



REVIEW

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A systematic review of effective literacy teaching in the 4 to 14 age range of mainstream schooling

**This review is supported by the Teacher
Training Agency (TTA) to promote the use of
research and evidence to improve teaching
and learning**

Review conducted by the TTA-supported English Review Group

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SUMMARY

Background

Governments of all political persuasions in countries around the world are showing strong concerns about the so-called 'basics' in education. They are concerned about how poor standards in numeracy and literacy are costly in terms of lost wealth-creation opportunities as well as being a drain on society's resources in terms of the cost of social problems associated with academic failure. The numeracy and literacy levels of young people are of vital importance in influencing later academic, social and economic outcomes. These concerns have prompted a range of government initiatives to improve standards in schools. The National Literacy Strategy (NLS) implemented across schools in England can be seen as such an initiative; it reflects the government's concern to develop 'what works' approaches to raising standards of literacy and a growing need to understand more fully the distinctive characteristics and classroom practices that can be regarded as effective.

Although there has been an interest in 'effective schools' and 'effective teaching' for decades now, it is only recently that there has been a specific focus on literacy and especially on those characteristics and practices of teachers who appear to be successful in their teaching of literacy. We know a great deal about how children acquire literacy and develop as readers and writers, but we are only just beginning to understand more fully the ways and means through which successful teachers promote healthy literacy growth amongst their students. Many curriculum approaches and packages have been found both to work and to fail; what seems critical is the skills of the teacher. We need to know more about how to recognise 'effective' teachers of literacy and to understand more fully the kinds of professional knowledge, beliefs and classroom actions that are associated with the successful teaching of literacy. It is a recognition of such needs that has prompted this review. What we mean by 'effective' literacy teaching is not straightforward and for this reason we sometimes place the word in inverted commas to demonstrate our recognition of this. However, we have not done this throughout the text since we also use the synonyms 'successful', 'exemplary' and so on, in line with the literature.

The better that we can understand the nature of the expertise of successful teachers of literacy the more likely are we to be able to plan and implement courses for the initial, as well as in-service training of our literacy teachers.

Aims and review question

The central aim of the review was as follows:

- to assemble, examine, appraise and synthesise the evidence on the nature of effective literacy teaching of students in the 4 to 14 age range of mainstream schooling

This necessitated our focus on the main question for the review:

- What are the professional characteristics, beliefs and classroom approaches of teachers of literacy in the 4 to 14 age range of mainstream schooling who have been nominated as effective?

Embedded in our search question was a concern to know more about how successful literacy teachers are recognised, what their classroom practices are like, and what professional knowledge and beliefs about literacy, learning and learners they bring to their classroom teaching.

Methods

To answer our research question, we initially drew up a protocol or plan in which we set out our main strategies for finding studies from our literature search and the methods which we would employ for screening these studies to ascertain their inclusion in, or exclusion from, our review. We searched three major databases, handsearched key journals and scrutinised websites. Using a set of explicit criteria, the titles and abstracts of the relevant studies were screened and the studies that met the criteria set out in the protocol were identified. These studies were then keyworded, or indexed, using the EPPI keywording sheet with some review specific keywords added. A 'mapping exercise' was conducted on the studies which met our selection criteria and a descriptive map helped us to identify and describe the studies and build up an overall picture of the field. It also enabled us to identify a subset of studies which we would examine in an in-depth review. The 12 studies which were data-extracted and analysed were those deemed to be of most direct relevance to the Teacher Training Agency (TTA).

The in-depth analysis of these studies involved two stages. In the first stage each study was analysed carefully in terms of its contribution to answering the review question. This involved data-extraction by one reviewer using EPPI procedures. It also involved a modified version of data-extraction by another, independent reviewer using a proforma designed to describe each study under the following headings:

- bibliographical details
- focus
- aims
- design
- main findings
- conclusions
- generalisability
- trustworthiness

The individual studies were given a HIGH, MEDIUM or LOW weight of evidence score according to the extent to which they were judged to contribute to answering the research question. In the second stage, three of these 12 studies were further analysed, adhering fully to the quality assurance procedures recommended by EPPI.

Results

Searches of three major databases together with a small amount of handsearching of journals and scrutiny of websites took place and 1,276 studies published in English after 1988 were identified as being of possible relevance to the review. Eighty studies satisfied the criteria for inclusion in the 'map' and a number of interesting patterns were detected amongst these studies. The bulk (79%) of the studies were of American origin with only about one-fifth from the United Kingdom. Whilst almost half of the studies were concerned with general literacy teaching, and one-quarter focused on the teaching of reading, fewer than 10 percent were about the teaching of writing. The greater number of the studies was based upon the primary school years with only about one-quarter focusing on the middle and secondary school years. The research studies examined seem to suggest that by far the most popular and useful way to find out about effective literacy teaching is to observe teachers nominated as effective teachers and to interview them about their teaching.

The synthesis of the 12 studies in the in-depth review showed that effective teachers of literacy have a wide and varied repertoire of teaching practices and approaches (e.g. scaffolding, where support in learning is initially provided by the teacher and then gradually withdrawn as the pupil gains in confidence) integrating reading with writing, differentiated instruction, excellent classroom management skills) and they can intelligently and skilfully blend them together in different combinations according to the needs of individual pupils. Effective literacy teachers are especially alert to children's progress and can step in and utilise the appropriate method or practice to meet the child's instructional needs. The 'effective' teacher of literacy uses an unashamedly eclectic collection of methods which represents a balance between the direct teaching of skills and more holistic approaches. This means that they balance direct skills teaching with more authentic, contextually-grounded literacy activities. They avoid the partisan adherence to any *one* sure-fire approach or method.

The synthesis of the three studies (in which teacher effectiveness was empirically demonstrated) that underwent the second and more rigorous stage of in-depth reviewing suggests the actions that teachers can take to promote literacy development in the early years of school. These are as follows:

- **balance** (direct skills instruction and more contextually-grounded literacy activities)
- **integration** (integrating literacy modes, and linking with other curricular areas)
- **pupil engagement, on-task behaviour and pupil self-regulation**
- **teaching style involving differentiated instruction** (incorporating extensive use of scaffolding and coaching and careful and frequent monitoring of pupil progress)
- **links with parents and local community**

Conclusions

The in-depth analysis of all 12 studies suggests that it is possible to identify the effective teacher of literacy and to delineate a wide variety of components which appear to be collectively associated with successful teaching of literacy. The existing evidential base is limited, however, by the fact that most research studies did not empirically verify the nominations of effectiveness, relying instead on the nominations of others. Also, it is limited by the scale of evidence pertaining to the UK. The majority of studies are US-based (North American) and the recommendations that follow have therefore to be considered in the light of the fact that all education systems are contextually bound and what applies in one may not necessarily be found in another.

Implications

Implications for policy

- (a) It is important that teacher educators, student teachers and teachers as well as literacy advisers, consultants and OfSTED inspectors (in the UK) are aware of the existing evidence about effective literacy teaching. We suggest that these groups should be made aware of the strength of the evidence supporting the findings for the early years and that these findings should influence their practice.
- (b) The research reveals that differentiation (where the teacher uses appropriate teaching strategies, methods and resources for teaching a diversity of learners) is clearly a crucial aspect of effective teaching and will need to become much more common in our increasingly diverse classrooms. Our national concern for inclusion means that greater numbers of students, who might have attended special schools in the recent past, are now taught in mainstream schools, thus emphasising the significance of this issue.
- (c) Policy-makers should consider the importance of the following in literacy development: the early years as a key time for literacy learning; differentiated instruction; authentic opportunities for reading, writing and talk; cross-curricular connections; and careful monitoring of pupils' literacy learning by teachers.

Implications for practice

There simply is no *one* single critical variable that defines outstanding literacy instruction. According to the research evidence, however, there is a cluster of beliefs and practices like scaffolding, the encouragement of self-regulation, high teacher expectations, and expert classroom management. Students in training will not only need to be exposed to this wide and varied array of teaching practices but will also need experience in blending these practices in different ways for different children. They will also need opportunities to reflect on their own and others' practice in the light of the research base. Case study and exemplification material would be useful supports for teacher educators in promoting this learning and reflection.

Implications for further research

- (a) The majority of the current research studies originate from the US. We need more high quality research about the work of effective teachers of literacy in UK schools.
- (b) Future research would benefit from a close focus on effectiveness in literacy teaching with reference to a range of student outcomes (and not just test scores).
- (c) Research in the UK might examine more closely the links between effectiveness at the whole school level and the ways in which effectiveness at this level can promote and support effective literacy teaching within individual classrooms.
- (d) Writing is more in need of further study than reading, at all phases, but especially in the primary and middle years.
- (e) Further systematic in-depth analysis of the 80 studies noted above, and more immediately, of the nine which have not been through the full EPPI quality-assurance system, is necessary in order to progress our understanding of effective literacy teaching.

1. BACKGROUND

This chapter identifies the aims and rationale for the review as well as some definitional and conceptual issues. It describes the policy and practice context and considers the existing reviews in the field. It briefly describes the authors of the review, notes the funders and identifies the different users for whom it is intended. It concludes by specifying the review questions.

1.1 Aims and rationale for current review

How is it that different classrooms and schools sometimes seem to produce very different literacy results even when their pupil populations are very similar? Why is it that some approaches to teaching literacy sometimes seem to work very well with pupils, even when those pupils come from community and home circumstances that are often associated with disadvantage and educational failure? What is it that the best teachers do in their classrooms that increases literacy learning? Do we know what literacy teaching expertise looks like when it is in action? Questions like these lie at the heart of this systematic review of the classroom practices of effective literacy teachers.

The overall aim of our collaborative enterprise was to draw up a research question about the nature of effectiveness in literacy teaching and to search out and assemble the available evidence systematically in support of answering such a question. It was the strong belief of the review team that insights from the analysis and synthesis of research findings, derived from the studies associated with our research question, should be of relevance to the TTA, which funded our review, as well as to those people in schools and institutions of higher education concerned with the education and training of future teachers. It would also, of course, be of direct use to the teacher-training students themselves. The usefulness of the review to these relevant audiences was a recurring theme in our meetings over the course of the project.

The central aim of the review was as follows:

- to assemble, examine, appraise and synthesise the evidence on the nature of effective literacy teaching of students in the 4 to 14 age range of mainstream schooling

The review is based on the assumption that the better we understand the nature of the expertise of effective teachers of literacy, the better we will be placed to design and implement courses for the initial training of literacy teachers of the future.

While much attention has been devoted, over the past two decades or so, to the content and objectives of the school literacy curriculum (e.g. the national curriculum and the NLS in England), considerably less attention has been paid to the transactions through which that content is taught and those objectives are met. It is opportune to attend more closely to the practices and perspectives of successful literacy teachers. To equip trainee teachers with the knowledge and expertise to maximise the literacy learning of their pupils, teacher educators need to have access to up-to-date evidence about the practices and classroom actions of those teachers

who are most successful in developing their pupils' literacy capacities. Teacher educators are well aware that, in order to improve literacy teaching, attention to teaching expertise, rather than just materials or particular methods or content or objectives, is essential. This in turn means that knowledge of the available evidence on expertise in literacy needs to be accessible to them, to trainee teachers and to teachers generally. A fuller understanding of expertise is facilitated through an examination of the teaching practices and perspectives of those teachers deemed to be most effective in promoting the literacy learning of their pupils. Knowledge of that developing evidential base is of crucial importance to teacher educators and to the TTA which oversees the training of all teachers in state schools in this country.

1.2 Definitional and conceptual issues

Attempts to understand the nature of 'effective' teaching go back quite a long way. In the late 1960s and early 1970s, researchers began to document the teaching processes that occurred in classrooms. Their goal was to identify processes associated with high achievement, often reading achievement. This approach became known as the product-process approach because it was based upon the belief that educational outcomes (i.e. products) could be understood as a function of educational inputs and processes. From the product-process research studies of the 1970s (for example, Brophy, 1973; Dunkin and Biddle, 1974; Flanders, 1970) we learned that effective teachers maintain a clear academic focus in their classrooms, are consistently concerned to keep their pupils 'on-task' and regularly rely on direct instruction. They set clear goals for their teaching and for pupils' learning, regularly monitor pupil understanding through questioning, and give ample feedback about progress and achievement.

In the 1980s, Duffy and Roehler and their colleagues (1987) as well as other researchers helped our understanding of the cognitive processes used by effective teachers where, in the teaching of reading; for example, they urged teachers to approach the task as a 'meaning getting' process. Emphasising a view of teaching as explanation they argued that by explaining and modelling how mature readers went about the task of making meaning from written texts such teachers would help their pupils to become more strategic, interpretative, meta-cognitive and thoughtful in their reading tasks. In a comprehension task, for example, an effective teacher would overtly explain and model how he or she would make predictions about what might develop in the text as it is read. The teacher would describe the kinds of questions that occur to him or her as they read and would talk about the messages that were emerging from the text as it is being read. By letting pupils see skilled reading as a strategic activity and showing them how mature readers construct meaning and respond to text, such effective teachers would help their pupils to become active themselves in the ways of skilled readers. Duffy and Roehler (1986, p. 23) summarise their position as follows:

Instruction is more than getting students on task and presenting content in organised ways. It is also a cognitive interaction between teacher and students, particularly when the goal is to develop conceptual understandings rather than automatised responses. Such instruction is much more subtle than earlier concepts of instructional effectiveness led us to believe and it requires much more substantive supervision.

In the late 1980s and the 1990s, concerns about school and teacher effectiveness began to focus much more sharply on the area of teaching literacy. Although there is considerable research knowledge about (a) how young children acquire literacy and develop as readers and writers, and (b) how to develop literacy (e.g. Adams, 1991; Geekie *et al.*, 1999), there is still much to be learnt about literacy pedagogy in different contexts and in different phases of schooling. Indeed the specific area of effective literacy teaching or expertise in the promotion of literacy, however 'effective' is defined, has a short history (Hall, 2002). Writing with particular reference to the early years of schooling Wharton-McDonald *et al.* (1998, p. 102) wrote, 'There is a lack of systematic study of effective literacy teachers, a lack of understanding of their practices and perspectives'.

In the search for ways and means of improving the teaching of literacy, it is becoming increasingly acknowledged that the identification of teacher characteristics and teachers' ways of working is likely to be more productive than a reliance on, and adherence to, any particular package or materials. There is much evidence to show that a variety of packages and materials have been seen both to work and to fail depending upon the quality of the implementation (Allington, 2002). To improve literacy teaching, it is necessary to train teachers well rather than to expect a panacea in the form of materials and equipment (Collins-Block and Pressley, 2000). It would appear to be imperative that we learn more about the instruction of 'effective' teachers of literacy and how they differ from those who are less effective. How do we recognise 'effective' teachers of literacy? What are the differences in the knowledge, beliefs, aspirations and classroom actions of teachers whose pupils consistently outperform others? What do the best teachers do in their classrooms to promote the literacy achievements of their pupils? These are the kinds of questions that have exercised us in this review of evidence.

1.3 Policy and practice background

Governments of all persuasions over the last 25 years or so have shown a strong concern with the so-called 'basics' and have argued consistently that low skill levels amongst the population of the UK, together with the 'trailing edge' of children leaving school with poor qualifications, costs British society considerably in terms of lost wealth creation as well as the expense of the resources required to cope with the social problems associated with academic failure (Reynolds, 1998). This pattern is repeated across a range of countries especially in those developed countries of the English-speaking world, such as the US, Australia and New Zealand. A central thread running through governmental policy-making has been concerned with literacy and numeracy levels that, it is recognised, are of vital importance in determining later academic, social and economic outcomes.

In the specific case of literacy, this concern has prompted the creation of an array of initiatives aimed at improving literacy and its teaching in schools. The NLS in the UK is a good example of such an initiative. It reflects the government's concern to develop 'what works' approaches to the teaching of literacy and its associated interest in understanding as fully as possible the distinctive characteristics and ways of teaching of those teachers who are 'effective' and who consistently 'add value' to their pupils' literacy development.

1.4 Research background

We have already referred to some of the existing research on 'effective' literacy teaching. Here we focus more specifically on some existing reviews in the field. Several reviews of different aspects of literacy teaching have been published over the past decade (Adams, 1991; Beard, 1998; Hiebert and Raphael, 1996; Kamil *et al.*, 2000; Lyon, 1998; National Reading Panel (NRP), 2000; Snow *et al.*, 1998). Unsurprisingly, many studies of literacy have sought to determine which instructional methods are most effective for the development of literacy and the reviews have of course reflected this emphasis. Undoubtedly, we now know a great deal about how literacy develops in children and how teachers can support that development. What emerges clearly from the literature is that there is no *one* best method of teaching literacy that works for all children. Summarising the reading research of the National Institute of Child Health and Development (NICHD) in the United States, in 1997, Lyon (cited in Willis and Harris, 2000) testified before the US Congress that

We have learned that no single method, approach, or philosophy for teaching reading is equally effective for all children ... The real question is which children need what, when, for how long, and with what type of instruction, in and what type of setting.

While considerable knowledge about literacy processes and about methods of teaching literacy has been accumulated and while a focus on instructional approaches or teaching methodology merits continued research to establish what works in specific contexts, it is likely that an exclusive emphasis on method is inadequate to determine effectiveness.

Some highly influential literacy researchers in the US (for example, Barbara Foorman and her team) have been criticised for equating instructional method with teaching (Taylor *et al.*, 2000). As Taylor *et al.* point out, teachers' understanding of and commitment to, particular teaching strategies are crucial and these, they argue, are significant factors and may well be equal to, if not more important than, the methods themselves. Drawing on general classroom research, these authors go on to argue that 'teachers make a larger difference in students' growth as readers than do the methods those teachers are nominally using and that between-teacher variation has usually proven to be greater than between-method variation, after taking account of variation in initial student characteristics' (p. 21).

A major review of the evidence on the prevention of difficulties in early reading acknowledges the impact of the teacher, but does not give studies on this theme the same status in the reviewing process as it gives studies about methods (Snow *et al.*, 1998). The Committee on the Prevention of Reading Difficulties in Young Children concluded their report (Snow *et al.*, 1998, pp. 314-5) as follows:

Effective instruction includes artful teaching that transcends – and often makes up for – the constraints and limitations of specific instructional programmes. Although we have not incorporated lessons from artful teaching practices with the same comprehensiveness as other topics in the conventional research on reading, we acknowledge their importance in conceptualizing effective reading instruction.

An emphasis on the centrality of teachers is timely. The extent to which the current state of the research base can offer descriptive characteristics of the unique features of outstanding literacy teachers and their teaching is especially timely. All the reviews noted in this section are narrative reviews, with the exception of one. The NRP study (2000) is a systematic review of the experimental and quasi-experimental research relevant to a set of topics on early reading. Correlational studies and ethnographic and qualitative research were, controversially, excluded from that analysis. Significantly, there is no systematic review of the evidence on 'effective' literacy teachers.

1.5 Authors, funders and other users of the review

All those who participated in the review have direct involvement with teacher education. They are especially interested in enhancing the professional expertise of those training to teach and those already teaching literacy in primary and secondary schools. Although many have experience in conducting research, they are primarily users of research in their professional practice.

The two authors of this review have, between them, over seventy years of experience in primary, secondary and higher education. They have been involved in the education of trainee and qualified teachers for decades and have had particular responsibility for literacy education. Both have conducted research on literacy education and are based at Leeds Metropolitan University.

As the major agency in the state with oversight of teacher education, the TTA commissioned this review. The Evidence for Policy and Practice Information and Co-ordinating Centre (EPPI-Centre) at the Institute of Education, University of London, worked closely with the TTA and the research team, training core team members and assuring the quality of the systematic research process.

The team have also been supported by a group of people who have an interest in using the completed review. Considerable professional experience and expertise have helped to plan and implement the review. From the very outset of the project, we have benefited from the opinions and suggestions of a wide range of people with long and distinguished careers in teaching and in teacher education. Primary school and secondary school teacher educators with expertise in literacy development as well as in teacher education have collaborated with schoolteachers, former schoolteachers and a consultant headteacher. Collectively, they have all helped to shape and frame the questions at the centre of this review as well as to offer support and critique as the project has been developed and its methodology planned and implemented.

Having decided to shadow as closely as possible the approach to systematic review as exemplified by EPPI, we have gained much from the guidance of our two EPPI representatives who have contributed significantly to our attempts to maintain quality assurance. Furthermore, we have been able to benefit much from our liaison with a distinguished international researcher in the field of literacy, Professor Taffy Raphael of the University of Illinois at Chicago.

In exploring the elements of effective literacy teaching, it is intended that the review will be especially useful to teacher educators who can employ the research synthesis in their initial teacher training (ITT) programmes. It will also be of use to serving teachers who wish to improve their own practice through analysis and reflection. The review of studies will help teachers, and especially prospective teachers, to understand better how successful literacy teaching can be enacted in classrooms; it will also help them to create their own classroom contexts that support successful literacy learning. In focusing on the micro-context of what actually happens in the classrooms of 'effective' teachers, the review will provide food for thought and also a model for action, which will be useful to all teachers, and especially teachers-in-training who aspire to improve the literacy learning of their pupils. The results of this review would also likely be useful in consulting with/disseminating to parents about the promotion of their children's literacy.

1.6 Review questions

Our main review question was as follows:

- What are the professional characteristics, beliefs and classroom approaches of teachers of literacy in the 4 to 14 age range of mainstream schooling who have been nominated as effective?

More specifically, this involved our seeking answers to important subsidiary questions:

- On what basis and through what mechanisms have the teachers in the studies been afforded the status of being 'effective'?
- What knowledge and beliefs about pupils, teaching and literacy do these teachers bring to their classroom tasks?
- What is the nature of the broad pedagogical approach adopted in their classrooms by the teachers described as 'effective'?

It was in the light of these questions that the review set out systematically to search for and then scrutinise and appraise relevant research studies.

2. METHODS USED IN THE REVIEW

This chapter begins by briefly outlining how users were involved in the review. It then sets out the methods of the review, detailing how we defined our terms and how we narrowed our focus. It explains the criteria used to include and exclude studies, and describes the methods used for finding studies. It also describes the screening and the quality assurance process. It then describes how we progressed from a mapping of the studies to an in-depth review. An account is offered of how we assessed the quality of studies, how we conducted a synthesis of the evidence, and the quality assurance mechanisms we applied.

2.1 User involvement

2.1.1 Approach and rationale

Educational research has been criticised for serving the interests of researchers, rather than those of policy-makers, and providers and users of educational services (Hargreaves, 1997; Hillage *et al.*, 1998; and Tooley and Darby, 1998). One way of responding to such criticisms is to involve policy-makers and users in the research process from the beginning, from the identification of aims through to dissemination and application of findings. In section 1.5, we described those involved in the review. This group of people was involved in the identification of our focus on effective literacy. They agreed that such a focus would be useful to them and to other practitioners and policy-makers. They were of the view that a review of effective literacy teaching could guide their decisions and could also inform future research.

Many were known to the authors of the report and were contacted to participate because of their professional interest in the broad area of literacy and because they represented a range of professional settings, namely, teacher education, primary teaching, secondary teaching, advisory teaching, literacy consultancy, and OfSTED inspection. Although most members of the group were themselves parents, it is unfortunate that we did not represent more mainstream parents who did not have a direct role in professional education.

2.1.2 Methods used

Our initial approach to involve users was to convene several formal meetings of the entire group to discuss key aspects of the work as it developed: for example, to have meetings to discuss and agree the identification of our overarching review question, the specification of inclusion and exclusion criteria and so on. The timescale, unfortunately, prohibited such a series of meetings of the entire team. However, we had very many face-to-face meetings where up to five colleagues met to talk about the protocol, to agree the inclusion criteria and to discuss an approach to identifying studies for in-depth reviewing. At the time of preparing the report, further meetings are scheduled to disseminate the findings and to discuss issues in systematic reviewing. The discussions with the user group continued informally via email. In addition, we had several phone calls with individual members of the team who became deeply interested in the process and who participated in data-extraction.

With the exception of one consultant headteacher, all the latter group members were teacher educators. This fitted well with the TTA's interest in building the research reviewing capacity of colleagues in ITT.

2.2 Identifying and describing studies

2.2.1 Defining relevant studies: inclusion and exclusion criteria

Before we could identify our inclusion and exclusion criteria, we had to define our terms and narrow our focus. When planning our search strategy, we were mindful of the need to have clear ideas about the key elements which are embedded in our research question. The term 'effective' (and other synonyms used in the research, such as 'exemplary', 'accomplished', 'reflective') were used to highlight our concern to explore the extent to which the current state of research literature would provide descriptive characteristics of the features of 'outstanding', 'exemplary', 'accomplished' or 'effective' teachers.

We were aware how some of the very early studies actually asked teachers themselves to assess their own competence but we decided to rule out studies that adopted such an approach to the identification of 'effective' teachers because of our belief that self-evaluation is too open to the influences of bias, ingratiation, deception, self-degradation or self-ascension. Whilst ruling out this particular approach to self-nomination, we were aware of the possibility that each of the studies scrutinised in the review would employ its own criteria upon which teachers were deemed 'effective' and chosen for study. Accordingly, it was decided that this review would focus closely upon the criteria of nomination used in the research and the extent to which they were made explicit and objective. It was anticipated that a common thread connecting the studies in our review would be that they were concerned with the practices and beliefs of teachers whose students are 'beating the odds' (Taylor *et al.*, 2000) in the sense that their literacy development outstrips that of similar students in parallel classes in the same school or those who live in similar neighbourhoods or come from similar socio-economic backgrounds but were taught by more typical, less 'effective' teachers.

The timescale for the conduct of the review suggested that it would be prudent to confine the review to a narrow definition of literacy. We recognised at the outset that a broader interpretation of literacy was possible, even desirable in ideal circumstances, but we agreed that whilst a fuller, broader approach to literacy would involve, amongst other things, the incorporation of multi-modal texts (such as televisual and other texts associated with the new technologies), this review would knowingly use a narrower view of literacy that places its emphasis on print literacy and refers to the creation and understanding of printed text. We also recognised that in our search of literature it would variously be described as literacy, the language arts, English, reading or writing.

In focusing upon *teaching* the review was not concerned with assessing the effectiveness of specific teaching materials, packages or programmes designed to develop literacy. Instead, it was concerned with the actions, behaviours, tactics and

practices that teachers use in school contexts to promote pupil literacy. Our decisions were guided by a belief that we wanted to identify indices of literacy teaching expertise, the kind that if acquired by new teachers would make significant differences in the rate and depth of their pupils' literacy growth. We wanted to try to be clear about the processes of expertise in action and we did not want our search to be clouded by the incorporation of those studies, valuable as they are in many ways, which have been concerned with the effectiveness or otherwise of specific literacy materials, named curricular programmes or classroom packages. We were keen to examine whether teacher abilities and actions, over and above the teaching materials that they use, might make the major contribution to their pupils' literacy learning. We also wanted to consider the teachers' understandings, beliefs and attitudes about literacy and its learning and how such viewpoints, influenced by their professional lives, might be brought to bear on the tasks of classroom teaching.

The particular contexts examined in the review were in *mainstream schools serving the 4 to 14 age range*. This focus excluded non-school settings such as home-schooling and family literacy. It also excluded studies concerned with special schools or one-to-one tutoring unless such tutoring occurred within mainstream contexts. The particular age range chosen encompassed kindergarten, primary and middle schools and the first years of secondary schooling. In the US it covered Grades K- 8 and in the UK it referred mainly to reception and key stages 1, 2 and 3 (i.e. the years covered by the NLS).

We also chose to focus on those studies which have occurred during the last 15 years in order to encompass broadly research influenced by the developments in many countries of reform agendas in policy-making and the associated interest in the development of literacy in school students.

It was agreed at the outset that, within the constraints of time and resources, we would follow as closely as possible the protocols governing systematic reviews as described in the EPPI documentation. It was our intention to carry out the review in two stages. We would first perform a screening and mapping of studies, and then carry out an in-depth appraisal of particular subsets(s) based, perhaps, upon methodological type or rigour of studies.

We agreed to focus on as wide and as comprehensive a range of relevant research studies as we could and that we would include work that was both quantitative and qualitative in orientation. Indeed our previous work suggested that much of the relevant research would combine qualitative and quantitative methodologies and that case studies or more in-depth studies of a single classroom or school might often be incorporated into bigger projects about effective literacy teaching (see Hall, 2002; Hall, in press).

It was agreed that the *mapping exercise* would *include* those studies that meet *all* the following criteria.

- Each study would be about the teaching of literacy in schools.
- Each study would have the characteristics of effective literacy teaching as its main focus.
- Each study would be concerned with the 4 to 14 age range.
- Each study would be related to teaching and learning in mainstream schools (kindergarten/nursery; primary/elementary; middle/high/secondary schools).

- Each study would be published in English.
- Each study would have been published between the years 1988 and 2003.
- Each study would be essentially investigative and evidence-collecting in nature; they might, for example, describe a teacher's performance in lessons, collect and scrutinise pupils' written work, examine students scores on reading tests or seek to detect a relationship between a teacher's knowledge and beliefs and their classroom performance.

Studies would be *excluded* if they fell into *one* of the following categories:

- Studies that were not about the teaching of literacy.
- Studies that did not have the effective teaching of literacy as their main focus.
- Studies that did not have mainstream schooling in the 4 to 14 age range as their research setting.
- Studies that were not published in English.
- Studies that were carried out/published before 1988.
- Studies that were opinion or exhortatory pieces, book reviews, bibliographies, theoretical papers, methodological discussions or were essentially non-investigative and non-evidential in nature.

2.2.2 Identification of potential studies: search strategy

The following electronic databases were interrogated:

ERIC (The Educational Research Information Clearinghouse)
PsychINFO
BEI (The British Educational Index)

Journals that were handsearched or accessed electronically included the Journal of Research in Reading (for the period 1988-2003).

A selection of key internet sites were also searched:

<http://www.ciera.org>
<http://cela.albany.edu>
<http://www.canteach.gov.uk>

A collection of appropriate keywords were generated for use in searching. Care had to be taken to vary the keywords to align with the varying word usages in different countries. For example, 'primary' school is referred to as 'elementary' school in some countries. 'Literacy' teaching may be described as 'Language Arts Instruction', reading instruction, writing instruction.

Examples of some of the search terms used for searching the bibliographic databases were chosen to include the following sets in combination:

1. Terms to indicate that a study was about teaching characteristics
2. Terms to indicate that the study was about the high quality of teacher performances
3. Terms to indicate that the study involved pupils aged between 4 and 14
4. Terms that indicate that the study was concerned with literacy (the teaching and learning of reading and writing)

Table 2.1 illustrates some of the search terms used.

Table 2.1: Search terms used in electronic searching

1	2	3	4
Teachers	Effective	First school	Literacy
Teaching	Exemplary	Primary school	Language arts
Instruction	Successful	Elementary school	Reading
Teaching style	Accomplished	High school	Writing
Teacher	Reflective	Secondary school	Reading instruction
characteristics	Outstanding	Middle school	Writing instruction
Teaching approach			

The key terms were developed with the assistance of Helen Finlay of Leeds Metropolitan University Learning and Information Services, who advised on the use of indexing languages for specific databases. (See Appendix 2.2 for details of the search strategies used.)

All studies returned from searches were incorporated into the bibliographic software program, Endnote. This was to maintain maximum compatibility with the EPPI-Centre systems.

2.2.3 Screening studies: applying inclusion and exclusion criteria

The studies included in the review proceeded through a series of graduated filters. Initially a database was made of all the studies retrieved from the electronic databases, electronically processed online journals and searches of websites (Endnote 1). The inclusion and exclusion criteria were applied to the titles and abstracts of studies in this database. This was done independently by two members of the review team who eventually shared a few uncertainties which had occurred and drew up a list of those studies which at first screening met the inclusion/exclusion criteria. In addition, a random sample of some 30 studies were examined according to our inclusion/exclusion criteria by one of our EPPI representatives whilst a further sub-sample of 10 studies was scrutinised by our second EPPI representative.

The final collection of included studies was entered into a second database (Endnote 2) and full copies were obtained of as many as possible of those studies in this second database which appeared to meet the criteria. The inclusion/exclusion criteria were re-applied so as to exclude any which, upon fuller scrutiny, did not meet the inclusion criteria. All the studies which remained were keyworded using EPPI-Centre Core Keywording Sheet (EPPI-Centre, 2002) with some additional review-specific keywords. (See Appendix 2.4 for EPPI Keyword sheet, including review-specific keywords.) This process permitted the building-up of a 'descriptive map' of the studies in our review and a fuller and clearer picture of the kinds of research which had been used in the studies together with details of their methodologies, theoretical orientation, and so on.

At this stage, no attempt was made to assess the quality of the studies. Although one of our review-specific keywords refers to research methodology, we were more

concerned, at this stage, to note whether or not the study included a detailed account of research methodology rather than presume to evaluate it.

2.2.4 Characterising included studies

The studies collected in the map were explored and a number of interesting themes and tendencies emerged. These are discussed in the next chapter.

2.2.5 Identifying and describing studies: quality assurance process

Each study was keyworded independently by two different members of the review team and a ten percent sample was also keyworded by one of our EPPI link people (CT). In addition, an EPPI colleague re-applied the inclusion/exclusion criteria to a sample of 12 full studies.

2.3 In-depth review

2.3.1 Mapping to in-depth review

During the course of the mapping, it became clear to the review team that there was a large number of studies in the field and that it would not be possible to review in depth all 80 studies found. It was agreed that we would continue with our original research question but that a number of considerations would help us to decide upon (a) those studies which would be subjected to further in-depth data-extraction and (b) those which would be entered into our database with the possibility of data-extraction at some future date.

The choice of those studies for in-depth data extraction was determined by their satisfying new inclusion/exclusion criteria. Our aim was to seek the firmest evidential base upon which implications and conclusions of use to the TTA and to teacher training institutions might be based. Consequently a study was chosen for in-depth data-extraction according to:

- (a) the extent to which it provided a full and detailed account of both methodology and findings
- (b) the extent to which, in the context of the review question, it appeared to us to be of the most direct relevance and usefulness to the TTA and to those involved in the training of student-teachers

In the case of (a), such studies appeared to assume a research community audience primarily (as opposed to a professional audience primarily) in that a theoretical rationale, research design and findings were described in detail. In relation to (b), the review team had to make a professional judgement as to a study's potential to inform the TTA about the teaching practices of literacy teachers who were deemed to be effective.

To enhance the trustworthiness of our decision at this stage, members of the extended review team firstly agreed on the application of the above criteria. Secondly, two members of the team separately re-examined the studies in the map and independently determined those studies that should be included in the in-depth review. Following some discussion to resolve some minor differences (in relation to b above), the 12 studies were agreed upon.

It was agreed that those studies which appeared to satisfy these criteria most effectively – that is, were directed primarily at an academic, research audience, detailed in the presentation of their data-collection, analysis and conclusions as well as being of direct relevance and usefulness to the TTA and those institutions where student teachers are trained – would be subjected to data-extraction and in-depth scrutiny. Applying the above criteria to the studies in our mapping resulted in the identification of a subset of studies that appeared to us to satisfy the criteria and to merit further investigation. These studies were selected for in-depth study, data-extraction and quality appraisal.

The process of selecting studies and the filtering from searching to mapping and finally to synthesis is diagrammatically summarised in Appendix 3.1.

2.3.2 Detailed description of studies in the in-depth review

Data-extraction was conducted on the subset of studies selected for in-depth review. (The studies themselves are described in detail later.)

Each study was data extracted by one person using EPPI Reviewer software and data extracted independently by another team member using a modified version of EPPI Reviewer. It had been our original intention that data would be double entered onto EPPI Reviewer by two reviewers working independently with two members from EPPI also involved for quality assurance purposes. We were obliged however, because of time pressures, to deviate slightly from our original intentions.

It was agreed that we would download the questions from the standardised data-extraction framework, the EPPI-Centre's *Review Guidelines for Extracting Data and Quality Assessing Primary Studies in Educational Research* (EPPI-Centre, 2001) and that our reviewers would use this framework to record their responses on disc or hard copy. We wanted to describe in as much detail as possible the characteristics of the included studies and also to assess their findings as well as their methodological quality. Our concern at this stage was to assess their dependability and establish the contribution that each study made to answering our review question.

It was agreed, however, that we would need to design our own proforma (a modified and shorter version of EPPI Reviewer) on to which our individual responses might be recorded. Each study was analysed using the EPPI Reviewer questions which are summarised on our own proforma under a set of seven sub-headings:

- **Bibliographical details:** author, title, publication, date of publication
- **Abstract:** a brief summary/resumé of the research
- **Aims:** goals and purposes of the research

- **Design:** location of the study, its foci, methods of data-collection and analysis
- **Main findings:** summary of the principal findings of the research
- **Conclusions:** summary of any conclusions which can be drawn from the research
- **Generalisability:** estimate, where appropriate, of the degree to which the results of this research might be generalised
- **Trustworthiness:** estimate of the methodological soundness and appropriateness of the study and the degree to which it contributes to answering our review question. (See Appendix 4.1 for full details of application for all studies.)

Clearly, the data-extraction process described this far did not adhere fully to EPPI procedures; that is, the full subset of studies were not data-extracted independently by two reviewers using EPPI extraction methods. To maximise quality assurance, all the studies selected for in-depth review should ideally be subjected to such a level of scrutiny. Although the timeframe prevented this for all the relevant studies in this project, we decided to apply this, more rigorous, process to a smaller subset. This involved the identification of new criteria to prune still further the studies for a second stage of in-depth reviewing.

At this second stage, the weaknesses of the existing studies had become apparent. More specifically, it became clear that most of the existing studies on effective literacy teaching had not defined teacher effectiveness empirically, depending instead on teacher reputation and nomination by peers.

However, some of the studies in the subset, as well as being the most highly regarded and high scoring studies in the set, had also defined teacher effectiveness empirically. The inclusion criterion for determining those studies which would be subjected to the EPPI data-extraction process was that the studies should achieve a high quality rating (see section 2.3.3 below) and also define teacher effectiveness empirically.

This new subset of studies was then subjected to in-depth reviewing adhering fully to EPPI data-extraction procedures. All these studies were independently data-extracted by two members of the review team and, following moderation, a final version was agreed.

The quality of studies and weight of evidence were assessed using the EPPI data-extraction framework.

2.3.3 Assessing quality of studies and weight of evidence for the review question

Our first task with the in-depth studies was to ascertain the weight of evidence which could be reasonably ascribed to each study in the degree to which it helped to

answer the review question. The EPPI guidelines suggest the bringing together of three considerations when assessing the weight of evidence. In order to ensure that the conclusions drawn from the studies were based upon sound and relevant evidence, we were required to make judgements about three aspects of each study. These three aspects were combined so as to give an overall judgement of the weight that could be attached to the evidence from each particular study to answer the review question. The aspects are outlined in A to D below.

- **A:** In making our judgements about the trustworthiness of each study, we considered the extent to which the study was adequately described, whether it had clear aims, whether it was clear about how its sample had been chosen, and the appropriateness of the study design for the research focus. We considered the adequacy and appropriateness of the data-collection and analysis methods for the study focus. Overall, we rated a study as being of high, medium or low soundness and assigned 3 for high, 2 for medium and 1 for low soundness.
- **B:** We rated the studies as high, medium or low (3, 2 or 1) according to the extent to which we judged that the research design was appropriate to the review question.
- **C:** We rated the studies high, medium or low (3, 2 or 1) according to whether we considered that the focus of the study was relevant to answering the review question. We judged how well the data collected helped to answer the review question.
- **D:** The judgements for the three aspects (A, B and C) were combined into an overall weight of evidence towards answering the review question. Combining our ratings in this way meant that studies in the 1-3 range would be judged *low*, 4-6 range judged *medium* and 7-9 range judged *high*.

2.3.4 Synthesis of evidence

Considerable thought and discussion took place about how best to synthesise the evidence to shed light on the review question. Depending on the nature of the studies, a variety of methods might be used. However, we were aware from our previous research on literacy that it would be unlikely that a statistical meta-analysis would be suitable since we suspected that most of the studies would not be quantitative in design. In the event, the majority of studies drew on case study methodology and some also incorporated quantitative elements. The group agreed that the best way of analysing the studies was to derive themes from those studies which had been subjected to the most rigorous interrogation via EPPI data-extraction. Thus, it was agreed that a combination of methodological and substantive themes would form the basis of a narrative synthesis of the evidence.

2.3.5 In-depth review: quality assurance process

In line with the description of studies in the in-depth review, as outlined in section 2.3.2, the quality assurance process occurred in two stages. In the first stage, two internal reviewers independently applied the procedures: one person data-extracted

using the EPPI guidance and another used a modified version of this. Only when the independent in-depth analysis of the studies was completed did each internal pair of reviewers meet to isolate and resolve any differences of opinion and interpretation. The second stage involved a smaller number of studies being data-extracted using the EPPI guidance. Here two internal reviewers independently conducted the data-extraction and, on completion, decided on agreed versions where there were differences of interpretation. In addition, one of our EPPI colleagues independently data-extracted two of the selected studies and, following moderation with the internal reviewer, a final version was agreed.

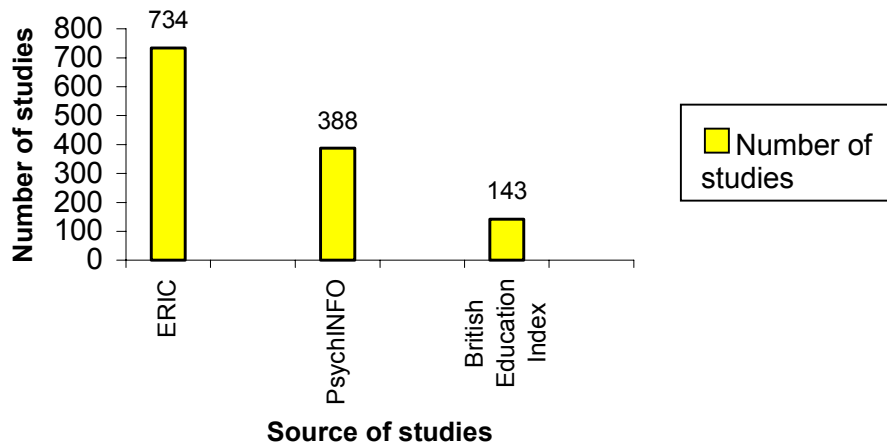
3. IDENTIFYING AND DESCRIBING STUDIES: RESULTS

This chapter describes how the searches produced the potential studies for inclusion in the review and outlines the process by which the initial collection of studies was pruned to produce those that form the basis of the descriptive map.

3.1 Studies included from searching and screening

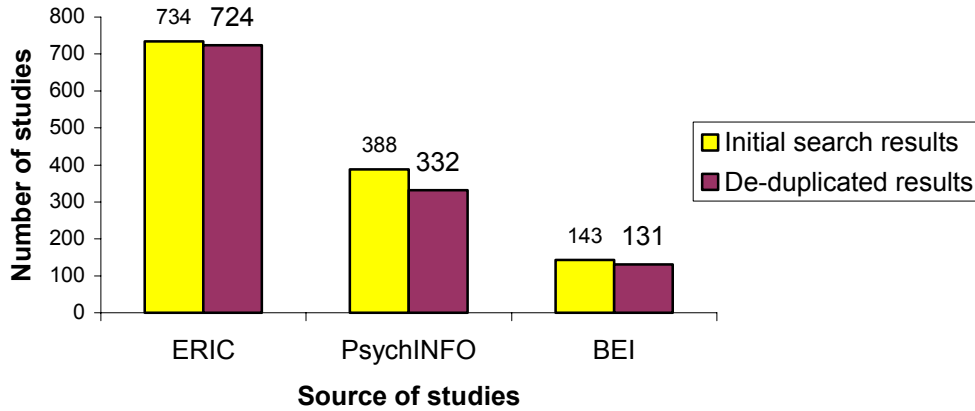
Figure 3.1 sets out the results from the initial search for studies from the electronic databases. The results of this first search (N=1,265) were intended for inclusion into the database, Endnote 1.

Figure 3.1: Retrieval of 1,265 studies (titles and abstracts)



Before the scrutiny of these 1,265 studies and their importing into Endnote 1, each collection of studies was separately checked for duplicate entries. The three databases and the handsearched studies were then brought together hierarchically with the ERIC database being imported into Endnote 1 first. The PsychINFO studies were imported next into Endnote 1 and duplicates appropriately removed. The studies from the British Education Index search were then imported and again duplicates were removed. Finally, the handsearched studies were incorporated. The resultant database, Endnote 1, consisted of the de-duplicated sets of search results with no studies in the ERIC studies duplicated in the PsychINFO or BEI importations. Similarly, the entries from the PsychINFO search were not duplicated in the studies imported from the ERIC and BEI results. Figure 3.2 sets out the de-duplication results. The removal of duplicates resulted in there being 1,187 studies in the Endnote 1 database.

Figure 3.2: Retrieval of 1,187 studies (duplicates removed)



Exclusion criteria (Appendix 2.1) were next applied to the titles and abstracts of these 1,187 studies resulting in a collection of 105 studies which, on first screening, were considered to have satisfied the criteria for inclusion in the review and for entry into our second database, Endnote 2. A total of 1,082 studies were excluded; the details of the exclusions and the bases for such exclusions are set out in Table 3.1.

Table 3.1: Details of excluded studies

Exclusion criteria	Number	%
Studies in which the scope and subject matter of the research was not directly concerned with the characteristics of literacy teachers nominated as being effective.	464	43%
Studies in which the focus was on specific literacy curriculum packages, named approaches or published materials	366	34%
Studies in which the populations studied were not students in the 4 to 14 age range	13	1%
Studies in which the settings for the research were not mainstream schools (primary/elementary/middle/secondary/high schools)	87	8%
Studies which were opinion or exhortatory pieces, book reviews, bibliographies, theoretical papers, methodological discussions or were essentially non-investigative and non-evidential in character	152	14%

Full copies of the 105 studies were sent for and were screened a second time, again using the exclusion/inclusion criteria now applied to full readings of the studies. In addition, a further 11 studies which had resulted from journal and website handsearching were screened. After this second full document screening, 27 studies were excluded as being unsuitable for inclusion in the review. In addition, nine

studies were unavailable in time for the writing of the report. Table 3.2 sets out the full-reading exclusions and the bases for such exclusions.

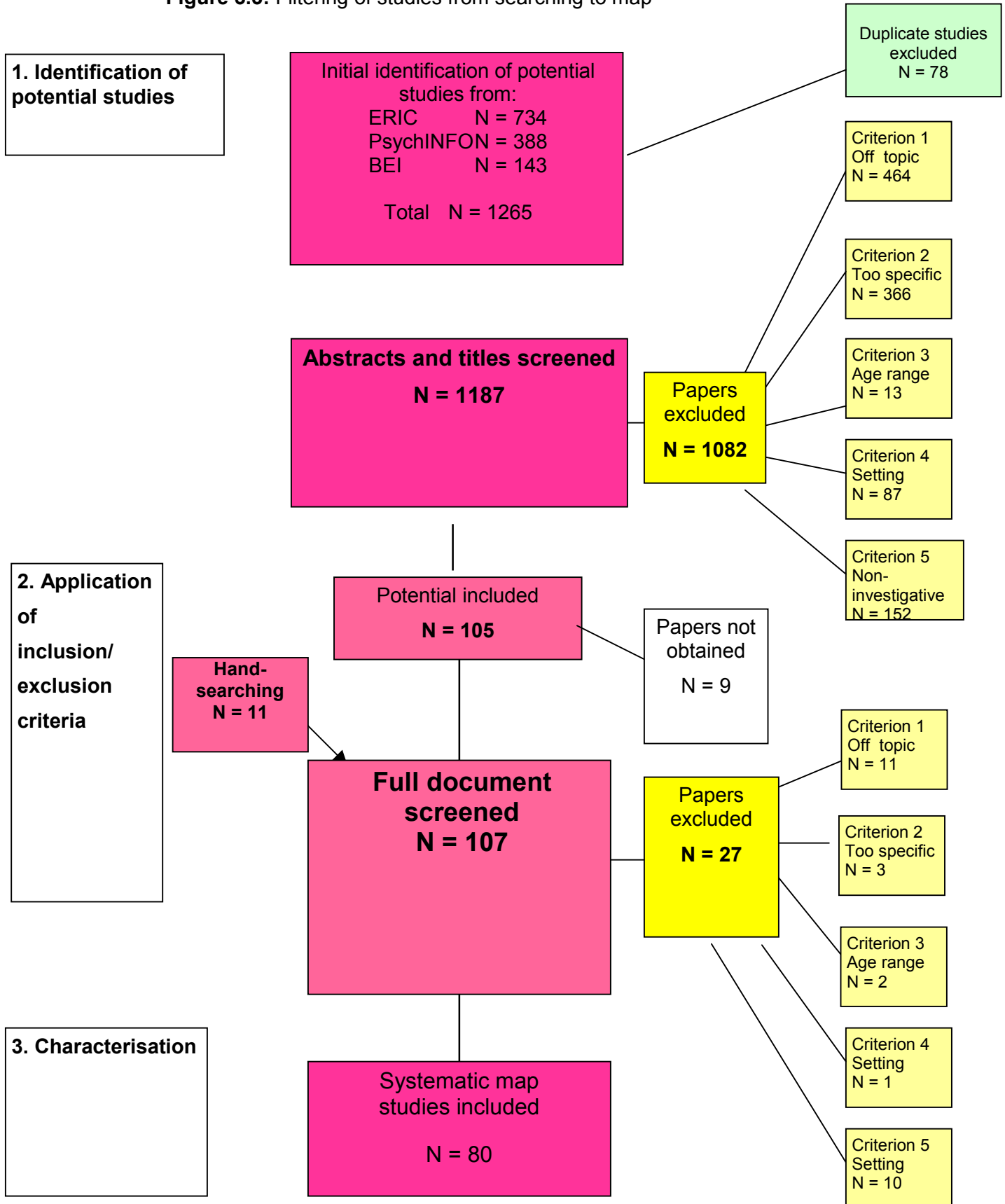
Table 3.2: Details of excluded full studies

Exclusion criteria	Number	%
Studies in which the scope and subject matter of the research was not directly concerned with the characteristics of literacy teachers nominated as being effective	11	41
Studies in which the focus was on specific literacy curriculum packages, named approaches or published materials	3	11
Studies in which the populations studied were not students in the 4 to 14 age range	2	7
Studies in which the settings for the research were not mainstream schools (primary/elementary/middle/secondary/high schools)	1	4
Studies which were opinion or exhortatory pieces, book reviews, bibliographies, theoretical papers, methodological discussions or were essentially non-investigative and non-evidential in character	10	4

Exclusions at the titles and abstract stage as well as further exclusions of full studies together with the unavailability of some studies meant that Endnote 2 now contained 80 studies. These 80 included studies constituted the data for the first mapping exercise (see Appendix 3.1).

The series of 'sieves' through which the initial collection of potentially useful studies was filtered is summarised in the flowchart set out in Figure 3.3.

Figure 3.3: Filtering of studies from searching to map



3.2 Characteristics of the included studies

Figure 3.4 summarises the database origins of the studies which were included in the mapping study.

Figure 3.4: Origin of included studies (N=80)

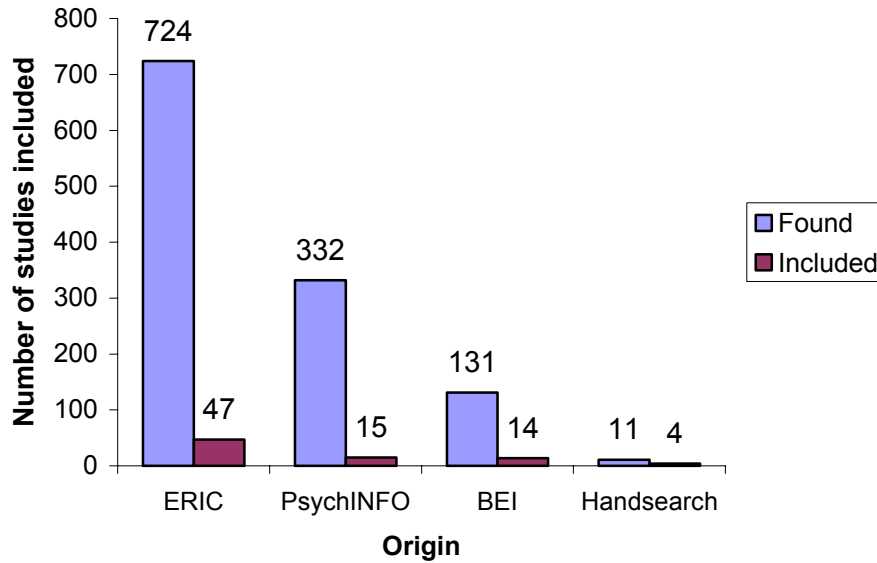


Figure 3.5 sets out the countries in which the various included studies were carried out. The United States of America is clearly predominant, accounting for more than three-quarters of the studies included in the map.

Figure 3.5: Countries of origin of studies (N=80)

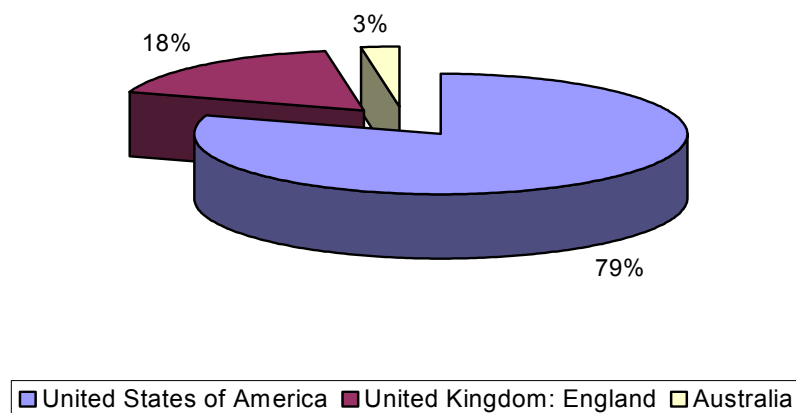
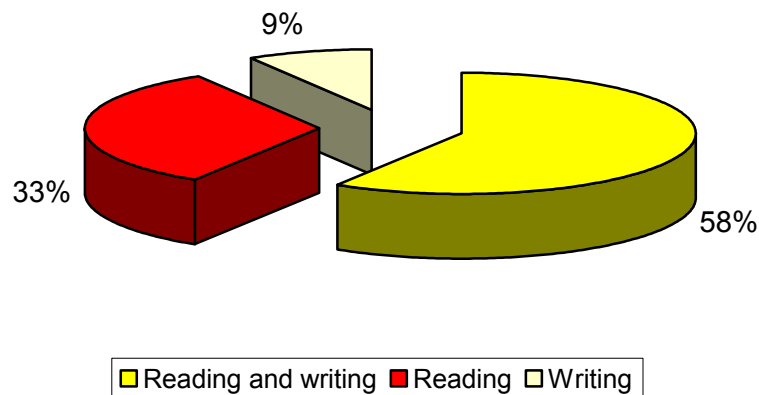


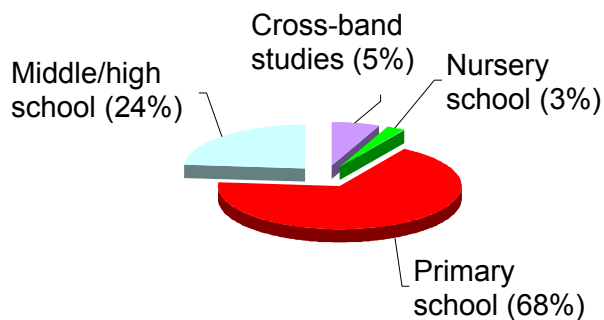
Figure 3.6 sets out the principal aspects of literacy which were the focus of the various included studies. It is interesting to see that, whilst most studies focus directly on both reading and writing and a sizeable number also focus on reading alone, the number of studies based upon writing alone is comparatively small. This may be significant in view of the concerns underlying the NLS for writing in schools.

Figure 3.6: Focus of studies



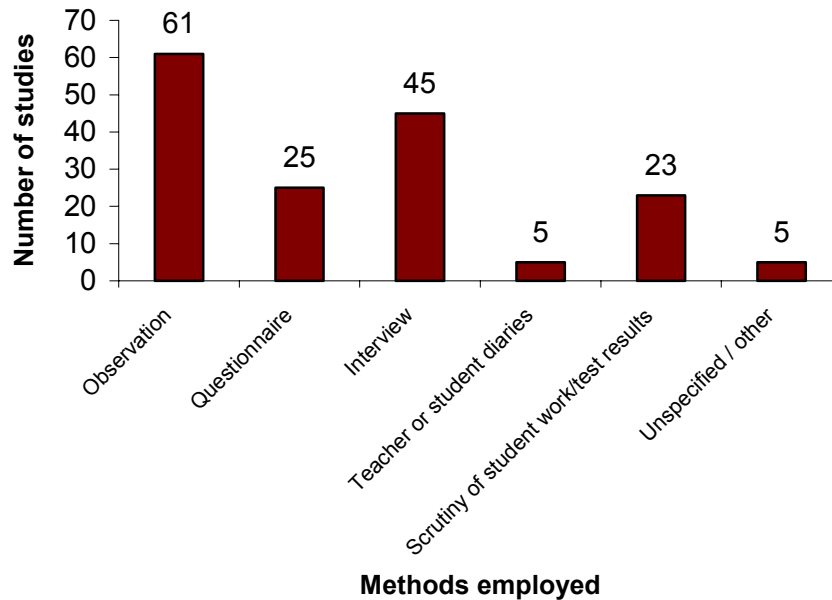
The locations within which the various studies took place cover the full range of 4 to 14 years of schooling. Figure 3.7 shows the specific numbers of studies which occurred within the different age bands. Some 'other' studies included in their design to consider the teachers in a range of schools which crossed the conventional age demarcations of schooling. These are referred to as the 'cross band studies'.

Figure 3.7: Settings in which studies were located



A variety of methods was used for data-collection in the various studies. Many studies employed a range of techniques and methods that included observations, questionnaires, and interviews. Figure 3.8 notes the number of studies that used the various data-collection methods.

Figure 3.8: Data-collection methods (N=80 studies)



The examination of the 80 studies that satisfied the criteria for inclusion into the map revealed a number of interesting patterns. The vast bulk (79%) of the studies was of American origin with only 18 percent from the United Kingdom. Whilst 58 percent of the studies were concerned with general literacy teaching and one-third focused on the teaching of reading, only 9 percent were about the teaching of writing. The greater number of the studies (68%) was based upon the primary school years with just under one-quarter (24%) focused on the middle and secondary school years. The research studies examined seem to suggest that by far the most popular and useful way to find out about effective literacy teachers is to observe them teach. As many as 76 percent of the studies used observation as one of their research techniques. Talking to teachers about their teaching was also a popular research technique; interviews were used in 56 percent of the studies.

3.3 Identifying and describing studies: quality assurance results

Colleagues from the EPPI-Centre played a crucial role in helping to assure quality within the processes of identifying studies of potential importance and applying

inclusion and exclusion criteria that would help highlight those which were important for answering the review question.

In the application of exclusion/inclusion criteria to the collection of titles and abstracts, the measure of inter-rater reliability between the two members of the review team was high (Cohen's Kappa 0.91) and that between the review members and our EPPI colleagues was only slightly lower (Cohen's Kappa 0.86). There was very close agreement between the independent keywording of the two members of the review team and also between their moderated keywording and that of their EPPI colleagues. Where differences did occur, in virtually all cases, they concerned one of two aspects of the core keywording: namely, the population focus (question 8 of the EPPI-Centre Core Keywording Sheet - see Appendix 2.4) or the type of study (question 10). The question of 'type of study' elicited a different (or rather more detailed) response from internal reviewers in the case of some of the studies, with the first three elements (i.e. 'description' and 'exploration of relationships') being ticked by one reviewer while another ticked only 'exploration of relationships' or, in some cases, ticked only 'description'. This issue was also resolved through moderation.

4. IN-DEPTH REVIEW: RESULTS

This chapter provides further information on the studies included in both stages of the in-depth review. The studies are categorised and narrative descriptions of each of the chosen studies are presented. This chapter synthesises the evidence and describes the process of assuring the quality of results. In the final section, we refer to the actual involvement of users in the review.

4.1 Selecting studies for in-depth review

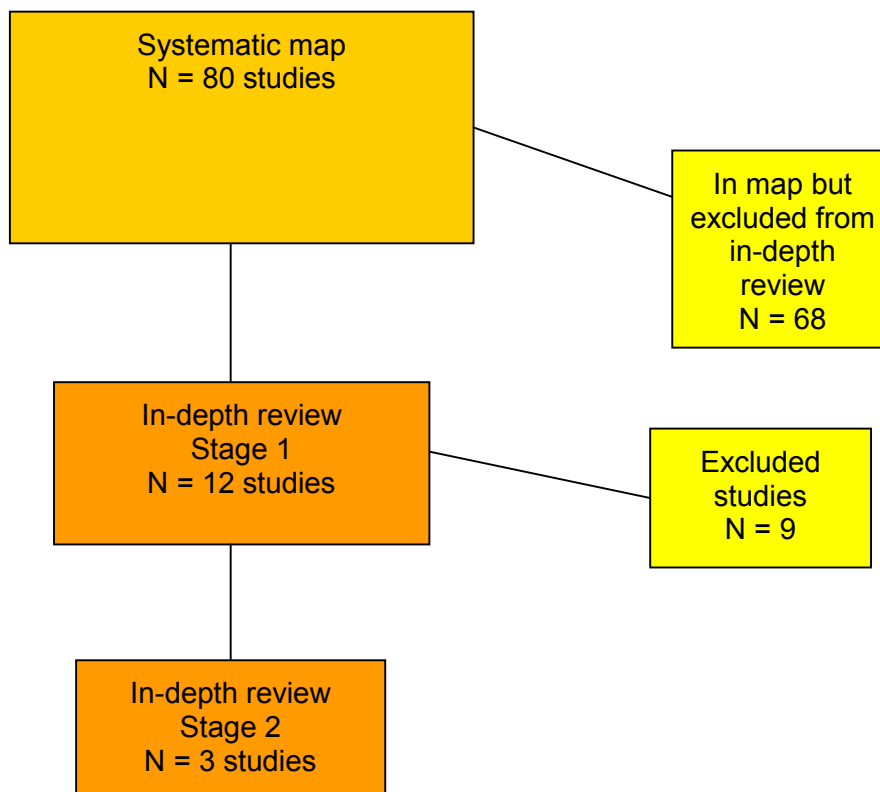
The 12 studies selected from the map of 80 for in-depth review were chosen on the grounds that they were distinguished from the remaining studies in the map because they were of more direct relevance to the Teacher Training Agency and they incorporated a detailed account of methodology and findings.

The three studies that were subjected to the full EPPI procedures of in-depth reviewing differed from the other nine in the subset of 12 in that they had demonstrated teacher effectiveness empirically and they were rated highly by reviewers for quality of evidence (see below). Effectiveness was determined in each case with reference to student outcomes, including results of literacy assessments and student engagement in classroom tasks. While four studies had demonstrated effectiveness empirically (including Collins-Block and Pressley, 2000), only three were deemed of 'high' quality by reviewers and therefore included in the second stage of the in-depth review.

The three most highly rated studies were as follows:

Wharton-McDonald, R *et al.* (1998)
Pressley, M *et al.* (2001)
Taylor, BM *et al.* (2000)

Figure 4.1 charts the process and results from systematic map to in-depth review.

Figure 4.1: From mapping to in-depth studies

4.2 Further details of studies included in the in-depth review

To aid description and analysis in this section, we have clustered the 12 studies that were chosen for in-depth review. Some of the studies within the sample chosen for in-depth analyses fall naturally into clusters. There is, for example, a collection of seven studies which we shall refer to as the ‘Pressley’ studies since they collectively represent a substantial body of emerging research carried out by Michael Pressley and his associates and doctoral students. Then there are what we call the CELA studies – two linked studies carried out at the National Research Center on English Learning and Achievement. One study associated with the work of the Center for the Improvement of Early Reading Achievement (CIERA) stands alone, while the two UK-based, linked studies form the final cluster.

4.2.1 The Pressley studies

In 1996, Pressley, Rankin and Yokoi published a survey of the instructional practices of primary teachers nominated as effective in promoting literacy. Teachers of Kindergarten (N=23), Grade 1 (N=34), and Grade 2 (N=26) who were nominated by their supervisors (N=45) as effective in educating their students to be readers and writers responded to two questionnaires about their practice. As the authors

expected, there were shifts in reported practices between Kindergarten and Grade 2, although there was much more similarity than difference in the reports of Kindergarten, Grade 1, and Grade 2 teachers. The teachers claimed commitment to (a) qualitatively similar instruction for students of all abilities, along with additional support for weaker readers; (b) literate classroom environments; (c) modelling and teaching of both lower order (e.g. decoding) and higher order (e.g. comprehension) processes; (d) extensive and diverse types of reading by students; (e) teaching students to plan, draft and revise as part of writing; (f) engaging literacy instruction (that is, instruction that motivated literate activities); and (g) monitoring of students' progress in literacy. The authors argue that, on the basis of the evidence, teacher education should include exposure to a number of approaches and practices intermingling different types of instruction.

We judged the quality and weight of evidence of this study to be *medium* (see Table 4.1). A disadvantage of the study is the suitability of a questionnaire survey to provide valid evidence of what teachers do.

A very similar survey approach was used by Pressley *et al.* in their 1997 study, **A survey of the instructional practices of grade 5 teachers nominated as effective in promoting literacy**. In this study, Grade 5 teachers, who were nominated by their supervisors as effective in educating their students to be readers and writers, responded to questionnaires about their practice. The teachers claimed commitments to (a) extensive reading at the heart of their reading instruction; (b) diverse instructional activities (e.g. whole group, small group instruction, cooperative grouping, individual reading); (c) teaching of both word-level and higher order (e.g. comprehension, critical thinking) skills and processes; (d) development of student background knowledge; (e) student writing, including mechanics and higher order composition skills (e.g. planning, drafting, revising as a process); (f) extensive evaluation of literacy competencies using diverse assessments; (g) integration of literacy and content-area instruction; and (h) commitment to practices that promote student motivation for reading and writing. Excellent literacy instruction was seen by these Grade 5 teachers as a balanced articulation of many components, including whole language experiences and skills instruction.

Although the study includes a very detailed account of how the questionnaire was developed, reviewers had concerns about the low numbers in the two samples. The fact that no information about response rates was provided casts further doubt on its trustworthiness. As in the previous study, a disadvantage of the study is the use of a questionnaire survey to provide valid evidence of what teachers do. Overall, we rated the quality of this study as medium (see Table 4.1).

Two further Pressley group studies were published in 1998. Both improved on the methodology of the earlier studies in that they left behind the limitations of the questionnaire survey and began to use both observations and interviews as the principal means of data-collection. In the study by Ruth Wharton-McDonald *et al.* (1998), **Literacy instruction in nine first-grade classrooms: teacher characteristics and student achievement**, classroom observations and in-depth interviews were used to study nine first-grade teachers from four districts in the US who had been nominated by language arts coordinators as outstanding (N=5) or typical (N=4) in their ability to help students develop literacy skills. Based on observational measures of student reading and writing achievement and student

engagement, three groups of teachers emerged from the original nine. The following practices and beliefs distinguished the instruction of the three teachers (two nominated as outstanding, one as typical) whose students demonstrated the highest levels of achievement and engagement: (a) coherent and thorough integration of skills with high-quality reading and writing experiences; (b) a high density of instruction (integration of multiple goals in a single lesson); (c) extensive use of scaffolding, (d) encouragement of pupil self-regulation; (e) a thorough integration of reading and writing activities; (f) high expectations for all pupils; (g) masterful classroom management; and (h) an awareness of their practices and the goals underlying them. Teaching practices observed in seven of the nine classrooms are also discussed in the study. The data attest to the complexity of primary literacy instruction and support the conclusion that effective primary-level literacy instruction is a balanced integration of high-quality reading and writing experiences and explicit instruction of basic literacy skills.

Reviewers agreed that the major weakness of this study is its small sample size. However, its high ecological validity and relevance for our review question helped to place it *medium* on quality and weight of evidence (see Table 4.1).

A second study was also published in 1998 when Pressley *et al.* explored **Literacy instruction in ten fourth- and fifth-grade classrooms in upstate New York**. In this study there was considerable improvement on the methodology of the earlier survey studies but the limited sample size together with its very local setting was its major weakness. Reviewers rated its quality as *medium* (see Table 4.1).

In this study literacy teaching was observed in six Grade 4 and four Grade 5 classrooms over the period of one year. The participating teachers were defined as 'effective'. Using the method of constant comparison, commonalities among classrooms were identified in the areas of reading instruction, writing instruction, instructional materials, instructional goals, management and classroom motivational orientation. All teachers provided a combination of authentic reading and writing experiences, and explicit skills instruction. Dimensions of difference among classrooms were also identified with respect to the same set of instructional components. Classrooms differed with respect to the methods and materials that each teacher considered to be the core of his or her pedagogy. There were some striking omissions in the instruction observed, specifically a lack of instruction in comprehension strategy and little or no instruction in self-regulation. The study concludes that literacy instruction in these grades is extremely complex, involving many teacher decisions about how it should proceed.

Two further (linked) studies appeared in 2000 and 2001. We will describe the larger (2001) study first. **A study of effective first-grade literacy instruction** (Pressley *et al.*, 2001) is a qualitative, comparative study of most and least effective-for-locale literacy teaching in first-grade classrooms in five US locales using observational and interview methods. The classrooms of the most effective teachers were characterised by excellent classroom management based on positive reinforcement and co-operation; balanced teaching of skills, literature, and writing; scaffolding and matching of task demands to pupil competence; encouragement of pupil self-regulation; and strong cross-curricular connections. These outcomes did not support any theory that emphasises just one particular component (e.g. skills instruction, whole language emphasis) as the key to effective grade one literacy. Rather,

excellent grade one instruction involves multiple instructional components articulated with one another. Effective teachers combine practices that work well for them without regard for theoretical purity in their teaching. The study concludes that effective literacy instruction is a complex interaction of components but that this does not mean that is a matter of a little of this and a little of that. It means, however, a lot of skills instruction intelligently integrated with voluminous reading and writing. The study provides detailed descriptive characterisation of outstanding American first grade classrooms and also confirms the Upstate New York evidence (Wharton-McDonald *et al.*, 1998).

There is considerable explicitness and justification for all aspects of the research design, especially triangulating processes and reviewers agreed that the study should, overall, be rated *high* (see Table 4.1 below).

The last of the Pressley cluster of studies is that conducted by Cathy Collins-Block and Michael Pressley, presented as a conference paper in 2000 at the National Reading Conference in Scottsdale, Arizona. It was entitled **It's not the scripted lessons but challenging and personalized interactions that distinguish effective from less effective primary classrooms**. This is a study about effective literacy teaching that is part of the larger programme of work, described in Pressley *et al.* (2001) above. This paper extended the work of the larger study by providing more intensive measures of teaching effectiveness and by incorporating pre- and post-test data to describe students' literacy achievement in first and second grade. Data analyses occurred in three phases. In Phase 1, indices of teaching effectiveness were computed for teachers who participated in this study. Phase 2 analysed the end of Grade 2 literacy performances of students who had experienced exemplary versus typical teaching in Grade 1. This paper reports on Phase 3 which identified philosophical and teaching differences between exemplary and typical teachers. Effective beginning literacy instruction involved more than using a single effective instructional method well. Exemplary teachers did much to make their classrooms motivating; they were explicit when developing word level skills, but they also contextualised this explicit instruction in real reading and writing activities. Such instruction, the paper concludes, cannot be packaged in 'teacher-proof' scripted lessons. Though this paper presents much valid evidence that is important and useful about effective literacy teachers, there is a good deal of implicitness about the methodology (perhaps because it was a linked paper and was presented at a conference, albeit a conference dominated by literacy researchers). Its lack of explicit methodological details means that our reviewers judged it *medium* in overall quality (see Table 4.1).

Cathy Collins-Block's second, stand-alone study, **The expertise of literacy teachers: a continuum from pre-school to grade 5** (2002), sought to create a descriptive database of pre-school to Grade 5 teaching expertise. The study occurred in four phases. In Phase 1, 647 directors of literacy instruction in K-12 institutions from seven English-speaking countries analysed highly effective instruction in action from pre-school to Grade 5 through case study point-by-point Delphi procedures. In Phase 2, the resultant 1,294 characteristics of teaching expertise were dimensionalized into 475 categories and inter-rater reliabilities were computed. In Phase 3, 11 prominent researchers from the US, Canada and Australia cross-validated the data. In Phase 4, the authors summarised the five most distinctive qualities per grade level, compared characteristics across grades, and

analysed commonalities and differences between literacy directors' and researchers' ratings. Pre-school to Grade 5 literacy teachers were distinguished from one another by 44 indices of teaching expertise. Applications of these data for research, policy and practice are described in the study. Some 44 categories of expert behaviours are described as being grade-specific. It is claimed that these behaviours provide information that can be used for educators to make more informed career decisions about (a) which grade level most consistently demands their talents and skills, and b) how to advance their expertise in very specific ways. The 44 categories of grade specific expertise could, it is claimed, be collapsed into six domains of expertise and a variety of teacher roles (guiders, guardians, encouragers, demonstrators, managers, coaches and adaptors) are identified.

The research design is explicitly described and the Delphi procedures are applied rigorously. However, the validity of the approach (inappropriately mechanistic and atomistic) and its design appropriateness for our review question meant our reviewers assigned it a rating of *medium* for quality and weight of evidence (Table 4.1).

4.2.2 The CELA studies

The CELA studies include two papers by Judith Langer, the Director of The National Research Center on English Learning and Achievement (CELA) which is the only national research and development centre funded by US Department of Education's Office of Educational Research and Improvement (OERI) to conduct research dedicated to gaining knowledge to improve students' English and literacy achievement in schools across America. CELA is affiliated with the Albany Institute for Research in Education (AIRE) in the School of Education at the University at Albany, State University of New York (SUNY) and works in partnership with the University of Wisconsin-Madison.

In the first paper, **Beating the odds: teaching middle and high school students to read and write well** (Langer, 1999), the author reports on a five-year, qualitative study focusing on characteristics of educational practice that accompany student achievement in reading, writing and English across four states. It describes features of English instruction that support student achievement and the kinds of attention given to helping students gain both knowledge and skills in English. The study, based on socio-cognitive principles, focused on the workings of schools, teachers and classrooms that strive to increase student performance and, despite difficulties of serving the poor, beat the odds on standardised tests in reading and writing, that is gain higher literacy beyond comparable schools. The project as a whole focused on both the professional and classroom activities that contribute to the English instruction the students experienced. The following features dominated the higher achieving English schools and teachers: skills and knowledge are taught in multiple types of lessons; within curriculum and instruction, connections are made across content and structure to ensure coherence; strategies for thinking and doing are emphasised; generative learning is encouraged; and classrooms are organised to foster collaboration and shared cognition. These six features, the author claimed, worked in conjunction with one another to form a supported web of related learning. The researcher concluded that it is the 'whole cloth' environment, the multi-layered contribution of the full set of these features to the teaching and learning interactions, that distinguished the higher achieving settings from others.

A major concern here from the reviewers' perspective is that findings and results are mostly asserted rather than presented and demonstrated. Its considerable implicitness in research design issues together with the fact that concepts were not defined (e.g. 'shared cognition') caused reviewers concern. It was deemed *low* on quality and weight of evidence (Table 4.1).

The second and related Langer paper from CELA, **Excellence in English in middle and High School: how teachers' professional lives support student achievement** (Langer, 2000), examined the characteristics of teachers' professional lives that accompany student achievement in writing, reading and English. It took place in the classrooms of 44 middle and high school teachers in four states, in 25 schools and districts that were attempting to improve students' literacy abilities. The schools served mostly poor and traditionally low performing students and diverse student bodies. The 14 participating schools were described as places where students were 'beating the odds'; that is, they were performing better than other students in demographically similar areas. The other 11 participating schools were more typical of other schools with similar demographics. A five-year study of both the professional and classroom communities sought to identify characteristics in teachers' professional lives that accompanied higher student achievement. Analyses of patterns across cases indicated six features that permeated the 'beating the odds' schools, yet were not present in the more typical schools. The more effective schools nurtured a climate that (1) orchestrated co-ordinated efforts to improve student achievement, (2) fostered teacher participation in a variety of professional communities, (3) created structured improvement activities in ways that offered teachers a strong sense of agency, (4) valued commitment to the profession of teaching, (5) engendered a caring attitude to colleagues and students, and (6) fostered a deep respect for lifelong learning. These characteristics were pervasive across levels, in the ways central administrators as well as classroom teachers lived their professional lives as well as in the features they considered evidence of professional excellence.

This study has much to say that is of value to the review question; its methodology, however, is weak. Like its linked study, just described, there is considerable implicitness in relation to research design issues and there is a failure to explain fully and clearly its central concepts and terms. The two reviewers agreed on a rating of *low* for quality and weight of evidence (Table 4.1 below).

4.2.3 A CIERA study

The study **Effective schools and accomplished teachers: lessons about primary-grade reading instruction in low-income schools** (Taylor *et al.*, 2000) is a study associated with the work of the Center for the Improvement of Early Reading Achievement (CIERA), which is a national centre for research on early reading and represents a consortium of educators from five universities (the University of Michigan, Michigan State University, the University of Southern California, the University of Minnesota and the University of Georgia); teacher educators; teachers; publishers of texts, tests and technology; professional organisations; and schools and school districts across the United States.

This study by Barbara Taylor and her colleagues is a study about school and classroom factors related to primary-grade reading achievement in low-income schools. Two teachers in each of the grades K-3 in 14 schools across the US participated in the study. In addition, two low and two average readers per class were tested in the autumn and spring on reading accuracy, fluency and comprehension. The teachers were interviewed about their practice and their teaching was observed by trained observers. They also completed a written survey and kept logs of their teaching activities. Based on several measures of reading achievement in the primary grades, each school was identified as most, moderately and least effective. A combination of school and teacher factors was found to be important in the most effective schools. Statistically significant factors included: links with parents, systematic assessment of children's progress, strong communication and collaboration. A collaborative model for the delivery of reading instruction, including early reading interventions, characterised the most effective schools. Statistically significant teacher factors included time spent in small group instruction, time spent in independent reading, high levels of pupil on-task engagement and strong home communication. More of the accomplished teachers and more teachers in the most effective schools supplemented explicit phonics instruction with coaching in which pupils were taught strategies for applying phonics to everyday reading. More of the accomplished teachers and more teachers in the most effective schools also facilitated more higher-order interaction. In all the most effective schools, reading was a priority at both the school and the class levels. The study is clear in its conclusion that children in the primary grades make the greatest growth when a high proportion of their reading instruction is delivered through small achievement-based groups, when their progress is monitored regularly, and when they have ample time to read and to learn needed skills and strategies. Teachers who are most accomplished in helping children thrive in reading are skilled in coaching and in keeping all children academically on-task.

The thoroughness of this study, its high validity and reliability, and high relevance for our review warranted it a judgement of *high* for overall quality and weight of evidence (Table 4.1).

4.2.4 The United Kingdom studies

Two studies from the United Kingdom are included in our in-depth analyses. These two are linked studies and were part of a project commissioned by the Teacher Training Agency (TTA).

The study by Medwell *et al.*, **Effective teachers of literacy** (1998), was commissioned by the TTA to help the agency and teachers in England to understand more clearly how effective teachers help children to become literate. The findings are based on close examination of the work of a sample of teachers whose pupils make effective learning gains in literacy and of a more random sample of teachers whose pupils make less progress in literacy. Using mainly a qualitative research design, the study points to a consistent picture of the characteristics of effective teachers and the factors underpinning these characteristics. It seems that effective teachers of literacy placed a great deal of emphasis on presenting literacy to their children in ways which foregrounded the creation and recreation of meaning. Because meaning was of such high priority, they tried to embed their teaching of the crucial technical features of literacy in a context where the children could see why they were learning about such

features. This context very often involved the use of a shared text, which was either being read or written together. As this text was being either read or written, the fundamental skills and features involved were being systematically taught by the teachers. Thus, the teachers continually made connections explicit for their pupils. Functions of language were emphasised rather than rules or definitions. The effective teachers demonstrated a great deal of literacy to children, modelling the processes of reading and writing, but also explaining at the same time the thinking behind these activities. The teachers were aware of how they were teaching and made reasoned decisions about their teaching. They had developed strong personal philosophies about their literacy teaching which had resulted from involvement in literacy projects and/or curriculum responsibility for English in their schools.

The processes for identifying and recruiting the sample are all clearly recorded in Poulson *et al.* below. However we failed to locate the many appendices detailing in full the research design for this larger study in time for this review and therefore we are unable to offer a summary rating for its quality and weight of evidence.

The TTA linked study by Poulson *et al.* (2001), **The theoretical beliefs of effective teachers of literacy in primary schools: an exploratory study of orientations to reading and writing**, is the final study in this in-depth sample. This paper reports an exploratory study, based on a questionnaire, of the theoretical beliefs of a sample of 225 British primary school teachers who were identified as successful in teaching literacy. The response rate to the questionnaire was 59 percent. The research took place between 1996 and 1998. Its aim was to examine the characteristics of effective teachers of literacy – in particular, their background, experience, professional development, knowledge, beliefs and classroom practices – and to compare them with a sample of 71 primary teachers who represented the range of effectiveness in literacy teaching. The findings indicated differences in theoretical orientation to literacy within the effective teacher sample, according to the type of teacher training course taken, the number of years' experience of teaching gained after qualifying, and the highest level of professional qualification. There were also differences in theoretical orientation between the effective teachers and the comparison sample. The paper concludes that these differences in beliefs about literacy and its teaching have implications for policy and professional practice.

The research in this study is limited to one carefully crafted instrument, but this is set in the context of the 'bricolage' used in the wider study (summarised above). Reviewers deemed this study *medium* overall for quality and weight of evidence (see Table 4.1).

4.3 Synthesis of evidence

As we described in section 2.3.4, the authors, in collaboration with two members of the full team, agreed the approach to synthesising the evidence from the studies. Since most of the studies were based on case-study methodology and incorporated quasi-ethnographic methods, a meta-analysis of a statistical nature was ruled out. However, it was possible to treat their findings as complementary and cumulative since the studies, especially the three key studies subjected to the more rigorous in-depth analysis, tended to incorporate a common theoretical and empirical literature base. In addition, the 12 studies tended to refer to each other, to varying degrees.

The Pressley studies, for example, were clearly building on each other and the CIERA study took account of the Pressley studies. The UK studies also referred to the US literature. This meant that there were common themes across most of the studies and especially across the three key studies. We took these themes as a basis for synthesising the substantive findings.

In addition, we agreed that issues of methodology would need to be synthesised. It was agreed that the scale of evidence available on the topic, the measurement of effectiveness and the evaluation of the quality of evidence made available in the studies were themes meriting discussion. We consider these issues first and then proceed to the substantive themes.

4.3.1 Scale of evidence

The first thing to note in relation to the research base on effective teachers of literacy is the limited evidence that is grounded in this country. Only two studies met the criteria for inclusion and these are linked studies, meaning that they derive from the same database. All the remaining ten studies describe teaching in the United States. One must be cautious therefore about applying the findings too rigidly to the United Kingdom.

The majority (8) of the 12 studies relied exclusively on nominations of teacher effectiveness which were provided by supervisors, administrators, advisors, inspectors, headteachers and subject co-ordinators. Thus, teacher effectiveness was taken for granted rather than empirically investigated within the studies; we discuss this more fully below under methodological issues. For now, we note that a minority of studies relied on nominations only as a starting point and did empirically examine teacher effectiveness in considerable depth. However, the demands of doing this led to other issues to do with limited sampling, bearing on the scale of evidence available. The complexity of the research designs required for demonstrating actual effectiveness meant that typically those studies focused on a small number of teachers and schools, thus raising issues of generalisability.

Our review question sought information about teachers of pupils in the 4 to 14 age group. Only two studies (the two CELA studies) were devoted to the upper end of this age range. The majority of the studies, and all the studies allocated the highest rating for quality and weight of evidence, were focused on the younger end of that spectrum.

4.3.2 Methodological issues

The majority of the existing studies on effective literacy teachers depend for their definition of effectiveness on teachers' reputed, as opposed to, demonstrated effectiveness. The following example from Pressley *et al.* (1998, p. 163) was the more usual approach to selection:

In each district, the district-level language arts coordinator was asked to nominate teachers at the fourth- or fifth-grade level whom he or she believed were effective at helping students develop appropriate literacy skills and behaviours at their grade level. District A nominated 4 fifth-grade teachers... Specific criteria for ascertaining teacher effectiveness were left up to the

language arts coordinators. However, some of the most frequently cited criteria included students' year-end standardized test scores in reading and writing; students' written products; students' enthusiasm for reading and writing; teacher practices consistent with current thinking in the field....and teacher creativity. (Emphases added.)

This mode of defining effectiveness would not be a problem if research showed that it is trustworthy but this is not the case. When studies did incorporate empirical measures of literacy teacher effectiveness, it was found that not all teachers, nominated as exemplary, were found to be so (see Taylor *et al.*, 2000; Wharton-McDonald *et al.*, 1998;) and incidentally, not all schools reputed to be exemplary proved to be so either (Stringfield *et al.*, 1997). To illustrate, the final analysis in the study by Wharton-McDonald (1998) was based on a subset of three teachers. Two of these teachers had been nominated as outstanding; one had been nominated as typical or average.

Until we have many more studies, where literacy teacher exemplarity is defined empirically and validly, we cannot claim to have a very secure evidential base about what constitutes literacy teacher effectiveness across the range of mainstream schooling from 4 to 14.

4.3.3 Comparative analysis of quality assessment and weight of evidence

Table 4.1 summarises the quality assessment and weight of evidence ratings for 11 of the 12 studies in the in-depth review. (Although an unpublished report of the study by Medwell *et al.* was available, despite our efforts, we failed to locate the appendices associated with the finer details of the research methodology which meant that we were unable to grade this study for quality assessment and weight of evidence).

As Table 4.1 reveals, the majority of the included studies scored *medium* or *high* for trustworthiness of method. While the majority also scored *medium* or *high* in relation to appropriateness of the focus for our review question, only one (Taylor *et al.*, 2000) obtained the top possible rating for appropriateness of design for our review question. Only Taylor *et al.*'s study obtained the top rating overall, *high*, and two others (Pressley, *et al.* 2001; Wharton-McDonald *et al.*, 1998) obtained a *medium* rating overall for weight of evidence.

Table 4.1: Quality assessment and weight of evidence*

Study	Trustworthiness of methodology	Appropriateness of design for review question	Appropriateness of the focus for review question	Weight of evidence
Pressley <i>et al.</i> (1996)	2	1	2	5
Pressley <i>et al.</i> (1997)	2	1	2	5
Wharton-McDonald <i>et al.</i> (1998)	2	2	2	6

Study	Trustworthiness of methodology	Appropriateness of design for review question	Appropriateness of the focus for review question	Weight of evidence
Pressley <i>et al.</i> (1998)	2	1	2	5
Pressley <i>et al.</i> (2001)	2	2	3	7
Collins-Block and Pressley (2000)	1	1	2	4
Collins-Block (2002)	2	1	1	4
Langer (1999)	1	1	1	3
Langer (2000)	1	1	1	3
Taylor <i>et al.</i> (2000)	3	3	3	9
Medwell <i>et al.</i> (1998)	Not available	Not available	Not available	Not available
Poulson <i>et al.</i> (2001)	3	1	2	5

* 1-3 = low; 4-6 = medium; 7-9 = high

4.3.4 Substantive themes bearing on our research question

Despite the limited scale of studies and the methodological issues just noted, the substantive findings emerging from them (and from the eight that did not actually test effectiveness) align in virtually all respects in terms of describing effective teachers and their teaching.

An important starting point that emerges from the studies is how it was possible to identify and nominate those perceived to be effective teachers of literacy. A variety of different personnel in the studies including supervisors, headteachers, local authority inspectors and language arts specialists readily nominated teachers for inclusion in research studies and a common thread linking most of the choices was that the teachers were recognised by the quality of their pupils' learning. The nominations across the studies were of teachers who were in some way 'adding value' or 'beating the odds' in that their expertise seemed to be associated with their students scoring highly on mandated tests as well as exhibiting generally high levels of literacy in their everyday school work. The methods for recognising effective literacy teachers would be important if such teachers were seen to be an important resource by those who are charged with training student teachers. Most of the studies were based on the premise that the best way to find out about teaching expertise in literacy was to talk to the expert teachers and to observe their practice. By watching them in action and discussing their approaches and beliefs with them, it was judged possible to build up a reliable picture of expertise in action.

The studies in this review represent hundreds of hours in which teachers were carefully observed and talked to about these observations. In this way, the various researchers were able to construct their understanding of effective literacy teaching and to delineate its salient features. Scrutiny of the 12 studies in this review makes it

apparent that effective literacy teachers share a number of important pedagogical practices and bring to their teaching a set of similar beliefs about the nature of children, literacy and its learning.

Bearing in mind what we have said in the previous section about methodological issues and drawing on the three studies which underwent the most rigorous, in-depth analysis, we answer our review question in relation to key themes that were common across these studies. These common themes suggest the sorts of actions teachers and schools can take to promote their pupils' literacy development.

Balance

A key feature of all these studies is a view of the effective teacher of literacy as one who consciously and skilfully balances direct skills instruction with more holistic, authentic, contextually-grounded literacy activities. Effective teachers, it appears, manage to avoid distorting their teaching into bi-polar either / or choices but rather intelligently blend the teaching of skills, such as phonics, spelling and vocabulary with an immersion into literature (including non-fiction) and writing. Pressley (2001, p. 49) puts it this way: 'Effective teachers combine practices that work well for them without regard for theoretical purity in their teaching'.

Effective literacy teaching in these studies is a complex interaction of many components, an intelligent weaving together of a lot of skills instruction with voluminous reading and writing.

A number of studies suggest that this balance is much more sophisticated than mixing a little bit of many approaches. Instead, it is skilled and complex instructional balance.

Integration

As well as blending skill instruction and holistic teaching, the effective teacher in the studies is a teacher who also integrates the various literacy modes so that children regularly and consistently talk and write about what they have been reading. Each literacy mode stimulates and supports the others. They regularly read and write with their teacher and for their teacher, with classroom helpers and for classroom helpers, with each other and for each other. Integration also occurs between literacy and the other areas of the curriculum. Literacy is not sealed off from other curricular activities but is woven skilfully, for example, into the science or history pursuits of the children. Clear and strong connections across the curriculum are a regular feature in the classrooms of effective teachers in many of these studies. Instruction was often seamless and overlapping. The strong connections between reading and writing and subject knowledge helped the children to develop a notion of literacy as a means to an end, a way of finding out, of getting things done. These findings may have implications for policy-makers in relation to the NLS.

High levels of pupil engagement and instructional density

Most students in the classrooms of effective teachers were involved and engaged with their work most of the time. Students kept on-task, their conversations were task-oriented and there was little time-wasting. Even when left unsupervised, the children continued to be involved with their work. Effective teachers were distinguished by their ability to foster several aspects of learning in one short

teaching episode. They were able to seize teaching opportunities as they arose and link them with planned teaching.

Excellent classroom management

The effective teachers in the studies were excellent managers of their classrooms. They managed to teach in a variety of effective ways and to make high demands on their students but did it within a strong management framework where children's behaviour and learning were effectively and efficiently supervised, and where pupils and teachers collaborated about rules and routines. These rules and routines were then consistently and persistently applied. Classroom assistants, specialist teachers and helping parents were also used well and managed carefully and skilfully. Maximum time and opportunities were created for learning and time-consuming, non-demanding tasks were minimised.

A positive, reinforcing and co-operative environment

The classrooms of effective teachers were very positive places. Discipline problems were rare and they were dealt with positively and constructively, devoid of harsh demeaning criticism and with minimal disruption to the class. Students received a lot of positive reinforcement for their efforts and accomplishments both privately and publicly. Students were also consistently encouraged to work co-operatively. They were encouraged to aim high and a 'can do' approach was encouraged.

Encouragement of self-regulation

Effective literacy teachers promoted self-regulation in their classrooms. They helped students to use their time well, and also to be organised and efficient in their work habits. Students were taught, for example, to check their use of conventions, such as spelling and punctuation in their written work and to choose books which were within their reading capabilities. The teachers expected their students to work to their full capacity at all times; they did not accept work from them which was below par.

Teaching style: differentiated instruction

Effective teachers made extensive use of 'scaffolding' and this contributed to the density of their instruction. They monitored their pupils' progress carefully and regularly and interacted with just enough help to facilitate learning but not so much that it would lessen their need to strive. These teachers were sensitive to students' literacy progress, they were skilled at matching task to ability and recognised the necessity to pace teaching in line with their students. Their teaching style was more akin to 'coaching' in which student understanding and skill development was prompted through the use of structuring comments, the probing of incorrect responses, the scaffolding of instruction and a readiness to seize opportunities and teach 'on the fly'. Their style of talking to their students was more conversational than interrogational. They grouped and re-grouped children for *instructional* purposes rather than created fixed *ability* groups. Small group teaching, one-to-one instructional conversations and whole class teaching were judiciously blended.

Links with parents and the local community

It is of note that in the most highly rated study in the review (which incorporated both school and teacher factors in its analysis of literacy teacher effectiveness, Taylor *et al.*, 2000), close links with parents and with the local community were highly significant. This study was based in 'low poverty' urban settings.

Teacher beliefs

We also posed the question: What knowledge and beliefs about pupils, teaching and literacy do effective literacy teachers bring to their classroom tasks? Many of the effective teachers in the studies had a strong core of professional knowledge. They exhibited strong, coherent personal philosophies and they were able to relate their philosophies and beliefs to the individual needs of students. They had strong beliefs about their own effectiveness; they also believed that they could adapt instruction to meet individual student literacy needs and that no barrier to a student's literacy development was greater than their own professional competencies to overcome it. They were determined to communicate their own personal enthusiasm for literacy to their students. In addition, effective literacy teachers appear to be aware of how and why their teaching works for individual pupils and for their class as a whole.

Professional lives

The instructional potency of individual teachers can be amplified if they are supported in their efforts by the professional contexts within which they operate (Taylor *et al.*, 2000) The school is an obvious source of such support. Schools can make teachers feel that their work is valued; they can offer teachers a sense of agency and help strengthen their commitment to their teaching tasks. Co-operation, collaboration and collegiality are the hallmarks of the supportive school. In addition, effective teachers are characterised by their continuing professional development.

4.4 In-depth review: quality assurance results

Chapter 2 includes an account of the quality assurance process of the in-depth review. Here we offer an elaboration of the results of that process for the three studies which were subjected to the EPPI quality assurance procedure at the in-depth review stage. The three studies were independently data-extracted by two members of the review team and, following moderation, a final version was agreed.

Overall, there was very high agreement between pairs of reviewers. Issues to be resolved in moderation tended to be the same for each study. In one case, reviewers had interpreted a series of questions about sampling differently. One reviewer had assumed that learners (who were only of secondary importance and not the sampling frame) should be detailed under sampling details in the EPPI data-extraction form. However, it was agreed that 'teaching staff' constituted the sampling frame.

A further issue for discussion was how best to describe the sample, specifically whether it should be described as 'cross-sectional' or 'prospective'. Another point for discussion was whether data analytic methods should be rated 'implicit' or 'explicit'. Discussion facilitated agreement between the pairs and the occurrence of discussion itself was recorded.

There was also very close agreement between the (moderated) agreed version and the completed data-extraction form of our EPPI colleague who also data-extracted two of the three studies. Once again, areas of initial disagreement related to whether descriptions of data analysis could best be described 'implicit' or 'explicit', and additionally, whether procedures for enhancing validity and reliability of data analysis were in place and explicit. One further aspect of discussion between internal and

EPPI reviewers related to the study type. It became clear that a different interpretation of the word 'evaluation' was applied and we agreed to stay with the EPPI understanding of the term. Overall discussion led to consensus and an agreed response to the items, where there had been some misalignment initially.

There was very high agreement, both between the internal reviewers and between internal and EPPI colleagues about 'weight of evidence'.

4.5 Nature of actual involvement of users in the review and its impact

The beginning of Chapter 2 describes the approach to and rationale for user involvement. As we explained there, actual involvement of users consisted mostly of small-group, informal meetings with colleagues. The largest meeting involved five colleagues and more typically meetings involved three or four people. However, most of the extended team had several conversations with one or both authors. Moreover, email facilitated communication across the entire team. There were two key points at which this form of communication was especially helpful: at the point of determining our focus and at the point of agreeing the protocol.

The tight timescale for the review militated against the scheduling of as many meetings as were desirable. However, four colleagues, all heavily involved in teacher education, have become quite skilled in the process of systematic reviewing and are critically aware of some of the issues involved. These colleagues are also significantly involved in training student teachers how to develop children's literacy and so, the findings of this review are of special interest to them.

The final chapter summarises the findings and offers some recommendations for policy, practice and research.

5. FINDINGS AND IMPLICATIONS

The review set out to answer a specific question about the nature of effective literacy teaching in schools. The aspiration was to assess the evidential base from which useful findings, conclusions and implications of especial importance to the TTA might be derived. This chapter summarises the systematic review journey and pulls together the major substantial and methodological findings from the project. It considers the strengths and limitations of the review. Finally, it offers proposals for the policy, practice and research implications of the findings.

5.1 Summary of principal findings

5.1.1 Identification of studies

The identification of studies was guided by the review question. We needed to be clear about the processes of expertise in action and we also wanted to consider the teachers' understandings, beliefs and attitudes about literacy and its learning and how such viewpoints, influenced by their professional lives, might be brought to bear on the tasks of classroom teaching.

The particular contexts examined in the review were in mainstream schools serving the 4 to 14 age range. It was also agreed to focus on those studies that had occurred during the last fifteen years. We focused on as wide and as comprehensive a range of relevant research studies as we could and we included work that was both quantitative and qualitative in research orientation.

Having agreed the criteria with the extended team, the mapping exercise included those studies that:

- were about the teaching of literacy in schools
- had the characteristics of effective literacy teaching as a main focus
- pertained to the 4 to 14 age range
- pertained to teaching and learning in mainstream schools
- were published in English
- had been published between the years 1988 and 2003
- were essentially investigative and evidence-collecting in nature

At this stage, criteria pertaining to the quality of the research were not considered. Clearly, therefore, a study could meet the criteria above, but not be a particularly useful one. For example, there may be issues about the quality of the match between question and methodology, the quality of the instantiation of the methodology in perhaps participant selection, materials used, number of observations and so on. Criteria pertaining to quality were considered later in the process.

Electronic databases, journals and internet sites were searched using an appropriate search strategy and the results of the various searches were incorporated into a bibliographic software programme.

5.1.2 Mapping of all included studies

The studies included in the review proceeded through a series of graduated filters. Initially a database was made of all the studies retrieved from the electronic databases, electronically processed online journals and searches of websites. Initially the inclusion and exclusion criteria were applied to the titles and abstracts of studies in this database. The final collection of included studies was entered into a second database and full copies of as many as possible of those studies in this second database were obtained. The inclusion/exclusion criteria were re-applied so as to exclude any which, upon fuller scrutiny, did not meet the inclusion criteria. All the studies which remained were keyworded using EPPI-Centre Core Keywording Sheet (EPPI-Centre, 2002) with some additional review-specific keywords. This process permitted the building-up of a 'descriptive map' of 80 studies in our review.

5.1.3 Nature of studies selected for in-depth review

In seeking to extract a manageable subset from the 80 studies in the descriptive map, we were concerned with maintaining our original review question but to search amongst the studies to discover those which were likely to provide the firmest evidential basis upon which answers to that question might be based. Some 12 studies emerged from the application of additional inclusion criteria to the 80 studies in the descriptive map. Each of these 12 studies satisfied the following inclusion criteria: they were considered to be directed primarily at an academic, research audience; they were detailed in the presentation of their data-collection, analysis and conclusions; and they were deemed by the team to be of direct relevance and usefulness to the Teacher Training Agency and those institutions where student teachers are trained.

Each of the 12 studies was subjected to a modified version of the EPPI data-extraction process and narrative descriptions as well as quality assessments and weight of evidence measures were generated. The full EPPI data-extraction and in-depth analysis process was applied to three of the studies. These three studies were chosen from the 12 because they were the only studies to achieve an above 5 quality rating, as well as well as being the only studies of the 12 that defined teacher effectiveness empirically. These three studies were deemed by the team to be high on trustworthiness: they had clear aims and had an appropriate sampling and research design for their focus; they applied appropriate data-collection and analysis methods. They were also rated highly by the team in terms of the appropriateness of their research design for the review question and the focus of each study was deemed highly relevant to answering the review question (see sections 2.2 and 4.4 for full details). The significance overall of the studies selected for the in-depth review is discussed in section 5.2 below.

5.1.4 Synthesis of findings from studies in in-depth review

The 12 studies in the in-depth review were quite heterogeneous and did not lend themselves to any pooling of data. There were also no opportunities for any kind of statistical analysis.

Although several studies, including all three included in the second phase of in-depth reviewing, were deemed to be medium or high in terms of weight of evidence, an issue remains about the scale of evidence available to address the research question. High quality studies, which incorporated empirical validations of effectiveness, were, unsurprisingly, based on small samples.

Despite those limitations, the substantive findings had a great deal in common and offered a sound basis on which to make recommendations for practice.

Scrutiny across the 12 studies in this review but, more specifically across the three that were subjected to more rigorous interrogation and that empirically established effectiveness makes it apparent that effective literacy teachers share a number of important pedagogical practices and bring to their teaching a set of similar beliefs about the nature of children, literacy and its learning. These are now summarised under key headings.

Balance

Effective teachers obtain a balance between skills teaching and the application of literacy for meaningful purposes. Direct skills teaching is balanced with more authentic, contextually-grounded literacy activities (e.g. reading real books, connected text), not just completing worksheets to practise a single skill; using skills and strategies in combination in authentic writing and talking about text. Effective teachers of literacy manage to blend the teaching of skills like phonics, spelling and vocabulary with an immersion into literature, including non-fiction and writing.

Integration

Effective teachers integrate the modes of language so that literacy lessons involve reading, writing, listening and talking. Integration also occurs between literacy and other curriculum areas.

Pupil engagement and instructional density

Effective teachers manage to keep their pupils on task most of the time. They are distinguished from their less effective colleagues by the amount of teaching they manage to do in a given amount of time. They are more adept at making links across topics and connecting with pupils' prior experiences.

Classroom management

Effective teachers are effective classroom managers. They collaborate with their pupils to develop class rules and routines, and are persistent and consistent in applying them.

A positive environment

Effective teachers create a 'can do' approach in their classrooms.

Self-regulation

Effective teachers of literacy encourage self-regulation on the part of their learners. In addition, they actually teach their pupils strategies to engage in self-regulation.

Teaching style

Effective teachers make extensive use of scaffolding and they monitor their pupils' literacy progress carefully. They are skilled at differentiating according to pupil

learning need. They are more conversational than interrogational in their style of teaching. They adopt a fluid grouping approach; that is they do not consign pupils to fixed ability groups. Small group teaching characterises their classroom practice.

Links with parents

The evidence shows that effective literacy teachers maintain close links with parents of pupils.

Teacher beliefs

As well as holding a strong core of professional knowledge and beliefs, effective teachers are able to relate their philosophies to the individual needs of pupils. They also believe in their own effectiveness as teachers of literacy.

Professional lives

Effective teachers are characterised by their continuing professional development.

5.2 Strengths and limitations of this systematic review

Positive outcomes of this review are at two levels: the findings themselves and the impact on the participants constructing the review.

We return more directly to our research question: ‘What are the professional characteristics, beliefs and classroom approaches of teachers of literacy in the 4 to 14 age range of mainstream schooling who have been nominated as effective?’ We conclude that we can have some confidence in the claims made and in the findings about effective literacy teachers in the early years of school. This is the major strength of the current review. It is of note that all three studies which we subjected to the second stage of scrutiny, fully in line with EPPI procedures, are deemed at least *medium* for weight of evidence. All three pertained to the early years of the primary school. What engenders further confidence in the findings in relation to the early years of school, apart from more and better quality studies having been conducted at this phase of schooling, is the similarity and consensus across their findings. As we move from the very early years up through the school system to age 14, then our degree of confidence about the results drops considerably. This is due to (a) the limited number of studies that specifically examined effective teaching beyond the early years of school and (b) the quality of those that were conducted in terms of their appropriateness, especially methodologically, for the review question.

A further strength of the current review is the mapping of the relevant evidence. Using specific inclusion and exclusion criteria, we have systematically assembled those studies pertaining to effective literacy teaching of pupils aged 4 to 14 in mainstream schooling. This map is likely to prove useful to other researchers who are interested in studying this field. We return to this later in relation to recommendations.

Colleagues involved in teacher education have benefited from having their systematic reviewing skills and their empirical research skills developed over the course of the project. Members of the team were involved in all phases from identifying the focus through to the synthesis of evidence and the reporting of results. Sustaining the systematic process over the period of the study led to several

discussions about what constitutes evidence, what counts as effective and indeed what defines literacy and its achievement; many such discussions occurred outside the planned, task-oriented meetings of the review proper. The upshot was a more interrogating approach on the part of colleagues to the evidence underpinning policy and practice, in relation both to their own policies and practices and to those of others. To sum up, it developed the team's appreciation of evidence-informed practices and policies, not just in relation to literacy, but in relation to all aspects of education. These benefits are important to note since it means that users were not merely involved in informing the process and in becoming aware of the research evidence for their own professional purposes; they also had their research capacity enhanced.

It was unfortunate that, given the short timescale, we were not able to take account of one group of users, the students themselves.

There are limitations about the review process itself. We have, as a research field, limited methodologies for synthesising across qualitative studies. The over-emphasis on quantitative studies tends to privilege exploration and synthesis of problems that can be easily reduced to their subcomponents, such as recognising a letter-sound correspondence, or responding to text-based questions. Questions about effective literacy instruction cannot be easily reduced, so those studying this area use methodology appropriate to the complexities. Yet, the methods for synthesising across such studies are limited, which in turn, limits the production of a synthesis of information in this field.

There are yet other limitations pertaining to specific aspects of this review. The in-depth review is based on just 12 studies and that the EPPI procedures were fully applied only to three, which means that the recommendations that follow in the next section are drawn mostly from just three studies. This is a limited research base. Yet the field of literacy research is vast and it may be that other review questions based on other selection criteria, incorporating different inclusion and exclusion criteria may also offer insights into how best to promote literacy in the classroom (for example, questions about children's literacy learning).

We would have benefited from more in-depth training at the beginning of the process and more time to develop and reflect on the process with the extended team of users and colleagues in ITT. While meetings did take place, as we have described above, these meetings were often heavily task-oriented: for example, agreeing the inclusion criteria, deciding on the best way of synthesising the evidence, etc. All team members together did not have the opportunity, within the period of the project itself, to discuss some of the wider aspects of the systematic reviewing process (e.g. reasonable methods for synthesising qualitative studies).

5.3 Implications

Although we offer recommendations for policy and practice here, we need to add a major caveat at the outset. The three studies that form the major thrust of the findings and recommendations are from the US and may therefore not be directly applicable to the school context of the United Kingdom. It is worth bearing in mind that children in the UK typically start formal schooling at a younger age than their

counterparts in the US. This may mean that teachers in both countries have different expectations for pupils in the same age range. On the other hand, UK and US governments have implemented very similar educational reforms over the past 15 years or so, leading to the specification of standards to be met, content to be covered and assessments to be carried out. Pedagogical guidance and literacy have also been major foci of curricular reform in both regions. All this may suggest a convergence in educational priorities and practices. Nevertheless, comparative researchers caution against 'uncritical borrowing' (Grant, 1999) so our recommendations must be considered in the light of the limited UK-based evidence.

5.3.1 Policy

The existing research base offers an account of what appears to be best practice at present. It is important that this knowledge is disseminated to teacher educators, student teachers and teachers. It is also important that it is shared with literacy advisors, literacy consultants and OfSTED inspectors.

We would suggest that teacher educators and student teachers should be made aware of the strength of the evidence supporting the findings for the early years (up to age 8) and that those findings should influence their teaching of students and pupils respectively.

What we currently know about best practice, as detailed in this review, should inform curricular policy in literacy. This evidence should provide the foundation for future experimental strategies and initiatives in literacy.

Effective teachers have a detailed knowledge of their pupils' learning and they are adept at matching work to pupil need. This seems to be accomplished by small, instructional, group work and one-to-one instructional conversations. Such differentiation seems to be a crucial aspect of effective teaching and may need to become much more common in classrooms. Our more diverse classroom populations and our national concern for inclusion suggest small group work and individual work with pupils should not be undermined.

The constant reviewing of the NLS is important in the light of the evidence about effective teachers of literacy. The recent emphasis of the policy-makers on the dialogic classroom is to be welcomed in the light of the evidence about effective teachers' classroom interactional patterns outlined here. Also, the fact that effective literacy teachers do not just integrate the modes of language but also integrate literacy and other curriculum areas suggests that policy-makers might emphasise this feature to teachers and teacher educators.

To summarise, policy-makers should consider the importance of the following in literacy development: the early years as a crucial time for literacy learning, differentiated instruction; authentic opportunities for reading, writing and talk, cross-curricular connections; and careful monitoring.

5.3.2 Practice

It is very important that effective literacy teaching is seen as the sophisticated and complex practice that it is. It consists of a variety of characteristics which work in

combination and cannot be reduced to any one or two factors. Effective literacy teachers have a wide repertoire of varied practices and their skill lies in the ways in which they combine and integrate these in different ways and combinations to suit the different individual learning needs of students.

There is, according to the research evidence, a cluster of beliefs and practices, such as balancing skills teaching and more authentic literacy activities for meaningful purposes; integrating the language modes and making cross-curricular connections; scaffolding and differentiating teaching; promoting self-regulation; having high expectations for pupils; expertly managing the classroom; and having a knowledge of their pupils' literacy learning, and so on. Student teachers need to know what is current best practice and they need experiences of all these practices as well as training in combining and blending them in the light of their monitoring of their pupils' learning. Given the complex nature of effective literacy teaching, teachers in training would need opportunities to reflect on their own and others' experience of teaching literacy in the light of the existing research base.

Case study material and exemplification material would be useful supports for teacher educators in promoting this learning and reflection.

Two major issues stand out about effective literacy teachers. One is the twin emphasis on code and meaning, encapsulated by the word 'balance'. Effective literacy teachers foster their pupils' literacy learning through the use of contexts and activities that are meaningful to them in the here and now of their lives. The other issue is that they integrate the modes of language so that, for instance, talk and reading, are developed in tandem. In addition, literacy and the rest of the curriculum are integrated; effective teachers seize opportunities across the curriculum for literacy development. It is likely that student teachers would benefit from exposure to examples and experiences of the application of 'balance' and 'integration' in the literacy classroom.

5.3.3 Research

- (a) The majority of the studies identified in this review were from the US. It is obvious that we need more high quality research in the UK on effective literacy in all phases of schooling. This is especially true of the middle years of schooling where concerns about literacy have been expressed most recently.
- (b) Future research would benefit from a close focus on effectiveness in literacy teaching with reference to student outcomes. Whilst student outcomes as measured by valid assessment scores are clearly important, consideration should also be given in research on literacy teacher effectiveness to pupil interest and enthusiasm and how their motivation to learn might be enhanced in response to effective teaching. To focus only on the more readily measurable indicators of pupil progress, such as test scores, would be inadequate. Such scores cannot be taken as indicators of pupils' levels of confidence in literacy, their attitude to learning or their commitment, as shown in their readiness to engage in literacy activities outside school demonstrated in the recent Progress in International Reading Literacy Study (PIRLS) (Mullis *et al.*, 2001). As one of our anonymous referees reminded us, in the long run, such features may make a significant contribution to pupils' effectiveness in using literacy. What is

essential is that nominations of literacy teaching effectiveness are accompanied by appropriate empirical validations of what effective literacy teachers think and do in their classrooms.

- (c) Research in the UK might examine more closely the links between effectiveness at the whole school level and the ways in which it can promote and support effective literacy teaching within individual classrooms. The synergy between school and classroom factors is worthy of further study. The trustworthy evidence of Taylor *et al.* (2002) - that a combination of school-level decisions as well as effective practices within individual classrooms is needed, if low-income schools are to 'beat the odds' in literacy - suggests research is especially needed in contexts and settings that are associated with high levels of school disaffection. The more recent direction of research on effective literacy teaching in the US (see Taylor *et al.*, 2002) has shifted to translating research on effective literacy teaching into practice and, particularly, to the professional development activities that are most effective in promoting changes in the teaching of literacy. This is also an area that merits study in the UK.
- (d) Insofar as one might legitimately separate the modes of literacy, writing is more in need of further study than reading, at all phases, but especially in the primary and middle years.
- (e) Given the limitations pertaining to the existing research base, discussed above, it would seem that we need more studies about effective literacy teaching in which we can have high levels of trust. The best of the studies included in our review (e.g. Taylor *et al.*, 2000) depended on natural correlations between teaching factors and pupil achievements. Such studies are useful in directing us to what seems to work best in practice. We need studies of this kind in the UK.
- (f) The mapping of the research territory that this project represents might usefully be developed through updating the map as new studies are reported and published, and conducting further analysis of the studies in the map. Immediate attention might usefully be given to further in-depth analysis of the nine studies that were not part of the second stage of in-depth systematic reviewing. Some colleagues directly involved in initial teacher education are beginning to be skilled in this approach. In this context, an issue for further research is to establish the extent to which the findings emerging from the small pool of studies, selected according to such stringent criteria, would apply equally to the findings of studies drawn from the larger pool.
- (g) Finally, research users, especially teacher educators, might be supported in the production of case study material, based on the existing evidence, summarised in Appendix 4.1. This could be used in the development of student teachers' knowledge and skills. In addition, support might be made available to produce a 'professional user review' of effective literacy teaching.

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APPENDIX 1.1: Advisory Group Membership

EPPI-Centre advisors

Professor Diana Elbourne, Institute of Education, EPPI

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International advisor

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Professor Kathy Hall, Leeds Metropolitan University

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Ms Lyn Holmes, Leeds Metropolitan University

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Dr Jon Tan, Leeds Metropolitan University

Dr Sue Warren, Leeds Metropolitan University

APPENDIX 2.1: Inclusion and exclusion criteria

Screening studies for inclusion in the ‘mapping’ section of the review

Exclusion: To be included, a study must *not* fall into any *one* of the following categories:

If the scope and subject matter of the study is not directly concerned with the characteristics of literacy teachers nominated as being ‘effective’ (or synonyms like accomplished, exemplary etc) teachers

Score 1

If the focus of the study is on a specific curriculum, named approaches, packages or published materials and not about literacy teaching in general

Score 2

If the populations studied are not students in the 4 – 14 age range

Score 3

If the settings on which the study focuses are not mainstream schools (primary/elementary/middle/secondary/high school)

Score 4

If the study is an opinion or exhortatory piece, a book review, a bibliography, a theory paper, a methodological discussion or is essentially non-investigative and non-evidential in nature

Score 5

If the study was published prior to 1988

Score 6

APPENDIX 2.2: Search strategy for electronic databases

The ERIC and PsychINFO databases were searched using the Cambridge Scientific Abstracts interface.

Query: KW=("effective teaching") OR ("effective teachers") OR ("effective instruction") AND KW=((literacy) OR (reading) OR (writing)) NOT KW=((adult literacy) OR (family literacy) OR (computer literacy))

KW=("successful teaching") OR ("successful teachers") OR ("successful instruction") AND KW=((literacy) OR (reading) OR (writing)) NOT KW=((adult literacy) OR (family literacy) OR (computer literacy))

KW=("exemplary teaching") OR ("exemplary teachers") OR ("exemplary instruction") AND KW=((literacy) OR (reading) OR (writing)) NOT KW=((adult literacy) OR (family literacy) OR (computer literacy))

KW=("accomplished teaching") OR ("accomplished teachers") OR ("accomplished instruction") AND KW=((literacy) OR (reading) OR (writing)) NOT KW=((adult literacy) OR (family literacy) OR (computer literacy))

KW=("reflective teaching") OR ("reflective teachers") OR ("reflective instruction") AND KW=((literacy) OR (reading) OR (writing)) NOT KW=((adult literacy) OR (family literacy) OR (computer literacy))

KW=("outstanding teaching") OR ("outstanding teachers") OR ("outstanding instruction") AND KW=((literacy) OR (reading) OR (writing)) NOT KW=((adult literacy) OR (family literacy) OR (computer literacy))

KW=((effective within "3" teaching) OR (effective within "3" teachers) OR (effective within "3" instruction)) AND KW=((literacy) OR (reading) OR (writing)) NOT KW=((adult literacy) OR (family literacy) OR (computer literacy))

KW=((successful within "3" teaching) OR (successful within "3" teachers) OR (successful within "3" instruction)) AND KW=((literacy) OR (reading) OR (writing)) NOT KW=((adult literacy) OR (family literacy) OR (computer literacy))

KW=((exemplary within "3" teaching) OR (exemplary within "3" teachers) OR (exemplary within "3" instruction)) AND KW=((literacy) OR (reading) OR (writing)) NOT KW=((adult literacy) OR (family literacy) OR (computer literacy))

KW=((accomplished within "3" teaching) OR (accomplished within "3" teachers) OR (accomplished within "3" instruction)) AND KW=((literacy) OR (reading) OR (writing)) NOT KW=((adult literacy) OR (family literacy) OR (computer literacy))

KW=((reflective within "3" teaching) OR (reflective within "32 teachers) OR (reflective within "32 instruction)) AND KW=((literacy) OR (reading) OR (writing)) NOT KW=((adult literacy) OR (family literacy) OR (computer literacy))

KW=((outstanding within "3"teaching) OR (outstanding within "3" teachers) OR (outstanding within "3" instruction)) AND KW=((literacy) OR (reading) OR (writing)) NOT KW=((adult literacy) OR (family literacy) OR (computer literacy))

KW=(("teacher beliefs") OR ("teaching beliefs") OR ("teacher knowledge")) AND KW=((literacy) OR (reading) OR (writing)) NOT KW=((adult literacy) OR (family literacy) OR (computer literacy))

Query: KW=(("classroom practices")) AND KW=((literacy) OR (reading) OR (writing)) NOT KW=((adult literacy) OR (family literacy) OR (computer literacy))

KW=(("professional knowledge")) AND KW=((literacy) OR (reading) OR (writing)) NOT KW=((adult literacy) OR (family literacy) OR (computer literacy))

KW=(("teaching approach")) AND KW=((literacy) OR (reading) OR (writing)) NOT KW=((adult literacy) OR (family literacy) OR (computer literacy))

KW=(("teaching style")) AND KW=((literacy) OR (reading) OR (writing)) NOT KW=((adult literacy) OR (family literacy) OR (computer literacy))

KW=(("teaching skills")) AND KW=((literacy) OR (reading) OR (writing)) NOT KW=((adult literacy) OR (family literacy) OR (computer literacy))

KW=(("teacher competencies")) AND KW=((literacy) OR (reading) OR (writing)) NOT KW=((adult literacy) OR (family literacy) OR (computer literacy))

Search strategy for use with British Education Index

The British education Index was searched using the DIALOGIC interface.

literacy

literacy AND teach\$

literacy AND instruction

literacy AND effective...teach\$

literacy AND exemplary...teach\$

literacy AND successful...teach\$

literacy AND outstanding...teach\$

literacy AND reflective...teach\$

literacy AND accomplished...teach\$

literacy AND "teacher beliefs" OR "teaching beliefs" OR "instructional beliefs"

literacy AND "classroom practices"

literacy AND "professional knowledge"

literacy AND "teaching approaches" OR "teaching methods" OR "teaching skills"

- # literacy AND “teacher style”
- # literacy AND “teacher competences”
- # literacy AND “instructional conversations”
- # literacy AND “classroom discussions2
- # Literacy AND “talk about text”
- # literacy AND “integrating reading and writing” OR “integrated language arts”

Repeat for READING

Repeat for WRITING

APPENDIX 2.3: Journals handsearched

Journal of Research in Reading
(for the period 1988-2003)

APPENDIX 2.4: EPPI-Centre Keyword sheet including review-specific keywords

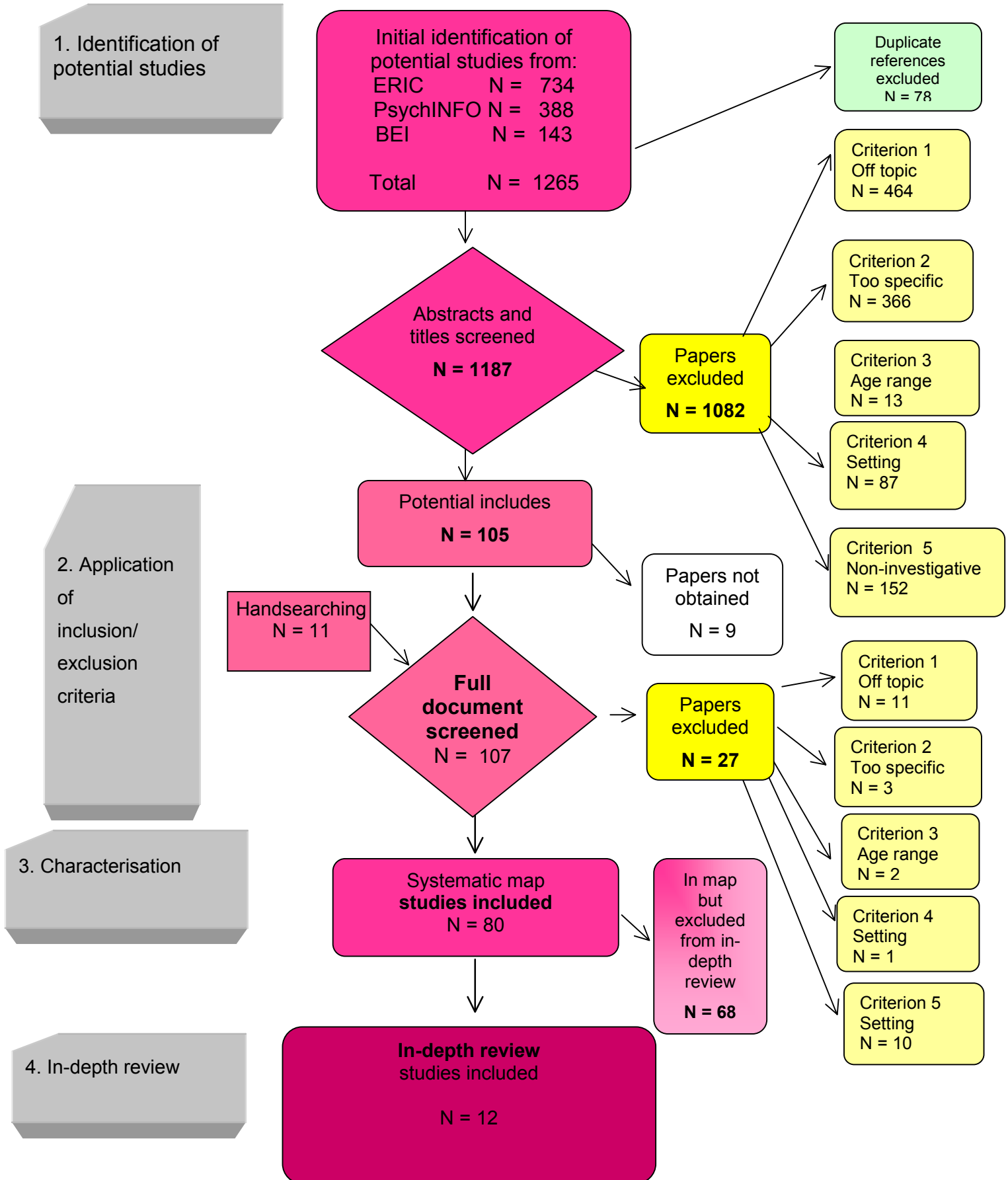
EPPI-CENTRE EDUCATIONAL KEYWORDING SHEET v0.9.6 Bibliographic details and/or unique identifier.....

<p>1. Identification of report Citation Contact Handsearch Unknown Electronic database (please specify)</p> <p>2. Status Published In press Unpublished</p> <p>3. Linked reports <i>Is this report linked to one or more other reports in such a way that they also report the same study?</i></p> <p>Not linked Linked (please provide bibliographical details and/or unique identifier) </p> <p>4. Language (please specify) </p> <p>5. In which country/countries was the study carried out? (please specify) </p>	<p>6. What is/are the topic focus/foci of the study? Assessment Classroom management Curriculum* Equal opportunities Methodology Organisation and management Policy Teacher careers Teaching and learning Other (please specify).....</p> <p>*6a Curriculum Art Business Studies Citizenship Cross-curricular Design & Technology Environment General Geography Hidden History ICT Literacy – first language Literacy further languages Literature Maths Music PSE Phys. Ed. Religious Ed. Science Vocational Other (please specify).....</p> <p>7. Programme name (please specify)</p>	<p>8. What is/are the population focus/foci of the study? Learners* Senior management Teaching staff Non-teaching staff Other education practitioners Government Local education authority officers Parents Governors Other (please specify).....</p> <p>*8a Age of learners (years) 0-4 5-10 11-16 17-20 21 and over</p> <p>*8b. Sex of learners Female only Male only Mixed sex</p> <p>9. What is/are the educational setting(s) of the study? Community centre Correctional institution Government department Higher education institution Home Independent school Local education authority Nursery school Post-compulsory education institution Primary school Pupil referral unit Residential school Secondary school Special needs school Workplace Other educational setting (please specify)</p>	<p>10a. Which type(s) of study does this report describe?</p> <p>A. Description B. Exploration of relationships C. Evaluation a. Naturally occurring b. Researcher-manipulated* D. Development of methodology E. Review a. Systematic review b. Other review</p> <p>*see 10b.</p> <p>10b. To assist with the development of a trials register please state if a researcher-manipulated evaluation is one of the following: Controlled trial (non-randomised) Randomised controlled trial (RCT)</p> <p>Please state here if keywords have not been applied from any particular category (1-10) and the reason why (e.g. no information provided in the text)</p> <p>..... </p> <p style="text-align: right;">PTO to apply review-specific keywords (if applicable)</p>
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Review-specific keywords

AUTHORS		
TITLE		
SOURCE		DATE
<p>Literacy focus / Foci</p> <p>Reading <input type="checkbox"/></p> <p>Writing <input type="checkbox"/></p> <p>Reading and Writing <input type="checkbox"/></p> <p>Not Specified <input type="checkbox"/></p>	<p>Educational settings (USA)</p> <p>Kindergarten <input type="checkbox"/></p> <p>Grade 1 <input type="checkbox"/></p> <p>Grade 2 <input type="checkbox"/></p> <p>Grade 3 <input type="checkbox"/></p> <p>Grade 4 <input type="checkbox"/></p> <p>Grade 5 <input type="checkbox"/></p> <p>Grade 6 <input type="checkbox"/></p> <p>Grade 7 <input type="checkbox"/></p> <p>Grade 8 <input type="checkbox"/></p>	<p>Perceived audience for report</p> <p>1. Research community <input type="checkbox"/></p> <p>2. Teacher / Practitioner <input type="checkbox"/></p> <p>3. Both <input type="checkbox"/></p> <p>4. Other <input type="checkbox"/></p> <p>Presentation of data collection and analysis</p> <p>1. Thorough, rigorous and explicitly stated <input type="checkbox"/></p> <p>2. Implicit <input type="checkbox"/></p> <p>3. Not clear / Unstated <input type="checkbox"/></p>
<p>Data-collection methods</p> <p>Observation <input type="checkbox"/></p> <p>Interview <input type="checkbox"/></p> <p>Questionnaire <input type="checkbox"/></p> <p>Teacher logs / Diary <input type="checkbox"/></p> <p>Scrutiny of student work <input type="checkbox"/></p> <p>Audio tape-recording <input type="checkbox"/></p> <p>Video tape-recording <input type="checkbox"/></p>		<p>Teachers nominated 'Effective' by:</p> <p>Supervisors <input type="checkbox"/></p> <p>Headteachers <input type="checkbox"/></p> <p>Parents <input type="checkbox"/></p> <p>Self-nominated <input type="checkbox"/></p> <p>Not specified <input type="checkbox"/></p> <p>Author / Researcher <input type="checkbox"/></p>

APPENDIX 3.1: Filtering of studies from searching to map to synthesis



APPENDIX 4.1: Summaries of studies included in the in-depth review

Title: A survey of instructional practices of primary teachers nominated as effective in promoting literacy

The Elementary School Journal 96, 4: 363-384

Michael Pressley, Joan Rankin and Linda Yokoi (1996)

Abstract/overview

Kindergarten (N=23), grade 1 (N=34), and grade 2 (N=26) teachers who were nominated by their supervisors (N=45) as effective in educating their students to be readers and writers, responded to two questionnaires about their practice. As the authors expected, there were shifts in reported practices between kindergarten and Grade 2, although there was much more similarity than difference in the reports of kindergarten, Grade 1 and Grade 2 teachers. The teachers claimed commitment to (a) qualitatively similar instruction for students of all abilities, along with additional support for weaker readers; (b) literate classroom environments; (c) modelling and teaching of both lower order (e.g. decoding) and higher order (e.g. comprehension) processes; (d) extensive and diverse types of reading by students; (e) teaching students to plan, draft and revise as part of writing; (f) engaging literacy instruction (i.e. instruction that motivated literate activities); and (g) monitoring of students' progress in literacy. The authors argue that, on the basis of the evidence, teacher education should include exposure to a number of approaches and practices intermingling different types of instruction.

Aims

- To shed light on the nature of effective primary literacy instruction (reviewer's interpretation). 'The overarching goal of the study was to solicit information from teachers [nominated as effective] about their literacy instruction' (p. 367). The authors sought to provide 'a detailed description of effective primary reading instruction by surveying reputationally effective primary reading teachers about their instruction' (p. 365).
- This study 'begin[s] to fill a somewhat surprising gap in the literature' The authors say '[w]e could find no systematic study of effective primary reading teachers' knowledge about the components that need to be included in primary literacy instruction.' (p. 365). Other research concentrated more on programmes and methods. The authors go on to say 'those providing testimonies about or descriptions of particular methods were not selected because of their effectiveness as teachers, but, rather, because of the methods that they used in their classrooms. In contrast, in this study a number of teachers were selected on the basis of their perceived effectiveness' (p. 366).

Design

- 135 teachers were nominated as effective of which 113 responded to initial questionnaire, 86 replied to the second/final questionnaire and 83 of the 86 provided usable responses. 23 K, 34 G1 and 26 G2 teachers carried out in US 'from across the country, to avoid local and regional biases' (p. 366).
- The researchers asked language arts supervisors who are members of Int.Rdg.Assoc. to nominate 'effective' teachers and they provided them with criteria that would enable them determine 'successful'. 50 language arts supervisors were selected at random and then each one asked to identify the most effective k, Grade 1 and Grade 2 literacy educator 'in their jurisdiction with 'successful' defined as "successful in educating large proportions of their students to be readers and writers" (p. 366). The sample frame consisted of teachers considered to be the most successful teachers the supervisors knew by a given definition of 'successful'.
- Since each supervisor was asked to nominate three teachers, this resulted in a possible 150 targeted teachers for the questionnaires.
- Teachers were from 23 states and represented all the major regions of the US.
- Self-completion questionnaire had a 76% response rate.
- In terms of analysis, some grade level comparisons made using both parametric and non-

parametric tests but the majority of statistical work is based on frequencies/counts and percentages.

- Reliability is demonstrated by the inclusion in the paper of the items used on the questionnaire.
- Very detailed description of all the questionnaire item responses

Main findings

(Presented as frequency tables and prose presentations of the responses to the questionnaire items)

- Teachers described classrooms filled with print (p. 369)
- Overt modelling of reading for students (p. 371)
- Practice of isolated skills was estimated as averaging 13% of the literacy instructional day; drilling (e.g. for letter recognition) decreased with increasing grade level (p. 373)
- Combination of grouping (whole, small and individual) used and more whole group than small group (p. 373)
- Majority (96%) stressed sensitivity to student needs, permitting progress at student pace (p. 373)
- Literacy instruction integrated with rest of the curriculum (p. 374)
- Meaning-making (vs decoding) predominated by 71% to 27% (pp. 374-375) and, for every basic skill, the majority who reported teaching it claimed to do so in the context of actual reading and writing.
- Commitment to teaching decoding: explicit to teaching of phonics and used a variety of procedures for doing so
- Explicit teaching of spelling and new vocabulary (pp. 375-376)
- All reported teaching comprehension strategies (p. 376) and all claimed to teach critical thinking skills.
- Teachers reported involving students in many types of reading experiences (p. 376).
- Teachers, on average, reported that 73% of the reading in their classrooms was of outstanding children's literature (p. 377). Only 6% was described as expository material.
- Vast majority claimed pupils wrote stories and developed written responses to readings. Composition activities also occurred in k classes.
- Teachers encouraged planning before writing increasingly from K to G2 (p. 377)
- Majority of respondents reported teaching the mechanics of writing (e.g. punctuation).
- Extensive efforts to make literacy and literacy teaching motivating.

Conclusions

- Taken from the discussion of the paper, the authors conclude that 'a number of contemporary reading-instructional theorists have argued for balanced reading instruction, meaning the meshing of holistic literacy experiences and skills instruction...Consistent with that outlook, the teachers in this study depicted their classrooms as integrating the attractive features of whole language with explicit skills' (p. 379).
- Although teachers reported delivering a common curriculum to their students, they also claimed to tailor instruction to individual differences (p. 379).
- Authors conclude that, on the basis of the evidence, teacher education should include exposure to a number of approaches and practices intermingling different types of instruction.

Generalisability

- Method of nomination and therefore selecting teachers renders this problematic.

Trustworthiness

Medium trustworthiness in its own terms, given the explicitness and thoroughness of the research design. Reviewers agreed on a medium weighting for quality assessment and weight of evidence.

<p>Title: A survey of the instructional practices of grade 5 teachers nominated as effective in promoting literacy <i>Scientific Studies of Reading</i> 1, 2: 146-161 Pressley M <i>et al.</i> 1997</p>
<p>Abstract/overview In this study, Grade 5 teachers, who were nominated by their supervisors as effective in educating their students to be readers and writers, responded to questionnaires about their practice. The teacher respondents claimed commitments to (a) extensive reading at the heart of their reading instruction; (b) diverse instructional activities (e.g. whole group, small group instruction, cooperative grouping, individual reading); (c) teaching of both word-level and higher order (e.g. comprehension, critical thinking) skills and processes; (d) development of student background knowledge; (e) student writing, including mechanics and higher order composition skills (e.g. planning drafting, revising as a process); (f) extensive evaluation of literacy competencies using diverse assessments; (g) integration of literacy and content-area instruction; and (h) commitment to practices that promote student motivation for reading and writing. Excellent literacy instruction, the paper concludes, is a balanced articulation of many components, including whole language experiences and skills instruction.</p>
<p>Rationale/aims/research questions</p> <ul style="list-style-type: none"> • Several years ago these authors noted a ‘peculiar oversight’ in the literature on effective literacy teaching (p. 146). • Authors assume that, if we want to learn about expert literacy teaching, we should study ‘expert’ teachers. They argue that outstanding literacy teachers should have a privileged understudying of the nature of excellent literacy instruction, especially of the conscious decisions they make in planning and carrying out their teaching. (p. 149) • Aim is implicit: to determine what effective G5 literacy teachers do in their classrooms. However, it is clearly stated that ‘the main goal of the initial questionnaire phase was to assemble a list of practices that outstanding G5 teachers consider to be part of their literacy teaching’ (p. 148). And the goal in asking the teachers to make quantitative ratings on the final questionnaire was to identify instructional practices that are relatively common (p. 152).
<p>Design</p> <ul style="list-style-type: none"> • Two stages to the design • First 33 outstanding teachers, who were nominated as effective by reading supervisors from the International Reading Association (IRA), responded to an initial questionnaire (response rate not given). • All the major areas of the US were represented in this sample (p. 147). • Final questionnaire sent to the 33 outstanding teachers who completed the initial questionnaire. 28 responded. • To expand the sample size, an additional 80 supervisors from the IRA list were contacted and asked to nominate an outstanding G5 teacher from their district using the same criteria applied in the first round. This resulted in 34 newly nominated teachers completing the final survey (again response rate not given). • So a total of 62 teachers nominated as effective completed the final questionnaire. • The supervisors of 53 of the 62 teachers responding to the final questionnaire provided information about the basis of their nomination. Criteria applied included a combination of: pupil test scores, pupil literacy test scores, direct observation of teaching, positive comments from other teachers, conversations about philosophy of teaching, in-service interactions. • In-depth account of the format of the questionnaire and of the items it contained. • 28 of the final Q respondents had completed the initial Q and 34 had not. Data were analysed separately for the two groups and their performances compared statistically. However, there was no instance of difference that was statistically significant. • Frequencies presented in table in the paper.

Main findings

- The teaching reported by the sample of teachers represents more of a blending of a variety of important language arts and instructional perspectives than of adherence to any one approach.
- The G5 teachers portrayed their instruction as based largely on actual reading. The pupils read children's classics, other literature, trade books and expository books.
- The teachers also reported extensive writing, especially in response to literature read in school.
- The teachers also claimed explicit instruction in all aspects of the writing process, from planning to writing mechanics.
- Considerable explicit teaching of word level skills (decoding, vocabulary and spelling)
- Most claimed to use writing portfolios and many reported using reading portfolios.
- The teachers reported using sources of information about pupils' literacy achievements from responses to daily readings to frequent curriculum-driven tests to less frequent, more standardised assessments.
- The teachers claimed to instruct a long list of comprehension and critical thinking strategies.
- Teachers claimed integration of language arts and content area instruction.
- Pupils in these classroom were portrayed by their teachers in their responses as 'frequently reading with their teachers, peers younger children, and parents' (p. 157).
- The teachers claimed small group meetings with membership changing frequently and so pupils were regularly reading and interacting with others who vary in ability.
- More intense and individualised instruction for those under-achieving but it is clear that effective teachers do not 'water down' or 'slow it down' for these students.
- They viewed motivation as critical and complicated.

Conclusions

- Authors conclude that 'those who argue for eclectic teacher education are right' (p. 158).

Generalisability

- Small samples and the extension of the sample to increase size does not compensate; it is not any more representative by being 'bigger'. Its generalisability is quite low.

Trustworthiness

- Low trustworthiness in its own terms. Very detailed account of questionnaire development but our concerns about the sample design cast doubt on its trustworthiness and reviewers rated it medium overall in terms of quality assessment and weight of evidence.

<p>Title: Literacy instruction in nine first-grade classrooms: teacher characteristics and student achievement <i>The Elementary School Journal</i> 99, 2: 101-129 Wharton-McDonald <i>et al.</i> 1998</p>
<p>Abstract/overview</p> <p>In this study, classroom observations and in-depth interviews were used to study nine first-grade teachers from four districts in the US nominated by language arts coordinators as outstanding (N=5) or typical (N=4) in their ability to help students develop literacy skills. Based on observational measures of student reading and writing achievement and student engagement, three groups of teachers emerged from the original nine. The following practices and beliefs distinguished the instruction of the three teachers (two nominated as outstanding, one as typical) whose students demonstrated the highest levels of achievement and engagement: (a) coherent and thorough integration of skills with high-quality reading and writing experiences; (b) a high density of instruction (integration of multiple goals in a single lesson); (c) extensive use of scaffolding; (d) encouragement of pupil self-regulation; (e) a thorough integration of reading and writing activities; (f) high expectations for all pupils; (g) masterful classroom management; and (h) an awareness of their practices and the goals underlying them. Teaching practices observed in seven of the nine classrooms are also discussed in the study. The data attest to the complexity of primary literacy instruction and support the conclusion that effective primary-level literacy instruction is a balanced integration of high-quality reading and writing experiences and explicit instruction of basic literacy skills.</p>
<p>Rationale/aims/research questions</p> <ul style="list-style-type: none"> • Authors refer to what they consider ‘a lack of systematic study of effective teachers, a lack of understanding of their practices and perspectives’ (p. 102). • Authors assume that if we want to learn about expert literacy teaching, we should study ‘expert’ teachers. They argue that outstanding literacy teachers have a privileged understanding of the nature of excellent literacy instruction (p. 103). • Aim is implicit: to determine what effective G1 literacy teachers do in their classrooms. • At end of paper, aim of study explicitly stated as follows (p. 121) ‘the purpose of this study was to tap the knowledge and expertise of highly effective teachers in an attempt to determine what makes their instruction so effective’.
<p>Design</p> <ul style="list-style-type: none"> • Language arts coordinators in four districts were asked to nominate one or more G1 teachers in each of two categories: exceptional at helping pupils achieve literacy and typical or average in promoting literacy (for the same type of student). • Criteria for nomination left to coordinators, but a strong steer given in terms of making judgements based on evidence. Among the criteria cited most frequently were observations, teacher enthusiasm, pupil reading achievement, pupil writing achievement, teacher involvement in improving own practice, and pupil enthusiasm for reading. • All five teachers nominated as outstanding were women. • Researchers considered the nominations to be ‘a starting point’ for the study (p. 105). The final analysis of effective teaching was based on a subset of three teachers whose pupils demonstrated consistently higher levels of reading, writing and engagement than students of the other teachers. • Non-participant observations of language arts lessons carried out twice a month in 1994/5 school year. Observations carried out by the authors of the study. Contextualising fieldnotes made throughout observations. Observers frequently reviewed each others’ notes, discussed similarities and differences of the same classrooms. • In-depth ethnographic interviews conducted with teachers twice during the study (audio-recorded and transcribed verbatim). These interviews explored beliefs and practices and allowed for clarification of observed practice. • Analysis and coding involved much going back to teachers and classrooms for clarification on issues and patterns arising from the data –necessary to refine emerging patterns in the

data and establish hypotheses (p. 106).

- Artefacts were noted, collected and examined: for example, books used, reading levels of books used in independent reading, lists of books read by pupils, writing journals, formal samples of pupils' work collected, posters, charts, homework assignments, etc.
- End-of-year writing samples and records of pupils reading materials were used to assess levels of students' reading and writing achievement. Also pupil engagement was assessed and fully described procedures in the paper.
- Important to note that from the outset of this study, nominations of effectiveness were viewed by the research team as only the starting point. Ultimately the judgement of teacher effectiveness came from pupils' engagement and literacy development. In general however the coordinators' ratings were similar to the achievement differences observed in the teachers' classes.
- Teachers were allocated then to one of three achievement groups (according to their pupils' success): high, middle and low. Following this designation, the data were revisited to identify the characteristics that most teachers had in common.

Main findings

Characteristics distinguishing high-achievement teachers:

- A set of characteristics was identified that as a cluster distinguished the perspectives and practices of the three teachers in the highest-achievement group.
- Instructional balance: These teachers were distinguished by how well they integrated and balanced instruction and the integration of skills instruction and authentic literacy activities was deliberate.
- In addition to planned, explicit instruction, all three teachers with high achieving students were skilled at incorporating skill mini-lessons into ongoing lessons as opportunities presented themselves (p. 114).
- Instructional density characterised the best teachers. These teachers integrated multiple goals into a single lesson. They never seemed to do just one thing at a time (p. 115). Lessons were filled with high quality reading and writing experiences.
- These teachers made extensive use of scaffolding and this contributed to the density of their instruction. They monitored pupils' thought processes as they taught and interacted with just enough help to facilitate learning but not so much that they lost the flow of the lesson (p. 116).
- Encouragement and self-Regulation: Throughout their instruction, the three high achievement teachers encouraged students to monitor their progress and understanding, and taught them what to do when they encountered difficulty.
- These teachers thoroughly integrated reading and writing activities.
- These teachers displayed consistently high expectations for all their students.
- They were masterful classroom managers. This means they were able to enrich their lessons based on pupil input without losing sight of the goals they had planned to address. They were also good managers of outside resource teachers.

The best teachers were very aware of their purposes as they taught.

Conclusions

- There is not a single critical variable that defines outstanding literacy instruction, but rather there is a cluster of practices and beliefs. These are extensive use of scaffolding, encouragement of self-regulation, high teacher expectations, expert classroom management, and awareness of purpose. These factors are important predictors of student learning in general but two of the factors to emerge from this study are specific to literacy:
 - Instructional balance
 - Thorough integration of reading and writing activities

Generalisability

- Small sample hinders this.

Trustworthiness

- Medium in terms of its own design. Methodology is detailed and justified and a great deal of evidence is presented in a way that demonstrates the validity of the claims, findings and conclusions drawn. However, the absence of pre-test measures (as acknowledged by the researchers themselves) renders the study medium as opposed to high on trustworthiness. Overall reviewers agreed on a medium rating for quality assessment and weight of evidence.

<p>Title: Literacy instruction in ten fourth- and fifth-grade classrooms in upstate New York <i>Scientific Studies of Reading</i> 2, 2: 159-194 Pressley <i>et al.</i> (1998)</p>
<p>Abstract/overview In this study, literacy teaching was observed in six G4 and four G5 classrooms over the period of one year. The participating teachers were defined as 'effective'. Using the method of constant comparison, commonalities among classrooms were identified in the areas of reading instruction, writing instruction, instructional materials, instructional goals, management, and classroom motivational orientation. All teachers provided a combination of authentic reading and writing experiences and explicit skills instruction. Dimensions of difference among classrooms were also identified with respect to the same set of instructional components. Classrooms differed with respect to the methods and materials that each teacher considered to be the core of his or her pedagogy. There were some striking omissions in the instruction observed, specifically a lack of instruction in comprehension strategy and little or no instruction in self-regulation. The study concludes that literacy instruction in these grades is extremely complex, involving many teacher decisions about how it should proceed.</p>
<p>Rationale/aims/research questions</p> <ul style="list-style-type: none"> • Authors pursued 'a theory about literacy instruction in the later elementary grades in 10 upstate New York classrooms – a theory about what occurs consistently among effective teachers and what can occur in particular classrooms during literacy instruction in the fourth and fifth grades' (pp. 162-163). • In coming to these understandings, the authors also expected to develop some insights into how teaching could be improved. • Researchers were interested in '...the practices not only of teachers considered to be exceptional (a small subgroup of those considered competent) but of a variety of teachers considered to be competent or effective' (p. 162).
<p>Design</p> <ul style="list-style-type: none"> • Language arts co-ordinators in four districts of upstate New York were asked to nominate teachers at the 4th and 5th grades who they believed were effective. • Criteria for nomination left to co-ordinators, but a strong steer given in terms of making judgements based on evidence. Among the criteria cited most frequently were pupil literacy test scores, pupil enthusiasm for reading and writing, teacher practices consistent with current thinking in the field (e.g. use of literature circles, integration of content-area instruction into the language arts curriculum, writing for authentic purposes), teacher involvement in professional development, and teacher creativity. • Seven teachers nominated were women; three were men. • Consistent with grounded theory approach, data-collection and analysis occurred simultaneously throughout the course of the study (p. 163). • Observations of language arts lessons carried out twice a month in 1995/6 school year (89 observations in total); some interaction with teachers and pupils during transitions. • Observations carried out by the authors of the study. Contextualising fieldnotes made throughout observations. Observers frequently reviewed each others' notes, discussed similarities and differences of the same classrooms. • In-depth ethnographic interviews conducted with nine of the 10 teachers twice during the study (audio-recorded and transcribed verbatim). These interviews explored beliefs and practices and allowed for clarification of observed practice. • Analysis and coding involved much going back to teachers and classrooms for clarification on issues and patterns arising from the data. This was necessary to refine emerging patterns in the data and establish hypotheses (p. 166). • Artefacts were noted, collected and examined: for example, books used, reading levels of books used in independent reading, lists of books read by pupils, writing journals, formal samples of pupils' work collected, posters, charts, homework assignments, etc. Each teacher was asked to provide representative writing samples from one or two pupils in each of the

three categories above average, average, below average readers and writers.

- Data coding described in full (p. 167) and in line with grounded theory approach.
- Much detail offered on how credibility (or validity) was enhanced: triangulation, negative-case analysis, prolonged engagement, and member checking (Denzin, 1989).
- Reliability ensured through interrater reliability techniques during each stage of the coding and summary-building processes.

Main findings

- Common features across the teachers and their classrooms:
In all classrooms, the literacy curriculum included some whole and authentic activities
Teachers uniformly expressed the belief that students needed to have many opportunities to read and write at this level. They ensured that students had access to a variety of trade books and they provided opportunities for independent reading.
Teachers expected that students at this level should be able to organise their time appropriately in order to accomplish assigned tasks and should be able to work cooperatively with their peers on at least an occasional basis' (p. 175).
- Differences among classrooms:
The proportion of 'authentic literacy experiences' and 'direct skills instruction' varied considerably (p. 175).
Considerable variation in teachers' approaches to vocabulary instruction
Variations in the role of reading with some teachers seeing '*little need (or opportunity) for integrating reading into a content-area instruction; other [viewing] it as critical*' (p. 176)
Clear differences in the kind and amount of writing taking place
Though in agreement as to the importance of writing within their language arts instruction, '*they adopted different approaches for teaching writing and held different expectations for their students' written products*'.
Considerable variation in the availability of books, and corresponding differences in the numbers of books read by each student. This was in spite of similarity in target numbers of books read per term across class
Variations in management of curriculum, instruction and behaviour
Density of instruction (p. 179): Variations in orientation of instruction (single instructional goal or multiple goals centred round a topic or theme)
Student engagement (pp. 179-180): Relationship between density of instruction and the degree of productive engagement of students; variations in the degree of engagement
- The combination and balance of whole-language and skills instruction used in the classrooms that took part in the research (p. 188)
- The variety of ways in which teachers achieved this balance, using a substantially varied core of activities (p. 188)
- Great deal of freedom in these fourth- and fifth-grade settings, '*exercised in the context of management demands, including demands following from contemporary educational policies and practices*' (p. 188). Such freedom requires significant managerial and organisational decisions to be made by teachers in the course of their practice.
- The lack of comprehension-strategy instruction and self-regulation instruction was indicative of how '*...instruction was quite removed from the findings of contemporary educational research*' (p. 189).
- Similarly, motivational practices were at odds with research on maintaining and enhancing motivation within this age-group of pupils
- Need for further research to enable general conclusions to be drawn, and further collaborations between teachers and researchers

Conclusion (in terms of seven hypotheses)

1. Effective literacy instruction at the intermediate level is characterised by an integration of skills instruction and authentic reading and writing experiences in fairly equal proportions in which the skills instruction focuses on the application of learned skills to authentic texts.
2. There is more diversity in literacy instruction at the intermediate level than there is at the primary level.

3. Four sub-hypotheses were offered: (a) there is a relationship between the teacher's core practices and his or her beliefs about learning; (b) there is a relationship between the teacher's core practices and the needs of her or his students; (c) one source of these core beliefs may be the teacher's professional development experience; and (d) if we could identify the types of cores associated with high levels of student outcomes, teacher development programmes could help to shape these cores.
4. Changes in policies (e.g. inclusion of learners with special needs) and better understanding of learning processes demand different forms of classroom and instructional management; this needs to be better understood.
5. Comprehension strategies instruction appears to have made little progress in 20 years.
6. Teachers expect students to be self-regulated but do not actively teach them strategies for organising their time and assignments and for working independently in the absence of direct teacher supervision.
7. Student engagement might be improved by making classrooms more motivating places in which to learn.

Generalisability

- Small sample hinders this.

Trustworthiness

- Methodology is detailed and justified and a great deal of evidence is presented in a way that demonstrates the validity of the claims, findings and conclusions drawn. There is much attention to enhancing validity and reliability. We deemed this study medium in terms of trustworthiness in relation to the design adopted and we also rated it medium in relation to quality and weight of evidence overall.

<p>Title: A study of effective first-grade literacy instruction <i>Scientific Studies of Reading</i> 5, 1: 35-58. Pressley <i>et al.</i> (2001)</p>
<p>Abstract/overview This is a qualitative, comparative study of most and least effective-for-locale literacy teaching in first grade classrooms in five US locales using observational and interview methods. The classrooms of the most effective teachers were characterised by excellent classroom management based on positive reinforcement and cooperation; balanced teaching of skills, literature, and writing; scaffolding and matching of task demands to pupil competence; encouragement of pupil self-regulation; and strong cross-curricular connections. These outcomes did not support any theory that emphasises just one particular component (e.g. skills instruction, whole language emphasis) as the key to effective grade one literacy. Alternatively, excellent grade one instruction involves multiple instructional components articulated with one another.</p>
<p>Aims/rationale</p> <ul style="list-style-type: none"> • To come to general conclusions by identifying commonalities across excellent G1 classrooms (p. 38). • Aimed to develop an understanding of what effective G1 literacy instruction is like in contemporary America (p. 38).
<p>Design</p> <ul style="list-style-type: none"> • School administrators asked to identify G1 teachers who they believed were effective in promoting literacy achievement. Also asked to identify teachers who taught similar students but who were much more typical of the participating school district in their effectiveness in promoting pupil achievement (p. 38). • These nominations were validated by the research team who came to their own conclusions about the effectiveness of each teacher based on observations of pupil engagement and evaluations of the quality of reading and writing observed over the course of the study. • 15 such pairs of teachers observed in this study (four pairs in upstate New York; three pairs in New Jersey; two pairs in Wisconsin; four pairs in Texas; two pairs in California) but only 10 teachers were used to generate conclusions in this paper (i.e. the most and least effective). To identify those 10, all 30 participants had to be studied carefully. • Observers were not informed of which specific teachers were nominated to be outstanding and more typical (p. 39). • The pupils observed in the classrooms represented the full range of diversity in American elementary schools, although approximately two-thirds of the classrooms observed were in schools populated by children from predominantly lower middle to lower socio-economic classes. • Grounded theory approach used: data-collection and analysis occurred simultaneously over the course of the observations of each teacher. Observers attended especially to teaching processes, types of materials used in the class, pupil reading and writing performances and outcomes. • Every conclusion about a teacher was supported by multiple observations and confirmed by multiple observers (p. 41). At least two observers visited each classroom and agreed on the conclusions advanced about each teacher. • In general, five or more half day visits to each classroom. • The most and least effective-for-locale teachers were selected based on literacy outcomes of engagement in literacy activities (full details on p. 43). • Write-ups of the most effective teachers – done for each teacher separately – were analysed by one researcher who constructed an exhaustive list of all the teaching behaviours and characteristics of teaching reported in the write-ups (detailed in full on p. 43). Researchers agreed that the list was in fact exhaustive with respect to teaching behaviours and characteristics of teaching in the most-effective-for-locale classrooms. • Researchers at each site then indicated which of the behaviours and characteristics on the

list had been observed in their site's most-effective-for-locale classroom. The entire list consisted of 221 behaviours and characteristics.

- This process led to a new list of 103 which are organised into seven overarching categories (pp. 44 and 52) and validated through several further processes.
- A further analysis conducted to identify the behaviours and characteristics unique to the most effective for locale teachers compared with the least effective for locale teachers. This led to yet another list of 11 behaviours and characteristics.

Main findings

The teaching of the most effective-for-locale teachers was much different from the teaching of the least effective teachers as follows:

- *Excellent classroom management* especially in relation to how they co-ordinated the instruction provided by para professionals and special teachers to assist the integrity of the curriculum. In short, the best-for-locale classrooms contained well-planned lessons and activities with a focus on pupil acquisition of self-regulation and problem-solving strategies (p. 46).
- *Positive, reinforcing, cooperative environment*: all were exceptionally positive places.
- *Balancing of skills instruction and whole language: teaching of skills, literature emphasis, and much reading and writing*: Explicit teaching occurred, opportunistic teaching and re-teaching. Mini-lessons offered on an 'as needed' basis. The co-occurrence of skills instruction with immersion in literature and writing could not be missed in the most effective classrooms.
- *Match of accelerating demands to student competence, with a great deal of scaffolding*: Pupils were monitored as they wrote for instance, alert for opportunities to intervene and prompt, but did more than monitoring progress, they cued materials or scaffolded instruction as pupils did appropriately challenging tasks, prompting use of skills and opportunistically re-teaching skills to individual students on an as needed basis. (Anything but one size fits all instruction.)
- *Self-regulation encouraged* teachers expected this from their pupils and they taught them independence. Pupils seemed 'lost in their work' (p. 48).
- *Strong connections across the curriculum*

Conclusions

- Effective teachers combine practices that work well for them without regard for theoretical purity in their teaching.
- Effective literacy instruction is a complex interaction of components. This does not mean it is a matter of a little of this and a little of that, but it means a lot of skills instruction intelligently integrated with voluminous reading and writing (p. 50).

Generalisability

- The study provides detailed descriptive characterisation of outstanding American first grade classrooms at end of the 20th century across several states in US; this confirms the Upstate New York evidence of the Wharton-McDonald *et al.* study (1998).

Trustworthiness

- Medium to high trustworthiness in relation to its own design. Considerable explicitness to research design issues, especially triangulating processes. Overall reviewers deemed this study high on quality assessment and weight of evidence.

<p>Title: It's not scripted lessons but challenging and personalized interactions that distinguish effective from less effective primary classrooms Paper presented at <i>National Reading Conference 2000</i> Cathy Collins-Block and Michael Pressley</p>
<p>Abstract/overview This is a study about effective literacy teaching that is part of a larger programme of work. The larger study is reported in Pressley <i>et al.</i> (2001) and is part of our review. This paper, however, extends the work of the larger study by providing more intensive measures of teaching effectiveness and by collecting pre and post test data to describe students' literacy achievement in first and second grade. Data analyses occurred in three phases. In Phase 1, indices of teaching effectiveness were computed for teachers who participated in this study. Phase 2 analysed the end of Grade 2 literacy performances of students who had experienced exemplary versus typical teaching in Grade 1. This paper reports on Phase 3 which identified philosophical and teaching differences between exemplary and typical teachers. Effective beginning literacy instruction involved more than using a single effective instructional method well. It involved more than adherence to a single approach. Deficits which pupils experience from non-exemplary teaching in their first year of school are not eradicated by the second so instruction that six-year-olds receive matters a lot. Exemplary teachers did much to make their classrooms motivating: they were explicit when developing word level skills, but they also contextualised this explicit instruction in real reading and writing activities. Such instruction, the paper concludes, cannot be packaged in 'teacher-proof' scripted lessons.</p>
<p>Aims</p> <ul style="list-style-type: none"> • The above is a 'linked study' and the goal overall for the research programme is described by the authors as follows: The goal is to identify statistically significant differences that exist between the beliefs and instructional actions of teachers whose students significantly outperformed schoolmates across the hall, who came from the same neighbourhoods and socio-economic backgrounds, but who received instruction from a teacher whose hard work and philosophical beliefs did not lead to as large literacy gains. • The purpose is to help us better understand the pedagogic subtleties that can enrich beginning literacy instruction and to point us toward new directions in preparing and developing expert teachers (p. 2). • This particular paper aims 'to provide more intensive measures of teaching effectiveness' and 'to describe students' literacy achievement in first and second grade'. This paper in particular sought to identify philosophical and teaching differences between exemplary and typical teachers.
<p>Design</p> <ul style="list-style-type: none"> • Eight teachers in four school districts in the state of Texas. Each school providing teachers for the study met 'generally high standards' (p. 4). • Language arts directors asked to nominate two G1 teachers from the same exemplary school to participate in the study: one 'truly exceptional at promoting literacy as identified by the district's standards' and the second 'as typical of solid primary literacy instruction in that district' (p. 5). A variety of indicators given to help nomination. Nominations validated by triangulating with school principals' nominations. During the study observers were not told which teachers were nominated as exemplary or typical. • 198 students of diverse ethnic and SE populations were enrolled in the eight classrooms. • Each teacher identified six target children (two among the highest achieving, two working at 'grade level' and two among the lowest performing in the class) whose progress was formally assessed. • Formal and informal interviews carried out with teachers (audio-recorded). • Pupils assessed formally and informally. • Researchers observed (unobtrusively) in each classroom seven times; two researchers at a time for two visits. • Methodological triangulation: two researchers shared interpretations and agreed on

conclusions; no a priori determinations made.

- Six targeted pupils tracked in each class to create profiles of each child's interactions with his or her teacher.
- Teacher effectiveness determined by seven measures arising out of authors' previous work and these included 'on-task'; average reading of books that the six targeted students self-selected to read at end of first grade; average number of books read during the last month of Grade 1; literacy scores on a test end of G1; standardised reading test results end of G2; average writing ability of the target pupils based on the coherence of stories they wrote and percentage of sentences free of errors end of G1; same at end of G2.

Main findings

- Students taught by exemplary teachers descriptively distinguished themselves from typical teachers on all measures of effectiveness at the end of G1.
- Exemplary teachers talked about philosophies by referencing individual students with whom they had applied specific theories.
- Exemplary teachers believed they could adapt instruction to meet students' special literacy needs. They believed that no barrier to students' literacy development was greater than their own professional competencies to overcome it.
- They modified instruction in four ways: they used distinct teaching cycle; taught opportunistically; monitored vigilantly; and held several one-to-one conferences each day. They also took the initiative to implement new instructional strategies more rapidly than typical teachers.
- The authors created the acronym TRIO to describe the teaching cycle that exemplary teachers follow, each letter designating one stage in the cycle. T=teaching strategies to pupils and ex-teachers taught more than one (and up to 15) literacy strategies a day. R=re-teaching which ex teachers did at least by the end of the week for students who had not mastered the concepts during the week – these occurred in small groups; I=individualization. Throughout the week on one-to-one sessions, exemplary teachers retaught those they had retaught, believing that those who did not learn concepts in small groups required one to one personalized instruction before they could learn. O=other resources – the last stage in the cycle which occurred when personalized instruction did not produce desired results. Other resources included peers, adult volunteers and resource teachers or levelled books, teacher made materials, hands on letters, language experience approaches and alternative programmes.
- Exemplary teachers knew how their instructional program contributed to students' literacy growth. They could cite what part of their actions, instructional program or teaching repertoire had scaffolded the success of individual students. Typical teachers did not hold as high a level of self-efficacy.
There were nine instructional actions that distinguished exemplary from typical teachers of six-year-olds:
Variety in Literacy Instruction: used more varied literacy instruction; they also varied group membership and purposes of small group lessons to re-teach concepts in new ways to those who needed more practice.
'Cast a larger literacy net' teaching more content in less time using more varied approaches. They taught more in multiple ways. Every lesson contained more than one objective.
Integrated reading and writing in content disciplines Activities changed every day.
- *Asked parents to perform seven roles in their children's literacy development*, whereas typical teachers averaged only one. For example, sign that their child had read; help their child identify and bring a book to school to share; send common household items to be used in the teaching of reading and writing; administer a spelling or a sight word test that night at home with the results to be returned to the teachers the next day; supervise their child's writing in their journals; volunteer at least once to participate in a literacy project at school; read the class newsletter and send ideas to school concerning literacy at home to be included in the newsletter; scheduled parents to read regularly with pupils in small groups and in one to one settings in school.

Held high expectations for all pupils taught in the 'zone of proximal development'
Encouraged student initiative
Maintained discipline
Corrected teaching errors
Provided specific feedback statements in a form that challenged, individualized and personalized instruction

Conclusions

- Effective beginning literacy instruction was more than using a single effective instructional method well. It was more than adherence to a single approach
- Deficits which pupils experience from non-exemplary teaching in their first year of school is not eradicated by the second so instruction that six-year-olds receive matters a lot.
- Exemplary teachers did much to make their classrooms motivating. They were explicit when developing word level skills, but they also contextualised this explicit instruction in real reading and writing activities. Such instruction cannot be packaged in 'teacher-proof' scripted lessons.

Generalisability

- Low due to very small sample

Trustworthiness

- Medium to low trustworthiness: Some issues left implicit possibly due to the fact that this is a linked study and that it was a paper presented at a conference. In terms of our review, we deemed this study to be medium in terms of quality assessment and weight of evidence.

<p>Title: The expertise of literacy teachers: a continuum from pre-school to grade 5 <i>Reading Research Quarterly</i> 37, 2: 178-206 Cathy Collins-Block (2002)</p>
<p>Abstract/overview This study sought to create a descriptive database of preschool to Grade 5 teaching expertise. The study occurred in four phases. In Phase 1, 647 directors of literacy instruction in K-12 institutions from seven English-speaking countries analysed highly effective instruction in action from pre-school to Grade 5 through case study point-by-point Delphi procedures. In Phase 2, the resultant 1,294 characteristics of teaching expertise were dimensionalized into 475 categories and inter-rater reliabilities were computed. In Phase 3, 11 prominent researchers from the US, Canada and Australia cross-validated the data. In phase 4, the authors summarized the five most distinctive qualities per grade level, compared characteristics across grades, and analysed commonalities and differences between literacy directors' and researchers' ratings. Pre-school to Grade 5 literacy teachers were distinguished from one another by 44 indices of teaching expertise. Applications of these data for research, policy and practice are described.</p>
<p>Aims/rationale/research questions</p> <ul style="list-style-type: none"> • To create a descriptive data base of preschool to G5 teaching expertise • To identify the qualities of teaching expertise that distinguished highly effective instruction at different grade levels • Rationale based on the assumption that, in order to improve reading instruction, we must examine teaching expertise rather than expect a panacea in the form of materials and that attention must focus on the centrality of the teacher (pp. 181 and 184). • Rationale for this study stemmed from the fact that educators and legislators in the US requested 'empirical data upon which highly effective practices at individual grade levels could be assessed'. • Rationale was also based on the assumption that 'if we can identify grade-level indices of teaching expertise, more children may receive consistently effective instruction at every grade' (p. 181). In addition, such information could provide pre-service teachers with information to make more informed decisions about the grade levels they want to serve. • Research questions posed were: <ol style="list-style-type: none"> 1. Do the indices of expertise in teaching literacy differ by the grade level being taught? 2. Do practitioners and researchers agree upon indices of teaching expertise that lead to greatest gains in students' literacy from pre-school to Grade 5? 3. Can more specific information about teaching expertise be obtained so educators can make more informed decisions about (a) which grade level most consistently demands their talents and skills and (b) how to advance their expertise in very specific ways?
<p>Design</p> <ul style="list-style-type: none"> • Four phases to the study • In Phase 1, 647 directors of literacy instruction in K-12 institutions from seven English-speaking countries (geographically spread to avoid bias and gain generalisability) analysed highly effective instruction in action from pre-school to Grade 5 through case study point-by-point Delphi procedures. Participants – all with a masters or doctoral degree specialising in elementary literacy and all having completed at least 36 hours of advanced training in literacy research and pedagogy – were asked to analyse episodes of instruction they had observed to identify teaching traits that distinguished the best educators at a specific grade. Participants came from 32 states in the US, three Canadian provinces, Australia, Belize, the British Virgin Islands, England and Venezuela. • In Phase 2, the resultant 1,294 characteristics of teaching expertise listed by grade level and were dimensionalized by researchers into 475 categories and inter-rater reliabilities were computed (minimum 84%) and disagreements resolved through discussion. 43 categories of grade-specific literacy teachers' expertise were identified. • In Phase 3, 11 prominent researchers from the US, Canada and Australia cross-validated the data.

- In Phase 4, the authors summarized the five most distinctive qualities per grade level, compared characteristics across grades and analysed commonalities and differences between literacy directors' and researchers' ratings.
- Enormous amount of detail presented in the paper on these four phases.

Main findings

- The results show that indices of teaching expertise differ by grade level. When data were compared across grade levels, indicators fell into six domains of responsibility. These domains varied in their rankings of importance but were present at every grade level. They were (a) the dominant role that experts assumed as classroom instructional leaders, (b) the strategies used to motivate students, (c) the talents called upon most frequently to re-teach concepts, (d) the types of relationships built with students, (e) the qualities that teachers valued in the classroom, and (f) the characteristics of lessons taught. These grade level qualities are summarised in the paper and illustrative activities offered.
- 87% practitioners and researchers agree as to qualities of teaching literacy expertise. They agreed upon 70 of 88 categories as the five most distinctive qualities of teaching expertise, per grade level. 32% rankings of practitioners and researchers were identical. Researchers and practitioners agreed upon at least one of the two most important qualities at every grade level. Data also indicated that talents at consecutive grades were not as closely related as were talents in non-consecutive grades.
- Data about teaching expertise can be obtained so educators can make more informed decisions. Highly effective literacy teachers can be distinguished by their automaticity in executing specialised teaching behaviours and self-regulated strategies.
- Table 1 (p. 188) details in full the expertise of literacy teachers from pre-school through Grade 5 under each of the six domains identified:
 1. roles and responsibilities that literacy teachers perform most repetitively
 2. methods used to motivate children
 3. actions taken to re-teach
 4. instructional techniques to relate to students
 5. classroom qualities that teachers value
 6. lesson characteristics

Conclusions

- 44 categories of expert behaviours are grade specific. It is claimed that these behaviours provide information that can be used for educators to make more informed career decisions about (a) which grade level most consistently demands their talents and skills and (b) how to advance their expertise in very specific ways.
- 44 categories of grade specific expertise could be collapsed into six domains of expertise. These six domains (listed above in previous section) were present for all grade levels although their order of importance differed at every grade.
- The majority of highly effective teachers frequently displayed grade-specific talents. These ranged from the ability to use sensory-based explanations to stimulating students' deep levels of understanding about vast amounts of content. The roles included guiders, guardians, encouragers, demonstrators, managers, coaches and adaptors. Each domain of difference described again in full.

Generalisability

- The results would appear to have some ability to generalisable (up to Grade 5 only). The size of the sample together with the spread of countries involved add to its generalisability and credibility. However, it did not involve simple random samples which rules out high generalisability.

Trustworthiness

- Medium trustworthiness, given the explicitness of the research design, together with the attention to methodological rigour. However, the validity of the approach (mechanistic and atomistic) is questionable on the grounds that participants had to decide on mostly de-

contextualised scenarios and teaching episodes. The lack of validity on the one hand and the lack of relevance for our review rendered it barely medium in relation to quality assessment and weight of evidence.

Title: Beating the odds: teaching middle and high school students to read and write well
Langer JA (1999) CELA Report series 12014

Abstract/overview

This is a report of a five-year, qualitative study focusing on characteristics of educational practice that accompany student achievement in reading, writing, and English across four states. It describes features of English instruction that support student achievement and the kinds of attention given to helping students gain both knowledge and skills English. The study, based on sociocognitive principles, focused on the workings of schools, teachers and classrooms that strive to increase student performance and, despite difficulties of serving the poor, beat the odds on standardized tests in reading and writing, that is gain higher literacy beyond comparable schools. The project as a whole focused on both the professional and classroom activities that contribute to the English instruction the students experienced. [For results from the study of the professional lives of teachers, see 'linked' study by Langer (2000)]. The following features dominated the higher achieving English schools and teachers: skills and knowledge are taught in multiple types of lessons; within curriculum and instruction, connections are made across content and structure to ensure coherence; strategies for thinking and doing are emphasised; generative learning is encouraged; and classrooms are organised to foster collaboration and shared cognition. These six features worked in conjunction with one another form a supported web of related learning. Some aspects of these features were also present in some of the more typical schools some of the time and other features none of the time. The researcher concludes that it is the 'whole cloth' environment, the multilayered contribution of the full set of these features to the teaching and learning interactions, that distinguished the higher achieving settings from others.

Aims/rationale

- To study the claim that no studies had focused on features of instruction that differentiate English achievement in higher versus lower performing middle and high schools
- To understand better the various components that make a difference to helping students become more highly literate
- To identify the features of instruction that make a difference in student learning and to contrast those schools where test scores are higher with demographically comparable schools in which they are not.
- Particularly interested in identifying features of excellence in urban schools
- Specific foci include approaches to skill instruction, approaches to testing; approaches to connecting learnings; approaches to enabling strategies; conceptions of learning; and classroom organisation.

Design

- The four states were chosen to represent student diversity, educational problems and approaches to improvement (rather implicit).
- Schools were nominated by at least three independent sources as 'places where professionals were working in interesting ways to improve student performance and tests scores in English' (p. 9).
- In addition, test data reported on each state education department's website were checked to identify those schools scoring above the odds and those schools that were scoring more typically (i.e. more like demographically similar schools).
- Research team visited 'the most promising programs' (not defined) (p. 9) based on a combination of recommendations and test scores and from these made a final selection based on teachers' and administrators' willingness to participate over a two-year period.
- 25 schools, 44 teachers and 88 classes were selected to participate.

- 14 of the 25 schools beating the odds; other 11 came highly recommended but schools literacy more typical of other schools with similar demographics. In addition, identified 'beating the odds teachers in beating the odds schools'; 'beating the odds teachers in typical schools'; and 'typical teachers in typical schools'.
- Four states: Florida, New York, California and Texas
- Study involved a nested multi-case design with each English program (never defined) as a case and the class including the teachers and target pupils as cases within.
- Field workers spent five weeks per year in each site. Also, weekly contact with teachers and students via email or phone.
- Parallel sets of qualitative data gathered in each of the sites: fieldnotes of all meetings; observations of all classes; conversations; email messages; artefacts; taperecordings and transcripts of all interviews as well as 'in-process' (outlined on p. 17) case reports developed by field researchers.
- Analysis done by constant comparison and cross cases analyses in line with qualitative research methodology (detailed on p.19).

Main findings/claims

Major concern here from reviewer's perspective is that findings and results are mostly asserted rather than presented and demonstrated – typical statements being 'both qualitative and quantitative analyses indicate that...' (p. 21).

- Three distinct approaches to skill instruction: 'separated' 'simulated' and 'integrated'. While teachers in higher performing schools used a number of well orchestrated instructional approaches more typical schools' approaches to skill development was more restricted and separated from the ongoing activities of the English classroom.
- More than 80% of the more successful teachers integrated the skills and knowledge that was to be tested into ongoing curriculum as their dominant approach to test preparation. 75% of the more typical teachers teach 'test preparation skills and knowledge apart from the ongoing curriculum' (p. 25). Higher performing schools focused on pupil learning, using the tests to be certain the skills and knowledge that are tested are being learned within the framework of improved language arts instruction, while the more typical schools seemed to focus on tests themselves, with raising test scores, rather than improving students' literacy learning, as the primary goal.
- In the higher performing schools, teachers worked consciously to weave a web of connections to support pupil learning.
- There were distinct differences in ways in which the more successful and typical teachers taught strategies. All the former and only 17% of the latter taught pupils ways of organising their thoughts and completing tasks.
- All the more successful teachers took a generative approach to pupil learning, going beyond pupil acquisition of the skills and knowledge to engage them in deeper understandings. These higher performing teachers were constantly encouraging their pupils to go beyond the basic learning experiences in challenging and enriching ways.
- The dominant classroom interaction patterns in the more successful classrooms differed sharply from those in the more typical classrooms.
- In the higher performing schools, at least 96% of the teachers helped pupils engage in the thoughtful dialogue Langer labels 'shared cognition'.

Conclusions

The following features dominated the higher achieving English schools and teachers:

- Skills and knowledge are taught in multiple types of lessons.
- Within curriculum and instruction, connections are made across content and structure to ensure coherence.
- Strategies for thinking and doing are emphasised; generative learning is encouraged; and
- classrooms are organised to foster collaboration and shared cognition.
- These six features worked in conjunction with one another form a supported web of related learning.

- Some aspects of these features were also present in some of the more typical schools some of the time and other features none of the time.
- The researcher concludes that it is the 'whole cloth' environment, the multi-layered contribution of the full set of these features to the teaching and learning interactions that distinguished the higher achieving settings from others.

Generalisability

- Very low on this criterion

Trustworthiness

- Low trustworthiness. Considerable implicitness re not just research design issues but also concepts not fully articulated (shared cognition, integrated). Triangulating processes not given enough detail. In general an implicitness and looseness of terms and language that suggest low trustworthiness. Overall low on quality assessment and weight of evidence.

Title: Excellence in English in Middle and High School: how teachers' professional lives support student achievement

Langer J (2000) CELA Research Report Number 12002

Also published in *American Educational Research Journal* 37, 2: 397-439, 2002

Abstract/overview

This study examined the characteristics of teachers' professional lives that accompany student achievement in writing, reading and English. It took place in the classrooms of 44 middle and high school teachers in four states, in 25 schools and districts that were attempting to improve students' literacy abilities. The schools served mostly poor and traditionally low performing students and diverse student bodies. 14 schools were places where students were 'beating the odds', that is performing better than other students in demographically similar areas. The other 11 schools were more typical of other schools with similar demographics. A five-year study of both the professional and classroom communities sought to identify characteristics in teachers' professional lives that accompanied higher student achievement. Analyses of patterns across cases indicated six features that permeated the 'beating the odds' schools, yet were not present in the more typical schools. The more effective schools nurtured a climate that (1) orchestrated co-ordinated efforts to improve student achievement, (2) fostered teacher participation in a variety of professional communities, (3) created structured improvement activities in ways that offered teachers a strong sense of agency, (4) valued commitment to the profession of teaching, (5) engendered a caring attitude to colleagues and students, and (6) fostered a deep respect for lifelong learning. These characteristics were pervasive across levels, in the ways central administrators as well as classroom teachers lived their professional lives as well as in the features they considered evidence of professional excellence.

Aims/Rationale

- The main explicitly state aim addressed by this study is to 'identify characteristics in teachers' professional lives that accompanied higher student achievement' (p. 1). And within this a particular focus on: 'how various images of English as a subject and of student proficiency in English are constructed within these [professional] contexts' (p. 2).
- At a context/ institutional level the rationale is less clear, the selection of contexts, individuals and institutions being based upon nominations 'from university and school communities for schools where "special" things were happening in English teaching and learning in an attempt to increase student performance and test scores' (p. 2).

Design

- Much of this information is also in Langer (Beating the odds).
- The four states were chosen to represent student diversity, educational problems and approaches to improvement (rather implicit).
- Schools were nominated by at least three independent sources as places where 'special things were happening' to improve student performance and tests scores in English.
- Test data reported on each state education department's website were checked to identify those schools scoring above the odds and those schools that were scoring more typically (i.e. more like demographically similar schools).
- Research team visited 'the most promising programs' (not defined) based on a combination of recommendations and test scores and from these made a final selection based on teachers' and administrators' willingness to participate over a two-year period.
- 25 schools, 44 teachers and 88 classes were selected to participate.
- 14 of the 25 schools beating the odds; the other 11 came highly recommended, but school literacy was more typical of other schools with similar demographics. In addition, identified 'beating the odds teachers in beating the odds schools'; 'beating the odds teachers in typical schools'; and 'typical teachers in typical schools'.
- Four states: Florida, New York, California and Texas
- The study provides an incomplete account of its sampling strategy, opting to talk generally about the involvement of university and school communities (p. 2). It does not provide a clear

account of the criteria for selection beyond stating that teacher/schools were chosen recruited where “*special*” things were happening in English teaching and learning in an attempt to increase student performance and test scores’ (2).

Main findings/claims

Factors that contribute to excellence and effectiveness in school practice include the following:

Coordinating efforts to improve achievement (pp. 13-14)

- Significance of high levels of organisation, connectedness and overt effort to improve performance
- Importance of a co-ordinated effort involving all staff in identifying needs
- Opportunities, through professional development, to debate and discuss issues, policy and ideas concerning field of practice.
- Receptiveness to change (incremental and major)

Fostering teacher participation in professional communities (pp. 14-17)

- Importance of membership of ‘*communities that sustained [practitioners] efforts*’ (p. 14)
- Significance of being engaged with the professional community at many levels – local, district and beyond – including engagement with broader developing knowledge and practice reported through professional writing (e.g. journals)
- Presence of both formal and informal networks, and the importance of collegial support, within and outside of the formal in-school network

Presence of a critical friend (p. 16)

Creating activities that provide teachers with agency (pp. 17-19)

- Importance of teachers having ‘*an ongoing sense of agency: they can effect change* (p. 17)’
- Sharing of responsibilities and being part of curriculum development and change

Valuing commitment to professionalism (19-21)

- Having a sense of professionalism: ‘*in effective programs, the teachers we studied are proud to be educators; they think of themselves as professionals and carry their professional selves with them wherever they go. They are in touch with the larger world and the concerns of others with regard to education. They consider themselves spokespersons for the profession*’ (p.19).
- Importance for teacher to keep apace with their field and continually hone their professional skills (p. 20).
- Significance of valued professional relations among all staff (p. 20).

Engendering caring attitudes (pp. 21-22)

- Creating a ‘family feel’ (p. 22), welcoming, and including for families and staff
- Importance of fostering a sense of community

Fostering respect for learning (22-24)

- Importance that teachers are themselves learners
- Exemplary teachers being computer literate (p. 23)
- Teachers’ continual engagement in the development of their profession (linked to iv).

Conclusions

- Successful schools were those in which the six focal characteristics that the study discusses came together. Every school in the study that performed better than comparable one exhibited all of these characteristics: (a) co-ordinated efforts to improve achievement; (b) fostering professional community engagement among staff; (c) creating teacher agency; (d) valuing commitment to professionalism; (e) engendering caring attitudes; and (f) fostering

respect for learning (p. 24).

- The knowledge and experience that teachers gain in their wider professional arena affects the classroom context and their students' learning and achievement.
- Through the constant filtering through 'both broad and distant as well as closer-to-home professional contexts [] teachers maintain the professional knowledge, skill and techniques [] to help their students learn and achieve in English' (p. 24).
- The essence of these successful and effective professional networks is in their cultures of support whereby all staff are bound together by common practices, experiences and goals: they all are involved, they all examine, inquire, learn and share. The environment in which they then operate is receptive to individual and collegial agency. They are 'open, rather than closed communities, open to new ideas from many places, and open to examination and discussion'. It is implied that such schools and communities of practitioners are also open to and have some ownership of change. (p. 25)

Generalisability

- Low

Trustworthiness

- Low trustworthiness. Like the linked 'Langer' study, considerable implicitness re not just research design issues but also concepts and terms not defined . Validating processes not given enough detail. Overall very low on quality assessment and weight of evidence.

<p>Title: Effective schools and accomplished teachers: lessons about primary-grade reading instruction in low-income schools Barbara Taylor, David Pearson, Kathleen Clark and Sharon Walpole (2000) <i>The Elementary School Journal</i> 101, 2: 121-164</p>
<p>Overview/abstract</p> <p>This is a study about school and classroom factors related to primary-grade reading achievement in low income schools. Two teachers in each of the grades K-3 in 14 schools across the US participated in the study. In addition, two low and average readers per class were tested in the fall and spring on reading accuracy, fluency and comprehension. The teachers were interviewed about their practice and their teaching was observed by trained observers. They also completed a written survey and kept logs of their teaching activities. Based on several measures of reading achievement in the primary grades, each school was identified as most, moderately and least effective. A combination of school and teacher factors was found to be important in the most effective schools. Statistically significant factors included: links with parents, systematic assessment of children's progress and strong communication and collaboration. A collaborative model for the delivery of reading instruction, including early reading interventions, characterised the most effective schools. Statistically significant teacher factors included time spent in small group instruction, time spent in independent reading, high levels of pupil on-task engagement and strong home communication. More of the accomplished teachers and more teachers in the most effective schools supplemented explicit phonics instruction with coaching in which pupils were taught strategies for applying phonics to everyday reading. More of the accomplished teachers and more teachers in the most effective schools also facilitated more higher-order interaction. In all of the most effective schools reading was a priority at both the school and the class levels.</p>
<p>Aims</p> <ul style="list-style-type: none"> • To investigate simultaneously both school and classroom factors affecting reading achievement (KH) • To 'pinpoint and explain school (i.e. programme) and classroom (i.e. teachers' instructional practices) factors that distinguished the most effective schools from other schools in the study (p. 126) • To get a richer picture of what was happening in high-poverty schools that excel in promoting growth in reading among students (p. 156)
<p>Design Details</p> <ul style="list-style-type: none"> • 14 schools across four states • 11 moderate to high poverty schools selected because of their dual reputation for implementing recent reading reform and for promoting greater-than-expected primary-grade reading achievement plus three schools because they 'allegedly produced ordinary achievement' (p. 125) (all fully detailed on p.126). So 11 experimental schools and three control or comparison schools the latter having no history of exceptionality on either high achievement or reform activity. • School exemplarity defined empirically: used gain scores from researchers' own classroom reading measures and scores from achievement test the district normally used. Based on this aggregated index, four schools were determined to be the most effective, six additional schools as moderately effective (neither exceptionally high or low on the two indices) and four schools as least effective. • Within each school and within each of the grades, the principal was asked to identify two good or excellent teachers who would be willing to take part in the study but, as in the case of schools, not all teachers were found to be exemplary according to the researchers' criteria. • 22 K; 23 G1; 25 G2 and 22 G3 but study here details all bar CK (see Taylor <i>et al.</i> CIERA report for K). • Principals participated by responding to a survey, providing demographic information, etc. • Teachers asked in the fall to identify four high, four average and four low achieving pupils in their class (based on T's perceived performance in literacy). From this pool, researchers

randomly selected two low and two average students.

- Children were pre-tested in Nov and again in May; tests administered by trained researchers. (Details of what appear to be highly valid tests used are described in full on pp. 128-9.)
- One-hour observations once per month in each class for five months. Lots of coding in advance to maximise reliability. Details of how to observe given.
- Logs were kept by teachers for one week in Feb and one in April, recording activities in 15-minute intervals.
- Questionnaires were completed by teachers and principals in each school (return rate of 88%).
- Interviews were given with all principals and at least three teachers per school focusing on community and school links; advice to schools wanting to up achievement; teacher questions focusing on classroom practices.
- Case study procedure also followed for each school (outlined in detail on p. 131).
- Quantitative and descriptive analyses (fully detailed) e.g MANOVA, univariate analysis, ANOVA and non-parametric testing

Conclusions

1. *Time spent in small-group instruction* characterized the most accomplished teachers and the teachers in our most effective schools (p. 156). This was facilitated by the collaborative model used in all four of the most effective schools. Here 'instructional' grouping a term preferred to 'ability' grouping. Teachers used systematic assessment to prevent the groups from being rigid and inflexible, shifting group membership regularly. Students in the lower instructional-level groups spent as much time on higher order activities as did average achievers. (importance of the school factors: collaboration and common assessment system.)
2. *Coaching* (use of structuring comments, probing of incorrect responses, scaffolded instruction or 'on the fly' instruction). Effective teachers exhibit a general preference for coaching over telling.
3. *Phonics*: It was what teachers do to promote application of phonics knowledge during the reading of connected text that matters most (p. 157). What distinguished the most accomplished teachers from their peers was their use of coaching to help students learn how to apply word recognition strategies to real reading (p. 158).
4. *Higher level questions*: more of used by more accomplished
5. *Balanced instruction*: defined (p. 158); the most accomplished teachers and/or the teachers in the most effective schools exhibited more balanced instruction than their peers.
6. *Reaching out to parents*
7. *Independent reading*: more time in by students of the most accomplished teachers
8. *Maintaining student on-task behaviour*: higher rates of on-task behaviour
9. *Local vs. national reform models*: None of the schools in the most effective category used national reform models; all were home-grown.

Conclusion

- 'Children in the primary grades make the greatest growth when a high proportion of their reading instruction is delivered through small achievement-based groups, when their progress is monitored regularly, and when they have ample time to read and to learn needed skills and strategies. Teachers who are most accomplished in helping children thrive in reading are skilled in coaching and in keeping all children academically on-task (p. 161).
- In our view, this study demonstrates the need to take school and class factors into account in studying literacy teaching effectiveness.

Generalisability

- Not simple random so not high

Trustworthiness

- The detailed account and its overall explicitness prompted a judgement of *high* for this study in its own terms and overall a very high rating was allocated for quality assessment and weight of evidence.

<p>Title: Effective Teachers of Literacy (1998) Jane Medwell, David Wray, Louise Poulson and Richard Fox Report for the TTA</p>
<p>Abstract/overview</p> <p>This study was commissioned to help the Teacher Training Agency and teachers in England to understand more clearly how effective teachers help children to become literate. The findings are based on close examination of the work of a sample of teachers whose pupils make effective learning gains in literacy and of a more random sample of teachers whose pupils make less progress in literacy. Using mainly a qualitative research design, the study points to a consistent picture of the characteristics of effective teachers and the factors underpinning these characteristics. It seems that effective teachers of literacy placed a great deal of emphasis on presenting literacy to their children in ways which foregrounded the creation and recreation of meaning. Because meaning was of such high priority, they tried to embed their teaching of the crucial technical features of literacy in a context where the children could see why they were learning about such features. This context very often involved the use of a shared text, which was either being read or written together. As this text was being either read or written, the fundamental skills and features involved were being systematically taught by the teachers. Thus, the teachers continually made connections explicit for their pupils. Functions of language were emphasised rather than rules or definitions. The effective teachers demonstrated a great deal of literacy to children, modelling the processes of reading and writing but also explaining at the same time the thinking behind these activities. The teachers were aware of how they were teaching and made reasoned decisions about their teaching. They had developed strong personal philosophies about their literacy teaching which had resulted from involvement in literacy projects and/or curriculum responsibility for English in their schools.</p>
<p>Design</p> <p>(Most details obtained from the linked study, Poulson <i>et al.</i>, 2001, reviewed for this review)</p> <ul style="list-style-type: none"> • A questionnaire survey of the qualifications, experience, reported beliefs, practices and preferences in teaching literacy of a group of 228 teachers identified by the research team as effective in the teaching of literacy on the basis of a range of data including pupil learning gains • Observations of literacy lessons given by 26 of these effective teachers of literacy • Interviews with these 26 teachers about the content, structure and organisation of the lessons observed and about the knowledge underpinning them • A quiz designed to test teachers' subject knowledge about literacy • This report does not contain full details of the methodology. There is a reference in the report referring the reader to appendices for more specific information about the research. However the report (available online) does not contain the appendices and at the time of preparing our report had not become available. • However, the research design details are already outlined in another of our reviewed studies i.e. Poulson <i>et al.</i> (2001). • In addition to studying the characteristics of effective teachers, the researchers also studied student and newly qualified teachers of literacy (see aims above). To accomplish this, a questionnaire survey of 75 student teachers (on two PGCE courses) was conducted; observations of lessons of 11 students with a range of subject backgrounds during their final teaching practice plus interviews with these students enquiring about particular aspects of the lessons observed including how they had learned particular teaching strategies and how they had chosen the content of the lesson; follow-up observations of literacy lessons and interviews with six newly qualified teachers in their first year of teaching; a literacy quiz completed by the newly qualified teachers.
<p>Findings/conclusions</p> <p>Effective teachers of literacy tended to:</p> <ul style="list-style-type: none"> • Have extensive knowledge about literacy although not necessarily in a form which could be abstracted from the context of teaching it. For example the researchers found that when

examining and judging samples of children's reading and writing, all the teachers were able to generate criteria and to analyse mistakes, but the way the two groups approached the task was different. The effective teachers were more highly diagnostic in the ways they approached the task and were more obviously able to generate sustainable explanations as to why children read or wrote as they did. In examining the pieces of writing, although the two groups mentioned similar features eventually, the effective teachers were quicker to focus on possible underlying causes of a child's writing behaviour. The validation sample required lots of prompting and time to reach an equivalent point. It is likely that, in a busy classroom context, they would not routinely make the same level of judgements made by the effective teachers.

- Believe that it is important to make it explicit that the purpose of teaching literacy is enabling their pupils to create meaning using text; they were very specific about how literacy activities at the whole text, word and sentence levels contributed to such meaning creation (more details about beliefs in Poulson *et al.* above)
- Centred much of their teaching of literacy around 'shared' texts. Shared texts were used as a means of making the connections between text, sentence and word level knowledge explicit to children, both as a vehicle for teaching specific ideas at text, sentence and word levels, and for showing how the features of words, sentences and texts work together. The effective teachers made more use of big books in their teaching; they were also more likely to use other adults to assist their classroom work. The validation teachers made more use of phonic exercises and flashcards, although both groups were similar in the extent to which they reported and were observed to teach letter sounds. The difference was in the ways they went about this. The effective teachers tended to teach letter sounds within the context of using a text (often a big book) and to use short, regular teaching sessions, often involving them modelling to the children how sounds worked (by, for example, writing examples of letter groups on a flip-chart). The validation teachers were much more likely to approach letter sound teaching through the use of paper exercises. The effective teachers were generally much more likely to embed their teaching of reading into a wider context. They tended to use whole texts as the basis from which to teach skills such as vocabulary, word attack and recognition and use of text features. They were also very clear about their purposes for using such texts.
- Teach aspects of reading and writing such as decoding and spelling in a systematic and highly structured way and also in a way that made clear to pupils why these aspects were necessary and useful.
- Emphasise to their pupils the functions of what they were learning in literacy.
- Have developed strong and coherent personal philosophies about the teaching of literacy which guided their selection of teaching materials and approaches (again, see Poulson *et al.* for further details on this aspect)
- Have well developed systems of monitoring children's progress and needs in literacy and use this information to plan future teaching
- Have had considerable experience of in-service activities in literacy, both as learners and, often having themselves planned and led such activities for their colleagues.
- Be or have been an English subject co-ordinator in their schools.
- Most helpful to novices in learning to teach literacy, was a coherent combination of knowledge and practical experience consisting of (a) initial introduction to and practice with

key areas of content, concepts, issues and processes in the teaching of reading and writing most usually done in the university/college-based parts of the PGCE course; followed by (b) parallel with observation of experienced teachers doing the above, with the opportunity for discussion after observation; followed by (c) the opportunity to practise, in the classroom, the content, techniques and processes learned and observed; and with opportunities for discussion with teachers and tutors afterwards, to enable evaluation of performance; to identify strengths and weaknesses; and to set targets for future performance and achievement in literacy teaching.

Generalisability

- Medium on this criterion. Not high since the study was not based on simple random samples of teachers nominated as effective.

Trustworthiness

- The report addresses the issues identified in the research questions systematically and comprehensively. The processes for identifying and recruiting the sample are all clearly recorded in Poulson *et al.*, although, as stated above, we failed to locate the many appendices in time for this review). The various procedures and approaches for collecting and analysing data are highly appropriate. We did not rate this study on quality assessment and weight of evidence.

<p>Title: The theoretical beliefs of effective teachers of literacy in primary schools: an exploratory study of orientations to reading and writing Louise Poulson, Elias Avramidis, Richard Fox, Jane Medwell and David Wray <i>Research Papers in Education</i> 16(3) 2001: 271-292</p>
<p>Abstract/overview This paper reports an exploratory study of the theoretical beliefs of a sample of 225 British primary school teachers who were identified as successful in teaching literacy. The research took place between 1996 and 1998. Its aim was to examine the characteristics of effective teachers of literacy – in particular, their background, experience, professional development, knowledge, beliefs and classroom practices – and to compare them with a sample of 71 primary teachers who represented the range of effectiveness in literacy teaching. The findings indicated differences in theoretical orientation to literacy within the effective teacher sample, according to the type of teacher training course taken, the number of years’ experience of teaching gained after qualifying, and the highest level of professional qualification. There were also differences in theoretical orientation between the effective teachers and the comparison sample. The paper concludes that these differences in beliefs about literacy and its teaching have implications for policy and professional practice.</p>
<p>Aims/rationale/research questions</p> <ul style="list-style-type: none"> • ‘to examine the characteristics of effective teachers of literacy – in particular their background, experience, professional development, knowledge, beliefs and classroom practice – and to compare them with a sample of 71 primary teachers who represented the range of effectiveness in literacy teaching’ (p. 271). • This paper itself, however, is concerned , more narrowly, with the theoretical beliefs of the two groups of teachers (p. 272). • The explicitly stated reason for the study includes evidence of: international concern over literacy standards; the imposition of externally devised curricula on teachers; and new recognition of the role of teachers’ beliefs in their response to imposed • The explicitly stated research questions are as follows: <ol style="list-style-type: none"> 1 What were the theoretical orientations of the effective teacher and mathematics co-ordinator samples, as measured by the TORP [theoretical orientation to reading profile]; and what were the differences between the two groups? 2 Were there any differences in theoretical orientation within the sample of identified effective teachers according to years’ teaching experience, level of academic qualifications, or type of degree course or training? • The study is part of a larger examination of the relationship between teacher beliefs and practice. This study focuses on possible relationships between teacher effectiveness, teaching experience, level of academic qualifications, or type of degree course or training and teacher beliefs.
<p>Design</p> <ul style="list-style-type: none"> • 225 primary school teachers identified as successful in teaching literacy and 71 mathematics co-ordinators chosen to represent ‘the range of effectiveness in literacy teaching’ participated in the study (p. 271). • 296 teachers working in primary schools located in 14 localities in a range of geographical areas in England with different demographic patterns and school types (pp. 276-277). • The effective teachers of literacy were originally nominated by LEA advisor or inspectors (p. 276). This nominated group was narrowed with reference to ‘external data sources’ and ‘additional evidence of above average learning gains’ supplied by headteachers (p. 277). The mathematics co-ordinators were a sample from the same schools as the effective teachers of literacy, or from similar schools in the same localities (p. 277). • The study is mainly concerned with two groups: the effective teachers of literacy and mathematics co-ordinators. The effective teachers of literacy are also grouped according to years’ teaching experience, level of academic qualifications, or type of degree course or training, and by post of responsibility for the purposes of some parts of the study.

- The researchers describe their overall study design as 'bricolage' (p. 274). This term appears to apply appropriately to the larger study of which the survey of beliefs discussed in this paper forms one part.
- The questionnaire instrument used for the survey was carefully designed with reference to De Ford's TORP, the particular, English context in which it was to be applied, and particular interests of the researchers (in writing as well as reading) which resulted in its modification. (pp. 275-276). The modification of the TORP resulted in the provision of explicit questions about sets of beliefs and questions which tested the reliability of these responses by inviting teachers to indicate preferences for teaching strategies which were coded against the sets of beliefs. Correlations in the two sets of answers were later analysed (276). The validation of the TORP 'through a multi-method process of analysis' is reported, as well as its previous use by other researchers (p. 275).
- 225 of the effective teachers of literacy returned the survey questionnaire (59%) and 71 of the mathematics co-ordinators (47%) (p. 277).
- Data analysis was conducted using both descriptive and inferential statistical tests. The techniques applied include analysis of mean responses recorded on five-point Likert scales, correlational analysis and Multivariate Analysis of Variance (MANOVA).

Findings

- There were differences in the theoretical beliefs about reading and writing held by effective teachers according to the number of years' teaching they had; the type of training they had experienced; and the highest level of qualification they held.
- There were also differences in theoretical orientation between the effective teachers and a comparison sample of primary school mathematics co-ordinators.
- The effective teachers of literacy showed a greater degree of consistency between responses relating to a particular theoretical orientation, and the hypothetical teaching activities that would accompany such an orientation.

Conclusion

- The authors conclude that the differences in beliefs identified are interesting because they have implications for the implementation of innovations in literacy education, which the authors propose should include differentiated training to take into account the starting points of different teachers (p. 290).
- They also conclude that the study can make no claims about the relationships between beliefs and classroom practice and that this is a matter for further investigation, as is the effect of the constraints on acting according to beliefs, which are imposed on teachers by the complexities of classroom life.

Generalisability

- The results may not be very generalisable because of the issues concerning the use of mathematics co-ordinators as the comparison sample.

Trustworthiness

- The information supplied is detailed and appropriate. The report addresses the issues identified in the research questions systematically and comprehensively. The processes for identifying and recruiting the sample are all clearly recorded. Reviewers agreed on a rating of medium for quality assessment and weight of evidence.