

T: It's not hard.

So the last sense is?

Ch: See

T: Ok when you see water what is some of the words that come into your mind?

Ch: Waves

T: Ok waves.

Ch: Swimming.

8:49 Coded: Teacher talking, whole class, board

T: When you see water, you think about swimming.

So what we're going to do today for the first draft, we're just going to brainstorm words, right. We're going to do the five senses. And we're just going to brainstorm words. The five senses and then I'll tell you what the next step is going to be. Do you all understand what you have to do?

Ch: Yes

Ch: How many do we have to do?

T: How many do you think is a good number?

Ch: 5

Ch: 10

T: Let's keep it between...

Ch: 5 and 10

T: 8 words.

8:52 Coded: Teacher talking, whole class, carpet

Think of really good words.

T: I'll tell you tomorrow how you write the sensorial poem. Right?

So, one minute...

So before you write in your book, what's your title today?

Sensory and your title is water. Brainstorm words. Alright, any questions? Norma? Ok? Everyone else good?

T: Watch your head.

(Children settle down with their work.)

T: Ok ah **123 eyes on me**

Ch: 1,2, eyes on you

The Sands of Time

T: (To child) You are a little distracted this time hmm?

This is what you need to do in the next few weeks.

So get started, put your title and the date.

Ch: I don't have another page.

T: If you're going to be distracted I'll have to put you over here.

Ok put that away.

T: Ok start with your...start with this.

Write the date.

We're talking about water right?

Water.

8:55 Coded: Monitoring Supervising, Whole class, Moving around classroom

(Teacher walks around class monitoring the students at work.)

T: Date

(Teacher at desk)

(Children work in silence)

T: I didn't mention dictionaries but if anyone wants they are over there.

Ch: I can use my own dictionary.

T: I have one more here. Anyone else? Go and get one.

(Teacher at desk looking at computer)

8:58 Coded: Administration, Whole class, Teacher's desk

T: I'm sorry we won't be able to do any more on your presentations today because we don't have any more ah, ah scheduled right?

So who is left with their projects? John and ? Right.

Look in the dictionary for interesting words to use right?

T: That's alright.

(Children work in silence, teacher at desk.)

T: Marlon can you come here please?

I've just started to... (Unclear)

Think of water...

(Children work in silence.)

T: Ok which table is that?

(Teacher rubs merit point from board.)

9:01 Coded: Personal management, Teacher alone, Teacher's desk

(The air conditioning suddenly stops)

T: What was that? The air conditioning.

Ch: My ears are popping.

Ch Mine too.

Ch: I'm hot.

T: It's not hot.

T: Shh

Ch: I'm hot

T: Already?

(Children work in silence for sustained time.)

T: (To caretaker) The A/C has stopped working. I don't know what it is, maybe it's the...ah...

9:04 Coded: Organization, Teacher with adult, Door

(Teacher and caretaker continue talking in Indian. Children continue working for sustained time.)

(Teacher looking at computer at desk)

9:07 Coded: Administration, Whole class, Teacher's desk

T: Ok stop children, can I have your attention please. Children tomorrow we are going on our trip to the theatre, children.

And ...ah... if you want to bring your costumes you can bring them in. So that you can change alright?

(Children continue working)

T: **Ok 1,2,3 eyes on me**

Ch: **1,2,eyes on you.**

The Sands of Time

9:10 Coded: Organization, Whole class, Front

T: Dutch people come here, the rest of you can you tidy up please?

Come here the Dutch..., on the carpet.

(Counting the children)

T: 1234

Ch: 6

T: 123456

Put the dictionaries back.

Can you line up outside?

9:13 End of lesson

School A Lesson 2 Mathematics.

9:50-11:10 (80 minutes)

9:50 Coded: Organization, Whole class, Front

(Children coming into class. Teacher directing children to seats.)

T: OK, excuse me...Neil come up here please, Neil. Shhhhhhh. Come on. We want to finish this...(unclear)...alright?...

Ch: Ok

After we will review our work from yesterday and we will review Maths every single day and remember to review what you are not sure about. If you're sure about... if you're sure of addition and subtraction, don't spend too much time doing that, go on to time or fractions. Alright?... Tomorrow I will be giving you a review sheet, which has a little bit of everything in it and we're going to go over it. So you can get an idea of what you can expect in your test.

9:53 Coded: Organization, Whole class, Front

Let's go to page 101. Where did we stop children? So children what was the question?

Ch: Number 3

The Sands of Time

Ch: 3A

T: OK 3A ... What's the matter? 3A? Ok I'll stop until everyone's listening.

Ok, 2 containers that hold together 1 liter. How many milliliters is 1 liter?

Ch: General discussion.

T: Quiet. How many milliliters is 1 liter?

Ch: 1000

Ch: 1000

Orange and peach. Got that? Orange is 600, peach is 400. 1000, 1 liter.

We can have combinations, apple and pear and

Ch: Can I have plum?

Ch: peach?

9:56 Coded: Behavior management, Whole class, Front

T: Wait, excuse me... you put your hand up alright. Don't keep shouting all the answers out.

Ch: Ok

T: Number 4. 3 quarters of a liter. How much is 3 quarters of a liter? How many ml? How many milliliters?

Ch: 730

Ch: 750

T: Very good. You get... a combination of...

Yes. Lemon and pear.

Yes... Lemon and grape, lemon and grape alright? Yes Julie?

Ch: Orange

T: Orange? Where is orange? 850. That's wrong. 750. Right?

Ch: Why can't?... I have plum and grape.

T: Plum and grape? Plum and grape, that is only 700. It has to be exactly... how much?

Ch: Apple and grape?

Apple and grape no that's 750 plus 500. That's 1250

It has to come up to 750 right?

Ch: What is the next one?

T: Ok, next one is one and a quarter liters. How many is 1 and a quarter liters? How much is 1 and a quarter liters? 1 and a quarter.

9:59 Coded: Talking, Whole class, Front

Ch: 1500?

Ch: 1200?

T: Neil?

Ch: 1250

T: How did you get 1250?

Ch: Ahhh

T: How did you get 1250? Explain to the class. Come here. Come on.

(Calls child to white board and gives him a pen.)

Ch: He's wrong.

T: He's right, he's not wrong.

Ch: 1 quarter is 250 (Writing on board.)

... Em

He has 1 liter,

T: How much, how many milliliters?

Ch: 1000

T: 1000, This is? (Pointing at board)

Ch: 250

T: 250 so what does it add up to?

10:02 Coded: Talking, Whole class, Board

Ch: 1000

T: 1250. How many did not get this?

Ch: Silence.

The Sands of Time

T: Why were we getting answers that aren't right?

OK thank you, ah Neil (sending child back to seat) so apple....one minute..., lemon,

Ch: grape

T: One minute...Ahh, Apple

Ch: Peach

Ch: And grape

10:05 Coded: Talking, Whole class, Front

T: Apple and grape. Not peach. Peach is only 400. Ok. Apple and orange is 1650. It has to be exactly that.

Ch: Apple and strawberry

T: Apple and strawberry is 1550. You have to be exactly right. You've got to be careful of the addition children.

T: The next one is one and a half liters. How do we write one and a half liters?

Ch: 500

T: Why is it 500? One and a half liters is?

Ch: 1500

T: 1500, Right so which two is 1500?

Ch: Strawberry and orange.

T: Strawberry and orange yes. Why because 500 and 1000 is?

Ch: 1500.

T: Ok, Ok Which of these 3 containers will hold 1 and a quarter liters? Three containers. 1 and a quarter. Which did you get?

1 minute...Alan? What did you write?

10:08 Coded: Talking, One student, Pupil desk

Ch: Apple and plum and pear.

T: Good. Plum, pear, apple. Wait, Megan, next?

Ch: Peach...

T: Peach...

Ch: and strawberry

T: Strawberry. Shhh. Ok have you all worked it out?

Ch: Yeesss

Ch: I got lemon and plum.

T: (Working out) Yes that is also correct.

(General discussion)

T: The next one write in order. What is the smallest?

Ch: A quarter.

T: A quarter, very good.

Ch: A half?

10:11 Coded: Behavior management, Whole class, Front

T: I am not going to have children shouting. Excuse me class. Excuse me again. Are you supposed to shout out your answers like that? Put your hand up. Excuse me. When you call out the answer you are stopping others from putting their hands up. OK, Right?

Ch: Ok

T: It should be a quarter liter...., 300 milliliter..., half a liter...can I finish?

Ch: Half a liter?

T: Because again you've interrupted. Can you just wait till the end and I will check if your answer is different. Ok so I'll start again, please don't stop me in the middle again. OK, a quarter, 300 milliliters, half a liter, three quarters of a liter, 1 liter, and 1001 ml(unclear)

Ch: No...

Ch: Yess..

Ch: 1 liter and then 1001

(General discussion.)

10:14 Coded: Talking, Whole class, Front

T: Ok I'll start again: quarter, 3 hundred, half, three quarters, 850, 1001, Ok? OK next page, if you haven't finished on that table you listen. Right? OK, Max?

The Sands of Time

1000ml and 250. So how many ml is that?

Ch: 1250

T: 1200?

Ch: and 50

T: Ok

T: OK, She has 1350 liters, Gaby. Very good. How much has Colin got?

Ch: 1900 milliliters

T: How much is there?

Ch: 1900

Ch: 3000ml.

Ch: 3250ml

T: Yes 3250ml.

T: ...next..it's 2 liters..right?

A is 1200ml. You got that one wrong? (unclear)

Ch: laughter

10:17 Coded: Talking, One student, Pupil desk

T: Check and then we don't need to keep repeating.

I'm going to call out the answers, please check. 45ml, 1710ml, that's 17 hundred and 10 ml. 1710 right, 3805, 3 thousand 8 hundred and 5 ml. and 1025 ml, 1 thousand and 25 ml. Let's see.

Ok number 3 will be 1 liter 760 milliliters, 3 liters, 333ml. 4 liters 408 ml. 2 liters 50 ml. Any problems there?

Ch: Noooo.

T: So the review we did today is on capacity. What about E?

I just thought of that actually.

Ch: 2

T: 2 liters. Ok our last one is how many containers can we fill from 1 liter barrel? 1000 milliliters. The second one is 5

Ch: Hmm?

Ch: What?

Ch: 5?

T: This container will only hold 200ml. We have a barrel here with 1000ml. How many?

Ch: 5

T: 5 yes.

(General discussion)

Ch: What is number 1?

T: Ok Number 1 is one hundred.

T: Number 3 will be how many?

Ch: 4

10:20 Coded: Talking, Whole class, Front

T: 4

Ch : 4

T: Ok. 1 and a quarter liters how many ml?

Ch: 1250

T: So how many will we need to fill up the barrel?

Ch: 2

Ch: 4 more

T: That's easy capacity, do you understand capacity now?

It is very difficult when you're calling out.

You will definitely get some questions on capacity, so please, please, please learn your capacity.

Right? Ok, let's look at yesterday's work that you had to finish. You had to finish.

Ch: Em...

T: That was very easy, addition and subtraction again. Lets' go back to capacity again a minute.

Anyone want that sheet?

Number 1... if a can of pop holds 206 ml how much would 4 cans hold?

Ch: 824

The Sands of Time

T: How did you do that? 4 times 200 plus, plus plus right?

10:23 Coded: Talking, Whole class, Front

T: What's a faster way to do it?

Ch: Multiply

T: Multiply right.

Ok next one.

(Unclear)

How many cans will I need to make one liter?

Ch: 1

T: Only 1 can yeah.

Ch: 2 cans.

T: How did you get 2 cans actually?

Ch: You will need 2 cans for the extra.

T: 856 is what you've got right? I want to make 1 liter. 1 liter is how many ml?

Ch: 1 thousand.

T: 1 thousand. So how will I find the difference?

Ch: Minus

T: So the sum is 1441

How much is 1 can?

Ch: 1.4

T: How much is 1 can?

Ch: 214

10:26 Coded: Talking, Whole class, Front

T: So I will need...

Ch: 2 cans.

T: How will I need 2 cans? 1 can more right?

Yes?

(Unclear)

Ok, 1 pot of tea... 1 cup of tea. How do you find out?

Ch: Subtract.

T: Ok you have 1 pot of tea and you've taken out a mug and a cup already. You have to subtract the two. Got it?

OK number 3, a bath holds 83, a shower takes 34 liters, how many liters are used for a bath and a shower? 117. How much water will I save if I have a shower? Ok your shower... Your bath takes 83 liters and your shower takes 34 liters. How much am I going to save?

Ch: Add.

T: Add or?

Ch: Minus

Ch: Minus.

T: So how much water are you going to save by taking a shower? You subtract right?

So I'm going to do this right?

10:29 Coded: Writing, Teacher, Board

(Writing on board)

Ch: (Discussion.) No because...

T: Shhh, any problems there? Yes? Why have you got a problem?...

OK number 4. Are we all on number 4 now?

T: Yes. I will have to stop again. Children I am having to use a very loud voice today. The noise is only coming from there...

Number 4 a water bottle holds...

You are talking again and I'll have to stop. We can't keep doing this I'm sorry.

What's the problem Simon?

Ch: I just hurt myself.

T: ...A water bottle holds 454 liters, if you swallow 266 how much is left?

Ch: 188

T: Subtraction right?

The Sands of Time

Anyone got that wrong? What happened? Sorry...

Ch: I did it wrong. I put 188

T: It is 188

You need to practice right?

Ok next one... You need to practice right?

Ok remember when you borrow you need to reduce the number you keep forgetting to do that.

(Unclear)

10:32 Coded: Talking, Whole class, Front

T: 99, now I need to make a cake, 653 ml so how will I write that? 653 minus 99.

554, right. Just checking.

Ch: Add

T: You don't add, minus I want you to remember you already took some of the jam right? Alright.

Number 6 (Unclear) You have collected some rainwater in a bucket the bucket holds 8 liters you have 3.5 liters of water from the bucket how much is left?

Ch: 4.5

T: Next, how much more rain is needed to fill this bucket?

Ch: 2.25

T: Or 2250mls

Ch: I got 1.25

Ch: I got 1.35

(Teacher calling child out)

T: Ok go step by step.

First you have to stand back. Show us.

(Child writing on board.)

10:35 Coded: Talking, Whole class, Board

T: This is what the bucket holds right? How much rainwater do you have? How much is left you have to subtract so the answer is 2.25. Have you all answered correctly?

Ch: Yesss

T: Ok. This is what the bucket holds. What about the rain I get? I get 5.75 ml in this bucket. If I pour some out to water my plants, how much am I using to water my plants? 3.5 so what's going to be left?

Subtract. 5.75 subtract 3.5. is?

Ch: 2.25.

T: 2.25 Have we all got that, children?

Ch: No

T: Who still hasn't got it?

Ch: Silence

T: Alan come up here.

Alan this is your bucket of water and it holds this much water. Got it? Now you want to use some of this to water your plants. How much are you going to use to water your plants?

Ch: 3.5

How much is going to be left. If I use some of this to water my plants? How much is left? (Teacher writes on board) Have you got that now?

Ch: Yes,

10:38 Coded: Talking, Whole class, Board

T: Sure?

Ch: Yes... yes.

T: Ok. How many of you draw in your books? You can draw in them.

Ch: I do.

T: Next time when it rains in this bucket...

I am using a bucket which uses 7000ml of water to collect the same amount of rain. Alright. How much more rain is needed to fill this bucket? First time it's 5.75 and the second time is 7000 so how much more water will I need to fill this bucket up?

Ch: 1.25

T: Yes

Ch: Huh?

The Sands of Time

T: How did you get that answer, what method are you using? Add or subtract?

Ch: (Noise)

T: The first bucket holds 5.75 ml right? And you are using a larger bucket with 7000 ml.

Ch: You add them.

T: What do you add? How could you add? Ok, come on I want you to draw, draw this problem.

Ch: How?

10:41 Coded: Talking, Whole class, Board

T: How? You draw 2 buckets. Everyone draw 2 buckets.

Ch: Which number?

T: Number 6. Draw your first bucket. How much does your first bucket hold?

Ch: 5.75

T: 5.75 ok? Have you all got that?

Ch: Ok

T: Now your second bucket holds 7000 ml. Your second bucket holds 7000 ml. How much more water do I need to fill up this bucket?

Ch: 1 point...

T: 1.25. It doesn't matter what your answer is, how did you get that answer?

That's important. What method did you use?

Ch: Subtract

T: Subtracting.

You subtract what from what?

Ch: You subtract 5.75 from 7000

10:44 Coded: Talking, Whole class, Front

T: Now can I change this into liters and milliliters?

Ch: Yes

T: Yes I can so 7.0 and that was 5.75 (Teacher writing sum on board.)

It is very important to write your answer. Yes. Ok. 1.25ml. Got it?

Any problems?

Ch: I got 1250

T: That's right 1250ml.

Ch: I got it wrong.

T: Yes, but you understand why, right? Ok?

Ch: Mmmm.

T: Number 7 Mary was being cheeky and filled up her mothers shoes with cooking oil. Each shoe holds 1.7 ml. How much does Mary put in her Mums shoes? 3.4 You all got that?

If there is 6.75 ml to start with how much is left?

Ch: 3.35

T: Got that?

Anyone didn't understand that problem? Good. Ok

Number 8. A mug holds 221ml. A cup holds

164 ml How much more hot chocolate does a mug hold than a cup?

Ch: 78

10:47 Coded: Talking, Whole class, Front

T: Ok please stop me now if you're not sure...I will not be doing this again. Ok you're having a cup of hot chocolate and it is and the mug is 221, that's a big one. What have I got? How will I find how much I have? Now how much more is this compared to this, how will I find out? (Teacher writing on board.) 57.

Got it? Children please draw out your problems. I told you that if you don't understand. OK Let's look at yesterday's worksheets. Everybody.

Ch: Is our test on Monday?

T: It's on Monday yes.

Ch: Oohh

Ch: When is our other one?

T: Next Tuesday. Next Tuesday. Then we have a double day of Math.

Ch: Will green group do it?

The Sands of Time

T: Yes. Ok, let's get back to our work please.

Number 3, Shhh, Ok settle down again. We finished number 3.

How many 10 thousands?

Ch: 3

T: How many 1's?

Ch: 2

T: How many thousands?

Ch: 10

T: How many tens?

C : 6

T: How many hundreds?

Ch: 2

T: Tens?

Ch: 1

T: Everybody got that?

Ch: Yesss.

T: Good. (Unclear) Shhhh

5 million, 4 hundred thousand. Everybody got that?

Ch: Yess.

10:50 Coded: Talking, Whole class, Front

T: Who can read this number?

Ch: 5 million 86 thousand and 4

T: You all got that?

Ch: Yeees.

T: Ok can you close your workbooks and I'm going to give you something which is hard. Now this is , actually all the topics that we taught.

Ch: Oh

(General discussion)

T: Wait until I have finished ok? You can ask as many questions as you like afterwards. Right... Let me finish. This is just a ...start of the kind of questions you're going to get. The best thing for you to review, is to look at all your work so far and think about those things you're not sure of. You have to do whatever you can. So what we're going to do today is, just look at an example and we're just going to go through one step by step. And then you can start working this out for yourselves. Yes? 1 minute... if you find this is very easy for you, leave it and go to the one that is more challenging and those you're not sure of. Don't do something you're already sure about. Please skip addition and go on to time and making angles. I have a whole lot of worksheets. If you want to take some for things you are not sure about please come and take it from me. You can work on this and all the other worksheets. I also have loads of worksheets on addition, subtraction, division and multiplication. So before you...

(Unclear.) Alright?

(General discussion)

T: Please settle down.

(General discussion)

T: 1,2,3 eyes on me

Ch 1, 2 eyes on you

Settle down.

Ch: How many pages do we have to do?

10:53 Coded: Talking, Whole class, Board

T: Ok, let's look at the review section. The first one is very simple...you are given some vocabulary. You have to fill in the blanks. Addition and subtraction are examples of what? Choose one of the words. What do you think this is? Addition and subtraction... Number 1. This is vocabulary. Can you see that?

Ch: Yes.

T: What do you think, addition and subtraction are examples of what Natasha?

Ch: Digits?

Ch: Facts?

The Sands of Time

T: No.

Ch: Facts?

T: Operations. Don't shout out please. I said addition and subtraction are both types of operations. Ok what other types of operation are there?

Ch: Division?

T: Divisions and?

Ch: Multiplication.

T: Multiplication very good. So what are the 4 operations?

Ch: Addition, subtraction, division and multiplication.

T: Ok have you all got that? And now any problems there?

Ok next one. The symbols 1,2,3,4,5,6,7,8 and 9 are forms of?

Ch: Numbers.

T: An ordered set of numbers are? An ordered set?

Ch: Fact?

10:56 Coded: Talking, Whole class, front

T: Yes. Fact family.

Read chapter 1 and answer yourselves on fact families.

(Children write.)

T: You all now what fact families are? Have you all got that?

(Teacher monitoring, moving around desks)

T: Look at 4 and 5

17 minus 5 is 8

Something plus 5 is 17

Got it? You know what fact families are?

Next one is very easy, add 2 digits and subtract, you all know how to do that, anyone not know how to do that? You all know how to add and subtract?

Do 6,7,8,9,10, 11 come on.

Ch: 6?

T: 6,7,8,9,10,11 all of them right Marlon?

(Children work quietly, teacher reading computer messages)

Children for the break today it says high school gym. Do you know where the high school gym is?

Ch: No

Ch: Yes

10:59 Coded: Administration, Whole class, teacher desk

T: The high school gym is a big gym, where we had the (School name) day.

Ch: Yes.

T; So day 3, 5 and 6 high school gym. On day 2 and 4 you go to the other gym.

So where do you go on day 3, 5, and 6?

Ch: High school gym.

T: Where do you go on days 2 and 4?

Ch: Other gym.

T: Ok number 6 answer is?

Ch: 9

T: Next

Ch: 85

Ch: 84

T: What's that?

T: Ok number 9 is

Ch: 55

T: 55, who got that wrong?

(Silence)

T: 68 take away 53 Number 10 the answer is 15 yes?

Number 11 the answer is 17. Yes?

You have to see if it is subtraction. You need to practice subtraction. Ok next one everyone. Find all the even numbers. Odd numbers?

The Sands of Time

Ch: 1,5,10

Ch: 5,10

11:02 Coded: Talking, Whole class, Board

T: Children what are even numbers?

Ch: They divide.

T: You can divide by two.

Ok I'll wait.(Teacher staring at a noisy group.)

2,4,6,8,10.

So odd is 9

12 plus 14 is it odd or even?

Ch: Even

T: Ok what is number 9?

Ch: odd

T: And 40?

Ch: Even

T: Ok this example is standard form. Look at the example given there

42 thousand 1 hundred and 5. It's the standard form of writing it right?

So what is the standard way?

42 thousand, plus 1 hundred plus 5. And we have to write it in words.

42 thousand 1 hundred and 5. Ok?

Ok now write the standard form, 15,16,17, 18 and then 19 and 20 are expanded form. Come on let's do that, standard is the simplest form.

(Children write answers.)

Ch: Why can't we go to the library at break?

T: You shouldn't really be going there then?

Ch: Why?

T: Because you should go somewhere else.

Ch: Why?

T: Because it's the librarian's time she is on her break. But from today anyone can sit inside. You can take your book and sit inside yes? It's hot outside and we've been getting lots of headaches and nosebleeds and so on. So today we can all go to the high school gym right?

Ch: High school gym is huge.

Ch: We can't play in there.

Ch: The balls...

Ch: There's no room there.

T: Are you all drinking water?

Ch: Yes.

Ch: It's not fair.

T: You children don't know how lucky you are. Don't be complaining about the gym being too small. Some children have to walk 10 miles to school each day and before they walk they have to get water for the family right?

Ch: Don't they have it in their house?

11:05 Coded: Administration, Whole class, Teacher desk

T: No they have to get a bucket and walk to fill it with water.

Ch: They have miles to walk.

Ch: Don't they have horses?

T: Ok can we mark this now.

Ch: Noo...

T: Ok I'll give you a few more minutes.

(General discussion)

T: Number 15. I'm writing the answer on the board because some of you are doing something wrong and I want to make sure you don't do that. 700 and

Number 15 is 758. That's easy everybody got that? Number 16 is 280.

Number 17 is 12 thousand

Ch: hmm

The Sands of Time

Ch: Huh

10 thousand plus 2 thousand is 12 thousand. Yes? No?

T: Number 18 should be 3 hundred thousand plus 2 thousand plus 1 thousand 8 hundred.

In this expanded form you must write the plus sign in the middle. Marcus can you stop with that please. Like this. It is very important children.

Ch: Miss he's flicking her hair.

T: Julian stop that.

T: 500 thousand plus 17 thousand plus 1 thousand plus 16 plus 1

11:08 Coded: Organization, Whole class, Board

We have done a lot of math. Please write the date at the top of your paper.

(Children moving about and putting paper away. Getting worksheets etc.

T: Everybody please sit down in your place.

Please sit down.

Shhhh.

T: Claps pattern

Ch: Echo pattern

T: Please sit down.

Ok, Julian...

This is the type of thing you will get in the test, do it step by step over the next few days. You can practice at home. We will do this in class everyday from now on.

11:10 End of lesson

School E Lesson 9 Mathematics.

11:50- 12:50(60 minutes)

11:50 Coded: Organization, Whole class, Front:

T: Ok if you sit... you can sit there, there's another chair at the back look.

Right everybody looking at me, everyone looking at me. Come on I want you looking here. (Writing on board) What's the answer?

Ch: 360

How did you do that Angus?

Ch: You add zero.

T: Yes, you just add the zero.

(To child) Can you shut your book? Thank you.

Thirty six times ten which is basically thirty six times one, thirty six then thirty six times ten we add the zero. Ok. Right, thirty six times twenty, what about that one?

Ch: Em ..

T: Right how do you think we do that, some of you are thinking, oh I can't possibly do that in my head. How do you think you do that? David?

Ch: You double thirty six then you add the zero.

T: You double thirty six add a zero thank you. What about this one?... Joseph?

Ch: Nine hundred and sixty

T: Good how did you get that answer?

Ch: Em... I doubled forty eight then I added a zero.

T: Good double forty eight and add zero. Right... Hmm try green, oh green is a bit better. What I want to do, I'm going to put five on the board and I want you to do five in your math books I want you to work across as you do them.

11:53 Coded: Writing, Alone, Board:

(Teacher writing on board.)

(Children working on problems from the board in silence.)

T: Have a go ...all of you. Today, Henry would be good.

The Sands of Time

Ch: I haven't got my pencil.

T: Why not? I haven't got one. Why haven't you brought it with you, how ridiculous, quickly.

(Child leaves to fetch pencil)

(Children working on problems from the board in silence.)

T: (To child at their desk) Yes, that was the answer, yes. Put it the other side, the answer.

(Teacher stands by door as next door class return to their classroom.)

T: Year six shhh. Axel shush. Axel can you do your shoe laces up please.

11:56 Monitoring, Whole class, Moving around:

(Children work quietly while teacher monitors round room.)

Andy, are you finished,

Ch: Yes

T: Bob, are you finished,

Ch: Yep

T: Carol, are you finished?

Ch: Yes

T: Davy, are you finished?

Ch: Yes

T: Eddie?

Ch: Yep

T: Good. Right ok tell me what's double 46

Ch: Em...ninety two.

T: Then what do we add?

Ch: Zero

T: Right, Felicity what's double eighty nine?

Ch: Em... one seventy eight

T: One seventy eight and then we add

Ch: Zero

T: Grant, what is double sixty seven

Ch: Em double sixty seven is ...

T: Harry?

Ch: One hundred and thirty four

T: Add a zero. What does that number say Joshua?

Ch: Em one thousand and forty.

T: Good, right

Yes one hundred and thirty four add a zero. Right double thirty nine Imi?

Ch: seventy eight

T: seventy eight add a zero, seven hundred and eighty.

T: Double two hundred Jemima?

Ch: Em... four hundred

T: And then we add naught, so what's the answer Katie?

Ch: Four thousand.

T: So you've got, (teacher reads out answers in a list) and they should all be written like that in a list.

Right, ok, great so stop put your pencils down and look at me again. We'll go back to our original

question. What was the answer to that one? Karen?

Ch: Three hundred and sixty.

T: Ok. What's the answer to that one? (Unclear)

Ch: One hundred and thirty.

T: Nope, Jenny

Ch: One thousand and eighty.

T: So how did we do that? How do we get that answer? Anita?

Ch: We do ...and... (Unclear)

T: So some of you won't know how to do this in your head. You might need to do some working out

beside your answer. Alright...So times by three. So... another quick list and see if you can get these

right? Yes? I'm going back to one again here.

11:59 Writing, Alone, Board:

The Sands of Time

(Teacher indicates question numbers. She writes sums on board. Children work silently.)

A: (With individual child) What did you do here? Times by five?

(Assistant and teacher checking answers as they wander around desks.)

T: Yours is wrong as well you need to do thirty two times three. And you thirty two times three. Em...

Cameron you have to times by three.

And you, do two times three.

Do seventy two times three Freddy and then add a zero.

12:02 Monitoring, Whole class, Moving around:

Come on Cameron three times tables, think... Some of you can't times by three. Yep...

A: (Working on separate activity with two children) You put four here.

Is that right? No, that four was right. And you said it wasn't a half, so what?

T: Have you done three times three, yes?

A: Count in halves ok but you have to start from zero.

T: Ok stop who has finished?... lots of you have finished.

Seventy two times three is two hundred and sixteen then we add a zero. Ok What does that answer say... Henry?

Ch: Em... two thousand and three.

T: Excellent.

T: Forty nine times three is... Anita?

Ch: One hundred and twenty four?

T: What's that answer, Anita?

Ch: One thousand four hundred and seventy.

T: Right a hundred and thirty five times three, Jackie?

Ch: four hundred and five

T: Hmm?

Ch: Four thousand and fifty.

T: Yes. Emm... fifteen times three Toby is?

Ch: Forty five

T: Oh Toby you're such a star these days. What does that answer say?

Ch: Three thousand four hundred and eighty.

T: Good and... ninety seven times three Rosie?

Ch: ninety seven times three is two hundred and ninety one add a zero.

T: What's the answer?

Ch: Two thousand nine hundred and ten.

Ch: Ten.

T: Good. Who got all ten right? Wow. Very good. Henry you can't possibly because you weren't here for the first five. Right ok. You can do these now and do exactly the same. What did I tell you year four? Everything this year comes down to tables. Ok. Right then... (Monitoring around classroom.)

12:05 Monitoring, Student, pupil desk:

No you can't do it there. You can't do it there; you've got to write it across like I've done there. You can't add a zero there. It wouldn't make sense what you've got there. You've got to write them across like me, like I told you to. Ok. If you cannot do this, it will be wrong.

You've got to write it out like I have here. You can do working out all the way around it, that's absolutely fine.

But when you add the zero it's got to be here, alright?

That one's wrong. How are you doing? Right. Just do it like this. Do you know your four times table?

Right go on then just do this bit first. Do forty nine times five. What are nine fives? Alright?

(Children working in silence.)

12:08 Monitoring, Student, pupil desk:

T: Yes, you know all your tables very well... That can't possibly right. You've said forty nine times five is sixty five and two time four is thirty six. I tell you what, why don't you do it like everybody else in the world? A few of you are getting it wrong because you're not writing it out properly.

Are you finished Freddy? Yes? Did you write them down? Yes?

(Children working in silence.)

Henry are you finished? Did you work them out for me? Have you got these five right?

The Sands of Time

Ch: Yes, I've got all of them right?

T: Who got four of them right? Three? Mark did you finish?

Ch: Yes.

T: Harry how many did you get right?

Ch: All of them.

12:11 Monitoring, Student, pupil desk:

T: Did you work them out in your head?

You must write it down in case you get it wrong. It's important to do the working out and get it right. Simple, you can record here can't you Nick. It's not difficult. Everybody can get them right if they do. (Teacher writing on board, children working in silence.)

T: Good Henry you're doing really well.

12:14 Monitoring, Student, Pupils desk:

Freddy, write a sum, the first one. Let's try and get one done. Do it here. Now. Come on this one.

Felicity are you finished? Wow year four. Well we now know who knows their tables and those who don't. I know you know your tables. Fine. I'm sure you know what four these are...

Ch: Twelve

T: Thank you. Careful Mark, look at what you've done.

(Teacher writing answers on board while children complete work in silence.)

Who got those right? Wow. Something wrong Daniel? Jack you got one wrong did you? Angus? One wrong, Kerrie five. Right ok... What happens..

12:17 Talking, Whole class, Board:

T: Let's go back to our first one. What is the answer?

Ch: Three hundred and sixty.

T: Ok. What happens when you have this? Can you do it in your head?

Ch: No

T: No we can't. We cannot do this, we cannot do this across. So there's lots of different ways of doing this. There is a straightforward way of doing this that you can use for the rest of your life. And I'm going to show you this way. Some of you have probably touched on it when you were doing your prep. Now what I want is you to be really careful at setting it out. You have got to do this one number one square. You have got to do this one number one square. Right? If you don't do this one number one square, it's wrong. The reason I said that Cameron's was wrong is that we have to go down in tens and units. We can't go over here. It's really important. The setting put is really as important as the sum. So watching very very carefully all of you. Right you only draw one line. Ok. One line. Right what have we added all the way through. All through the whole lesson what have we added? What have we put on the end each single time?

Ch: Zero.

T: Right this time you are going to put it there, underneath in that line. It has to be in that line, one number one square and then we're going to do six times one. And three times one Rosie?

Ch: Is eight.

T: three times one is not eight.

T: So basically what we've done over here is thirty six times ten. On that line right? All we've done. And underneath what do you think we're going to do? What are we going to do now? You don't need to write this we'll just do it here. So six sixes are...

Ch: Thirty six.

T: thirty six. Now what to do with these carries. We'll put them there. Now three sixes are...

Ch: Eighteen.

12:20 Talking, Whole class, Board:

(Demonstrating how to set calculation out.)

T: Then you over write that carry. Now what we're going to do now...Jack. Add them. Six, six and one is.. seven. You do not add that three. So once you've put a carry there you're going to leave it there. Alright? Right. Right. Ok. What are you going to do every single time Jack? What am I going to do next?

Ch: six.

T: Six times one and three times one. Six times ten. Right six time five Angus.

Ch: Thirty.

The Sands of Time

T: thirty and carry.

Three times five mark?

Ch: Fifteen.

T: Add the numbers so we'll do zero time zero is zero. Six and Eight?

Ch: Fourteen.

T: Fourteen. Right just write it down. All I want you to do is write it down. See if you can do that. See if you can write it down. Do not do anything. Just write it down.

(Children copy from board quietly.)

T: Right. Ok. What are we going to do?

12:23 Talking, Whole class, Board:

T: Toby? Jake?

What do I want you to do? It has to be in the right place. Ok. Right. We're going to do times by one. Six. Now four times one, one number one square. It's really important. On the line. Your six is on the line. They are big squares. That top one there. Ok. Six threes are eighteen, can you all do that? Then we're going to add our one. Which is thirteen. One at a time. Don't do anything unless I tell you to right?

(Children copying)

Right we've got eight, nine, five. Write those two.

(Children copying) All you need to do is write down the sum that's all you're going to do, write down the sum. Now you did it wrong. Too close to that one. Year four we have four days left we do not need to squeeze it into the smallest place possible set it out properly. Leave yourself room. Do the top line, just the top line. Think what you've got to do first. Oh dear copying from each other is not the way to do it.

A: Concentrate on what you're doing.

T: Good Henry. Ok Yes Right, now what do we do first. Joshua?

Ch: Seven times one then three times one.

T: Yes. If you have a problem put your hand up. Right. Do the second line year four.

A: Now the next line.

(Children working in silence.)

T: Please do not copy.

Now we've done thirty seven times ten, what are we going to do now?

Ch: Thirty seven times four.

T: Thirty seven times four. It's my second line. Seven times four are twenty eight. Three fours are twelve add two are fourteen. That's your second line.

Now what do we do?

Ch: Add

T: Add them.

12:26 Talking, Whole class, board.:

Go on then.

(Children working in silence.)

T: This time I want you to write this but don't do any more than that. Do the top line. Perfect first line. Hugh this is not a game. You must stop messing about. Ok Freddy. Ok what do we do first?

Ch: You the naught, then we do nine twos are eighteen. Then carry there. Then what are we going to do forty nine times three underneath. Just do that line. Nine threes, then four threes.

A: Rub it all out.

T: When you've done that add it up. Yes Millie. Yes Daniel.

12:29 Monitoring, Student, pupil desk:

T: Yes Jacob. Keep going them. You've done nine threes instead of four threes. Add it up. That's not right. Forty nine plus three that's not the answer. I'm sure you know your three times table. That's not the right answer. Ok you should have got a hundred and forty seven here. Then we add it up. Right. We're on number four. Do not do the adding but you can do the top two lines. If you think you can do it. You've done really, really well. Have a go.

(Children working in silence.)

T: (Monitoring) That's right Angus so far. That's right Millie so far. Top line's right. Only add it if I said it's right. So four... seven that's right.

The Sands of Time

Add it up. Angus? Do the next one. Well done those who got that far. Henry. Four fours. Ok. Most of you got that right. Have you added it?

Ch: Yey!

T: Now I'm going to put five up and you can do them across.

12:32 Writing, Alone, Board:

I'm going back to one. Right. Show Mrs. K or me after each one alright?

(Children working in silence.)

A: Five fives? ...Four fives?...

T: Yes you can carry on Daniel. Right good. OK.

A: You have got the second line right.

T: Ok good Henry. Three fours...Four threes...Add one. Now where's your first one? Well done right.

A: Put your hand up if you need help. Check the top line. Quickly now.

T: It's your second line that is wrong. Jack. Wow Jack fantastic good boy. Jake come on number three. What does that say? Right do that line now.

12:35 Monitoring, Student, pupil desk:

Seven times one can't be four.

A: Do the top line and you times four by four and four by three.

T: Have you got them all right Angus?

Ch: Yes.

T: How did you get a hundred and fifty four? Come on then. Eight threes. What have you got to do here? What have we done each time. Have you put a zero? That's a three Joshua, not six. Why have you got six? It's not a race. Slow down. Do that second line again. Why have you squashed it at the bottom of the page here. Right go down in a line. Excellent, Daniel. Three. Yes. Fantastic. Ok. You got it right. Third one is right well done. Fantastic.

12:38 Monitoring, Student, pupil desk:

Fantastic. Last one then. Well done. Did you get it right first time? Freddie not two lines. Wow year four you're doing really, really well.

A: Three sevens are twenty one.

T: Finish that one Freddy. Squashed. Second line's wrong. Ok.

(Children working in silence.)

Great you are doing well good boy. Why did you set it out like that it's sloppy. All that and that add it up again...

12:41 Monitoring, Student, pupil desk:

T: ...and you'll get the right answer. You've timesed it right. Will you please do that again and think what you're doing.

(Children working on own.)

Now stop what you're doing and I'll give you your prep. I'm going to give you eight. Make sure you write the right numbers down. This is not a guessing game. Write them down.

(Teacher writing sums on board. Children copying them into books for homework.)

12:43 Talking, Whole class, Board:

Write them down across like that. I don't want to see anyone not writing them the way I have please. Did you check them? Check you've written them correctly.

(Children working individually from the board. Putting up hand when completed.)

(Teacher writing sums on the board then wandering around looking at math books.)

12:46 Monitoring, Whole class, Moving around:

T: Wow you're doing well. Excellent Daniel.

Wow year four you've done really well.

Too close to the bottom of the page.

1 times 1 and 2 times 1 can't possibly give you 14.

12:49 Organizing, Whole class, Front:

Ok stop everyone please. Make sure you've written down all your prep properly. If you've moved a chair put it back. Make sure you take all your bits and pieces with you. Line up by the door when you've got everything. You'll have to put everything back in your classroom then go to lunch. Do it quietly please.

12:50 End of lesson.

School E Lesson 10 English.

12:45- 3:15(30 minutes)

In an informal chat the teacher explained that the central purpose was to develop listening skills and to practice their mathematical and geographical concepts.

12:45 Organizing, Whole class, Front:

T: (Giving out sheets with grid on it.) You need one each. Put your names neatly at the top please. We're going to do an exercise today that needs your ears. I will be giving you instructions and if you don't listen you won't know what to do and you won't get it right. You have to start at the middle by the arrow. Listen very carefully now... Go two squares north and put your finger on the square. Let me see you put your finger on that one, two squares north. Now two steps. Now. Let me see what you've done. So when you've gone two squares north, draw something beginning with t. You think and draw something beginning with t. Sh, you think in your head. T. Sh sh. Just drawing, very quickly. Anything. Right. Now when we've done that your finger should be on that picture. So you know what you're doing. Now we're going two squares east. Write the answer to the sum 3 times 11. 11 times 3.
Ch: 11

T: Sh you know your three times table.

Ch: I don't know my three times table.

T: Well work it out.

Ch: I don't know what it is.

T: Sh... well then don't put an answer but put your finger on that space because you'll need to know where to go to. Right ok. Let me see. (Monitoring.) Now.

12:48 Talking, Whole class, Front:

Ok from there go two squares south. Put your finger on that square and go two squares south.

Ch: Is it from the answer or three.

T: Right remember, we're going on to the last one. When we've done two squares south from the answer 11 times three we're doing draw something that keeps you warm. Anything you like. Just very quickly. Keep your finger on that last one. Shh.

Right, ok. We're going to go one square west and write your name.

Ch: Was it one square.

Ch; It was only one square.

T: Right that's enough. Right.

12:51 Talking, Whole class, Front

Finger on the word, listen to me speaking, three squares south. Three squares south. Draw something beginning with K. Sh.

Ok from the thing beginning with k

Ch: I haven't finished yet.

T: Come on you've got to keep up with it. Go two squares west. Two squares west and draw a flower.

Sh. You put your finger on the K and you go 2 squares west and draw a flower. Ok done the flower?

From the flower go 2 squares north and write the answer to seventeen add five more. Sh.

12:54 Talking, Whole class, Front

From the answer to seventeen add five, put your finger on it and go three squares east. Three squares east. And draw a piece of fruit. Any fruit. From the piece of fruit go two squares north and draw a vegetable. Any vegetable. Ok. Ok From the vegetable, put your finger on the vegetable. Sh. Go four squares west. Four squares west and on that one can you write today's date.

Ch: Is it the sixth. Or was that yesterday?

T: Now when you've done the date, listen very carefully I'm going to give you two. From the date go one south and one west. So when you've got your finger on the date go one south and one west. Look

The Sands of Time

at your page. Put your finger on the date. Go one south and one west and on that square draw something beginning with B.

Ch: I don't know where I am.

T: Well this is where you need to think about what you are doing.

12:57 Talking, Whole class, Front

T: Right. Again I'm going to give you two directions and you're going to draw when I give you two directions. Put your finger on that one beginning with b. Go two east. Two east then three north. Three north. Right I'll start at B again. Go two east and three north and when you get there draw something you can use to play tennis. Again I'm going to do two moves.

3:00 Talking, Whole class, Front

Finger on the tennis thing. One east one north. Draw something you can eat.

Ch: What was that?

T: That was just the wind blowing for goodness sake.

T: Have you done your picture. Right from the thing you can eat go eight south. Sh. And when you get to eight south draw something anything that gives us light.

Ch: Why am I off the page?

T: Oh dear you've gone wrong somewhere.

Ch: Why are you drawing that?

Ch: Maybe she's drawing this. Yes she is.

Ch: Oh yes.

Ch: Are you going to tell us the results now?

Ch: is the food supposed to be above the trees.

T: Well that's what we will find out.

Ch: I've written a toy.

Ch: I've put a doughnut on top of a tree.

Ch: She said something to eat.

Ch: Well you can eat a doughnut.

Ch: But you can't eat a tree.

3:03 Organizing, Whole class, Front

T: Change papers with somebody near you. Right mark it with something different. Right there are a total of 16 points on this game.

(Children change papers)

Ok there are lots of answers on this paper. Everybody should have this right because right in the middle they should have their name in the middle. And so give them a tick for writing their name in the middle. Right. I'll draw the compass up here so you don't get confused. Then we have to go two steps north, one two then something beginning with t.

Ch: I don't know what that is.

Ch: Train.

Ch: Taxi

T: Good.

What have we got here?

Ch: Tiger

T: tiger good.

(Teacher continues to go through answers while children correct each others work.)

3:06 Assessing, Whole class, Board

T: So we went up there...

T: Right next one was east. So we had to go 1,2, (Teacher counting on sheet.)

T: That was the answer to 11 times three. That is 33.

T: Charlie what was that?

Ch: I don't know.

T: next we had to step west and that was a bird.

T: Emm Hugh Hugh watching this way.

Ch: Are you supposed to have a different pen or something?

3:09 Assessing, Whole class, Board.

T: Right from the bird we go three south and on there something beginning with c.

The Sands of Time

Ch: Cake

T: Cake that's right. "Cuh" can be a c or a K Charlie sit down. Right Archie are you watching? From that there we went 2 west and that was a flower. Right are you ready? From the flower, 2 north Right now. Right ok. From there we had to go 3 east. We did 2,3 and we did some sort of fruit. Right now from the fruit, 2 next and that was some sort of veg. Right Charlie. Right ok. From the veg was 4 west. So after the veg was the date which was 5th July. 5,7 07.

Ch: Mrs. D. is that the date? Is that the short date?

3:12 Assessing, Whole class, Board.

T: The next one is a little bit harder. From the date we had to go 1 down and 1 west. (Looking at individual work.)

Right Charlie, Charlie, No, No, No. Yes that's right Charlie. Charlie did a picture of a ball in the right place. Sit down. Mark it right.

T: Clive, this way 2 east,

So you see why it's really important to keep listening properly. Who got their pictures in all these squares. Your pattern should be like mine on the board. If it isn't you didn't listen properly.

Ch: I listened. I listened but my one isn't like that.

T: Ah you didn't listen.

Ch: Mine is. Mine is right. I got it right.

3:15 Organization, Whole class, front.

T: Right get your things together. Put your chairs under.

Now take your paper with you and stand by the door.

3:16 end of lesson.

School F Lesson 11 Mathematics.

9:30-10:25 (55 minutes)

9:30 Coded: Talking, Whole class, Front :

T: Come on Christopher, there so we're going to do a bit of work on our tables but we're also going to be looking at time ok so we're also going to do time. Right now today we're going to start, for our starter we're going to go the ICT suite and we're going to work on our tables. Now we're going to work a bit differently today. We're going to work first of all on our three times, so do our three times first of all. When we've done our three times, we're going to use doubling and what table are we going to use then?

Ch: Six

T: Good so we're going to use doubling to do our six times. And then we're going to go onto something we haven't used before. We've used our multiplication, we've used our division. There's a little box we haven't used yet and we're going to do our mega tables

CH: oh no!

T: Mega-tables you'll see the box for it and we're going to do our 30 and our 60. Now for 30, who can tell me if we know our threes, we know our 30s? Who can tell me how that works?

Ch: Ten

T: You're multiplying by ten, you're moving your digits one place. You're adding zero. You can't always say your adding a zero because it might be a decimal

9:33 Coded: Talking, Whole class, Front:

So we're moving our digits one place. Yes Paul, you're looking...are you alright?

Ch: Yes.

T: Yes so

As it's Monday she'll be fine. If it was Friday I would be a bit worried.

Now 3, who thinks they can get their three times under a minute, put your hand up if you think you can do that. It's all multiplication today Daniel, there's no division. All multiplication. Right hands down. Right. Next I want to see who can get below three minutes. Ok? Ok? And thirty below 2 minutes and 60 below 4 minutes. So you need to decide who you're going to work with.

And you're going to take it in turns but you're going to work actually together. And click the button.

9:36 Coded: Organization, Whole class, Door:

The Sands of Time

You can sort yourselves out. Right.

(Children finding a partner and lining up by the door.)

T: Now really quiet because we do not want to disturb the other class. Shh

Be as quiet as we can all the way there please. I don't want to have to remind you about moving around the school. William do put it away.

(Children walk to ICT suite and noisily sit down at desks with partners.)

9:39 Coded: Monitoring, Student, Pupil desk:

(Unclear, very noisy, children working with partners on times tables interactive exercise as teacher monitors their work)

www.forestpath.net/maths/mega-tables.htm

9:42 Coded: Monitoring, Student, Pupil desk:

(Teacher typing in website for pupil struggling to find connection. Class assistant working with individual child with Spina Bifida.

9:45 Coded: Monitoring, Student, Pupil desk:

(Very noisy, children working with partners on times tables interactive exercise as teacher monitors their work)

(Teacher discussing task ahead with assistant, explaining worksheets and checking she understands what the pupil needs to do.)

9:48 Coded: Behaviour, Whole class, Pupil desk:

T: Right stop for the moment. Can you quieten down please and I'm sorry you're being really loud with what you're doing. Right. Who has managed to get their 3 times done? (Children put up hands) Who has managed to get their six done? Good. Right off you go.

(Very noisy, children working with partners on times tables interactive exercise as teacher monitors their work)

T: How are you doing?

Excellent you've done it.

How are you doing there?

Yes well done.

How's he doing? Is he doing well?

Ah whoever's thumping can you stop please?

Alice are you getting over-excited?

9:51 Coded: Talking, Student, Pupil desk:

(Teacher monitoring and praising those children working on their speed tables within the time limit. Children working in pairs.)

(Teacher extending those more able pupils with the mega-tables exercise)

9:54 Coded: Organization, Whole class, Pupil desk:

T: We need to finish what we're doing, we need to close the programs down, log off. Ah we need to stop now please. Now hands away. We need to put our stools under and line up quietly.

(Children line up by door.)

T: Ah please, otherwise we're going to disturb Mrs. M.

(Children walk back to their classroom.)

Right sit down quickly in your places then.

T: Now we're going to do some work on time. We're going to do some work to make sure we understand how long is a minute. Now who thinks that we can shut our eyes and we can just put our hand up when we think a minute has gone. We are investigating how long is a minute.

(Child puts hand up)

T: You think you would be exactly right Alice do you?

Now I wonder what strategies would we use to make sure that we were accurate? We're not going to say them now. You think of your own. Wait.

Ch: Waiting for the bell?

T: What?

Ch: Waiting for the bell?(meaning the bell that signals the end of the timer on the interactive whiteboard.)

T: Ah well because yours has got to be up exactly ok. I'm not going to do it fro this one anyway but for the other one we can use it. Right now you need to close your eyes because we don't want any

The Sands of Time

cheating. And you've got to be really quiet when you do this because otherwise people will hear you when you put your hand up. Because we have a tendency to copy don't we, so as soon as you think it's been a minute, you put your hand up and I'll see who's actually closest.

9:57 Coded: Organization, Whole class, Front:

So close your eyes Alex because otherwise it's cheating aren't you because you've got the clock. That's not what we're about. Right so I'll tell you when to start timing. So ready, steady start timing...now.

(Teacher waiting for children to put hand up.)

T: And stop. Put your hand down. That was one minute and thirty five seconds.

And spot on was Daniel. Well done. And you were very close. First hand went up twenty seconds before the minute and then that wasn't actually too bad at all. Right. What strategies did you use? How did you judge the minute? What did you use? Sam?

Ch: I counted to a minute.

T: So you just counted slowly?

T: Christian? Tommy did you have a strategy.

Ch: Em well I was just counting seconds in my head.

T: Counting them, just one two like that? Hanna

Ch: I have a clock by my bed that I hear so I was going tick tock.

T: Oh that was clever. What about you Brandon?

Ch: I did it in my head.

10:00 Coded: Talking, Whole class, Front:

T: Right I wonder how much we do in a minute. How many times do you think you could write your Christian name in a minute? Ohhh think. So Alice, Alice, Alice, Alice how many times do you think you could write it in a minute Alex.

Ch: About 20.

T: Ah Flynn, what about you? How many times do you think you could write your name?

Ch: (Silence)

T: Right so let us think. Now first, sh... I want you to write your estimate. How many times do you think you could do it? Elizabeth?

Ch: Does it matter who wins?

T: It's not a race it's just to see how many times you can do it. OK. Can you give the paper out Hanna? (Paper being passed round)

How many times do you think you can do it in a minute?

Ch: 15

T: 15. How many times for you Olivia?

Ch: 11

T: 11, Daniel how many times?

Ch: 51

T: 51 Corr. A high target there. Connor how many?

Ch: 15.

T: 15 right. Pencils poised.

(Children getting ready)

T: Now the rules, first of all you've got to have your estimate done first otherwise it doesn't make sense. Secondly it's got to be neat because it's got to be able to be read. It's not to see how many you do, it's to see how good you are at estimating the time span. How many you do in the time ok? Right.

Ch: Does it have to begin with a capital letter?

T: Yes, of course it does.

Ch: Why?

T: Because it does. Begin.

(Children writing down.)

You're getting more flamboyant Lucy as you go! Shh

I think you've forgotten how to spell it now!

(Church bells signal end of timer.)

Ok write how many times you wrote your name and see how close you were to your estimate.

(Children discussing their number.)

The Sands of Time

10:03 Organization. Whole class. Front.

T: Right when you're done bring your pieces of paper and sit on the carpet.

Now, let's just see how we did first of all. Now, who managed ...who over estimated how many they could do? (Children raise hands)

T: Alright hands down. Who underestimated? (Hands up) Right well done, now we've done time work before so let's just see how much we can remember. So put your pieces of paper down now because we don't need them at the moment. There might be time to do one at the end. Are you ready Daniel? Now, we talked a lot about different units we use to measure time. We just talked about minutes now, who can give me a long measure of time? One that covers a long time?

Ch: 24 hours.

T: So what would that be? It's a...

Ch: Day

T: A whole day, so a day is quite a long unit of time. In 24 hours we need to work out how many minutes it was. Matthew?

Ch: A millennium.

T: A millennium. How long is a millennium Matthew?

Ch: Thousand.

T: One thousand years. Right hands down. Em... let me see. David how long is a century?

Ch: Hundred years.

T: A hundred years. Elizabeth how long's a decade?

Ch: 10

T: 10 years. Well done. Does anybody know how many days there are in a year?

Ch: 3651/4

T: And this year is a leap year isn't it so how many days will there be in that now?

Ch: 366

T: Six because that is when they adjust all the quarters together isn't it.

Ch: Why do they adjust the quarters?

T: Because it's the adjusting of the time.

Ch: So that's why it is every 4 years.

T: That's right. Now we're going to be thinking about hours. Because really our day is run by time isn't it. Literally when we're at school. Now I'm going to give out some clocks. Can you take one each. Now I want you to hold the hands at the back. See how you go. So you need a clock each. We're going to just think of the school day and then we're going to think how we can use our knowledge of time to work out time problems. Alice can you pass them round for me because it's, thank you Rupert.

10:06 Organization. Whole class. Front.

William have you got one. Can you pass that to William for me please Tom? Good. Alex. (Giving out card clocks) Right now. Ok...Right who's missing one? Right ok. Right, Right. And Christian Now. Right I want you first of all to turn your clocks so the face is towards you So not towards me, towards you and not anybody else. Right now I'm going to just have a look at the times. Now I want you to set your clock to the time.. now you might not know it but see if you can work it out...it doesn't matter if you don't get it right but have a go. I'd like you to set your clock to the time that on Monday we would go to assembly. Ah don't show the others. Right keep it hidden so people can't see it. Right now you can show. I want you to hold your thing up. Right what time is that Matthew please?

Ch: Five past nine.

T: It's five minutes past nine. All nine. So Five ok. Now when we come back from assembly we then have our math lesson. Now what time does our Math lesson finish for playtime can you put the clock to that setting. Just keep it hidden for the moment.(In silence children move hands of clock.) Right now show. Playtime Daniel. Right and what time is playtime? Sam.

Ch: Half past ten?

T: Ohh it could be but it isn't. Alex?

Ch: Ten twenty five.

T: it's ten twenty five or twenty five minutes past ten. Right. Henny you were a bit optimistic there having your play at nine o' clock weren't you? Right do you see what you're doing now?

10:09 Talking. Whole class. Front.

The Sands of Time

Now we come in from our playtime ready for our snack time at quarter to eleven. Can you set your clocks to quarter to eleven and show mw your time please. To eleven. You might need to hold it at the back because they do slip. You've got your hands round the wrong way Burt now the little hand is the hour hand remember. Think of the minute hand. Right, excellent. Now we spent quarter of an hour or fifteen minutes with our snack and that's story time. So set your time to the time that we go off to English. Quarter to eleven Daniel and we have fifteen minutes for story time. What time do we go to English? Right show. Five minutes out Daniel. Not five past. Not ten past twelve or you're missing dinner. Eh Tom. Right and show. And down. Right down now if... you don't need your clocks for this you need to think, English starts at eleven o'clock. It finishes at quarter past twelve. Ho long is the lesson? So really thinking how long, listen carefully Tom. It starts at eleven o'clock and it finishes at quarter past twelve. You might want your clock to help you. When you've worked it out just put your hand up so I know that you've worked it out. Just sit still to give other people thinking time please. Use your clock to help you. Put your hand up as soon as you've worked it out. Good boy Sam. Elise as soon as you've worked it out put your hand up. Daniel have you worked it out yet? Put your hand up then. Right Connor?

Ch: Seventy five minutes?

T: Not quite, you're very close Connor. You choose somebody to help you to put that answer right please.

Ch: One hour and fifteen minutes.

T: Good.

No lunchtime starts at quarter past twelve now unfortunately with the production today you get held up with your lunch.

Ch: Ahhh...

T: Don't worry you aren't really, but you are in our story, you have to wait half an hour. Right put your hands up when you think you would be going into assembly. Do you want to set it on your clock and show me that's fine. Right Ah Christian what would we normally say we wouldn't say it like that. Right now we know, put your clocks down.

10:12 Talking. Whole class. Front.

Now we can say how we would solve problems. Now we've been lets have a look, it's like problem solving that we were doing last week. You need to follow the same steps, so what's the first thing we do when we're problem solving? What do we do?

Ch: underline.

T: Good we need to read the question. Underline the key facts. What do we then need to do? Alice sit up please. What do we do next Alice. We've read the question, we've underlined the key facts, we've got to choose the...

Ch: Line

T: yes, getting there we need to choose the operation, we need to do it and then what do we need to do with our answer.

Ch: Write it down.

T: Write it down and check that it is..

Ch: It's real life.

T: Yes it's got to relate t real life problems, it's got to be sensible hasn't it. So...

Ch: You've got to use that offsetting thing.

T: Yes use the inverse to check. Good girl. So lets have a look at this problem. If I got up at 7:15 and left the house at 8:05, how long did it take me to get washed and dressed and have breakfast? So up out. Now before you try and work it out on your clocks which I think would be the most sensible way of doing it, what are you, what sort of number operation are you doing, can anybody tell me? To work out from here to here, what do you think you're doing. You all know how to do it, but what are you doing? Right lets work...oh Hanna?

Ch: Funding the difference?

T: Yes, you're finding the difference. Now Tom what kind of operation is it when you're finding the difference between 2 numbers? Finding the difference between 2 numbers? Max can you help him out.

Ch: Subtracting.

The Sands of Time

T: Yes you're subtracting the numbers. Now I don't think any of you need to do the subtraction sum for this would you. What would you do, how would you work it out. What different strategies would you use? Jasmin?

Ch: Number line?

T: Yes number line or use your clock and count on from 7:15 to 8:05.

10:15 Organization. Whole class. Front.

Right can you do that on your clock, work it out and when you've got the answer, show me you've got the answer by putting your hand on your shoulder. Don't tell anybody. Only one hand. 7:15 to 8:05. (Children working it out)

T: Are you all right. Let's see, Alex?

Ch: 50

T: 50 minutes. Let's see how you work it out. Right you've got 7:15, now if we move our hands of the clock round, if I move it quarter of a turn round, how many minutes have I moved it through from here to here five ten

Ch: Fifteen minutes

T: Fifteen minutes good boy. Now if I move it half a turn, how many minutes have I moved it through?

Ch: 30

T: So three quarters of a turn, together how many minutes have we moved it?

Ch: 45

T: 45 then we've got our extra five to add on, so $45+5$ Lucy give us

Ch: 50

T: 50 minutes, well done excellent. Do you all see that, was that a glimmer of panic there Daniel? Good. Just thought for a moment...but no, that's good. Let's have a look at our next problem. This is how you could use a number line to help you. Start with your 7:15 add on 45 minutes, add on the 5 then you get your total. Now why is it useful to have a jotting like this? You all did it in your head or used your clock but why is it a good idea sometimes to have jotting?

Ch: So you don't forget.

T: Sometimes when it's a bit more complicated you do forget. So we have a jotting to remind you. You could get muddled and that would stop you from getting muddled. Well done. Now so you need to choose somebody on the carpet next to you to work with. It's not a problem and not a discussion issue. Now, what have we got here though, something when you read the problem that you'll probably notice.

Ch: Digital

T: Digital, not only is it digital it is in..

Ch: 245 hours.

T: Now we know about 24 hour clock just in case we've forgotten..

10:18 Talking. Whole class. Front.

Remember you get to twelve then you go to 13 and 14, 16, 17. So what would 17:30 be in ordinary clock time?

Ch: Five o'clock.

T: Five thirty. Right in your pairs, you've got your paper if you need and you've got your clocks. See if you can work out the answer to this: Ok off you go (Teacher signs problem on whiteboard.)

(Children discuss answers together.) Put your hand up when you've got the answer. Oh no. We'll go back to it in a minute. You jot down your 2 times. What's the first time that you've got? Sam?

Ch: 4 hours.

T: You're telling me the answers I want the 2 times first. Ah excuse me. The 2 times. What was the first time that we worked out?

Ch: 5:30

T: What was the second time you were finding the difference for.

Ch: 9:30 So you're finding the difference between 5:30 and 9:30 so we're working in whole hours.

10:21 Talking. Whole class. Front.

Right let's see. Put your hand up if you've got an answer for me. David?

Ch: 4

The Sands of Time

T: So you're quite right Sam you counted on 4 hours. Right I don't know if we've got time to do this one. Alright now. I want to see and I'm going to time you for one minute and I'm going to time you and you've got to do the following things in 1 minute. You've got to put your clock faces in the box, put your pieces of paper in a neat pile on the table. You've got to go back to your places, put your pencils in the pot and sit in silence starting now.

(Children move back to places and put things away.)

10:24 Organization. Whole class. Front.

T: 5 seconds. And ready well done, excellent. Now we'll carry on with our problem solving tomorrow. More paired work and more problem solving. Right your table can put their chairs out and you can go out.

10:25: End of lesson.

School F Lesson 12 English.

11:00-12:10 (70 minutes)

11:00 Coded: Organization. Assistant. Teacher desk:

(Unclear)

11:03 Coded: Organization. Whole class. Front:

T: Martha you need to put that away...I'll put it with my cat. They won't fight will they?

T: Now we're going to be thinking and doing a book study over the next week and a half. We have got a book and we're going to look at it in quite a bit of detail. We're going to do a bit of thinking first of all. Now what makes us choose a book? When we're looking at the library time and we're looking for a good book to read, not an information book a story book. What kind of things do we .. what do we look at? Holly?

Ch: Blurp

T: We might look at the back of the book, now our book, the book we're reading at the moment: The secret of the Sirens it's got the blurb at the back about the mythical creatures. If you're the kind of person who likes fantasy type stories you know that that would be a good one to look at. The blurb is a good thing to read.

What else, how else do we choose books? What else makes us choose them? Molly?

Ch: We have a little sneak inside.

T: Now why might a little sneak inside be very useful?

Ch: It will give you an example.

T: Yes it will give you an example. If it's going to be good to read because you don't want a book that is so hard it's going to take you a week to read one page. Because by the time you turn over and read the next page you'll have forgotten what the page before was about. Ok. You've got to pick a book that you can read. Now how can you judge that? You just open it at a page what should you be able to do? What should you be able to do?

Ch: Read the page.

T: Read the page easily. If you're struggling over more than about 5 words then really it's not the book for you and you need to put it away and look for something else. So we need to choose a book we can read. What else? Lesley

Ch: The Title

T: The title might interest us. Who can think of a book title that they've read?

Ch: The Cat Mummy

T: Would that interest you Sam?

Ch: No

T: Why not?

Ch: Because it's a mummy

T: Right. Do you think a picture might help?

11:06 Coded: Talking. Whole class. Front:

T: So if there was a picture it might interest you more mightn't it. So the title and the picture. Would that interest you more? What would interest you more?

The Sands of Time

So we've got our title and we've got our picture on the cover.

Ch: Well if you've got a book by the same author and you might think that was nice.

Ch: Yes so if you've read one often it's nice to read another book by the same person. Remember the Roddy Doyle book we enjoyed and went on to read two more because we enjoyed it so much. Yes?

Ch: Well if the book is really thick and you normally read quite thin books you'd probably get bored half way through.

T: Now we're going to have a look at a shorter book today. We're picking a book that's got a lot in it. It's not only because it's got some lovely language in it the words are lovely. But also it is beautifully illustrated. So we can do some artwork later on as well. Now. I'd like you to bring yourself and come and sit on the carpet so you can see the board. Well done you did that very well.

(Teacher at computer setting up next part of lesson)

T: Now we're going to have a look at a book which I know lots of you have looked at before. Probably more looked at than read. This is the book and it is called the Mousehole Cat. Now. When you look at it look at this word. Does it look like the word Mousehole?

How would you read that word? Joe.

Ch: Mouse hole

11:09 Coded: Talking. Whole class. Front:

T: It is joined together. It's only our knowledge-it is named after a place.

Alex you need to turn yourself right round because you can't see the board. Go and sit next to Rupert and look this way. It's a place in Cornwall and it's called Mousehole. It's named after a mouse hole. It's a fishing port and it's got a lovely harbor. The harbor has a very tiny opening from the sea to the harbor. So.

Why is it named after a mouse hole?

Ch: They are very very tiny.

T: They are aren't they so it's called mouse hole. Over time as people said it, it became Mousehole because it's easier to say. It's easier to say. This is the cover of the book. You've got two parts.

You've got the background and then you've got a picture here. What do you think it's going to be to do with? Just looking at the book. What clues does it give you? What can you work out? Esme?

Ch: It's going to have a cat in it.

T: We've got the title of the cat and the picture of the cat. That's a clue. What else?

Ch: It's near a harbor

T: Yes it's near the sea. We've got the sea in two pictures haven't we? What else?

Ch: There might be a fisherman who owns a cat.

Ch: Or owns a cat.

T: There might be or finds a cat. Tom, concentrate. Molly.

Ch: (Unclear)

T: So we can get an awful lot of ideas from just looking at the picture. Who are the main characters going to be? We don't know any names but we can work it out from looking at the pictures. Who do we think the main characters are going to be?

Ch: The cat and the man.

11:12 Coded: Talking. Whole class. Front:

T: Where do you think the story takes place? Just looking at the book?

Ch: In Mousehole

T: Which is a seaside place. How do we know from its cover it's a seaside place.

Ch: Well it's got the sea.

T: Yes it's got the sea in. Just tell your partner and just tell them what you think the story is about and listen while they tell you what they think the story is about. I'll give you about forty five seconds off you go.

(Children discuss answers.)

T: And stop, now let's have a think about what kind of ideas... What do you think Alex?

Ch: I think it's the man with the cat (unclear)

Ch: A man goes fishing in the harbor everyday and one day he finds a cat and he's dead.

T: Right that's a bit sad. It will make us cry. Sam what do you think?

Ch: Well the man's fishing and the cat goes rowing and the man's going to go (unclear)

Ch: He's going to be his friend. And the cat runs away.

The Sands of Time

T: Interesting idea. Katie.

Ch: They're on a boat and they bring all the fish and the man finds the cat.

Ch: Em..There was a man and they were fishing. They were quite lonely.

When he pulled into a harbor right that afternoon, he found a cat in a boat and named him the Mousehole cat and he found a whole basket full of fish. Next morning there were more cats there and more fish on the boat. The cat had got them.

Ch: I think the man throws the net in and pulls him out.

T: He saves the cat. Oh a nice idea.

Ch: He has a cat and the cat is under the fish.

11:15 Coded: Talking. Whole class. Front:

Ch: The cat doesn't get any food and the man goes looking for him.

T: Gosh you've got some amazing ideas. Now this is what you're going to do. Now we're going to make our own folders. Instead of doing this in your English book we're going to do it in a folder. So we build all our work up and we're going to do it beautifully. We're going to think about the front cover. We're going to think about answering all these questions. It's going to be about what you think. What do you think would be a good sentence starter?

Ch: I think

T: Yes (writing on board) You might think the book is set by the sea.

It might be I think there's a cat in the story. Here... Who do you think the main characters in the story are? How would you start that sentence please? David?

Ch: I think...

T: I think the main characters are. We don't know yet do we? Writing as speaking.

T: Where do you think the story takes place, Millie how would you start that? I Ch: I think main story is set in...

11:18 Coded: Talking. Whole class. Board:

T: Brilliant that's really good. And then, I think the story is about.

You might want to do more than one sentence that's up to you. Alex you need to be listening very carefully.

T: I want you to think about your ideas. Using your creative thinking. And write good sentences. What does a sentence begin with Bradley?

Ch: Emm a capital letter.

What does it end with Ryan?

Ch: Emm a full stop

T: It must make...

Ch: Sense

T: Now I'm going to do a bit of moving around. I'd like Alex, Kieran and Matthew to sit on that table over there. (Teacher moves children and gives children the task of giving out equipment.)

(Organizing children at their desks)

T: Right can you go back to your places. Give the pens out please.

Apart from this table.

Emmm

Ellis you sit in your own place.

Has anyone got a spare sheet?

(Children giving out sheets with a picture on the front cover)

11:21 Coded: Organization. Assistant. Door:

T: Do you want to sit on a stool? (Unclear)

Ho many are we missing?

William can you pop next door and ask Mrs. O whether she has six, five spare sheets please...

I want this done beautifully and carefully please. Now I'll put the sentence starters. (Writing on board.) You'll just have to wait one minute and just be thinking.

T: Right people waiting. I don't know what happened. No need to... you're just writing your ideas.

Right some really nice sentences.

(Child return with sheets.)

T: You give them out to the people who are missing them.

Right Alfie, neat writing. Only sentence don't write the question.

The Sands of Time

Really neatly.

11:24 Coded: Monitoring and review. Student. Individual desk.

Shall we rule you a few lines? Right, let me see.

T: Don't just...I must say you're working very nicely well done. We'll share our ideas in a moment.

Remember I want your ideas. That's good Katie what lovely writing. Excellent.

Ch: Do we write he was...

T: Well you won't be able to give them names. You can say an old man or a fisherman whatever you think.

Very neatly Daniel.

This is coming on nicely.

Excellent. Just write the sentence Tom. I think the clues are the picture. Ok good boy.

I think that.

The clues are there.

You just write the sentence.

Ch: So the man

T: Alex are you alright?

Are you sure?

How are you doing?

So now you need to answer in a full sentence.

11:27 Coded: Monitoring and review. Student. Individual desk.

T: You're doing well Kieran aren't you and with a bit of help

Now you tell me what do you think the story is about?

Ch: A cat and a mouse

T: Is it really? Well where's the picture? (Laughter)

Don't encourage him.

Ch: The story is about

T: A man...And a cat

T: Right now read that sentence back to me.

Ch: The story is about a man and a cat.

T: Right, write that underneath. Right so if you (unclear)

(Queue of pupils developing by the teacher)

T: Go and check your spelling.

Alex you should have written that by now and I don't want any mistakes, come on.

11:30 Coded: Monitoring and review. Student. Individual desk.

That's very good. Now see if you can add more. That's very good well done. Alright, Matthew? Now on the board is the word *character* can you see if you can spell it properly? Now see if you can add anything to that. Alright.

T: Sam can I have a few of your own ideas? A couple more minutes just to get this finished. (Child reading work to teacher who corrects it with them.)

Ch: Can I have my pencil? I left it here.

T: Yes.

Add a bit more on.

(Front two children in queue reading to teacher)

They go on a new boat then the next day they find the cat

T: Nearly check the middle sound there *a,c,t*

Ch: oh, ...*acters*

T: Em... can you just finish the little bit you're writing at the moment? Put the lid on your pen. Put your chairs under and go back to the carpet please. Now don't worry if you haven't finished because you'll have time later.

Ch: Can I go to the toilet?

T: Not at the minute.

11:33 Talking. Whole class. Front.

T: Now looking around I can see very nice writing well done. Most of the information is not on the front cover where would we find a lot more information? You've got a barcode and we've also got something telling us about the story and you'll have to listen carefully as it's not quite clear on here.

The Sands of Time

So you have the mousehole cat

(Teacher reads the blurb) Now looking at this next bit...

What is it? Have a think Alex, Connor,

T: Alfie, where does it come from? Who can help?

Ch: Times

T: James. What do you think this might be.

Ch: Newspaper

Ch: It's where the newspaper has read it and they have their point of view about the book.

T: Excellent so it's like a little review.

(Teacher reads the comment)

11:36 Talking .Whole class. Front.

T: What did they like about it?

Ch: How it was written.

T: What else?

Ch: Pictures

T: The illustrations. What age group did they say it was suitable for.

Ch: Five and over to adult.

T: Who was the next little bit from?

Ch: the Sunday Telegraph

T: They said outstanding (Teacher reads) Deserving a permanent

What else did they like? They liked the story and the?

Ch: Illustrations

T: What do we mean by illustration?

(Child points to picture) yes pictures or decoration.

So it's got some very good comments. (teacher reads all comments) What kinds of things have they said? Brendan. Let's have a look here. What do the people like?

Ch: Book

T: No they like the Illustrations. What else.

Ch: How it is written.

11:39 Talking Whole class. Front.

This time we actually can work out who they are. What is the name of the cat?

Ch: Tom

T: The old man is Tom and the cat is?

Ch: Mowzer

T: Why do you think that's a good name for a cat?

Ch: Because they say meow

T: What else?

Ch: they catch mice.

T: We know the setting now for the story.

Ch: Cornwall.

T: So what you're going to do now and you're going to put your ideas around the back cover. Now I'll put your sentences on the board and see if you can do as well as you did before. Right off you go then (Children go back to their places and write about the back page of the book.)

T: Finish your fist bit first before you turn over. Alfie come on, get going please. (Teacher writing on board.)

Oh well done Rupert...what a good answer.

11:42 Monitoring. Student. Pupil desk..

T: Excellent, right, turn over and do the other side and we will see if we can add anything afterwards.

James you need to get on. You really don't want to be doing this in your lunchtime do you?

Ch: No.

T: So it's what people have said, the names of the main characters are and what the setting is and what the story is about. Don't forget to write in a sentence.

Ch: I've forgotten what I was on.

T: I think the main characters are...

Well turn over and do the others and we will go back afterwards.

The Sands of Time

11:45 Monitoring. Student. Pupil desk

Come on.

Get on.

Start on this one now.

Visitor: Have you got a spare sheet?

T: I think there's one on the table by Nathan.

(Queue of three children by teacher.)

Right change over.

That it isn't spelt right. Capital C o,r,n,w,a,l,l Cornwall

Ch: My finger hurts and I can't write. Shall I hold it like that?

T: Well try that. See what else you can add. Right who are the main characters?

So the characters are the cat and the man. What was he called?

Ch: Mowzer

T: Mowzer and?

Ch: Tom

T: Tom. Next question Matthew?

Ch: Can I go to the toilet?

T: Yes. Well done that's lovely. Try to add a bit more.

Next one (To individual child)

Emm, Joe what are you doing?

Assistant: Did you jump Sam?

Assistant: Three times this morning. (Referring to child's ability to jump at loud noises.)

11:48 Monitoring. Student. Pupil desk

T: No it's about saving the village from the storm.

(Queue of two by teacher)

Em... Matthew should I be able to hear your voice?

(Queue of 4 at front, looking at each child's work in turn and making comments.)

T: Excellent.

11:51 Monitoring. Student. Pupil desk

T: Now you can have a go on your guidelines. You need to put the Mousehole cat. You know now that the story is about trying to save the village from the storm. Em... Right and stop. Please can we please put our pens down with the lids on and come and sit down on the carpet please. Matthew quickly. Nearly everybody did it, good. We've got some very good sentences. Well done.

The next thing to do is we need to make somewhere to put that work.

Ch: Paper.

11:54 Talking Whole class Front

Alice you need to have paper.

Ch: We need the title of the story.

T: The Mousehole cat. Now you're going to do that in beautifully neat handwriting, like this (Writing on board,) or you could do block capitals. Do them very neatly in pencil first. If you want to outline them in black later you can.

The first job is your lettering. And you want to do the man and the cat.

And when you are very happy with it, you need to stick it on the front.

Yes Mike? You were anticipating that ending. If you know the story you can write about it. You have got to finish both sides of your sheet. Now settle down quickly. (Child comes in from another class and hands teacher sheet.)

T: Thank you. Just quieten down please.

Ch: Have you got a ruler?

No Katrina's got one but you haven't got one. Where is it? Now did you draw guidelines for that?

Come on Alfie. That is messy isn't it.

When we need to do our neat writing we need to draw guidelines, don't we.

11:57 Monitoring. Student. Pupil desk

T: What kind of lettering do you feel like doing?

Matthew try not to disturb Joe please.

What kind of lettering shall we use?

The Sands of Time

This kind or straight?

Do your lettering straight

Start off with one, copy it, go up to the top and down to the bottom each time. It's your sheet.

Then go through, block them in and then you can color them.

12:00 Monitoring. Student. Pupil desk

T: That's not nice. That's not your best at all now what are you trying to do? Now start again Matthew. This time concentrate.

T: That's lovely, good. Very nice James. Oh beautiful Jasmine. Here you are. Are you alright Brandon? Here you are I'll give you one. It's just here.

(Teacher gives child a piece of paper)

(Teacher at front. Gives child new pencil.)

12:03 Monitoring. Student. Pupil desk

T: Oh Bradley that's nice. Do you want to start again? If I give you some guidelines (Child nods) Let's go on to a new piece. Give me your ruler and I'll draw your guidelines. Now what sort of lettering do you want to use? Do you want to use printing or bubble writing? Now you need to write the Mousehole cat. Now if you press very lightly then if you go writing you can rub it out.

(Teacher at individual desk drawing lines and writing words for children.)

Some very very nice work.

12:06 Monitoring. Student. Pupil desk

T: Oh what a beautiful cat Alex. That is great. What character, that is lovely.

Ch: It looks more like a frog.

T: You can put the cat here then you can put the title lower down.

Ch: If you say it's good then you're boasting.

Ch: Why do they always have to squabble.

T: I know, it's wearing.

Ch: It looks like a horse.

T: No it doesn't it looks like a cat.

Ch: Mine's half cat half pig.

12:09 Monitoring. Student. Pupil desk

Alex, that's very nice Alex.

Em... right and stop please. Now stay where you are sit down and listen. Now we need to get ready so that we are ready for lunch, just in the blue cover very lightly write your name and sit up so I can see which table is organized and ready.

12:10 End of lesson.

School G Lesson 13 English

8:50-9:45 (55 minutes)

8:50 Coded: Talking, Whole class, Carpet :

T: What have we been covering in English? We have been looking at stories about something bad that we might have done, not really done because we're all angels. We have only four days left together...(Teacher makes sad face so we need to use every minute to try and get these published by the end of term. Now who would like to remind us what we had to do? Yes Tara?

8:53 Coded: Talking, Whole class, Carpet :

Ch: We had to write in three sections, a picture of the characters, what we were doing and thinking before it happened and what actually happened. We had to draw pictures of the story and then we publish them on the computer in the ICT suite next door.

T: Now we are going to go next door. I want you to use your traffic lights and I don't want those who have finished to interrupt me when I am conferencing with another child. I don't want you to put your name on the board until you have done all your jobs. Then I can do mine. That means you need to use your self-checking card and check spellings, punctuation, adjectives and all of the other things on the list. If you are editing use your edit pencils to make changes. Then I can see what you have been doing. We need to use all the time. See how quickly you can set up. Right, off you go.

8:56 Coded: Organizing, Whole class, Carpet :

The Sands of Time

(Children move from carpeted area to desks next door, fetch traffic light cards and self-checkers and set to work. Those children who have finished and need to see the teacher write their name on the board.)

8:59 Coded: Assessing with child, Student. Pupil desk:

(Teacher sits at spare place at child's desk and calls him to show her his finished work. Child read through work to her)

T: Shh, you're distracting me.(To next-door table)

9:02 Coded: Assessing with child, Student. Pupil desk:

This is good.

This is section one, that is section two. Ok. It is important to do this bit.

Heidi can you come and be conferenced please.

(Rest of class working on their own work.)

Can you have your work ready so that when I say "conference" you don't waste a minute. If I'm working with you then you can use someone else's chair. Otherwise we'll have to keep moving them.(Child reads her work to the teacher.

9:05 Coded: Assessing with child, Student. Pupil desk:

So this is your third section. So this is when you actually do it. It's your responsibility. I like that good. So that's the part when you say "That's when I did it." (Child continues reading story.) Right these speech marks here are needed to go round the other way. Hang on, who's she saying this to?

Ch: the man

The man still...

At the moment you've got the man's voice. How can you show it in your writing?

Ch: he said.

T: Ok so you're going to have Mum turned. Did she put the phone down?

Ch: No

T: Who phoned?

Ch: Mum.

T: Mum phoned Dad. Ok.

9:08 Coded: Assessing with child, Student. Pupil desk:

Ch: Reading

T: Here, these must go round the part that was said.

Ch: Reading.

T: Good I like your idea. Fantastic.

Em girls, just a minute, what's happening is you're distracting me. So I'll do this slower which means I cannot get through everyone including you. Sienna I see your name there and Sophie. You've got three pictures to do Sienna, is that picture one, two or three? Right get on quietly. Right we'll stop there.

(Children working quietly.)

How do I know this is being said to you? How can you show it in your writing?

Ch: use speech marks.

T: Good. Mum turned to me...Teacher correcting with child. Ok. Full stop

Ch: (Child continues reading.) Unclear due to sports day outside.

T: Em... girls hello. I'd really like to conference you but at the moment I'm not because you're taking my attention in a negative way and I want to give you my attention in a positive way. Sophie can I please see you.

Thankyou, let's go to Section two.

Ch: Reading his work to the teacher.

T: Good girl.

9:11 Coded: Assessing with child, Student. Pupil desk:

T: C not an S

Excellent spelling Sophie, excellent spelling. What letter are we missing here? Fantastic go to section two.

Megan. Right, where does it start? Right ok. I had...

Ch: Reading.

The Sands of Time

T: I thought it...

Megan, *Behind*. What does it need at the end?

Ch: Silence

T: D at the end. Behind. Right, (Reading) Hiding behind the massive bed in my Mum's room. No, read from here.

Ch: Reading.

T: I can't understand.

(To whole class) Can I say I'm really proud of you because if I was a child in this class and I had a sports day going on downstairs, I would find it really distracting and would be wanting desperately to be looking out of the window? So I'm very proud of you because if I was you I'd be standing there staring out of the window. You're very focused well done.

Ch: Reading.

T: It doesn't make sense. (Re-reading)... Then up to the... on the top. What are you trying to say. (Re-reading) No it doesn't make sense. Who was hiding?

9:14 Coded: Assessing with child, Student. Pupil desk:

A person? A hamster?

Ch: Unclear.

T: I crept into the room. I hid behind the massive drawers in y Mums room, and then comma, and then up, up from the drawers was a massive. You have use this word twice and then looking on (unclear) Your second section...good idea.

(Child comes to ask for teacher's attention) I suggest that you use your time in a really sensible way. How could you use your time sensibly? What could you do? What is everybody else doing?

What could you do?

Ch: Finishing off

T: Good.

T: Sienna. The third section. (Child comes to desk)

9:17 Coded: Assessing with child, Student. Pupil desk:

Ch: Child reading to teacher.

T: What's that bit?

Ch:

T: Good and... On the last day of term it was...

Ch: Reading.

T:...to walk home. That's a funny old spelling. It's really odd. But (Teacher correcting writing) full stop. What would that be? Emma can you come and sit here please so I can see how you're getting on.

(Child continues reading)

Caspar, distracting.

Ch: reading.

T: ing, a thing, thinking yes?

Ch: (Reading)

T: Very good. I like your exclamation mark. Brilliant writing, brilliant writing. Go on with the next section. Right Megan, let's see how you got on love.

9:20 Coded: Assessing with child, Student. Pupil desk:

Can you go and sit with Jemima and see if she can help you with your illustrations for section three.

Ch: Reading.

T: you need to open your mouth when you read to me because I don't understand you. This is brilliant. This is section three this is the central scene of where you are at the time, ok, what you did up to the moment that you took it. So here you've got... That's brilliant, so that's the end of section two. So you need to finish here, and that's when I did it. Alright. There you go onto section three. Good. Felix. I'm being as quick as I can I promise!(Funny voice)

Ch: Reading

T: Good.

Ch: Reading

T: I took it... full stop. Dorchester is a big town. You didn't run round the whole town did you?

Ch: Reading.

Yes they would exclamation mark. So what does that mean? You've just paused.

The Sands of Time

9:23 Coded: Assessing with child, Student. Pupil desk:

T: (Child adding punctuation) There quite rightly. How can you show that with punctuation? That needs to go inside your speech marks. Think of another way of saying that. Can you use another word instead of said? How do you think he would have said that? Yelled?

Ch: Mum was catching up with me.

T: So what does that need to be?

Ch: It was the worst (unclear)

T: Ok you need to explain why it was the worst. Were you actually pleased that you got caught in the end in a funny sort of way?

(Child shows T a drawing)

T: I'm afraid it's not quite as good as the others. Right. Ok. George please.

Ch: Reading.

T: That's a very long sentence! Are you alright?

Ch: Yes

(Laughter)

Lets see if we can make it a better sentence.

Ok so you got Mum to leave you on your own. Were you on your own? Ok. As or because, so leave me on my own (unclear) Is that better?

Ch: reading

T: George? Always use punctuation. Good you can start a new line. They didn't say they were staying. When you write it, write it like this, a line there and a new line there.

9:26 Coded: Assessing with child, Student. Pupil desk:

Should I go and get the money. What is that? Punctuation there? Is it?

Ch: Question.

T: I knew it was wrong but if you felt. ..How were you feeling? ...

Ch: Excited.

T: As excited as me, you'd be doing the same thing. Right section two.

Let's get you focused then. That's gorgeous. They look so nice when you outline them. Right section 2. Ok. Right, why have you got a capital "A" old chap?

Ch: (Reading) I had to find my mother. I had to make sure Mummy and Daddy

T: Ok sure, shore (Correcting spelling) So these are names. What do you need to have?

Ch: Capitals.

9:29 Coded: Assessing with child, Student. Pupil desk:

T: I needed to make sure my Mummy and Daddy...what are you trying to say?

Ch: They didn't know

T: Ok. They didn't know. OK.

(To a child who has come back from the computer room, who is wandering around looking fro a seat.)

You'll need to sit somewhere else ok. You can sit anywhere you'd like where there is an empty space.

Good boy.

Katie.

Ch: Reading

I saw Mummy and Daddy meant everything. Look how you're spelling that with an e at the end.

S.A.I,D

Ch: Reading

9:32 Coded: Assessing with child, Student. Pupil desk:

Ch: Reading

T: Ah...I see...

At...George can you take one more piece of paper and then you can start on your dividing page. Ok one more and you need to do a little illustration that you cut out an stick in your book.

Ch: Shall I cut it now.

T: No you will but not now.

A: Morning Miss L.

T: Hello

The Sands of Time

A: How are you doing? Ok.

T: What do you say?

Ch: Morning Mr. M.

A: Morning year four. We're having one of those days aren't we?

T: It needs to be an because it starts with i. Ok.

9:35 Coded: Assessing with child, Student. Pupil desk:

T: And my brother...

Ch: Reading.

Jemima. Right, (To another child.) now I'm not sure about this one. It looks rushed to me. It looks rushed. Right. Section 2

Ch: Reading.

T: Good

(Some children going to ICT suite with finished work to type on the computer.)

T: Guess what.

Ch: Reading

T: Right. I like that that's nice. Full stop. Hold on a moment. (Correcting work)

Ch: Reading

T: I like that, that's beautifully written..."there was no way out of the temptation" Excellent writing. There was the shop.

9:38 Coded: Assessing with child, Student. Pupil desk:

T: I don't see any pictures, or colored pencils out of the window. I meant...

Dante, what is it?

Ch: I don't have a chair.

T: I see a chair, a chair, a chair

(Child sits down.)

Ch: And that's when I did it.

Ch: reading

T: Fantastic. Section two off you go. Your name's not on here so I can't conference you, if your name's not on here. Katie can I conference you please? Yes, if you've published it you tick your name and go on with the illustrations. That's excellent. That's excellent. That's lovely but I'm not sure about that one there. Can you put that on there have you done any outlines on them? I'm not sure about the middle one. But they're fantastic. Right, let's go.

Ch: Reading

T: "Did on mac", so what are you trying to say?

Ch: Did not make.

Right "Did not make" Shall we say that? So did not get the... Ok. You need to fix this up Katie.

You're saying to me you've corrected it and it makes sense but I'm saying to you it does not. . By the board looking at list of names to call next. Where is Alexa today?

Ch: She's on holiday.

Ch: For a whole week.

Caspar, I know you've been waiting a long time.

9:41 Coded: Assessing with child, Student. Pupil desk

T: Right ok, so when she was gone I could take it but...

Ch: Reading

T: Good spelling Caspar

Ch: Reading

T: Thinking about belonging to sisters needs an apostrophe s. No that's "nows" you want "Knows" yes? Full stop.

Ch: Reading.

Right. You know I say to you about sticking your tongue out when you say "th" Do you know why? If you say a "f" sound, for example if I say fish, watch my mouth now, thish, I said "th" Alright. If you say em...thought or fought...I fought the battle what letter does that start with?

Ch: "F"

T: Here you have got "fat" What letter does it start with?

Ch: F

The Sands of Time

T: So if I say “th” what two letters will I start with? So if you don’t say it properly, you won’t spell it properly.

9:44 Coded: Assessing with child, Student. Pupil desk

T: So that’s starts with “th” Ok? Good.

Sh,sh,sh

Ch: Sh,sh,sh

Right I think we’ll leave it there. We haven’t wasted any time whatsoever. Don’t huff and put and cross your arms we will try to get started straight away tomorrow. Put your initials on the back. Put them on the pile really really neatly please. Then tidy everything up please. And you can come and sit on the mat. We don’t have time for a plenary today because we started late.

(Children put things away.)

9:45 end of lesson.

School G Lesson 14 English

9:48-10:33 (45 minutes)

9:48 Coded: Organization. Whole class. Carpet.

T: Right everybody on the mat please. Mmm... actually we can’t start this lesson because tables aren’t tidy, can you move the timer please Lucy? (Children go back to move furniture and put away resources.) Now we had a rather busy week last week with the theatre week and we actually need to finish off our math topic on weight. Now it feels like ages ago that we last did it, don’t you think? Now on the last day you had some homework to bring in. What was it, can you remember? Yes.

H: Cakes

T: A rather nice homework. Hands up if that was one of the first times you had to weigh things yourself. (Ch put hands up)

Was there anything that you discovered that you needed to do to make sure it was accurate?

Ch: Well if you don’t put the egg in right it *curgles* or something.

T: How can you make sure that you weigh things accurately Tara? The order that you do things has to be right. But let’s say I’ve got some scales, what do I need to do to make sure the scales are set before I put the ingredients on?

I don’t do this at home. I pour something in and I don’t check it first.

Ch: Put it on zero first.

9:51 Coded: Review. Whole class. Carpet

T: Yes you do have to put it on zero and the other mistake I make... I make sure they are at zero and I put it on and I pour in my flour...(Teacher showing how she pours the ingredients into the bowl beside the scales. What am I doing wrong?)

Ch: You need to put the bowl on first because otherwise you’re going to have the weight of the bowl.

T: So you have to be quite careful. Now let’s just very quickly remind ourselves of the equivalent weights between kg and g.

So I’m going to give you all one of these. So...Children, so are you ready? Don’t look. (Teacher passes round cards with weights written on them in grams and kilograms.) Now a couple of the weights are quite tricky to get the hang of.

Ok let’s see how quickly you can do this. I’ll time you I think. And when you’ve found your buddy you need to sit down and we’ll see how quickly you’re able to all match up. Not yet. Right on your marks, get set go.

(Children match their cards like “snap” and simultaneously find then sit by a math partner.)

Ok get in line smallest to largest. Smallest here, largest here.

(Children look for their place in the line.)**5,4,3,2,1** and stop. You should be standing with our buddy for a start. Right he’s your buddy, grab him, he should be with you. Where should you be that’s the question? Right can you call out what you’ve got? Right,(Teacher checking cards and that the line of

The Sands of Time

math partners is correct and that they have organized themselves into order from largest to smallest.)
2, 1 and a half, 1, three quarters, half, good, quarter. Well done.

9:54 Coded: Organization. Whole class. Carpet.

Fantastic. That is brilliant. Right give them to Katie and she will pop them in a neat pile down on the floor. Quickly and then sit down with your buddy and your whiteboard go.

T: Now, on your whiteboard I would like you to write down an object. Any object. An object that you could weigh. Choose any object. It could be anything from a heffalump, to a lorry, to a feather. You and your buddy choose one object.

(Children writing) Now when you're done, put your pens down.

Ch: Ooooooh she was taking over. (Talking about partner.)

T: Right ok. Katie (Looking at child who is not in the circle.) you look very lost, what could we do to include Katie? Good you've moved, Jared, that's better. I've got two pieces of paper here. One of them I've put Kg on and one g on. What I want you to think, is what unit of measurement you'd use to measure the weight of your object. Would you measure it in g or would you measure it in Kg? Decide with your buddy. Put your board around the kg or around the g.

(Children talking and placing their board by the correct sign.)

9: 57 Coded: Talking. Whole class. Carpet.

T: A puppy, would you measure a puppy in grams. Alright. Would you really measure the heffalump in grams? Alright very interesting, I'm going to call some objects out. This room is the g room. Next door is the kg room. If you believe you would weigh your object in kilograms you'll walk into the kg room. If you believe that the object I say should be measured in g you will go into the g room.

However we have got markers and pens still being held and if they get stepped on causing an ink spill...., so if you've got something in your hand that you are responsible for you need to put it down. Right stand up.

T: A car (Children move to kg room. Teacher continues with list: a feather, a boat, a plane, a pencil, a rubber, a potato, and children walk in and out of the room.)

10:00 Coded: Talking. Whole class. Carpet.

T: A potato would you use grams, it depends if it was a new potato...

Ch: yes.

T: A ruler,

T: Would you really measure a ruler in kg? A rucksack, full...

Ch: It could be full of feathers.

T: True. A rucksack full of rocks. A saucepan.

Ch: It depends how big it is.

T: A shoe.

Ch: It depends how big it is.

T: An empty plastic bag. Em... a tooth, a human tooth. Right can you come and sit back down in circle please and on your way to sitting down, can you get a Target Math Stage 2.

10:03 Coded: Talking. Whole class. Carpet.

T: Then you can look at the index for the mass problems. I like the way that Natasha is looking in the index to find the page number. Mass problems. Page 79. Now then... Pop it down in front of you.

Listening. Now I have had a look at your ASL assessments. If you remember it was chopped up into three main sections. If you had a dot in your ASL what did it mean?

Ch: That you haven't a clue about it?

T: If you get a dash what does that mean?

Ch: You kind of got it.

T: If you get a tick what does that mean? You have got it sorted you've got your head around it. Out of the three things there was one area that we need to work on a lot more. What do you think it was? Felix?

Ch: Weighing.

T: Yes problems involving mass. Now as you're working with a buddy, I'd like you all to look at section 1 question A. Could you read it please George?

Ch: A sack of potatoes weighs 56kg, 24 are eaten. How much is left?

T: I want you to talk about it with your buddies, about how you are going to do it. (Ch working in pairs with w/boards.) Show your working Trevor. That's not showing your working. Get a pen and you

The Sands of Time

can use one of these pieces of paper. No I want you to show your working. If your pen is running out you can use paper. If you have finished that one with your buddy, without rubbing it out, turn your whiteboard over and try number two.

10:06 Coded: Monitoring. Whole class. Moving around.

T: Show me your working out. Show me your working. Well how are you going to solve it? What do you do? How are you going to work it out?

Ch: Take away.

T: Good it's a take away that I want to see.

Holly would you please buddy up with Kye.

(Teacher begins moving around to speak quietly with pairs of children.)

10:09 Coded: Monitoring. Whole class. Moving around.

T: A can weighs 20g. How much do 8 cans weigh?

Can you two try the ones from section B please?

Right can you two find the one from section B please?

Ok, you're partitioning it. That's fine.

Now you've got to sort out how else you could have done this. You're quite right.

Just write down the sum that you could use for times. How are you getting on in section B? But 250 what? Good. Can you try number one from section C Esme let's have a look. Can you two, can you try? Right, how are you getting on here? Well done.

(Children working together in mass problems on w/board and paper.

10:12 Coded: Monitoring. Whole class. Moving around.

T: Try the next one.

Well done, good. Now...

Shhh...

Can you please pop your pens down? Now when we did our AFL, these people were placed into section B. That's what your assessment showed me. Haadi's assessment showed me that he was working at section C. Everyone else is currently working on section A. Only you know what you're capable of more than me. No one knows your brain better than you do. You might say: hang on a second I'd quite like to try the next section. If you feel you'd like to try, then you can start. So I'd like you to do what you often do and I'd like you to chose what you'd like to focus on. And then if you've done it right. So what I'd like you to do is you being independent, responsible learners and stretching your brains.

We'll be using the traffic lights. So if you need to go to the emergency room you can. What do you think out L.O. should be for our work today?

Ch: Mass problems.

T: Fantastic. Please write each section clearly. One little word of advice... You need to show me whether it is g or kg because 2g is very different to 2kg.

Ch: Do we need to show your working?

T: You will need to show your working. Could you please stand up if you'd like to start with section A.?

10:15 Coded: Organization. Whole class. Carpet.

Stand up if you'd like to start with section B. Stand up if you'd like to start with section C. I'd like you to work together with someone who is in the same group. So jump up group A have a look around and a small squiggle. Jump up group B, have a look, jump up group C. Right what we need to do is I'll come through with then math books. You need to get everything else, your pencil cases sorted.

Alright, so... Flora could you put all the paper in the recycling? Let's see how quickly we can get going.(Children move to places.)

Good. Can you come here please? Well done. Excuse me.

10:18 Coded: Organization. Whole class. Front.

T: Sh,sh,sh

Ch: sh,sh,sh.

T: It's interesting to see that some people have chosen carefully are still quick at getting themselves organized, the only thing they do not have is traffic lights. It is interesting that other people have got them. Go... chair there.

(Children sitting down at tables.)

The Sands of Time

T: Do you want to do a couple and see how you get on? You can always move yourself into the next group. Remember if you want to go to the emergency room you can.

Ch: What is the date... it says yesterday's date.

T: I'm not telling you, you should be able to work it out.

10:21 Coded: Talking. Whole class. Front.

T: You should be able to work it out.

If you put your hand up I'll come and check it. You do not need that because you can share.

I'm a bit of a sergeant major when it comes to settling quickly aren't I? Yes?

Right of course you can talk because we were made that way but I expect you to be quiet, quiet talking. Why would it be 12 times 13? A can weighs 20 kg. Why are you going to do 12 times 13?

10:24 Coded: Monitoring. Student. Pupil desk.

T: Much better. You've eaten 24 so how many are left? I can't see any of your working out which means if you have gone wrong...

I can't see what's going on inside here. So I can't help you. How many chocolates are in a 2 kg box?

The chocolates in the box all weigh 25g. How many chocolates are there in a half kilogram box? How many times will 25 go into 100? Now work it out.

10:27 Coded: Monitoring. Student. Pupil desk.

T: I can't see any workings so we can't put it right because I can't see where you're going wrong. I'll tell you now, that one's not right. But I can't see where you've gone wrong. Look at number two and show me your working for it. I'm not looking at yours because it's not set out.

Ch: A serving of breakfast cereal weighs 30g. How many servings are there in a $\frac{3}{4}$ kilogram box?

T: How could you work that out? How many 30g servings could I get out of 1000? Can you try? George and see how you're getting.

Ch: Yes I am because.

T: Can you try B1 George.

How many times does 30 go into 1000? How could you work that out?

Em...you're distracting people because you're not actually talking about your math. Ah right. Try B1.

How many chocolates? It says... Put your chair in a bit please. Hang on it's not 20kg it's ok.

You're not measuring the weights there.

T: So why are you...

Can you move your chair?

10:30 Coded: Monitoring. Student. Pupil desk.

T: Good you're going to have to add them together, not take them away.

800g altogether? Why is it so messy? I'd like to try B1. A can of beans weighs 400g. How much do 6 cans weigh?

T: Sh, sh, sh

Ch: sh,sh,sh.

T: Write next to your learning objective so how I can see how you feel about today's work. I'd like you to finish the question you are on. I'd like you to put a face next to the L.O. to tell me how you feel about today's work. Section A, section B, section C. If you've done both you put it in the pile that you've currently working on, so if you're on B1 you put it in the B section but you must finish the question that you are on.

10:33 End of lesson.

The Sands of Time

Appendix 12

Class management

Range of observed discipline structures

Noise level and behavior.

Strategy	Observed example	
	Negative	Positive
Pre-emptive	I'm going to choose, not you.	
Look	Glare, frown, hold gaze,	
Gesturing	Pointing with a stick	Pointing
Noise	Shhhh, ahh..., em...	
Naming	Caroline and Ann...	
Short polite request	Quiet please, Excuse me, Get	

The Sands of Time

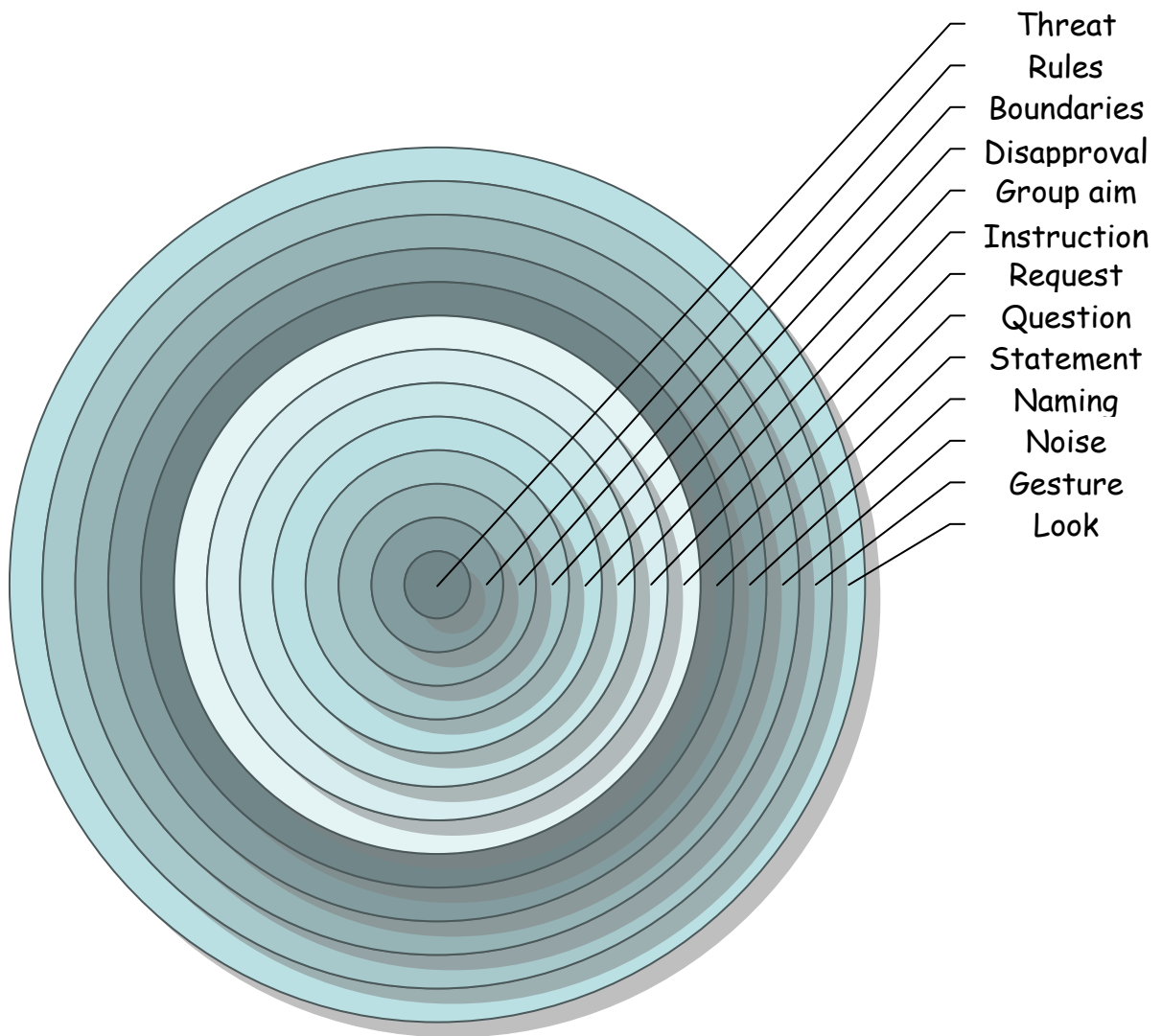
	on please, Hush please. Calm down please. Quite enough thank you.	
Statement	Someone is talking. I am having to shout. You are talking again. I'll have to stop. Too much noise. You are not thinking. I don't remember saying shout.	
Humorous statement		I have got a wiggly worm.(Queue)
General question to class	Who is talking? Are we getting on?	Who is sitting nicely?
General question with identification	Who is talking in that group? Is it that table?	
Statement with identification	That group is making a noise. You have interrupted. The noise is coming from there. You are distracting... You need to listen. You need to get on. You are not listening. You need to stop talking. You are fiddling. You haven't even started. You have been busy trying to distract...	Well done you are all working hard over there.
Direct question to individual	Why are you fussing? Are you supposed to...? Can you stop that? Have you done what I asked? Have you finished?	
Imperative instruction	Stop! Stop that! Working! Work by yourselves, Quiet! Don't shout out! Put your hand up! Settle down! Let me finish! Stop fiddling and...	
Imperative instruction with reasons.	Calm down so they can concentrate.	
Longer polite request.	Please don't stop me again, Don't shout out please, Everybody getting on quietly please, Can you work quietly please?	
Restating the group/task aim	We all want to...	
Stating approval/disapproval	I'm quite disappointed.	
Restating the teacher's boundaries	I am not going to accept... We can't keep doing this.	
Restating the rules	You are not allowed to talk. You put your hand up.	
Restating the rules with reasons	When you call out, you are preventing...	

The Sands of Time

Threat without intended action	This is the last time I'm going to tell you. Last warning.	I hope you're working hard or you might have to work alone.
Threat with intended action	If you continue, I will...	

Appendix 13
Model showing observed discipline structures.

The Sands of Time



Model showing methods used to discipline the class and keep disruptions to a minimum. As the circle widens, it involves more of the class, creates more disturbance to others and demands a greater amount of time.

In well managed classrooms where the teacher has taken time at the beginning to set clear boundaries, guidelines and expectations, the teacher will rarely have to use strategies in the outer circles. In less well managed classes the teacher will need to use strategies that are in themselves disruptive and take time.

The Sands of Time

Discipline strategies

Focusing attention

Question and answer phrase	1,2,3: eyes on me 1, 2: eyes on you.
Physical action	Clapping pattern echoing
Counting up or down with/without following routine.	5,4,3,2 and 1 pens down, face me.
Time limits	You have 2 minutes left; You have 20 minutes for this task.
Silent thinking time before random direct questioning.	I want everyone to think of an answer.

Strategies for encouraging good behavior.

Rewards/Sanctions	Table points
Praise	

The Sands of Time

The Sands of Time

School A

	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6
7:30-8:30	Assembly	English	Islamic	Assembly	English	Islamic
8:30-9:10	English	English	English	English	English	English
9:10-9:30	Break	Break	Break	Break	Break	Break
9:30-9:50	Reading	Reading	Reading	Reading	Reading	Reading
9:50-10:30	Reading	Math	Math	I.T.	Math	Humanities
10:30-11:10	Math	Humanities	Math	Math	Math	Math
11:10-11:50	Lunch	Lunch	Lunch	Lunch	Lunch	Lunch
11:50-12:30	I.T.	Humanities	Arabic	Humanities	Humanities	Arabic
12:30-1:10	Humanities	Library	Arabic/Dutch	Arabic/Dutch	Humanities	French/Dutch
1:10-1:50	Art	Music	P.E.	Humanities	Music	P.E.
1:50-2:30	Art	Life skills	French/Dutch	Reading	Handwriting	Reading
Total 1800 minutes (minus breaks)	360	360	360	360	360	360
Total 1680 Minutes (minus assembly And breaks)	300 (Minus assembly And breaks)	360	360	300 (Minus assembly and breaks)	360	360
1680 5 day week						

Other languages offered: German and Spanish

School B

	Day 1	Day 2	Day 3	Day 4	Day 5
7:55-8:00	Registration	Registration	Registration	Registration	Registration

The Sands of Time

8:00-8:30	Times tables	Handwriting	Thinking task	Spellings	Handwriting
8:30-9:00	Math	English	Math	Music	English
9:00-9:30	Arabic	English	Math	PSHE	English
9:30-10:00	Arabic	Group Reading	Group reading	Arabic	Assembly
10:00-10:30	Snack	Snack	Snack	Snack	Snack
10:30-11:00	English	Math	English	Math	Math
11:00-11:30	English	Math	English	Math	Math
11:30-12:00	P.E	Recorders	Library	English	Group reading
12:00-12:30	Lunch	Lunch	Lunch	Lunch	Lunch
12:30-1:00	Humanities	ICT	Author focus	Swimming	Science
1:00-1:30	Humanities	ICT	Author focus	Swimming	Science
1:30-2:00	Humanities	Art	French	Group reading	Science
2:00-2:20	Group Reading	Art	French	Set Homework	Golden time
Total 1800 minutes (minus breaks)	320	320	320	320	320
Total 1680 Minutes (minus Ass.)	320	320	320	320	270 (minus breaks, assembly and golden time)
1550					

School C

	Day 1	Day 2	Day 3	Day 4	Day 5
7:30-7:40	Children enter	Children enter	Children enter	Children enter	Children enter

The Sands of Time

7:40-7:50	Registration	Registration	Registration	Registration	Registration
7:50-8:00	Registration	Assembly	Registration	Registration	Registration
8:00-8:30	Math	Assembly	Math	Humanities	English
8:30-9:00	Math	Math	Math	Math	English
9:00-9:30	ICT	Math	English	Math	Arabic
9:30-10:00	ICT	Humanities	English	Humanities	Humanities
10:00-10:40	Snack	Snack	Snack	Snack	Snack
10:40-11:10	P.E	Humanities	P.E	Humanities	Math
11:10-11:40	P.E.	French	P.E	Arabic	Math
11:40-12:10	English	English	Humanities	English	Library
12:10-12:40	English	English	Humanities	English	I.C.T.
12:40-1:10	Lunch	Lunch	Lunch	Lunch	Prep/home
1:10-1:40	Arabic	Music	Humanities	Humanities	
1:40-2:10	Humanities	Music	French	Group reading	
2:10-2:15	Prep/home	Prep/home	Prep/home	Prep/home	
Total 1800 minutes (minus breaks)	300	300	300	300	240
Total 1680 Minutes (minus Ass.)	300	260	300	300	240 (early home time)
1550					

Appendix 18

Sample of calendar and timetabled time

	C	A	B
Average minutes of instruction per	280	336	310

The Sands of Time

day.			
Average hours of instruction per day.	4.6	5.6	5.16
Total Minutes of instruction per week.	1400 (Minus assembly with early home time.)	1680 (Minus assembly for 5 day week.)	1550 (Minus assembly and golden time.)
Total hours of instruction per week.	23.3	28	25.83
Total Instructional days in school year.	179	181	180
Instructional minutes in school year.	50,120	60,816	55,800
Instructional hours in school year.	835.3	1013.6	930
Average percentage of enacted instructional time in English and Math.	76.5%	71%	75.5%
Average enacted instructional minutes in English and Math.	38,342	43,179	42,129
Average enacted instructional hours in English and Math.	639	719.65	702.15