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Assessment of Literacy in the Text Level Strand of the National Literacy Framework at Key Stage Two: Issues surrounding Genre and Gender

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Abstract

The theory that girls achieve higher levels in English than boys has been well researched and, in some ways due to the increased publicity surrounding children's school performance, this difference in performance is well known. It is also widely accepted that girls prefer fiction and boys prefer non-fiction. (APU Primary Language Survey). But is this the whole picture? This paper investigates data from the CamPAS English trials. Key Stage 2 children completed reading comprehension and writing composition activities addressing the text level strand of the National Literacy Framework. Analysis of variations in achievement across a range of genres for reading and writing has allowed for a more detailed exploration of girls' and boys' performance within specific text types.

Background

The CamPAS project began in 1994. Its aim was to develop materials to support teachers in their assessment of the core subjects at Key Stage 2. The materials were to focus on areas in which teachers typically found it more difficult to make valid, reliable assessments. In mathematics this area was Ma1, Using and Applying Mathematics, and in science Sc1, Experimental and Investigative Science. These two assessment packages have been published by CUP (Cambridge University Press).

The third phase of the CamPAS project concerned English. With the implementation of the National Literacy Strategy, attention shifted away from the National Curriculum Programmes of Study and teachers were looking to assess against the new literacy framework for English. For CamPAS English the target area from the framework was the text level strand. This would support teachers by providing texts, or text extracts, at suitable levels, with appropriate features to use with the Framework. The CamPAS activities address both the reading comprehension and writing composition criteria from the National Literacy Framework.

The National Literacy Project was set up by the DfEE (Department for Education and Employment) in 1996. It was established as it was considered that standards in literacy were not high enough to compete internationally. Its management was shared by OFSTED (Office for Standards in Education), SCAA (School Curriculum and Assessment Authority), TTA (Teacher Training Agency) and the BSA (Basic Skills Agency). The NFER (National Foundation for Educational Research) carried out research in 1996 with 9 year olds to survey reading attainment in England and Wales. The results were interpreted as showing that these countries would be comparable to the average achieved for 91 countries that were part of an earlier international comparison. The English and Welsh scores were said to be lowered due to a 'long tail' of children whose achievement was well below average. The Literacy Task Force's aim was to develop a strategy to improve levels of literacy in primary schools over a five to ten year period and to spread good practice. The target was that 80% of eleven-year olds should reach level 4 in the national tests, level four being the standard expected for that age.

The National Literacy Strategy employed various methods to meet this challenge: the new National Curriculum for training primary school teachers has a greater focus on equipping trainees to teach literacy well. Head teachers, governors and key teachers received specialist training and all teachers received INSET on implementing the new strategy. The task force developed a framework for teaching based:

'on evidence of inspection and successful practice in schools.' (DfEE, 1997)

A major change for primary teachers was to teach a dedicated and structured literacy hour each day beginning in the autumn term, 1998, the content and structure of this hour being specified in the National Literacy Framework.

The Task Force acknowledged that children needed a core reading programme, supplemented by a wide range of other reading material, to become successful readers. In writing, they not only recommended that children learn how to present their work correctly and write about different content areas, but that they should also be taught to write in a number of different genres and to learn about the genre's particular features.

Points relevant to this paper from the rationale behind the Framework include how literate primary children should:

'know and understand a range of genres in fiction and poetry and understand and be familiar with some of the ways in which narratives are structured through basic literary ideas of setting, character and plot [and to] understand and be able to use a range of non-fiction texts.' (DfEE, 1997)

Reid and Bentley (1996) discussed the complexities of understanding a text, in as far as recognising the overall gist of a text as well as its subtleties, the ability to summarise, use information texts and strategies for retrieval and the ability to discuss a text. They also commented on the effect these should have on assessing reading. They suggested that responses to texts should involve:

'*expressing opinions with reference to the text, being aware of themes and images [and] considering the structure of texts and how authors use the language to achieve their effects.' (1996)*

If the criteria in the Literacy Framework are taught, children should have the tools to complete assessments of Reid and Bentley's form, as above. The criteria sampled from the Framework in the CamPAS English units address all these key features of a reader's response to a text, hence we can explore children's abilities in these areas across a range of text types.

Issues surrounding Genre and Gender

'*Texts are different because they do different things.' (Cope and Kalantzis, 1993)*

This simple explanation summarises how many would classify texts into a specific genre or indeed define genre itself. Books in primary school classrooms and libraries are often categorised by their subject matter, for example, animals, countries. They are also traditionally divided into fiction and non-fiction sections.

Many choose to group texts not on the subject matter or content, but according to the author's purpose (Littlefair, 1991). If a text is considered to be any meaningful piece of written or spoken language, longer than a couple of sentences, then its genre can be considered to be based on the authors' or speakers' purpose, rather than relating to its linguistic form (Biber, 1988). Young children, however, will most likely look first at the content of a text before considering its other linguistic features.

Kress (1982) and Wray and Lewis (1997) describe how texts are structures which are agreed forms:

'*located in a particular set of social practices and understandings.' (Wray and Lewis, 1997)*

These accepted structures vary according to the situation in which the text is to be used. Children must be taught these schematic structures to enable them to communicate using these agreed conventions. Language choices and ways of expression must be considered in order to make the text effective in achieving its purpose. Littlefair reports how:

'Research suggests that we cannot assume [children] will implicitly become aware of the variety of forms and genres of written expression available to them.'

Children may have had a degree of exposure to non-narrative texts, for example, exposition or procedural texts. Even so, it should not be assumed that without explicitly teaching them the structure, organisational features and linguistic forms associated with such genres, that children will be able to achieve the desired effect themselves.

The EastLINC team produced a professional development training package which included materials to aid understanding of language use and the purposes associated with various textual genres. Their categorisation of purpose was as follows:

COMPLAIN	PERSUADE	EXPRESS FEELINGS	DESCRIBE
ENTERTAIN	EXPLAIN	INFORM	INSTRUCT
REQUEST	COMPARE / CONTRAST		

Texts can be categorised into genres still further by what they are trying to do. Reports are factual accounts describing how things are. Procedural texts are also factual, but describe a set of actions to accomplish a goal, with the purpose of explaining. Recounts retell events and their purpose may be merely to inform or entertain. Narratives may also be to entertain or to describe or instruct. There are also arguments, explanations and so on. Even if explicitly taught, this suggests a formidable challenge for the primary child to comprehend and produce texts of this breadth of genre and purpose.

Alongside genre, the register of a text should be considered, which is determined by three factors. Firstly, the tenor, that is the relationship between the author and the reader, the perceived audience. Secondly the field, which is related to the content, for example, who, what, where and when. Lastly, the mode, that is how it is communicated, although here we are only considering the written form.

Littlefair (1992) expressed the link between genre and register as the genre determining the shape of the communication according to its purpose and the register controlling the choice of language. Both need to be considered and communicated to the young learner.

In order to make it explicit how an author has used language to create the desired effect, the ways in which language creates meaning must be taught. More so when considering the written, rather than the spoken form, as children do not have experience of reading and writing a wide variety of genres. These skills need to be taught. Littlefair (1991) suggested that teaching children to recognise and expect linguistic features and understanding why they have been used would help them become more proficient users of the conventions. Children should be given opportunities, for example, to write in the third person or passive voice to achieve a more formal script. Children should also have more exposure to non-chronological texts to learn how best to access them and to recognise differences in the ways in which the written form differs from the spoken. Research by Littlefair (1992) confirmed that:

'Young readers do not simply convert their ability to read stories into an ability to read other genres.'

We can see the importance for children of building up a knowledge of genre, its social conventions, the purpose of the text and the register associated with the form. Central to this

goal is the necessity for the knowledge and strategies to achieve these effects to be explicitly taught.

Another significant issue surrounding literacy and young learners is the perceived difference in performance of girls and boys. In the 1999 standards report for the Key Stage 2 tests, 65% of boys achieved level 4 (the standard expected for their age) compared to 76% of girls in the National Tests for English. The QCA's advice (1998) for raising boys' achievement related to exposure to a variety of genres. It suggested that English teaching should encompass a wider range of non-fiction texts and the associated need to assess using a variety of such texts, not solely relying on reading ability being measured against narrative texts.

OFSTED monitored and evaluated the impact of the early stages of the National Literacy Strategy. In their report (1999) on the first year's progress they observed children being taught to:

'examine the organisational and presentational devices of non-fiction texts ...[and that]... shared writing was usually linked to the genre and structure of the text.'

This seems to indicate that the implementation of the NLF is beginning to have the desired effect. However, it is early days to see where the difficulties will lie and specifically which genres may prove to be more challenging for perhaps girls or boys in the future.

OFSTED reported in 1996 how girls out-performed boys in the national tests at 7, 11 and 14. More recently, their evaluation of the NLS reports that although girls are continuing to out-perform boys in English, the gap is decreasing in reading. Conversely, the NFER's evaluation of the pupils' progress in pilot schools during their first 2 years of following the NLF showed girls progressing at a faster rate than boys, the observed difference being equivalent to 3 or 4 months development.

Looking at the international picture, Arnot et al (1998) stated that the patterns witnessed in England and Wales were mirrored in comparable societies elsewhere and that girls excelled in language globally. Research carried out by the International Study of Educational Achievement (Elley, 1992), into reading literacy found that differences in performance due to gender overrode observed national differences. They hypothesised that girls read more and that more frequent readers become better readers.

It may indeed be true that girls read more fiction that boys (Barrs and Pidgeon, 1993) and within fiction boys' and girls' tastes differ also. Osmont and Davis (1987) found that, even when presented with the same text, girls and boys reacted differently to it, with boys focusing on the perceived action and girls more on characterisation and relationships. This too seems to be reflected in their writing, for example in the QCA's standards report for 1998, where it was found that boys' stories and characters were less well developed than girls'.

Boys seem to avoid engaging with the feminine side of literature, that is that which does not deal with masculine values and culture. In contrast, girls are more willing to read some more masculine literature and hence have a wider literary experience. QCA (1998) found again that boys rarely discussed or wrote about emotional experiences. Arnot et al (1998) made the distinction in reading material chosen by boys and girls due to the familiarity of the content, this familiarity being due to personal experience at home and at school. Boys are more likely to read about their hobbies than girls, such information more likely being found in reference rather than fiction texts. Exploring the world through factual texts reaffirms boys' preference for impersonal texts. Littlefair (1992) argues that:

'our views of girls' and boys' relative strengths as readers might be altered in the context of a reading curriculum which took more account of boys' reading interests.'

Traditionally children's reading abilities have been judged more often against fiction and poetry texts than non-fiction. Arnot et al (1998) suggested that we should acknowledge the combined verbal and physical activity of reading and acting out plays as well as the reading of non-fiction which may advantage boys more.

Often it is social norms and pressures outside the school that influence attitudes to literature and literacy in boys. However, in the past there has been concern over girls' underachievement. The problem was researched, needs established and help targeted and the situation improved. Perhaps the same procedure needs to be adopted here to see how boys' achievement in reading and writing can be improved. There is certainly a need to collect more detailed data regarding relative strengths and weaknesses of girls and boys in literacy and to monitor changes over time. This research goes some way to establishing differences in performance by gender and genre associated particularly with text types specified in the National Literacy Framework.

Methodology

The National Literacy Framework for teaching contains objectives for teaching. These are arranged into word, sentence and text level objectives. The Framework states that assessment should refer to these termly teaching objectives. CamPAS English focused on the text level strand of the Framework. The aim was to develop a photocopiable book which would include stimuli, activities, marking guidance, National Curriculum levelling for teacher information and teachers' notes. It was designed to comprise freestanding, flexible assessment units which could be incorporated into the teacher's formative assessment practice.

The CamPAS English activities were designed for children in Years 3 to 6, that is Key Stage 2 (ages 7 to 11). There are 3 units for each year, 12 units in total. Each unit comprises a stimulus and a reading activity which informs the subsequent writing activity. To establish the assessment criteria for each unit, teaching objectives from the Framework were grouped together within the units, one group from the reading comprehension section and one from the writing composition section. Thus we could maximise the assessment opportunities with the minimum amount of reading. The materials are criteria-referenced to the objectives in the Framework.

In order to sample these grouped criteria, 'prime objectives' needed to be identified. This was achieved by leading a seminar with a team of English specialists, allocating sections of the framework to groups and considering their reasons for prioritising objectives from the sections, taking into account progression throughout the key stage and the key objectives to be mastered when completing each academic year. Subsequently, a sampling grid was developed which ensured that there was a diversity of genres in the texts chosen with a balance of fiction and poetry and non-fiction texts. The sampled criteria from the Framework were mapped onto the National Curriculum Programmes of Study and the National Curriculum Level Descriptions to establish relationships between the documents in a meaningful way. Table 1.1 is an overview grid showing the coverage of the National Literacy Framework's criteria.

Stimulus texts were identified and levelled. The materials were written with each unit comprising a stimulus text, a set of short answer questions addressing the reading comprehension criteria in the text level strand of the Framework and one or two long answer questions linked to grouped criteria from the writing composition section. One fiction and one non-fiction unit were piloted to inform the design and timing for the trials.

Trial 1 took place in April 1999. 12 schools were involved in England and Wales. Within the sample were large and small, rural and urban schools with a mixture of abilities of children and representing a range of geographical areas. There were 6 units for each year group, 24 units in total. 1250 children were involved in the trial with each child completing two units. It was left to the teacher's discretion whether or not to include children in their classes with special educational needs.

YEAR 3	YEAR 4	YEAR 5	YEAR 6

A Living in St Lucia
Text: Informative
Reading:
- use headings and sub-headings
- identify main points or gist by noting key words and
  phrases, list main points
- use index and page numbers
Writing:
- make a simple record of information from texts read
- complete a simple chart
- write a simple non-chronological report from known
  information for a known audience
	D A Viking Adventure
	Text: Historical Narrative
	Reading:
	- investigate settings built from detail
	- respond to character, identify main characteristics of
	  key characters and draw on text to justify views
	- explore narrative order
	Writing:
	- plan a story, identifying the stages of its telling, introduction, build-up, climax, resolution
	- use paragraphs in story writing to organise and sequence narrative
		G Spooked!
		Text: Play script
		Reading:
		- presentation of character through dialogue and action
		- personal response
		- dramatic conventions, asides, gesture, stage
		  directions
		- tension, empathy
		Writing:
		- annotate play script for performance
		- write play script, applying conventions learned from
		  reading
			J Peter's First Battle
			Text: Classic Fiction
			Reading:
			- articulate personal response to literature
			- take account of viewpoint
			- identify why and how a text affects a reader
			Writing:
			- summarise a passage in a specified number of words
			- manipulate narrative perspective by writing in the
			  voice and style of a text

B Ma Liang and his Magic Brush
Text: Traditional Narrative
Reading:
- identify typical story theme
- identify and discuss main and recurring characters
- evaluate characters' behaviour and justify views
Writing:
- write character portraits using story text and present
  as a letter
- write a story plan for a traditional tale using a theme
  from reading
	E The Daily Press
	Text: Journalistic
	Reading:
	- identify main features of newspapers
	- examine opening sentences that set scenes, capture
	  interest
	- pick out key sentences/phrases that convey information
	Writing:
	- write newspaper style reports, including composing
	  headlines, editing stories to fit particular space
		H Come to the Games!
		Text: Recount
		Reading:
		- identify features of recounts:
		  introduction, chronological sequence, supporting
		  illustrations, degree of formality, connectives
		Writing:
		- make notes for different purposes and build on these
		  in their own writing
		- write reports for an unknown reader
			K Animals in Captivity
			Text: Discursive
			Reading:
			- recognise effective argument, sequencing, linking of
			  points
			- balanced argument, summarise different sides, clarify
			  strengths and weaknesses of different positions
			- use persuasive examples, illustrations and evidence
			- pre-empt or answer potential objections
			Writing:
			- construct effective arguments, developing a point
			  logically and effectively
			- support and illustrate points persuasively
			- anticipate possible objections
			- harness known views, interests and feelings of
			  audience
			- tailor writing to formal presentation where appropriate

C Balloon Cards
Text: Instructional
Reading:
- identify purpose of instructional texts
- how written instructions are organised
- read and follow simple instructions
Writing:
- write instructions using a range of organisational
  devices recognising the importance of correct
  sequence
	F New Life
	Text: Explanatory
	Reading:
	- scan text, locate key words and phrases, summarise,
	  mark extracts
	- identify purpose and key features of explanatory text
	- use connectives of time
	Writing:
	- present information in diagrammatic form
	- fill out brief notes into connected prose
	- write an explanation of a process, using conventions
	  identified through reading
		I Why not Visit the Park?
		Text: Persuasive Leaflet
		Reading:
		- compare writing that informs and persuades:
		  the deliberate use of bias,
		  how opinion can be disguised to seem like fact
		- evaluate text for persuasiveness, clarity
		- use of rhetorical questions
		Writing:
		- construct argument in note form to persuade others
		  of a point of view
		- draft and write individual letters; to edit and present in
		  a finished state
			L Scared of Bullies?
			Text: Poetry
			Reading:
			- discuss how linked poems relate to one another by
			  theme
			- comment critically on overall impact of a poem,
			  showing how language and themes have been
			  developed
			- compare and contrast the work of a single writer
			- look at connections and contrasts in the work of
			  different writers
			Writing
			- annotate a passage in detail in response to specific
			  questions
			- write a brief helpful review tailored for real audiences
			- compare texts in writing, drawing out: different styles
			  and preoccupations, strengths and weaknesses,
			  different values and appeal to a reader

Table 1.1 Overview Grid showing National Literacy Framework coverage

Each unit was completed by four groups of children. Three groups came from the appropriate year group for the activity and one from the year group above that for which the unit was written. For example, a Year 4 unit was completed by 3 groups of children from year 4 and one group of children from year 5. This was to enable a Rasch analysis of the data to be carried out (details later).

The scripts were returned to the Primary Assessment Unit for marking. Teams of markers were trained after this trial and later after the second trial. Marking guidance was developed and co-ordination scripts were completed. Answer booklets from each cohort were divided between markers to minimise marker effects contaminating the data and marker reliability was checked throughout, any significant differences in the distribution of marks between markers being monitored.

Child level data was collected. The schools sent details of the children's dates of birth, their teacher assessed levels for reading and writing and if they were level 4 or 5 on the special educational needs register. The special education information was used if a child's script was considered to contain insufficient answers to be included in the data, as such marks may have skewed the data overall. The teacher assessment levels were used to inform the statistical comparison of characteristic scores achieved by particular level children on a specific activity. By comparing children's achieved scores on the units with their teacher-assessed levels we could make assumptions about the characteristic performance of children at the levels for which the units were aimed.

We also gathered data in the form of teacher feedback. Each classroom teacher was sent a short questionnaire asking for their opinions. They were asked to comment on the stimulus materials, the layout of the materials, the accessibility and reading level of the stimuli and answer booklets, management and organisation and timing. Their responses were collated and taken into account when amending the units.

After data analysis had been carried out, the materials were amended for the second trial. This took place in November 1999 in 8 schools in England and Wales. From the 24 units 12 were selected for use in the second trial on the basis of information from the data analysis. 720 children were involved, each child completing two units. Again overlap groups were employed in the same way as in trial 1.

As the trial was to take place during the autumn term, the children would not have covered the teaching objectives in the Framework for that current year. Hence, children in the year group above that for which the unit was designed completed the units. For example, Year 5 children at the start of their year completed year 4 units.

Data was analysed at item, child and unit level and for the package overall to investigate issues surrounding gender and genre.

Analysis

The analysis of how the materials performed during the trials took a variety of forms. One aim was to improve and amend the questions by considering the difficulty of the questions individually, as a unit overall, as set of units across a year group and across the whole key stage. The distribution of scores and any gender differences were also considered when developing the questions. Results were used to inform the marking guidance. The statistics generated enabled us to explore issues of gender and genre. The following were considered in this process:

fvs (facility values)	d.i. (discrimination indices)
Cronbach's Alpha (internal consistency)	mean marks overall
mean mark girls	mean marks boys
mean % scores	standard deviation
t-test (for gender bias)	Rasch analysis

Table 1.2 shows the results from the second trial of the CamPAS units. The numbers in the shaded boxes beneath show the results from the first trial. For the purpose of this project we will consider the results from the second trial as it was felt that the units, and hence their corresponding results, were more reliable. The first column specifies the year group that the unit is written for. The mean scores are given as percentages for the unit overall and are split to show the results for boys and girls separately and to show the results for reading comprehension (*RC*) and writing composition (*WC*) discretely. These figures do not include the scores for children in the overlap groups. Results for the overlap groups are listed separately i.e. for children from the year group above that for which the unit was designed. This data was collected to enable Rasch analysis of the results. The *rel* gives a figure for the reliability of the unit, *d.i.* is the discrimination index (a tick indicates there were no questions with any negative discrimination values in the unit, any figures listed indicate the size of any negative discrimination and the question number that it relates to), the standard deviation (*SD*) is given as a percentage and the unit total describes the number of marks available on a unit. The text type indicates the genre of the stimulus and the focus summarises the content of the criteria from the Literacy Framework which the unit is assessing.
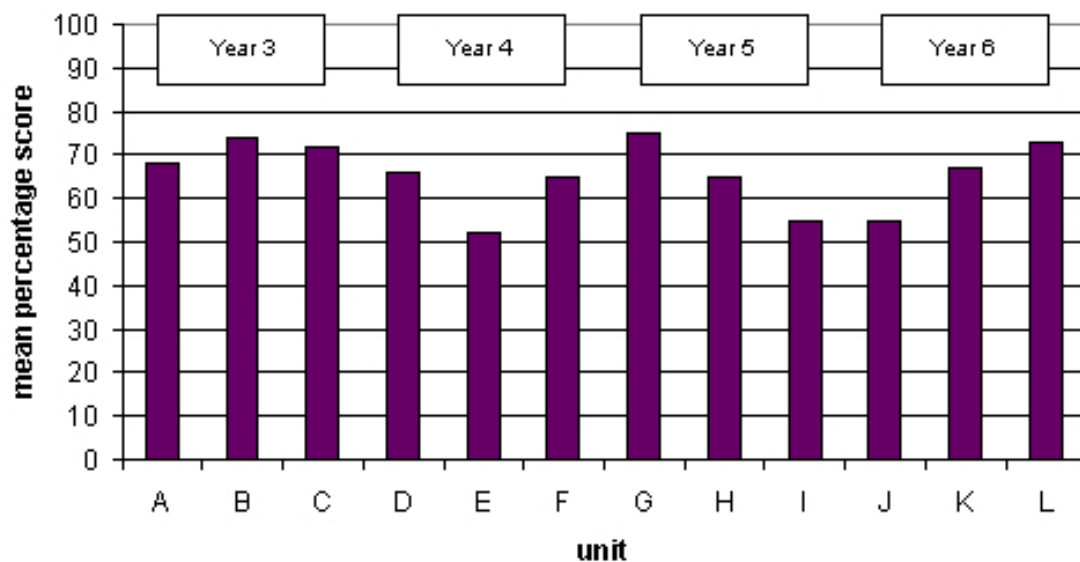

Fig.1.1 Mean Percentage Scores

Figure 1.1 shows the mean percentage scores for all the units in trial 2. In Year 3 (units A - C),

Table 1.2
Trial 2 results
Trial 1 results

yr.	Unit	text type	focus	mean %	mean % boys	mean % girls	mean % RC	mean % RC boys	mean % RC girls	mean % WC	mean % WC boys	mean % WC girls	Mean % overlap year	rel	d.i.	SD %	Unit Total
3	2 A	informative	locate and present information	68	67	69	68	69	68	67	65	71	75	.81	✔	23	19
				69	68	70	68	67	68	70	69	71	80	.83		24	24
3	3 B	traditional narrative	theme character	74	71	77	87	84	89	68	65	71	83	.78	✔	20	15
				68	67	70	84	84	85	60	57	62	77	.77		19	17
3	4 C	instructional	organisation and purpose	72	67	76	71	66	76	73	69	76	84	.76	✔	23	13
				57	54	53	67	68	66	47	45	49	62	.79		24	14
4	7 D	historical narrative	narrative order, paragraphs, sequence	66	63	71	67	63	72	66	62	70	85	.83	✔	19	26
				67	63	70	69	66	73	65	61	69	79	.86		20	26
4	8 E	journalistic	key sentences act / opinion layout, voice, formality	52	49	56	58	56	61	43	39	48	65	.75	✔	21	17
				46	45	47	53	52	53	37	34	40	79	.65		18	17
4	10 F	explanatory	scanning, summarising purpose, structure, language, presentation	65	63	68	67	64	69	64	61	67	91	.83	✔	21	22
				70	68	73	75	71	79	69	68	70	92	.83		20	21

5	13 G	play script	character presentation dramatic conventions annotation of play script	75	69	81	81	76	87	68	62	74	56	.71	Q4R -.0291	15	27
				63	57	66	67	62	70	58	51	63	67	.83		19	30
5	14 H	recount	features of recounted texts noting key points	65	60	67	70	64	74	62	59	64	74	.86	✔	22	27
				57	65	52	57	68	49	60	66	56	77	.84		22	29
5	18 I	persuasive	read and evaluate layout, language, purpose, persuasion	55	49	60	53	45	59	57	51	61	71	.73	✔	18	29
				62	62	62	59	60	58	65	64	66	66	.79		23	32
6	19 J	classic fiction / narrative	viewpoint, personal response narrative perspective voice, style	55	53	57	63	62	63	46	42	50		.77	Q4 -0.05	19	28
				56	51	63	81	76	87	39	34	46		.83		22	31
6	22 K	discursive	effective balanced arguments	67	64	70	73	72	75	62	58	67		.72	✔	17	23
				54	53	54	55	55	54	53	51	55		.74		17	25
6	23 L	poetry	theme, format, repetition, language impact, contrasts, connections reviews, values, appeal	73	69	78	84	79	89	58	54	63		.69	Q1C -0.05 Q2A -0.09 Q2B -0.07	14	30
				55	51	59	63	60	67	43	37	50		.79		19	34

the highest mean percentage scores were recorded for unit B. This had a narrative text as its stimulus and focused on theme and character. Children's unfamiliarity with the information and instructional genres of units A and C may explain the corresponding lower scores for these units. This pattern is repeated in Year 4, where unit D's text is again a narrative, here a historical story focusing on setting, character and narrative order. The two non-fiction units in this year group concentrate on journalistic and explanatory texts. This again seems to suggest that the children lack exposure to a broader range of text types.

In Year 5 (units G - I) the highest mean percentage scores were observed for the unit focusing on play scripts. The unit with a recounted text as stimulus yielded lower scores and the most demanding unit, unit I, was based on a persuasive text in the form of a leaflet. Again familiarity with the conventions of the arguably less traditional forms of text experienced in the Primary classroom could go some way to explaining these differences in outcome. Questions in unit I looked at persuasive techniques, bias, fact versus opinion and clarity of texts. The higher order skills involved in answering such questions could also contribute to it being a more demanding activity. A different picture emerges in Year 6 (units J - L). The highest mean percentage scores are found for the poetry unit, unit L. Next is the unit focusing on a discursive text. The lowest for this year group are observed for unit J with a classic fiction text as stimulus. Although this is an arguably more familiar genre, the criteria addressed in this unit include writing a summary and writing in the voice and style of the author, both of which proved challenging to the children involved.

figure 1.2 Mean Percentage Scores by Reading Comprehension and Writing Composition
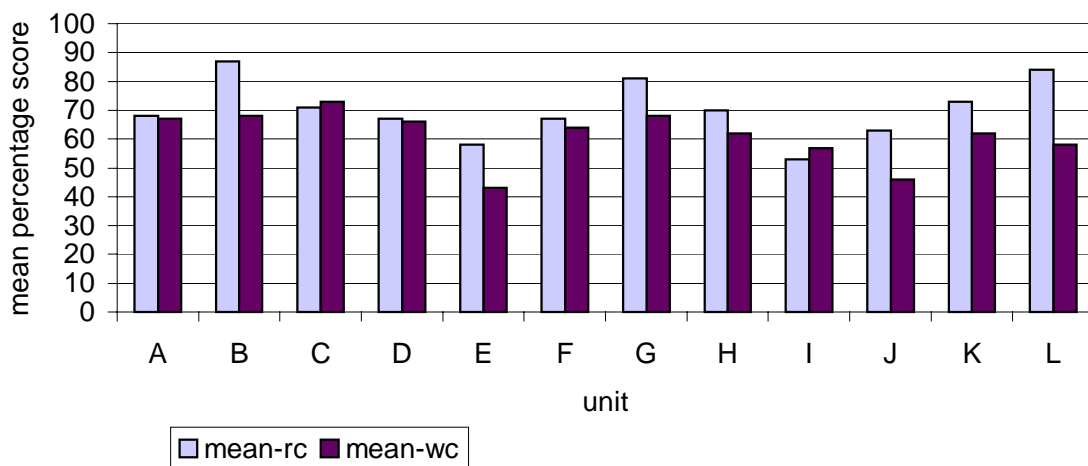

Figure 1.2 shows the mean percentage scores spilt by reading comprehension and writing composition. It shows that in 10 out of the 12 units the scores for reading are higher than for writing. The two units where the mean percentage writing scores are higher are unit C, instructional genre, and unit I, persuasive genre. In unit C the reading activity heavily informed the writing activity which involved writing a set of instructions similar to those given. The stimulus and reading comprehension questions may have acted as a form of scaffolding for modelling the subsequent writing activity. In unit I the writing activity was to write a persuasive letter to a headteacher. The familiarity of letter writing as an activity and the familiar school-based context may have facilitated the performance of children in this case. The greatest difference in mean percentage scores appears for unit L, the poetry unit. While the reading comprehension questions involved work on theme, format, language, contrasts and connections, the writing activity demanded the higher order skills of evaluation and synthesis, rather than writing poetry.

Asking them to write about a genre rather than in genre may go some way to explaining the contrast seen here.

The Rasch model is a type of item response model. As it can deal with missing information, it can be used to compare sets of data for different groups of children linked by completing a common activity or to compare sets of data for activities linked by common children having completed them. Having completed a Rasch analysis, each child is assigned a number corresponding to their 'ability' and each question or question part is assigned a number which corresponds to its 'difficulty'. These parameters are measured in logits, arbitrary units which are related to the probability of success on a question. The relative values of these measures are independent of the group of children completing the activities and the activities they are completing. It is a particularly useful model to employ here to use with activities which may be presumed to be progressing in difficulty as the Key Stage progresses or indeed of similar difficulty within a particular year group. All questions are placed on a common scale of difficulty by the analysis and hence direct comparisons can be made. We can investigate parts within a question and identify any misfitting questions or question parts, that is those for which unexpected behaviour affecting responses are observed.

Figure 1.3 shows a vertical summary of the relative difficulty of all the units. The scale on the left-hand side goes from -3 to +2 logits, reading from the bottom to the top shows from the easiest to the comparatively harder units. Here 1.4 logits is roughly equivalent to 1 National Curriculum level or 2 years' development. We can use this summary to investigate comparability across the Key Stage and consistency of difficulty within a year group. Although the overall picture of progression is evident, the analysis indicates some anomalies with the ordering.

Unit B, the narrative text appears the easiest unit, the next two easiest being the other two Year 3 units, as expected. Year 4 units D (historical narrative) and F (explanatory) appear the next most difficult, but unit E, based on conventions of a journalistic text seems to be proving to be as difficult as the Year 5 and 6 units. Both the Year 5 and the Year 6 units have similar ranges of difficulties. The poetry and play script units come out the easiest and this could again be argued to be a consequence of these genres being more usually found in the classroom. The hardest unit in this analysis, unit I, is the persuasive text, the conventions of this genre may well be proving an obstacle to the children answering well. This summary may indicate that the expectations of children, in terms of working with specific genres from the Framework, may be unrealistic and certain text types would be more appropriately introduced at different stages of their development.

We can also display these relative difficulties in tables for each year group as follows:

	Year 3	Year 4	Year 5	Year 6
most difficult	informative & instructional	journalistic	persuasive	narrative
↓		narrative	recount	discursive
least difficult	narrative	explanatory	play script	poetry

The fiction and poetry units seem to be the easiest in Years 3, 5 and 6 (aside from unit J, discussed above). In Year 4, the explanatory genre appears easier than the historical narrative. One explanation of this may be that one criteria from the Literacy Framework assessed within this activity is that of using paragraphs. However, paragraphs are not mentioned until level 5 in the National Curriculum level descriptions, which is above the level expected for Year 4 children.

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Figure 1.3
CamPAS English 2nd round
Table 6.0  All Facet Vertical Summary, showing relative difficulty of units,
measured in logits.
-----------------------------------------------------------------
         |Measure  |+unit               |genre
         |in logits|                    |
-----------------------------------------------------------------
difficult+   2     +                    +
|        |         |                    |
|        |         | unit I             |persuasive
|        |         | unit J             |classic fiction
|        |         |                    |
|        |         |                    |
|        |         |                    |
|        |         |                    |
|        |         | unit H             |report
|        |         | unit K             |discursive
|        +   1     +                    +
|        |         |                    |
|        |         | unit G             |play script
|        |         | unit E   unit L    |journalistic  poetry
|        |         |                    |
|        |         |                    |
|        |         |                    |
|        |         |                    |
|        |         |                    |
|        |         |                    |
|   ↑    *   0     *                    *
|        |         |                    |
|        |         |                    |
|        |         |                    |
|        |         |                    |
|        |         |                    |
|        |         |                    |
|        |         |                    |
|        |         | unit D             |historical narrative
|        |         |                    |
|        +   -1    + unit F             +explanatory
|        |         |                    |
|        |         |                    |
|        |         |                    |
|        |         |                    |
|        |         |                    |
|        |         |                    |
|        |         |                    |
|        |         | unit A   unit C    |informative  instructional
|        +   -2    +                    +
|        |         |                    |
|        |         | unit B             |narrative
|        |         |                    |
|        |         |                    |
|        |         |                    |
|        |         |                    |
|        |         |                    |
|easy    +   -3    +                    +
-----------------------------------------------------------------
         |Measure  | unit               |genre
-----------------------------------------------------------------
```

Having considered the relative difficulties of genre we move onto an investigation of performance related to gender. Figure 1.4 shows the mean percentage scores spilt by gender. It shows that girls out-perform boys in all units in all years. In the lower Key Stage the greatest differences are in the instructional text and the historical narrative. The smallest differences are found with the information text and the explanatory text. This reflects the assumption that boys read more of these types of non-fiction texts and this familiarity improves their ability to answer regarding these genres, hence reducing the disparity in performance. In the upper Key Stage the greatest differences are found in the play script and the poetry unit reflecting girls' ability to respond to character, language and so on. The smallest differences are observed for the recount and classic fiction units. The writing activity for the recount was in the context of sport which may have benefited the boys more than the girls and so reduced the difference in performance.

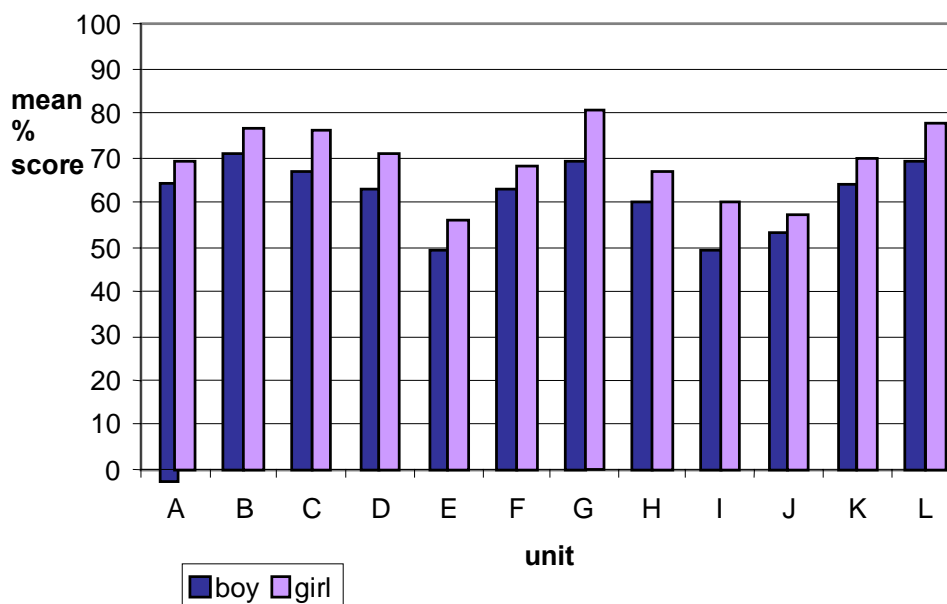**Figure 1.4 Mean Percentage Scores by Gender**

Figure 1.5 shows the mean percentage scores for reading comprehension split by gender. The graph shows that in reading girls out-perform boys in all but one of the units, namely the information text. Here the scores are close. The reading comprehension questions involved information retrieval and were short answer questions, both which may favour boys, being their preferred styles of answering. The largest observed differences overall are found in Year 5. The greatest difference in Year 6 is for the poetry unit which suggests that girls may have a greater exposure to poetry than boys.

Figure 1.6 shows the mean percentage scores for writing composition split by gender. It shows that girls outperform boys in all units. The differences seem to become slightly bigger as the Key Stage progresses. The observed differences in writing performance appear to be greater than in the reading. Smaller differences are found with the recount and explanatory texts in Years 4 and 5, suggesting boys perform comparatively better when writing in these genres.

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Figure 1.5 Mean Percentage Scores for Reading Comprehension by Gender
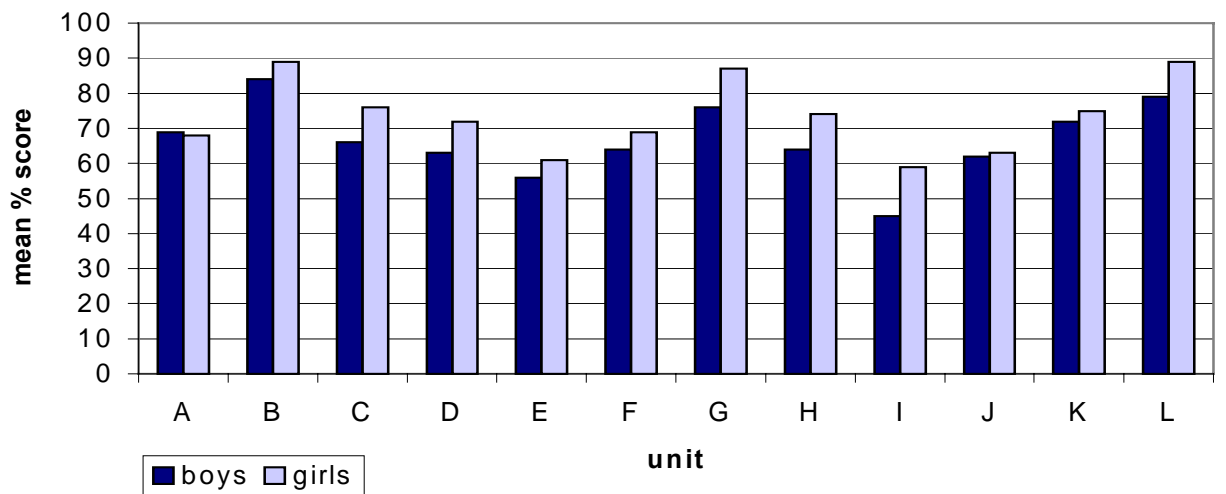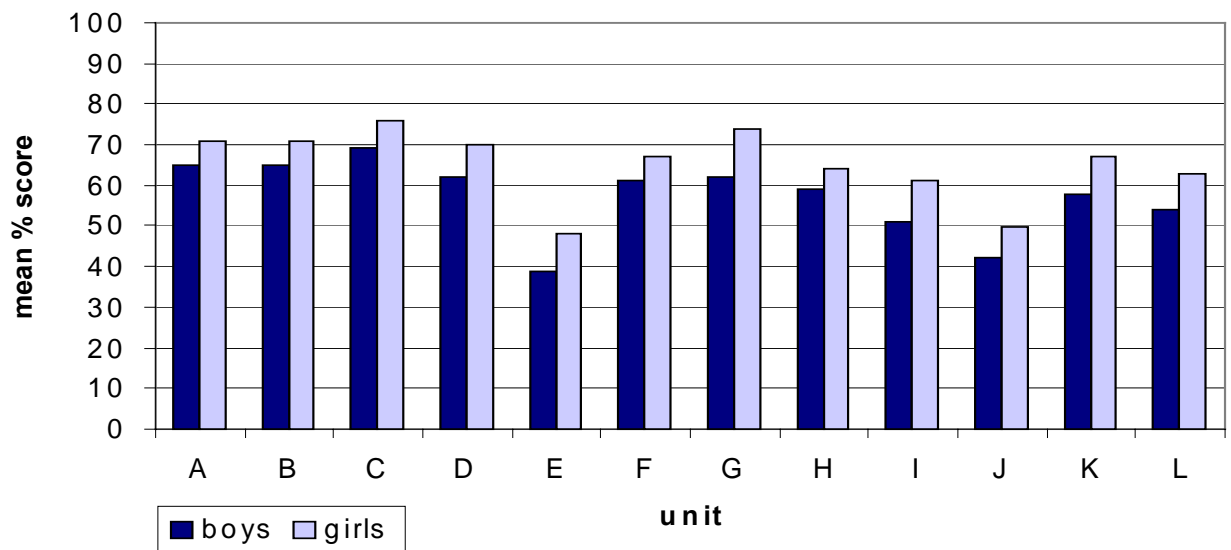
Figure 1.6 Mean Percentage Scores for Writing Composition by Gender

Rasch estimates parameters for children and for items which correspond to their abilities and their difficulties respectively. Using these parameters we can generate an expected score for each child-item encounter. The difference between the expected score and the actual score is called the residual. It is possible to analyse the residuals for different groups of people. Analysis of the residuals generated by the Rasch analysis for boys and girls showed that there was no statistically significant bias for gender.

Gender bias was also investigated using t-tests. Table 1.3 shows the results from the independent samples t-test with equal variances not assumed. The figures shown are for a 2-tailed significance.

Table 1.3

Unit	A	B	C	D	E	F	G	H	I	J	K	L
Sig. 2-tailed	.620	.130	.078	.046	.166	.127	.000	.184	.003	.243	.048	.001

Here figures smaller than 0.05 are considered statistically significant. This shows that there was gender bias on five of the units. This result is not unexpected as we can see from table 1.2 and figure 1.4 that girls out-perform boys in the units, so the observed differences in mean percentage scores is enough to explain these values.

It may be more interesting to consider the extent of the differential performance. Unit G shows the greatest gender bias which may be due to the nature of the questions favouring girls as they focused on the presentation of characters and writing in a fictional genre. Unit L seems to reflect a similar pattern, with a very low figure and questions addressing language issues of theme and impact. The stimulus here, a set of linked poems may also have favoured the girls. Unit I's low figure may be linked to the unit demanding children to evaluate the use of language and using the persuasive genre in their written answers. Unit A, the information text, yields the highest value which may be due to boys having a more similar ability as girls in accessing this type of text and being more successful at answering questions requiring locating and presenting information. This reaffirms the notion that boys' reading habits, related to using information texts to explore their hobbies, might indeed impact on their reading ability of such texts during assessment. It may also be a reflection of how boys prefer more structured writing tasks, as in this unit the writing task contained a lot of support and demanded shorter answers, including filling in a chart. It is less clear why unit J, classic fiction, has a figure of 0.243. Perhaps by Year 6 boys have had a greater exposure to fiction texts and are more familiar with tasks involving commenting on narrative perspective and personal response and writing a subsequent adventure. It may also be that the difficulty of the criteria addressed in this unit has proved very challenging to all the children so any gender trends have been skewed by the consequently lower scores.

Table 1.4 shows the patterns of statistically significant gender differences on the units overall and for reading and writing separately. It shows how the significance of gender differences is more marked in the upper key stage than in the lower key stage. This seems to show that boys do not 'catch up' as their writing and, more so, their reading ability develops.

The Rasch analysis for gender bias and the t-tests seem to have provided different pictures. However, t-tests only consider the children's mean marks on the units. These scores are considered alongside the standard deviations to calculate if there is a difference in performance between boys and girls. We know girls achieve higher levels in literacy than boys so these tests yield statistically significant differences in performance. However, the Rasch analysis looks at the child's performance on the test on each item and then compares it to their performance overall. Hence, it takes into account the differential performance of boys and girls and looks for differences in performance beyond the 'expected' difference. In this case there is no significant difference beyond that expected.

Table 1.4

	Genre	Unit	Reading	Writing
Y3	A Informative	-	-	-
	B Traditional Narrative	-	-	-
	C Instructional	-	*	-
Y4	D Historical Narrative	*	-	-
	E Journalistic	-	-	-
	F Explanatory	-	-	-
Y5	G Play Script	**	**	**
	H Recount	-	-	-
	I Persuasive	**	**	*
Y6	J Classic Fiction	-	-	-
	K Discursive	*	-	*
	L Poetry	**	**	*

-   not statistically significant
*   statistically significant at 5% level
**   statistically significant at 1% level

Discussion

The findings have shown that the picture relating to the performance of boys and girls with a variety of genres is indeed a complex one. There seem to be certain text types that are more challenging than others for boys *and* for girls and the extent of the differences in achievement *between* boys and girls differs from genre to genre. It could be argued that this indicates that more time should be spent instructing children in these various genres. It should be acknowledged that the Literacy Strategy was still in the early stages of its implementation at the time of this study, as was most children's exposure to the less familiar non-fiction text types. The results of this study support Littlefair's work (1992) which suggested that children do not implicitly pick up the rules of genre structure, but rather that they need to be taught such linguistic features. At a more detailed level the findings substantiate QCA's research (1998) showing how boys prefer impersonal texts, their stories and characters being less well developed than girls' and how girls focus on characters and relationships in their reading and writing.

Looking at some detailed patterns, considering the mean percentage scores of the individual units, the more challenging genres seem to be informative, journalistic, recount, persuasive and explanatory. The persuasive genre proved to be the most problematic and, as such, should demand the most attention as far as instruction goes. However, the genre per se is not the sole influence on children's performance in these activities. Other influences seem to be question

type, the difficulty of the criterion the question is addressing, the level of support given by the question and the context the question is set in.

Considering the performance of girls compared to boys, boys seemed to fall behind most when the units involved narrative texts, plays and poetry, which may be as expected if reflecting on boys' reading habits. More unexpected was the contrast in scores for the instructional text. Boys may need greater teaching input to understand and use the conventions used in this genre in order to reproduce them. The observed difference was less for information texts, explanatory texts and recounts. As previously stated, this may be due to boys greater exposure to informative and explanatory texts and to the context of sport adopted in the unit concerning recounts.

Looking at the differences in performance on reading comprehension and writing composition separately, we can make initial judgements as to where support may need to be targeted. In reading, boys fell behind most with poetry which could well be lack of exposure or motivation for reading such texts voluntarily. Conversely, the smallest difference was found with the information text which could also be accounted for by familiarity. In writing composition boys fell behind most in the unit connected with the play script, where the activity involved writing a script employing suitable dramatic conventions. The smallest contrast seen was with the recount and explanatory texts, as above. The bias analysis pointed towards persuasive writing favouring girls most, followed by poetry. This again suggests these should be areas where teachers target boys specifically.

Conclusion

The genre of a text affects everything from the large-scale layout of the text on the page to the small-scale vocabulary used. Teachers need to know about the linguistics of texts in order to teach their formats, especially when dealing with non-fiction genres. Especially in writing, children need to be taught accepted textual formats in order to make the texts they write achieve their purposes. Non-fiction texts demand a more abstract understanding and non-linear approach in both reading and writing which in turn demands a systematic teaching approach. Reid and Bentley (1996) suggested that we should assess literacy using a wide range of genres. Littlefair (1992) suggested that this may advantage boys. The implementation of the National Literacy Strategy should promote these concepts. Clearly, there is concern surrounding the under achievement of boys and their attitudes to literacy. This is recognised and a new national project is due to start to encourage men to take a more active part in teaching their children to read.

This study set out to explore the CamPAS English data in order to investigate how girls' and boys' performances vary according to genre. In this case it was the genre associated with specific reading comprehension and writing composition activities. The results from the CamPAS trials have verified existing theories regarding gender and genre in the Primary classroom. They confirm that girls do better than boys in literacy in Key Stage 2. They reinforce studies (for example, OFSTED, 1998) showing that children achieve better results in reading activities than in writing, an area of growing concern in Primary education. They have also indicated that, although the National Literacy Framework necessitates that children are exposed to a wider range of text types than may have traditionally featured in the Primary classroom, children are still performing better in assessments involving fiction and poetry, including play scripts. However, the study has shown that this is not the whole picture. Within non-fiction texts there are more and less challenging genres and the genre per se is far from the only influence on performance. Achievements vary further when considering performance in reading compared to writing. This indicates that teachers may have to modify their teaching focuses to accommodate such differences within a genre.

More research is needed in this area to establish a clearer picture of the problems posed by certain genres and how these challenges differ for girls and boys. Genre theory has important implications for teaching literacy, as an awareness of how texts are shaped and organised is

needed in order for a text to succeed in its purpose. There is a need to reverse the trend of prominence of the narrative genre so that assessments can provide a more diagnostic model for teachers to assess children's work against constructively. In turn this would enable children to see how to make improvements in the effectiveness of their texts and teachers to plan more efficiently for progression.

References

ARNOLD, H. (1997). *Minibook Series No. 10: Reading to Find Out.* Hertfordshire: United Kingdom Reading Association.

ARNOT, M., GRAY, J., JAMES, M. (1998). *Recent Research on Gender and Educational Performance. OFSTED Reviews on Research.* London: The Stationery Office.

BARRS, M. and PIDGEON, S. (1993). *Reading the Difference. Gender and Reading in the Primary School.* U.K.: CLPE

BEECH, J. and SINGLETON, C. (eds.) (1997) *The Psychological Assessment of Reading.* London and New York: Routledge.

BIBER, D. (1988). *Variation across Speech and Writing.* Great Britain: Cambridge University Press.

BROOKS, G., PUGH, A. and SCHAGEN, I. (1996). *Reading Performance at Nine.* Slough, Berkshire: National Foundation for Educational Research and The Open University.

COPE, B. & KALANTIS, M. (1993). *The Powers of Literacy: A Genre Approach to Teaching Writing.* Hong Kong: Falmer Press

DEPARTMENT FOR EDUCATION AND EMPLOYMENT LITERACY TASK FORCE. (1997). *The Implementation of the National Literacy Strategy: A Summary for Primary Schools.* Department for Education and Employment.

DEPARTMENT FOR EDUCATION AND EMPLOYMENT LITERACY TASK FORCE. (1997). *The Implementation of the National Literacy Strategy.* Department for Education and Employment

DEREWIANKA, B. (1991, revised impression). *Exploring how texts work.* Australia: Primary Teaching Association.

DEPARTMENT OF EDUCATION AND SCIENCE. (1988). Report of the Committee of Inquiry into the Teaching of English Language under the Chairmanship of Sir John Kingman, FRS. London: Her Majesty's Stationery Office.

EastLINC TEAM. (1992). *Language in the National Curriculum Project: A focus on primary practice.* Nottingham: Department of English Studies, University of Nottingham.

ELLEY, W. B. (1992). *How in the World do Students Read?.* Hamburg: International Association for the Evaluation of Educational Achievement.

GORMAN, T. P., WHITE, J., ORCHARD L. and TATE A. (1983). *Language Performance in Schools: Secondary Survey Report No. 2.* London: HMSO

HOLT, G., BOYD, S., DICKINSON, B., LOOSE, J. and O'DONNELL, S. (1999). *Education in England, Wales and Northern Ireland: A Guide to the System.*
Slough, Berkshire: National Foundation for Educational Research.

KRESS, G. (1982). *Learning to Write.* Great Britain: Routledge and Kegan Paul

LITTLEFAIR, A. (1991). *Reading all types of writing.* Milton Keynes: Open University Press.

LITTLEFAIR, A. (1992). *Genres in the Classroom.* England: UKRA

OFFICE FOR STANDARDS IN EDUCATION. (1995). *A Report from the Office of Her Majesty's Chief Inspector of Schools. English: A review of inspection findings 1993/4.* London: Her Majesty's Stationery Office.

OFFICE FOR STANDARDS IN EDUCATION. (1998). *Recent research on gender and educational performance.* London: Her Majesty's Stationery Office.

OFFICE FOR STANDARDS IN EDUCATION. (1999). *A Report from the Office of Her Majesty's Chief Inspector of Schools. The National Literacy Strategy: an evaluation of the first year of the National Literacy Strategy.* London: Her Majesty's Stationery Office.

OSMONT P. and DAVIS J. (1987). *Stop, Look and Listen: an account of girls' and boys' achievement in reading and mathematics in the Primary School.* U.K.: ILEA.

QUALIFICATIONS AND CURRICULUM AUTHORITY. (1998). *Can do better: raising boys' achievements in English.* London: Qualifications and Curriculum Authority.

QUALIFICATIONS AND CURRICULUM AUTHORITY. (2000). *Standards at key stage 2. English, mathematics and science. Report on the 1999 national curriculum assessments for 11-year-olds.* London: Qualifications and Curriculum Authority.

REID, D. and BENTLEY, D. (eds.) (1996). *Reading On! Developing reading at key stage 2.* Leamington Spa, Warwickshire: Scholastic Ltd.

STOBART, G. and GIPPS, C. (1997, 3rd Edition). *Assessment: A teacher's guide to the issues.* London: Hodder & Stoughton.

SUKHNANDAN, L. (1999). *An investigation into gender differences in achievement. Phase 1: a review of recent research and LEA information on provision.* Slough, Berkshire: National Foundation for Educational Research.

SUKHNANDAN, L., LEE, B. and KELLEHER, S. (2000). *An investigation into gender differences in achievement. Phase 2: school and classroom strategies.* Slough, Berkshire: National Foundation for Educational Research.

WHITE, J. and KARAVIS, S. with KISPLA, A. and CHRISTOPHERS, U. (1994). *The reading repertoire at Key Stage 2: a selective list of books.* Slough: National Foundation for Educational Research.

WRAY, D. (ed.) (1992). *Reading Beyond the Story.* Widnes, Cheshire: United Kingdom Reading Association.

WRAY, D. and LEWIS, M. (1997). *Extending Literacy: children reading and writing non-fiction.* London and New York: Routledge.