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ABSTRACT

This booklet is the teachers manual for "Spell-Write," a text to aid learners in writing, spelling, and word study, and is intended to function effectively in a variety of classroom spelling and word study programs. The booklet has four main sections. An introduction discusses briefly the alphabetical spelling lists, the background to the development of "Spell-Write," and its structure. The next section, "The Concept of Spelling," examines what spelling is, spelling and writing, how predictable English spelling is, the role of meaning, generalizations in spelling, the development of spelling skills, word use in children's writing, spelling errors in children's writing, and published spelling lists. The third section, "Classroom Spelling Programmes," discusses how spelling programs can be organized, personal spelling lists, word study and vocabulary extension, and studying and mastering the core vocabulary of written English. The fourth section, "Evaluating Progress in Spelling," deals with evaluation and measurement, measuring spelling as an aspect of writing, measuring spelling in relation to peers, measuring spelling of individual words identified for study, and measuring spelling weaknesses before starting remedial instruction. Eighteen references are attached, and appendixes contain the New Zealand Council for Educational Research (NZCER) Survey of Writing, a list of eight speeling tests, a list of nine useful books, and acknowledgements. (SR)

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Teachers Manual
for
Spell-Write

An Aid to Writing, Spelling and Word Study

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Contents

1 Introduction

The *Alphabetical Spelling Lists*

The NZCER *Alphabetical Spelling Lists*,[1] and accompanying manual *Learning to Spell*,[2] were prepared by the late Dr G.L. Arvidson and published in 1960 by the New Zealand Council for Educational Research. This followed a decision of the 1957 Annual Meeting of the New Zealand Educational Institute, asking NZCER to consider the desirability of preparing a spelling list for New Zealand schools. The lists were based on a New Zealand study,[3] unpublished word counts of children's writing, professional judgement of a wide range of educators, as well as research carried out overseas. The events leading up to the original publication are well documented by Parkyn's Foreword to *Learning to Spell*.

Background to the Development of *Spell-Write*

Since the publication of the *Alphabetical Spelling Lists* minor changes only have been introduced in response to New Zealand's change to decimal currency, so it has become increasingly apparent that it was time for their format and contents to be overhauled. Accordingly, A.C. Croft undertook a survey of the spelling practices of a representative sample of 108 New Zealand primary schools,[4] one of the major findings being that although 55 percent of teachers were using the basic principles as outlined in *Learning to Spell*, many additional practices had been introduced. It appeared as though the major uses being made of the lists could be strengthened by introducing changes to their structure. Moreover, when the various approaches to the teaching of spelling were being considered, the outstanding feature was the diversity of procedures being used, some of which were not well suited to the organization of the lists.[5] It had also been found that, rather than basing their teaching on procedures involving the use of 'levels', many teachers were using the 'levels' concept for assessing progress in spelling.[6] In other words, spelling 'levels' had become an approach to assessment, rather than an aid to teaching.

Croft[7] has commented on other background studies notably those of C.J. Nicholson,[8] and P.S. Freyberg.[9] One of Nicholson's major findings was that there had been a small decline in spelling accuracy over the period 1952–70. However, there was a difference in the number of words used, as the 1970 sample had written more than the corresponding 1952 group. When the error rate was corrected for the different number of words written, the difference was found to be a mere 0.06 percent, that is, six more spelling errors per 10,000 written words.

In his study, P.S. Freyberg found that the bottom 50 percent of pupils achieved less well under the approach to spelling described in *Learning to Spell*, and he suggested that the less able speller may benefit from a more structured word-study programme. He also pointed out that some high-frequency words, such as 'their', 'where', 'through', 'heard' are difficult to spell and use, whereas some low-frequency words, such as 'rug', 'tar', 'net', are much less difficult. The difficult high-frequency words may impede progress through the

levels to these easier words, with the result that some less able spellers are denied the chance of mastering these easier words until later.

Structure of *Spell-Write*

The over-riding principle kept in mind in determining the structure of *Spell-Write* was *flexibility*. The aim was to product a text that could function effectively in a variety of classroom spelling and word study programmes without being tied to any particular one. *Spell-Write* has five main sections.

The 'Looking Up' or Alphabetical Section (3,200 words)

Children should consult this section of the list first when they have doubts about how a word should be spelt. Recent studies of children's writing, which have ensured that the list contains the words children are most likely to require when writing, justify this particular use of the list. The pages in this section have guide words, as an aid to finding the word being looked for.

When children have learnt to use this section efficiently, they will have taken a major step towards developing independence in spelling, as they now have a strategy to apply when they are not sure how to spell a word. In addition, mastery of the techniques of consulting an alphabetically arranged spelling list will provide children with the basic skills for efficient use of the dictionary – an objective that will be foremost in the minds of all teachers.

Place Names and Special Names Section

Coming immediately after the Alphabetical Section is a page headed Place Names and Special Names. This page has been left blank, so that schools can build up and record core lists of place names and other special names of particular relevance to their pupils' writing. The diversity of the place names that children are likely to use in their writing makes it impossible to publish a single list that will suit everybody. When children reach the stage in their writing where they begin to outgrow the lists compiled by each school, they can be introduced to more comprehensive sources of information, like the atlas or gazetteer.

If individual schools decide to prepare a core list of place names and other special names, such as Maori words, for inclusion in each child's book, it is likely to be one that will apply equally to all pupils. The development of this common list could be undertaken as a cooperative venture between pupils and teachers. In order to maintain uniform standards of presentation, and to ensure that error-free lists of common words are entered, it is recommended that typed lists be prepared and fixed into page 24 of *Spell-Write*.

The Essential Words For Spelling and Writing Section (230 words)

In this manual, this section is referred to as the Basic Core Vocabulary. This is a separate section listing the high-frequency core words used most often in primary children's school

writing, and shown by a number of major studies to be prominent in most forms of written and spoken English. These words have been arranged into 4 lists, on the basis of information available on their frequency and usefulness. Although it is preferable to learn to use and spell these words within the context of writing, for some children the time may come when specific study of these words should pay dividends. Teachers who wish to undertake special study of high-frequency words will find these lists invaluable for either teaching or testing purposes.

All words in the Basic Core Vocabulary are contained in the Alphabetical Section.

The More Words for Spelling and Writing Section (580 words)

In this manual the fourth major section of *Spell-Write* is referred to as the Extended Core Vocabulary. This section provides a basic set of words that could form the nucleus of thematic word-study programmes, or provide a list for teachers who wish to organize a spelling programme around a group of words that children often use in their writing. The words in these lists, together with the Basic Core Vocabulary, are taken from the most common 1,000 words in the writing of a representative sample of New Zealand primary children.

The thematic nature of the 52 groups of words enable a variety of classroom activities to be based on this section of the book. For example, each complete group of words, or sets of words within each group, can be used as a basis for vocabulary extension, word-building exercises, or for aiding discussion of topics that pupils may write about. In addition, the words may serve as a handy reference for writing, as well as a means of introducing children to a simple thesaurus. This is a core list of words that children have been shown to use regularly, and there is scope to extend the number of words within each group, in accordance with the characteristics of each class.

All words in the Extended Core Vocabulary are also contained in the Alphabetical Section.

Commonly Misspelt Words Section (72 words)

This section consists of words that are misspelt and/or misused in New Zealand children's writing. Each word has been included here because of its frequency of misspelling, not because of its frequency of use. Some words in the Essential Words for Spelling and Writing Section are misspelt as often as words in the Commonly Misspelt Words Section, but their greater frequency of use has led them to be placed in the former section.

As the Commonly Misspelt Words Section is based on frequency of misspelling or misuse, it differs from the usual 'spelling demons', which are usually chosen because of potential 'hard spots' rather than because significant numbers of children misspell them in their writing. This section is arranged as an alphabetical list. Teachers who wish to undertake special study of 'difficult' words which are also written fairly regularly, will find this a useful starting point. These words also are all in the Alphabetical Section.

The Appendices include an account of the development of *Spell-Write* and further information about each section of the book. A brief description of the research into New Zealand children's writing, basic to the format and contents of *Spell-Write*, is also included.

II The Concept of Spelling

What is Spelling?

Spelling is an aspect of written language, so the teaching and learning of spelling must take place as far as possible within the context of writing. The emphasis should be placed on developing skills related to the uses, meanings and structures of words, rather than on developing skills of reproducing letters in a conventional sequence – a more restrictive but still popular view of spelling.

The rationale and structure of *Spell-Write* are built around the following eight principles:

(1) Spelling is a skill of writing. We learn to spell in order to communicate through writing.

(2) During the early stages of learning to write in particular, developing knowledge of the meanings and uses of words must take precedence over skills of recalling conventional spelling.

(3) Skills of spelling and word-use are best learnt initially, and then applied and developed later, in the context of learning to write.

(4) Individual spelling programmes are needed if the diverse requirements of young writers are to be met within classrooms.

(5) There is a core writing vocabulary that must be mastered by all children, if they are to become effective writers. If this vocabulary is not mastered as part of the process of learning to write, direct teaching may be necessary.

(6) Spelling and related word-use skills will not be picked up incidentally by all children. Most children will benefit from a properly conceived and well-structured programme of word study and spelling.

(7) Skills related to using references, proof-reading and checking writing, should be developed from the earliest stages of learning to write.

(8) The evaluation of growth in spelling ability must begin with written language, and utilize test-based information as appropriate.

Spelling and Writing

The only possible justification for learning to spell is that accurate spelling is necessary for effective writing. If there is no need to communicate by writing, there is no need to learn to spell.

Granted that spelling is a skill best acquired within the context of learning to write, there is still a place for learning selected words, provided that all words to be studied are necessary for each individual's writing; that the necessity to write these words exists now, or will exist with reasonable certainty in the immediate future; and that these words spring from some aspect of a particular writing programme.

How Predictable is English Spelling?

Before a case can be made for the benefits of teaching spelling, it must be shown that English is sufficiently predictable to allow a reasonable measure of generalization. In other words, from knowledge of spelling of individual words, or classes of words, it should be possible to work out the spelling of other words. Evidence of the rule-governed nature of English spelling has been provided by the research of P. Hanna, and others.[9] After analyzing 17,000 common words they concluded that most consonants have single spellings at least 80 percent of the time, and that while the spelling of vowels was not as consistent, their spelling could be predicted with reasonable certainty when factors such as stress and position within words were considered.

Although these findings were important, they had little direct relevance to the process of spelling. Consequently, Hanna and his colleagues undertook additional research, programming a computer to spell the same 17,000 words by using the information gained from the first part of the study. It is important to note that the rules used in this phase consisted only of phonological information and not contextual information, that is so important in determining English spelling. The major finding was that 49.8 percent of words (8,483 words) were spelt correctly when the rules established in the first part of the study were applied. However, this investigation should not be interpreted to mean that children should learn a host of spelling rules in order to improve their spelling. It simply demonstrates that English spelling is in part rule-governed, and although the majority of words must be learnt by memorization at least initially, there is sufficient structure in English to allow for some generalized learning.

The Role of Meaning

Traditionally, word length and regularity of phoneme-grapheme correspondence have been regarded as important influences on spelling difficulty. Other factors being equal, longer words are more difficult to spell than shorter words, and irregular words are more difficult to spell than regular words. Recently, the role of meaning has come under scrutiny. For instance, J.N. Mangieri and S.R. Baldwin[11] studied the influence of word meaning on the ability to spell. Their results showed that even when the effects of word length, word frequency and phoneme-grapheme regularity were controlled, there was still a significant relationship between the ability to spell words and understand their meaning. This suggests that efforts made within classrooms to have children understand and use words should have beneficial effects on their spelling.

Generalizations in Spelling

One major reason for stressing the importance of spelling as a constituent of writing is the principle of generalization. Obviously, the issue of generalization is vitally important for spelling, as it is essential that knowledge of spelling must transfer from one setting to another. To take a simple example: if the word 'keep' is studied and learnt, it would be hoped that the double 'ee' and the associated sound would be generalized to the spelling, writing and reading of words such as 'sleep', 'creep', and 'peep'. However, there is sound

evidence to suggest that many children will not automatically transfer learning from the formal spelling lesson to their writing. Provisions for children to learn possible generalization, and apply this knowledge, must therefore be purposefully planned.

Research does not provide clear evidence that in all cases generalization in spelling is improved when spelling is taught as an integrated language skill, rather than a series of words to be learnt and tested. However, the indications are that spelling generalizations are enhanced when spelling is regarded as a skill of writing, and classroom programmes are structured accordingly.

There is also evidence to suggest that children, particularly up to about nine years, may learn to spell a word in one format, but then have difficulty with spelling when the format changes. For example, 'wheel' may be spelt correctly by itself, but, when presented in the compound 'wheelbarrow', it may be spelt incorrectly. Conversely, compound words spelt correctly in their entirety will not necessarily be correct when broken down to their constituent parts.

The Development of Spelling Skills

It is widely accepted that language skills, particularly reading and writing, develop slowly. In the case of spelling, however, there is an unrealistic expectation regarding the accuracy with which children, especially in the first five years of school life, should spell. It is accepted that the spoken vocabulary of young school-age children will outstrip their reading vocabulary, but it is not so readily accepted that their ability to express ideas in writing will also outstrip their efforts to record them in words of conventional spelling. It takes time and practice to achieve the same success in spelling words, as in using them to express ideas.

There is now sound research evidence to show that what appears to be the bizarre spelling of children, who are at the beginning stages of learning to write, is in fact more logical and systematic than it looks.[12,13,14] This early spelling represents a very hazy understanding of phoneme-grapheme relationships, but the idea that certain symbols written down represent a number of sound patterns is beginning to develop. The studies go on to suggest that, as understanding of sound-symbol correspondence develops, greater understanding of generalizations appear as well.

One important general conclusion from studies of writing and spelling of young children is that rote learning of spelling in isolation has little beneficial effect on accuracy of young children's spelling during writing. When spelling patterns are learnt as part of the process of writing to communicate, the initial learning may be slow, but the end result appears to be better spelling during writing.

Word Use in Children's Writing

Among the major findings of the NZCER study of children's writing basic to the development of *Spell-Write* was that 25 words and their repetitions accounted for 40 percent of the 198,000 words written, 75 words accounted for 55 percent, 100 words accounted for 60 percent, and that 75 percent of all words written consisted of 300 individual words and their repetitions. On the surface, it appears that this small number of

words accounted for the majority of all words written, but the important corollary is that although 75 percent of all words written can be accounted for by 300 words, the total dictionary of words used was over 9,000. In other words, the 25 percent of words not accounted for by the most frequent 300 words are made up of close to 9,000 words. The main implication is that although we can identify a relatively small 'common core' of words that will be used by most children for most writing, the remaining proportion of words that a child may need to write will be chosen from a much larger range of possibilities.

In effect, every child has a unique writing vocabulary. On the one hand, we have a relatively small common core of words that are used often. These can be adequately catered for in the spelling and word study segments of a sound classroom language programme. On the other hand, we have the diverse requirements of individuals writing about a potentially infinite set of topics. Catering for the development of this aspect of written vocabulary, and ensuring that accuracy of word-use and spelling keep pace with it, is the major challenge of every classroom spelling programme.

Spelling Errors in Children's Writing

Some findings related to the incidence of spelling errors in the NZCER study of children's writing are also worth considering at this point. In the total of 198,000 words, some 8,000 spelling errors occurred. Of the 9,000 individual words used, some 2,000 were misspelt, but of this total 52 percent were wrong once only. The proportion of frequent spelling errors is not nearly as dramatic as the proportion of frequently used words. The 10 most frequently used words and their repetitions occurred 54,972 times, equalling about 25 percent of all words written. The 10 most frequently misspelt words occurred 890 times and, with their repetitions, accounted for just 11 percent of all mistakes, but, to account for 25 percent of all spelling errors, we have to include a total of 45 mistakes. Clearly, the relative frequencies and proportions of misspelt words and text words differ considerably.

It is more difficult to identify common errors from samples of children's writing, than it is to identify commonly used words. Indeed, a well-organized language programme will ensure that all children have the means at their disposal of reducing errors *before* the misspelt word is recorded. The message with regard to errors in children's writing is clear. The list of typical errors for groups of children is relatively small. On a class or group basis, there is strong support for ensuring that the common core of written words can be spelt conventionally, as this will ensure that these words, which constitute the bulk of writing, can be used correctly and spelt conventionally. However, the majority of spelling errors are individual, and reflect the diversity of word use found beyond the common core of written words. The only practicable way of catering for this type of error is to isolate the personal spelling errors of each individual, and ensure that meaning and use of the word is mastered, and the sequence of letters is learnt and remembered for future use. Such a system cannot function in isolation from each individual's written language.

Published Spelling Lists

No published list can constitute an adequate spelling programme for all pupils. A well-researched and carefully compiled published list will be a major resource within a

classroom, but it cannot contain all words every pupil may need to use and learn. Although computer-based word lists and silicone chip technology are beginning to revolutionize the concept of checking spelling against a correct source, no published list of the traditional type could ever be a manageable source of all words every child will need in his or her writing. Published texts such as *Spell-Write* can cater for the most often used 'common core' of written words, *but supplementary procedures and additional sources are needed if the remainder of each child's written vocabulary is to be developed effectively.*

III Classroom Spelling Programmes

How Can Spelling Programmes Be Organized?

When the question of varieties of spelling programmes is considered, there are two possible extremes. On the one hand, there are programmes stressing conventional spelling, with emphasis on recitation of lists, daily or weekly tests, and procedures aimed at teaching the conventional order of letters within words. On the other hand, there are programmes stressing the use of words, and attempting to broaden each child's spoken and written vocabulary, to the apparent exclusion of what is usually regarded as spelling. In reality, such polarization is probably rare, as distinctions between programmes stressing uses of words and programmes promoting spelling of words are probably matters of emphasis.

Conceivably, a programme incorporating a variety of word study activities designed to enhance knowledge of the meanings and uses of words, may also incorporate a number of activities to assist with the spelling of those words. It is also probable that a programme aimed primarily at s-p-e-l-l-i-n-g may incorporate activities that should promote vocabulary skills. The important distinction is that activities which support spelling are subsidiary to activities which support the use of the word; the aim of the programme is to ensure that words to be used are correctly spelt, and not that correctly spelt words are used. *Spell-Write* is likely to be of most use in classrooms that place spelling and word study activities in this first category.

The major principles to be kept firmly in mind when planning a classroom spelling programme incorporating *Spell-Write* are as follows:

- Spelling is a writing skill.
- Spelling is best learnt as a component of writing, and not as a result of studying isolated lists of words.
- Not all children will 'pick up' spelling as a result of reading and writing. For most children, a formal study of the structure and meaning of words is an essential part of the classroom writing programme.

- Words that are incorporated in a word study programme must emerge from other aspects of the classroom programme, for example, written language, social studies, science, mathematics, or else they must be words that children are likely to write in the near future.
- There is a relatively small core or high-frequency or 'heavy-duty' words that must be used properly and spelt conventionally, if skills of written expression are to develop.
- Beyond this small common core of words, there is a rich and diverse written language unique to each individual.
- There is markedly less uniformity and agreement to be found in the spelling errors of a group, than in the frequency of word use.

These major principles can be catered for by three distinct but related facets of the word study and spelling segment of the classroom language programme. These are:

(1) Personal Spelling Lists.

(2) Word study, vocabulary extension and related activities.

(3) Studying and mastering the core vocabulary of writing.

1. *Personal Spelling Lists*

The *Personal Spelling List* is one way of catering for the wide diversity of writing and the individual nature of spelling mistakes found in most classrooms. If we believe that the words each individual should learn to use correctly and spell conventionally are those that have been shown to be troublesome, we must conclude that success can be achieved only if at least part of the spelling and word study programme operates on an *individual basis.* The importance of the individual approach is further strengthened when it is considered that each child has a *unique written vocabulary, and hence a unique set of possible misspellings.*

If spelling errors from each child's writing are recorded, compiled, learnt and tested on an individual basis, the outcome should be that spelling misconceptions are gradually refined, and time is not wasted learning and studying words that are either known, or not used in writing. The vital point is that words to be learnt originate in each child's writing, and that these words are sufficiently general in their use to have a reasonable likelihood of being used again.

The question of which mistakes should be included in the *Personal Spelling List* is important. A previous approach[2] was to assess each child's 'spelling level', and have all words included in a *Personal Spelling List*, if they occurred in children's writing and were of a frequency that was equal to, or higher than, the assessed spelling level. As a procedure for according some mistakes a higher priority than others, this device had merit. However, it assumed that the frequency of use found for an individual word was constant for all children. This is unlikely, given the individual nature of each child's written vocabulary. The best basis for including a word in a *Personal Spelling List* is probably that the child has

demonstrated a lack of familiarity with the word during writing, and that sometime in the near future the word is likely to be written down again.

Teachers will have to exercise some judgement in determining words to be entered in *Personal Spelling Lists*. There may be little point including words that are likely to be seldom used, or have complex spelling. It is less certain whether a criterion of suitability or frequency is more desirable, but the former is more valid for individuals. In terms of judging the suitability of words to be included, the Alphabetical Section of *Spell-Write* will provide a helpful reference. Any word in this list that is misspelt or looked up, should be considered for inclusion in a learning list. Teachers should use their own judgement for words outside this list of commonly used 3,200 words. At all times, the criterion should be the relevance of the particular word to the individual child's written language requirements.

It would be wrong to assume that once an error has been recorded in a *Personal Spelling List* and learnt to the degree where its spelling can be recalled, it can be regarded as requiring no further revision. Unless the particular word is in regular use, it will be forgotten, so there is a need to have each child's personal list organized in a way that allows periodic testing of meaning and spelling to be undertaken.

The responsibility for ensuring that as many as 35 children compile and keep a *Personal Spelling List* up to date is immense, but the difficulty can be reduced by putting into operation a set of classroom procedures involving each child in what is, essentially, an egocentric activity.

If the *Personal Spelling List* is organized on a weekly basis, children can record all words that the teacher has marked as incorrect in their written work, and also all words that they have 'looked up' from *Spell-Write*, or some other suitable source. Teachers who wish to control the actual words entered in the learning list may mark each word to be entered in some clearly identifiable fashion. An arbitrary maximum number of words to be entered per week cannot be given, as this decision will depend very much on each child's age and accomplishments, and the scope and extent of classroom writing programmes. As a general guide, however, it would seem as though the optimum number of words to be included in each child's *Personal Spelling List* would be somewhere between 5 and 15 per week. Given that spelling skills develop gradually, it is preferable to adopt a conservative approach regarding number of words to be included, and subsequently learnt, revised and tested.

If the criterion for an entry in the *Personal Spelling List* is that the word has been written as an error, or its spelling checked in some appropriate source, how is one to regard children who have no need to check spelling, or do not make errors? Provided that these children show evidence of steady development of writing skills, there is no cause for concern, if entries in their personal lists seem to be fewer than might be expected. However, it is a different matter if the lack of entries in the *Personal Spelling List* is directly attributable to minimal output or poor quality of writing, the use of restricted and easy-to-spell words, or lack of development in style of self-expression. There is clearly an urgent need to reappraise the suitability of the language programme for this child. In cases such as this, the fault lies in the quality and quantity of the child's writing, not with the classroom spelling and word study programme. If a lack of entries is accompanied by little growth, the matter can be best rectified by modifying the language programme, rather than by abandoning the personal list.

2. *Word Study and Vocabulary Extension*

The *Personal Spelling List* provides the major means of catering for the spelling errors and spelling uncertainties of individual children. Since it comes into play only after an error or uncertainty has been identified, the *Personal Spelling List* is primarily remedial in nature. Nevertheless, a programme of word study and vocabulary extension can be both educative and preventative, and has a vital role to play in spelling and vocabulary development. The thematically arranged Extended Core Vocabulary on pages 27–31 of *Spell-Write* is one source of words for study.

A word study and vocabulary extension programme should be:

- A systematic attempt to develop skills of word use.
- Based on a demonstrated need to use the words chosen for study.
- Linked to the science, social studies, language, craft activities, or mathematics currently being taught.
- Primarily a study of the uses, meanings, and structure of words.
- Incorporating activities that demonstrate the spelling patterns of English, and illustrate the exceptions to these patterns.
- Utilizing a variety of procedures for learning to spell a word.

As with all other 'word list' type spelling programmes, there is the danger that an attempt to produce a common list will result in a selection of words too difficult for some pupils, and too easy for others. It is possible to minimize these effects by a careful choice of words. However, if this fails, an alternative may be to group children for this work.

How, then, might a programme of word study and vocabulary extension be organized? One approach is to select a group of words with relevance to some other aspect of the total class programme for that week, for example, social studies, and embark on a study of the characteristics, structure, variations and uses of those particular words. Alternatively, choose an appropriate set of words from the Extended Core Vocabulary, expand this list to include related words suited to the class, and use this list for word study activities. The focus of the programme should be the uses and meanings of each word, and the aim should be to equip each child with the skills needed to use these words in subsequent writing.

After selecting an appropriate group of words a series of exercises may be undertaken. The range of exercises can include:

- Using words in sentences.
- Finding the dictionary meaning of selected words.
- Supplying antonyms, synonyms and homonyms as appropriate.
- Reclassifying words into appropriate sub-groups.
- Identifying words in the list, after some clue to their meaning or use has been supplied.
- Identifying words with multiple meanings.

- Undertaking word building exercises, for example, addition of prefixes and suffixes to root of word.
- Identifying root word by removing prefixes and suffixes.
- Making new words by addition or removal of letters.
- Changing tenses.
- Writing in plural form.
- Completing skeleton form of words, such as s-e-l-ng.
- Marking silent letters.
- Practising the spelling of the words.
- Arranging the list in alphabetical order.
- Matching words with similar shapes.
- Marking vowels as long or short.
- Writing words in syllables.

The aim of these and related procedures is to familiarize children with the words chosen for study, and help them understand how the legitimate and common patterns of English spelling develop. A study of meanings will enhance the use of words, and hence aid the retention of spelling, whereas a study of the orthographic pattern of selected words will help children appreciate the rich and varied qualities of the English language, and aid the learning of spelling generalizations.

In planning a class programme of word study and vocabulary development, how many words should be included, and how long should the study of one set of words continue? There are no simple answers to these questions. Possibly a range of somewhere between 5 and 15 would be appropriate for most classes, with Standards 2 and 3 being towards the bottom of the range, and Forms 1 and 2 towards the top. As for the time to spend on a set of words, one week is probably adequate. This allows for word study activities to be undertaken in a variety of ways, and on a regular daily basis. It also allows knowledge of meaning and spelling to be tested, along with other aspects of the week's word study activities that are regarded as important outcomes. Any words that are shown by this testing procedure to be poorly known or understood can be transferred to the *Personal Spelling List* for further study.

3. *Studying and Mastering The Core Vocabulary of Written English*

The core vocabulary of 'heavy-duty' written words is relatively small when compared with the typical writing vocabulary of most adults and children. The Basic Core Vocabulary of 230 words, on pages 25–26 of *Spell-Write,* on average accounts for a little over two-thirds of the words used by most children in their general day-to-day writing. (Incidentally, other studies also indicate that the proportions of high-frequency words found in adult writing and literature are generally of the same order.) Whether the core vocabulary is defined as the 50 most often used words, or the 500 most often used words is relatively unimportant. What is important is that for most writers, within the written vocabulary of thousands of words, there is a set of words numbered in hundreds, that accounts for a large proportion

of their writing. Obviously, to master these essential words is of the utmost importance, if effective and efficient written communication is to be achieved.

Before we discuss the teaching of the Basic Core Vocabulary, there are two important points to clarify. The first of these is that the Basic Core Vocabulary and the Extended Core Vocabulary are written vocabularies. The justification for learning how to use and spell these words is that they are essential for each child's writing. In other words, these lists are the nucleus of a writing vocabulary and not a spelling vocabulary.

The second point is that, although the Basic Core Vocabulary and similar lists account for around 70 percent of most writing, this estimate is a group figure. It is an average, and as such, is subject to wide individual variation. In any given case, and for any given topics being written about, the proportion of words accounted for by the Basic Core Vocabulary will vary. This means that, although the importance and usefulness of the Basic Core Vocabulary is indisputable, it is not wise to regard every word it contains as being of equal importance for the writing of each individual in every situation.

These two points suggest that it is important for children, especially in the early stages of writing, to master the Basic Core Vocabulary as an aspect of learning to write. Teachers should not hesitate to correct misspellings of any Basic Core Vocabulary words, but they should wait for uncertainties in the use of the words to show up, before they are intensively studied. It might seem more logical to begin a study of these 'heavy-duty' words early in each child's writing career, but the reality is that words mastered in a list-learning context may not necessarily be correctly transferred to writing, and unless words mastered in isolation are subsequently used in writing, they will be forgotten. When these words are not being mastered as part of the process of writing, systematic teaching of their use and spelling must be introduced. But, if learning to spell these words can be coupled with learning to use them in meaningful and relevant contexts, recall of spelling will be enhanced.

At what point should systematic learning of the Basic Core Vocabulary in isolation from the process of writing be considered? For most children the latter part of the fourth year of school is probably the earliest time to begin. From that point on, there is more justification for ensuring that the use and spelling of the high-frequency words are mastered. However, this is not to advocate a wholesale teaching of the Basic Core Vocabulary as an isolated word study task from Standard 3 on. The emphasis should remain on the acquisition of the Vocabulary as a part of writing, but children who are not mastering the Vocabulary in their writing may also need direct instruction.

Children should master the spelling of the Basic Core Vocabulary before completing Standard 4. That should be the aim. They should learn to use and spell each word in the Vocabulary correctly during writing, but if that is beyond them, they should at least be able to recall the spelling of these words.

The Basic Core Vocabulary has been presented in four separate lists, which are of unequal number and increase from 25 in List 1 to 94 in List 4. The lists can be used to establish an order of priority for testing the recall of the Basic Core Vocabulary, and systematic teaching of its contents, when this is desirable.

Should the words in the Extended Core Vocabulary be regarded in the same light as those in the Basic Core Vocabulary? The former has been presented as a nucleus of words to be included in the classroom word study and vocabulary extension programme.

As they have been shown to be used fairly regularly by children they are important, but as a group their collective use does not warrant the prominence given to the Basic Core Vocabulary. All children should learn to use and spell the words in the Extended Core Vocabulary and their common derivatives, within the writing and word study programmes. However, some of the groups of words, for example, 'days', 'months', 'numbers', 'family names', may warrant special testing and associated teaching in the upper primary school. Each teacher is the best person to make this decision, and the structure of *Spell-Write* is flexible enough to enable a variety of approaches to be taken.

IV Evaluating Progress in Spelling

Evaluation and Measurement

Evaluation is a key component in all classroom instruction, as only by a conscious and deliberate effort to evaluate the outcomes of teaching can progress be measured. Evaluation is primarily a judgemental process, requiring the synthesis of objective and subjective information to decide whether a specified goal has been attained. A simple analogy contrasting the roles and contributions of measurement and evaluation may help to clarify this point. In cricket, a batsman may keep detailed records of his performance during a season. As well as recording details of each innings in terms of total runs scored, balls faced, time at the crease, boundaries scored, and so on, a host of other statistics may also be calculated. These may include average runs per innings, average runs per 100 balls faced, number of half centuries, number of centuries, and average time per century. When it is time to evaluate the season's performance, and choose the 'best', or perhaps most 'valuable' innings, these details will provide the basic objective information, but the final evaluation will also take account of information it is impossible to quantify, such as 'strength' of the opposition, the 'state' of the pitch, the 'capabilities' of the umpire, and the 'demands' made on the innings by the state of the game. Thus, to return to our batsman, the 'best' innings may not have produced the highest score, as the judgement has been reached by considering all relevant measurements as well as other important factors. The same general processes operate in evaluating achievement or progress in spelling. Measurements are made, considerations that cannot be validly quantified are added, and on this basis judgements are made about achievements, growth, and progress in spelling.

The Judgemental Process

The essence of evaluation, then, is that available objective and subjective information are used to judge whether or not the goals of instruction have been attained. The evaluative process itself is subjective, and this is both a strength and a weakness. Its strength is that it

can include features that are not measurable, but are nevertheless crucial in determining 'quality' of learning. Its weakness is that the 'importance' of those subjective factors may exist only in the eye of the beholder, may be applied inconsistently, or may be judged against unclear criteria. However, if it excludes the 'cannot be validly quantified' type of variable, evaluation is limited to measurement, and, in education, measurement alone is not an adequate basis for determining value.

For a valid evaluation of the 'status' of the written spelling of an individual pupil, a class group, or a whole school to be undertaken, the following information is needed:

(1) Clear objectives.

(2) Assessments of written spelling made against the 'quality' of the vocabulary, and the 'adequacy' of the writing for its particular purpose.

(3) A variety of valid test scores.

(4) Sound knowledge of the verbal capabilities of the learner.

The nature of the objective will determine how the evaluation is carried out. If the objective is fairly specific, such as, 'To reduce the number of Basic Core Vocabulary words being misspelt during writing', a simple count of errors in such words, compared with the tally of six months ago, will help to decide whether or not the objective has been reached. If the objective is a little more general, such as, 'To ensure that all errors in Basic Core Vocabulary words can be identified, and that adequate discrimination is made between all homonyms in the list', more specific testing would be required, and judgement would be needed to decide whether or not discriminations were 'adequate'. Moreover, 'adequate' might require modification for different pupils; what is 'adequate' for one, may be 'inadequate' for another. If the objective is fairly broad, and more akin to a long-term goal, such as, 'To ensure that each pupil develops his or her spelling to a level in keeping with his or her ability to write clear English', a variety of writing, as well as a selection of test scores, would be needed. This information would then be modified in the light of knowledge about the child's ability to write English. However, evaluation is not restricted to judging whether the objective has been attained, as the adequacy or appropriateness of the objective itself can also come under scrutiny.

There are four aspects of spelling that may be measured as part of the process of evaluation:

Spelling as an aspect of writing.

Spelling achievement in relation to peers.

Spelling of individual words identified for study.

Spelling weaknesses before starting remedial instruction.

Measuring Spelling as an Aspect of Writing

Few teachers would disagree that the ultimate measure of each individual's spelling is found in his or her writing. There are undoubted advantages of measuring spelling in the context of writing, but these are accompanied by a host of problems which place severe limitations on the process of measuring spelling this way. For example, there are

problems relating to the words being sampled, criteria for marking, conditions under which the writing was done, influence of the topics on choice of vocabulary, and hence the difficulty of the spelling. There is also the unknown influence of the relative difficulty of words, in relation to the writer's knowledge, background, and experience. The writer's personality is a factor too. How can the writing of a 'risk taker', who may have an extensive and colourful vocabulary with a high incidence of spelling errors, be compared with that of a more conforming pupil, who may use simple, mundane, easy-to-spell words? Granted, then, that measuring spelling within the context of each person's writing is desirable, it must be admitted that procedures displaying even minimum standards of validity and reliability are a long way off.

In general terms, these difficulties and limitations place the measurement of written spelling in the same category as those cricketing variables that 'cannot be validly quantified'. Although the objectivity of measurements made in context is thereby reduced, there are approaches that may isolate *some* objective information about spelling and writing. The procedures that follow do not overcome the measurement problems outlined above, but they begin to bridge the gap between totally subjective judgements and objective measurements. However, one could not expect to apply these procedures profitably to children's writing on a regular basis. They should be used sparingly, when there is a need for information to be incorporated in an evaluation of written spelling.

1. *Calculate the percentage of misspelt words in the total piece of writing.*
   (New Zealand research[7] indicates that on average, proportions of spelling mistakes, excluding proper nouns, vary from about 7 percent for J3 children to 2 percent for Form 2 children.)

2. *Calculate the number of mistakes in the Basic Core Vocabulary.*
   These mistakes can be further expressed as:
   (i) A percentage of all words written.
   (ii) A percentage of Basic Core Vocabulary words used.
   (III) A percentage of all mistakes.

3. *Calculate the number and percentage of words in the Alphabetical Section of* Spell-Write, *that are spelt incorrectly in the writing.*

4. *Make an assessment of the proportions of misspellings, against the quality of the vocabulary in the writing sample being judged, in relation to the writer's age.*
   Use a 5-point scale where:
   - 1 = A 'superior' vocabulary; up to 3 percent of misspellings are Basic words; up to 5 percent errors.
   - 2 (a) = A 'superior' vocabulary; more than 3 percent of misspellings are Basic words; more than 5 percent errors.
   - (b) = A 'well-developed' vocabulary; up to 3 percent of misspellings are Basic words; up to 5 percent errors.
   - 3 (a) = A 'well-developed' vocabulary; more than 3 percent of misspellings are Basic words; more than 5 percent errors.

(b) = An 'adequate' vocabulary; up to 3 percent of misspellings are Basic words; up to 5 percent total errors.

4 (a) = An 'adequate' vocabulary; more than 3 percent of misspellings are Basic words; more than 5 percent total errors.

(b) = A 'limited' vocabulary; up to 3 percent of misspellings are Basic words; up to 5 percent total errors.

5 = A 'limited' vocabulary; more than 3 percent of misspellings are Basic words; more than 5 percent total errors.

The crucial factor in implementing this scale of spelling accuracy is the judgement made about the quality of the written vocabulary. The data related to spelling accuracy have been determined objectively, but there is no information of a manageable nature that can be used to make objective judgements of the *quality* of children's vocabularies. It seems reasonable to assume that by using their professional judgement teachers will be able to classify the vocabulary in a writing sample as either 'superior', 'well-developed', 'adequate' or 'limited' in relation to children of a similar age-group, and that the assessment of spelling, in relation to the quality of word-use, can then proceed objectively.

This illustrates the types of measurement that may be made of spelling in the context of writing. These measurements are the building blocks from which subsequent evaluations are made. Meanwhile, it should be noted that the idea of using children's writing diagnostically, to improve spelling, will be touched on under Section 4 of this chapter.

Measuring Spelling in Relation to Peers

The possible benefits of standardized tests of spelling should not be exaggerated, nor should they be ignored, as standardized tests are objective sources of useful information.* Standardized tests are a valuable adjunct to assessing the quality of spelling in writing, as they have features that cannot be duplicated by other procedures. Because the test content is the same for all who take the test, direct measurements may be made of the test items. Providing the content of the test is equally appropriate to all students, inferences can be made about the extent to which the domain sampled by the test has been mastered. Furthermore, as the limits of the test's reliability are known, the consistency of each score can be estimated, and, if the test has norms applicable to the student, scores can be interpreted in the light of the performance of this group.

These four major features of standardized spelling tests -- direct measurement, inferences about the subject-area being sampled, reliability, and comparative measures -- complement measurements made of spelling in the context of writing. A standardized test of spelling, whether it is of the dictated, multiple-choice or proof-reading type, will convey little information about the quality of a child's spelling in his writing. Similarly, the most meticulous marking of a sample of writing will produce equally little information regarding the broad levels of performance on a sample of selected words in relation to class, school

*For a discussion of the possible classroom uses of standardized spelling tests see Teachers Manual for *Proof-Reading Tests of Spelling*.[15]

or age peers. While it is useful to know how performance on a standardized test of broad spelling skills relates to a wider reference group, the most complete picture of spelling achievement comes from information based on each child's writing, providing this information can be interpreted in the light of the child's accomplishments in relation to appropriate reference groups.

What Type of Test is Appropriate? If the intention is to choose a standardized test of spelling that has the closest relationship to spelling in the context of writing, the choice is clear. A test that incorporates *recall* or *production* skills, that is, a proof-reading test or a dictated test, is superior to a test emphasizing *recognition* skills alone, such as a multiple-choice test. Furthermore, a standardized test incorporating provision for diagnostic analysis, and having norms relevant to New Zealand children, offers additional advantages. The *Proof-Reading Tests of Spelling*[15] has both of these features. A selection of spelling tests is included in the Appendices.

How Often Should a Standardized Test be Administered? If spelling skills are to be assessed systematically as part of a school-wide evaluation programme, one spelling test a year will be sufficient. There may be special circumstances where more than one testing is deemed necessary, such as when an attempt is being made to measure the effectiveness of special programmes, or document the progress of selected pupils. These situations will be few, however, as annual testing on a school-wide basis will ensure adequate monitoring, for most pupils, of the aspects of spelling measured by standardized tests.

Measuring Spelling of Individual Words Identified for Study

If words from such sources as children's *Personal Spelling Lists*, aspects of the classroom programme, such as social studies, science, language units, the Basic Core Vocabulary or the Extended Core Vocabulary, are isolated for specific study, there will be a need to evaluate how well they have been mastered. The purposes for which the study is undertaken in the first place, will determine *how* any assessments are undertaken.

The Objective Dictates the Technique If the prime purpose is to aid *recall*, a traditional word-sentence-word spelling test will be adequate. If the major reason for studying the chosen words is to teach children to *recognize* the correct form of the word, some type of multiple-choice exercise would be suitable. If the major purpose of studying the chosen list is to help children to begin to learn some of the *patterns* and *structures* of the more common word 'families', assessment exercises concentrating on building various word-forms, by the addition of prefixes and suffixes, could be undertaken. If *meaning and use* of words are the major goals of a word study programme, assessment procedures reflecting these objectives are needed. Such procedures as using words in sentences that illustrate the meaning of the word, writing the meaning of the word, matching words with meanings, supplying antonyms and synonyms, are appropriate. When semantic considerations are uppermost, the well known cloze technique is a possibility too, but the major difficulty would be in constructing an appropriate paragraph to include, in a natural and meaningful way, a group of words that had been selected for specific study.

The study of specific sets of words, within a classroom language programme, is likely to be undertaken with a variety of outcomes in mind, but the predominant one must be to

have children expand their vocabulary and improve their accuracy of word use and spelling, with a view to maintaining growth in written language. If a variety of outcomes are being sought, a variety of testing techniques will be needed.

Validity, Reliability and Mastery. When these informal classroom tests constitute the major assessment techniques, questions of the validity of the technique, reliability of the measurement, and criteria for deciding when mastery has been achieved, become important. If the mode of testing matches the desired outcome – for example, the intention was to teach recall of words, so a word-sentence-word test was used – the test will be valid. If the test does not measure the objective – for example, the intention was to teach meaning and use, but a word-sentence-word test was used – the test will be invalid. To assess a test's reliability is time-consuming, so it would be unrealistic to suggest that formal assessment of this aspect of every classroom test could be undertaken. It is preferable to accept that scores on informal classroom tests are subject to measurement error, and that results should be taken as broadly indicative of the underlying learning at the time of testing, and are not constant, exact, or fixed scores. The confidence that can be placed in the consistency of the tests has some bearing on the criteria for deciding when mastery has been achieved. Rigid criteria cannot be drawn for tests that are subject to wide variation of scores. In addition, there may be a strong judgemental aspect as well, as it is likely that criteria for mastery will vary from child to child, and from task to task. Two important questions to keep in mind are 'How consistent are the scores from this test likely to be?' and 'What criteria do I accept as evidence that this group of words has been mastered to an acceptable level?'

Measuring Spelling Weaknesses Before Starting Remedial Instruction

There are two approaches to gaining diagnostic information about a child's spelling competencies. Firstly, careful analytic marking may be made of samples of the child's writing; secondly, a test giving diagnostic information may be administered.

There are obvious benefits in basing remedial instruction and diagnostic assessment on each child's writing, for example, the misspelt words are readily identified, and remedial teaching can begin immediately. However, the major disadvantage of this approach is that it uncovers language and spelling weaknesses restricted to the words and classes of word that the child uses. If a child has a limited vocabulary, there may be many weaknesses that do not appear in the writing.

The weakness of this approach is avoided by a well constructed test, designed to reveal diagnostic information. The standardized nature of the test content ensures that all pupils tackle a selection of spelling tasks, but its major inherent weakness is that the language measured may be irrelevant to the particular child's writing needs. As was stated earlier in this chapter, it is probably wisest to make the initial diagnosis through samples of writing, and then either verify or extend this information, with the sparing use of standardized or diagnostic tests.

Detailed discussion of how to assess a child's writing with a view to uncovering the major weaknesses is outside the scope of this manual. Suffice to say that the principles inherent in taking a running record of oral reading may also be applied to analysing a sample of writing. Errors of spelling and usage should be identified, and a systematic

approach to the classification of these errors adopted. For example, the classification of Gates and Russell as set out in *Learning to Spell* remains a useful starting point:

Additions: *sticke, carefuly*

Insertions: *neack, capiture*

Omissions: *ther, towr*

Substitutions: *becose, kolony*

Transpositions: *feild, fishined*

Phonetic errors: *wate, vakashun*

As Arvidson explains: 'An examination of the errors of any particular type may suggest the reasons for failure. For example, the addition in the word *sticke* may indicate a tendency to add a final *e* to all words, it may be a question of false analogy with familiar words (*like*), or it may result from poor powers of auditory analysis.' By looking at the words misspelt, some information regarding the spelling of similar words may also be obtained. For example if 'tower' is written as 'towr', this may suggest that other words that are similar in spelling to 'tower', may also be miswritten. Other examples of this nature can be found in the PRETOS Teachers Manual, pp.13–24.[15]

To sum up. Successful diagnosis of spelling and usage difficulties calls for the ability to find a clue and follow it up methodically. Although the emphasis should be on careful analytical marking of writing, any restrictions in the language being used may mask other equally serious weaknesses. To some extent, a spelling test may get over the masking effect of highly selective writing, but the child's writing should be regarded as the prime source of diagnostic information about spelling, simply because the writing reflects the words that the child actually writes – these must be mastered first.

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VI Appendices

The NZCER Survey of Writing

A representative sample of 58 primary and intermediate schools were approached in 1979 and 1980 for samples of children's writing. A standard set of criteria was specified, to ensure that writing samples were collected under reasonably uniform conditions. The required number of scripts was chosen randomly, so that the writing to be analysed was broadly representative of primary school children in terms of class, sex, geographic location, size of school and type of school.

It was a relatively straightforward matter to stratify a national sample of primary school pupils in terms of the above variables. It is fairly obvious that the nature of the population sampled is crucial in determining the quality of the resulting writing. It is equally feasible that the topics written about are crucial to the writing outcome, but there was no available objective procedure against which to measure how representative the topics were. It was assumed that, by sampling children from a representative group of schools, the topics written about would prove broad enough to elicit representative samples of writing. The only objective information on this point is that the 1,250 essays forming the basis of *Spell-Write* incorporated 258 separate titles, and, because of the broad nature of some titles, such as 'I am ....', 'My Favourite Animal', 'My Wish', 'Ghosts', 'Shipwrecked', 'Hobbies', 'The Prize' and 'Holidays', more than 400 topics were written about.

Many scripts had to be extensively edited before it was possible to undertake an analysis of the 1,250 samples of writing. This editing was not of a stylistic or semantic nature, but was designed to standardize spelling, so that the computer could 'recognize' each word prior to counting and categorizing. All errors of spelling had also to be listed separately, so that they could be analysed. A variety of sophisticated analyses were carried out on the powerful Burroughs 6700 computer at Massey University under the direction of Mr Paul Bieleski, Senior Lecturer in Computer Sciences.

The analysis of the 1,250 scripts revealed the following information about this sample of writing:

(i) Total essays analysed – 1,250.
(ii) Total number of essay titles – 258.
(iii) Total running words – 198,854
(iv) Total dictionary of words – 9,675
(v) Total running errors – 7,779.
(vi) Total dictionary of errors – 2,368.
(vii) Average running words per script – 159.08.
(viii) Average sentences per script – 10.60.
(ix) Average words per sentence – 14.99.
(x) Average mistakes per script – 6.22.

Criteria for Choice of Words:

1 Any word included in the *Alphabetical Spelling Lists*[1] and appearing in the NZCER survey of writing was considered for the Alphabetical Section. Of the 2,700 words in the *Alphabetical Spelling Lists*, 2,350 were in this initial category.

2 All words in the *Alphabetical Spelling Lists*, but *not* found in the NZCER sample of writing, were reviewed by a panel of 25 judges comprising teachers, principals, departmental officers,

advisory personnel, research staff and editorial staff. Each of the 350 words in this category was not excluded, unless two-thirds or more of the judges indicated that, in their opinion, the words were still part of the 'core writing vocabulary of New Zealand primary school children'. Examples of the 35 words eliminated from this category were 'acre', 'aritnmetic', 'barley', 'comical', 'embroidery', 'harness', 'mistress', 'negro', 'oatmeal', 'quack', 'starch', 'telegraph', 'therefore', and 'thus'.

3. The next task was to isolate potentially suitable words found in the writing sample, but *not* in the *Alphabetical Spelling Lists*. This eliminated most proper nouns (for example, people's names, product names, pets' names, local place names); unconventional word forms (for example zoooom, ahhh, brmmmm, screetch, weeeee, baaaaaaang); and words that, in the opinion of NZCER staff who undertook this work, were unlikely to be part of the common core of New Zealand primary school children's vocabulary (for example, 'abominable', 'avail', 'chauffeur', 'inmates', 'pier', 'reactor', 'tranquil', 'zombie'). In this way, a list a little over 3,100 words, potentially suitable for inclusion was prepared. This list, showing the frequency of use of each word, was circulated to the panel of 25 judges, who were asked to indicate which of the words, in their view, were included in the core writing vocabulary of New Zealand primary children.

   All words chosen by at least one-third of the judges were to be included, provided that regular derived words were not excluded by the criteria adopted for regular word-forms. Approximately 1,000 were chosen by the judges, but 350 of them were not included, because they conflicted with the criteria adopted for derived word-forms. Prominent examples of words included on the basis of judges' choice include 'activities', 'allowed', 'barbecue', 'become', 'biscuit', 'bonfire', 'care', 'chips', 'crane', 'dad', 'dollars', 'excited', 'finished', 'force', 'hello', 'huge', 'invisible', 'jeans', 'metre', 'mum', 'news', 'police', 'putting', 'raffle', 'rubbish', 'spider', 'suddenly', 'supermarket', 'tidy', 'television', 'wrapped' and 'yacht'.

4. The panel of 25 judges also considered the desirability of including various derivations of root words, if the root form was included as well. It was found that:

   (i) 85 percent of judges were in favour of excluding regular derivations ending in 's', for example, 'boats', 'runs';

   (ii) 40 percent were in favour of excluding 'es' forms, for example, 'bushes';

   (iii) 60 percent were in favour of excluding regular participles taking 'ed' or 'ing', for example, 'crying', 'followed';

   (iv) 20 percent were in favour of excluding 'ed' or 'ing' forms, where there was a change to the root as well, for example, 'running', 'smiling', 'stopped';

   (v) 55 percent favoured excluding the 'y' form of adjectives, for example, 'wealthy', and the 'ly' form of adverbs, for example, 'quietly';

   (vi) 35 percent favoured excluding adverbs with more than the 'ly' form, for example, 'happily'.

   Regular nouns and verbs formed by adding to the unaltered stem 's', such as 'hats'; 'd', such as 'moved';'ed', such as 'climbed';'ing', such as 'eating'; 'er', such as 'player', were not included in the Alphabetical Section, unless there was clear evidence to indicate that the exclusion of this particular form would hinder the independent use of the lists by significant numbers of children. The evidence referred to was in the form of information about frequency of word-use, and misspellings. For example, 'friends' has been retained because its use and error rate (137;21) was similar to 'friend' (160;23); 'answered' has been included because its frequency of use was the same as 'answer', but its error rate was five times greater; 'arrived' is included because it was used thirteen times more than 'arrive' (52;4), and its error rate was eight times greater; 'trying' is included because, though its use was almost identical to 'try' (39;40), it was four times more

difficult to spell; 'turned' is included (99;13), so is 'turn' (74;5), but 'turning' is excluded (5;1). These examples should illustrate why some regular derived forms are in and others are out. Every case was considered on its merits, with a view to making the lists as useful as possible as classroom aids.

5. Place names have all been excluded and, in their place, provision has been made for schools to develop lists appropriate to the writing needs of their pupils. Place names can be regarded as an example of a special vocabulary that should be built up on a school-wide or classroom basis. Once their writing needs expand beyond the scope of these prepared lists, children can begin to use the skill of consulting an atlas or gazetteer, to verify the spelling of place names.

To summarize the final position regarding the Alphabetical Section:

(i) There were 2,700 words in the *Alphabetical Spelling Lists*; 2,500 are retained in the Alphabetical Section of *Spell-Write*.

(ii) Of the 200 words eliminated from the revised list, 35 were unique words, 165 were derived words.

(iii) 700 'new words' have been added to the revised lists.

Developing the Basic Core Vocabulary

The aim in developing the Basic Core Vocabulary was to identify a group of high-frequency words widely used in writing. Although the starting point for the Basic Core Vocabulary was the NZCER writing survey, it was considered necessary to verify from other prominent studies that the high-frequency words from the survey had a high incidence of use elsewhere. If the Basic Core Vocabulary is to be regarded as a core writing vocabulary, all the words must have widespread use.

The criteria to be met before inclusion in the Basic Core Vocabulary could be considered were:

(i) The word was included in the most often used 350 words in the NZCER writing survey.

(ii) The word was in the most frequent 500 words in the *American Heritage Word Frequency Book*.[16]

(iii) The word was in the top 500 of *The Teacher's Word Book of 30,000 Words*.[17]

(iv) It was contained in the *New Iowa Spelling Scales*.[18]

(v) It appeared in Levels 1–3 of the *Alphabetical Spelling Lists*.[1]

When these criteria were met by a base word and one of its derivations, for example, 'look' and 'looked', preference was given to the base form. A derived word was included only if its base form was ineligible, for example, 'called' and 'heard'. All colour names were excluded as were numbers greater than 3 and contractions. Although isolated examples of these three classes of words met the criteria for inclusion, it was decided that they should be included in the appropriate categories of the Extended Core Vocabulary.

The arrangement of the 230-word Basic Core Vocabulary into four lists was undertaken on the basis of frequency of occurrence in the NZCER survey of writing, with some minor adjustments made on the basis of the word counts cited previously. The 25 words in List 1 vary in frequency of use from 11,330 ('the') to 1,223 ('there'), and account for 40 percent of words used in the writing survey. List 2 has 50 words, varying from 1,109 ('is') to 399 ('from'), accounting for 17 percent of words; and List 3 has 65 words, varying from 378 occurrences ('little') to 158 ('dog'), and accounts for 8 percent of words written. The 90 words in List 4 range from 153 ('right') to 50 ('sure'), and

account for 5 percent. The total percentage of words written in the survey accounted for by the Basic Core Vocabulary is 70 percent.

Developing the Extended Core Vocabulary

The 580 words in this section were initially selected from words ranked between 351–1,000 in the NZCER writing survey. Proper names were excluded, which reduced the number of words by about 45. The rest of the words in the list were included, unless mutiple forms of the same word occurred, such as the present or past participle, or infinitives, or both the singular and plural form of nouns. Though based on frequency of use by children, the list is principally a thematic one and a resource for word study. There seemed little point, therefore, in including such alternative word forms, when these could be made the focus of vocabulary extension exercises, using More Words for Spelling and Writing as the starting point. This criterion resulted in the greatest number of words being omitted. Finally, a very small group of words were subsequently excluded, because of considerable difficulty in classifying them (for example, 'anyway', 'line', 'flash', 'why'). These words, of course, are in the Alphabetical Section.

Once the list of words had been derived, words with similar meanings were organized into broad groups. Nine basic headings seemed best to capture the words and to reflect the interests of the writers in the sample: Numbers, Time, Amounts, Location, Nature, Common Objects, People, Activities and Descriptions. A further set of words, Contractions, stood out because of their construction. These have been called 'shortened words' in *Spell-Write* and have been added as a tenth category. Within each of the broad groups, shorter lists were compiled containing words with closer associations, such as 'seasons' under 'Time', and 'buildings' under 'Location'. Since many words have more than one meaning, a judgement was made as to the most appropriate category to put them into, according to their most likely use by children in their writing.

All words have been arranged alphabetically within the groups, with the exception of very few categories at the beginning of the section, such as 'numbers', where some other sequence seemed more logical. No attempt has been made to keep lists to the same size (the range is from 3 to 30), as the main concern was to group words according to meaning. Topics within each of the main groups are also arranged alphabetically for ease of reference.

Developing the Commonly Misspelt Words Section

In developing this section, the aim has been to identify the words most often misspelt in the NZCER survey of writing, but, at the same time, were used often enough to make them important components of a writing vocabulary. All misspelt words in the first 1,000 words were identified. Words that were misspelt less than 15 times were eliminated, unless their misspellings were greater than half their frequency of use, or unless there was other evidence to show that it was likely to be a significant spelling difficulty. A list of 147 misspellings resulted, with error frequencies ranging from 10 to 162.

To avoid duplication, any word within this 147, also included in the Basic Core Vocabulary, was removed from the list of misspellings. The 72 words remaining in the list generally have a lower frequency of misspelling than the 75 words that remained in the Basic Core Vocabulary, primarily because their frequency of use is much less than the words that qualified for inclusion in the Vocabulary. The 75 words were 'about', 'after', 'again', 'all', 'always', 'and', 'another', 'are', 'around', 'back', 'because', 'before', 'came', 'could', 'first', 'for', 'found', 'friend', 'heard', 'his', 'house', 'how', 'into', 'it's', 'its', 'knew', 'know', 'little', 'made', 'might', 'morning', 'now', 'of', 'off', 'one', 'other',

'people', 'put', 'right', 'said', 'saw', 'some', 'something', 'sometimes', 'still', 'sure', 'that', 'the', 'their', 'then', 'there', 'they', 'thought', 'through', 'to', 'told', 'too', 'took', 'tried', 'two', 'until', 'us', 'very', 'want', 'was', 'went', 'were', 'what', 'when', 'where', 'which', 'who', 'with', 'would', 'your'.

The 72 words making up this section account for about 15 percent of all misspellings in the survey of writing. When the 75 words above are included, 40 percent of misspellings are accounted for.

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A.C.C.