



# The impact of adult support staff on pupils and mainstream schools

Review conducted by the Educational Support and Inclusion Group

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Technical report written by Alison Alborz, Diana Pearson, Peter Farrell and Andy Howes

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EPPI-Centre  
Social Science Research Unit  
Institute of Education  
University of London

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# **The impact of adult support staff on pupils and mainstream schools**

## **REPORT**

Review conducted working with support staff

Report by Alison Alborz (University of Manchester)

Diana Pearson (University of Manchester)

Peter Farrell (University of Manchester)

Andy Howes (University of Manchester)

The results of this systematic review are available in four formats. See over page for details.

The results of this systematic review are available in four formats:

### **SUMMARY**

Explains the purpose of the review and the main messages from the research evidence

### **REPORT**

Describes the background and the findings of the review(s) but without full technical details of the methods used

### **TECHNICAL REPORT**

Includes the background, main findings, and full technical details of the review

### **DATABASES**

Access to codings describing each research study included in the review

These can be downloaded or accessed at:

<http://eppi.ioe.ac.uk/cms/Default.aspx?tabid=2438>

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## **List of abbreviations**

DCSF	Department for Children, Schools and Families
DfES	Department for Education and Skills
EBD	Emotional / behavioural disorder
HLTA	Higher level teaching assistant
LA	Local Authority
LSA	Learning Support Assistant
ONS	Office for National Statistics
PLI	Primary language impairment
PMLD	Profound and multiple learning difficulties
SEN	Special Educational Needs
SENCO	Special Educational Needs Co-ordinator
SENDA	Special Educational Needs and Disability Act
SLD	Severe learning difficulties
SLTA	Speech and language therapy assistant
TA	Teaching Assistant
WoE	Weight of Evidence



# Abstract

## **What do we want to know?**

What is the impact of adult support staff on the participation and learning of pupils and on mainstream schools? What are the support processes that lead to these outcomes?

## **Who wants to know and why?**

This information is helpful for the government and local authorities, to assess whether the employment of greater numbers of support staff has been worthwhile. It is also of benefit to school leadership and teachers, providing information on the types of positive impacts support staff have and how these are achieved. Other people interested in improving the quality of education for all children will also be interested in the impact of support staff.

## **What did we find?**

**Pupils:** Literature suggests that trained and supported teaching assistants (TAs) can have a positive impact on the progress of individual or small groups of children, in the development of basic literacy skills. In addition, ‘sensitive’ TA support can facilitate pupil engagement in learning and social activities, with the class teacher and their peers; that is, sensitive TA support can both facilitate interaction, and also reflect an awareness of times when pupils need to undertake self-directed choices

and actions. Evidence suggests that TAs can promote social and emotional adjustment in social situations, but that they are not very successful in undertaking therapeutic tasks aimed at supporting children with emotional and behavioural problems.

**Schools:** Use of TA support allows teachers to engage pupils in more creative and practical activities and to spend more time working with small groups or individuals. Class-related workload is somewhat reduced when working with a TA, but the teacher role may become more managerial as this workload may increase. An adult presence in classroom makes teachers feel supported and less stressed. The knowledge that pupils were receiving improved levels of attention and support was also reported to enhance job satisfaction for teachers. ‘Team’ teaching styles, involving TAs and work with small groups, can promote learning support as a routine activity and part of an ‘inclusive’ environment in which all children are supported. TAs can act as an intermediary between teachers and parents, encouraging parental contacts, but care is required to ensure that appropriate contacts with the teacher are maintained.

## **What are the implications?**

The review suggests the deployment of the TA workforce has been successful in providing support for teachers on a number of levels and

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in delivering benefits to pupils. To enhance these impacts, it is necessary to ensure effective management and support for TAs, including effective training and clear career structure. Collaborative working is required if TA support is to be employed to its best effect. Teachers therefore need to be trained in these approaches and the ongoing effect of this emphasis needs to be monitored in professional standards for teachers.

Progress was more marked when TAs supported pupils in discrete well defined areas of work or learning. Findings suggest that support to individual pupils should be combined with supported group work that facilitates all pupils' participation in class activities. The importance of allocated time for teachers and TAs to plan programmes of work was apparent. Support, embedded as 'standard' school practice, with the type and extent of support provided planned on an individual basis, has implications for the destigmatisation of supported pupils.

### **How did we get these results?**

The systematic review identified 232 studies, of which 35 were selected for in-depth review.

### **Where to find further information**

<http://eppi.ioe.ac.uk/cms/Default.aspx?tabid=2438&language=en-US>





## CHAPTER ONE

# Background

### **Aims and rationale for current review**

For some years, the issue of how to provide cost-effective support to teachers and pupils in schools has exercised the minds of government ministers, local authority staff, teachers, parents, pupils and researchers. The first EPPI-Centre review on the impact of paid adult support staff on the participation and learning of pupils in mainstream schools was completed by the Educational Support and Inclusion Group, at Manchester University in 2003 (Howes *et al.*, 2003). Since this original review was published, the National Agreement (*Raising Standards and Tackling Workload*, DfES 2003) has come into force, and the numbers of adults working in schools has increased substantially (DfES and ONS, 2005). The original review, therefore, considered data collected before the main thrust of workforce changes came into effect and any subsequent research into its impact on pupils and schools.

In addition, the original review was restricted to the impact of paid adult support staff on participation and learning. However, the presence of such staff has arguably had a wider effect, and has impacted on teaching approaches and teachers, as well as on organisational and managerial issues. The original review, therefore, needed to be updated to take account of research on the impact of support staff on the wider school setting. Hence, in addition to updating the

previous review in relation to the impact of TAs on pupil learning and participation, this review considers *all* relevant research on their wider impact, some of which preceded 2002, the cut-off date of the first review.

### **Policy and practice background**

#### ***Policy directions***

In the past 15 years, there has been a rapid growth in the numbers of teaching assistants (TAs) working in mainstream schools in the UK. Figures suggest that initially the increase was due to the rise in the numbers of pupils with special needs statements being educated in mainstream settings. The 1997 Green Paper, *Excellence for All Children: Meeting Special Educational Needs* (DfES, 1997), suggested that there were 24,000 fulltime equivalent TAs working in mainstream schools and that this number was expected to grow. Indeed, the rise in the numbers of TAs working in mainstream schools mirrored schools' and LAs' growing commitment towards inclusion. Building on these developments, the subsequent Green Paper, *Teachers Meeting the Challenge of Change* (DfES, 1998), referred to the projected increase of 20,000 in the numbers of classroom assistants who would provide general support in mainstream schools: that is, not restricted solely to pupils with special educational needs. In addition, the Green Paper referred to the need to recruit and train 2,000 'literacy

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assistants' to help in the implementation of the Government's literacy strategy.

Traditionally the work of TAs has almost exclusively been associated with supporting the education of children in special schools. In the 1990s, however, they began to play a role in supporting mainstream placements for pupils with statements of special needs. In the last 10 years, their increasing contribution towards assisting in the education of all pupils has been recognised. These developments have posed many challenges for the TAs themselves and for those involved in employing, managing, supporting and training them.

For some years, the Government has explicitly recognised the valuable and supportive role that TAs can play. At the turn of the century, they published the Good Practice Guide (DfES, 2000a), a consultation document (DfES, 2002), and two sets of induction training materials for newly appointed TAs in primary and secondary schools (DfES, 2000b; 2001). In addition, they supported the work of the Local Government National Training Organisation (LGNTO) which has devised a set of occupational standards for TAs (LGNTO, 2001). Such documents recognised the increasingly valuable and supportive role that teaching assistants (TAs) can have in mainstream schools. Indeed, this guide referred to the most recent reports by Her Majesty's Inspectorate (HMI) that have 'confirmed the tremendous contribution that well trained and well managed teaching assistants (TAs) can make in driving standards up in schools'.

In January 2003, the Government, employers and the majority of the school workforce unions (all except the NUT) signed a National Agreement, *Raising Standards and Tackling Workload*. This set out proposals for the following:

- a series of changes to teachers contracts designed to ensure that teachers spent their time on tasks that needed the professional skills or judgement of a teacher

- a reform of support staff roles
- a concerted attack on bureaucracy

These proposals were underpinned by a change management programme for schools and driven by a steering group, comprising signatories to the National Agreement.

The contractual changes were implemented in three phases, by amending the School Teachers' Pay and Conditions Document as follows:

##### *September 2003*

- Teachers can no longer be required routinely to undertake administrative and clerical tasks.
- Teachers' work-life balance has to be taken into account.
- Teachers with leadership and management responsibilities have a right to time in which to carry out their duties.

##### *September 2004*

An annual limit on the amount of cover for absent colleagues that teachers can carry out was introduced (38 hours a year).

##### *September 2005*

- All teachers are entitled to guaranteed time for planning, preparation and assessment (PPA).
- Headteachers are entitled to Dedicated Headship Time.
- Teachers can no longer be required to invigilate for external examinations.

As a result of the National Agreement, new support staff roles have been developed. These include roles such as cover supervisors, who supervise classes during short-term teacher absences, and higher level teaching assistants (HLTAs) who are able to lead

learning with whole classes. Regulations were introduced which allowed support staff to undertake 'specified work' in certain circumstances. Support staff increasingly take on a range of roles outside the classroom that were previously done by teachers, such as exam officers, bursars, attendance and behaviour managers, midday supervisors and a variety of pastoral roles.

### **Practice issues**

School support staff potentially impact on both the pupils they are targeting and school functioning more generally. In this review, the impact of general and targeted adult support on pupil outcomes is understood as part of a wider question about how the participation and learning of all pupils can be promoted and the impact this might have on teachers and teaching. Schools are encouraged, through a variety of schemes, including reductions in special school placements and disciplinary exclusions, to educate a wider range of pupils. The employment of TAs has been an attractive response to these initiatives, because it is largely within the control of the school management and avoids an increase in teacher workload. However, the previous EPPI-Centre review (Howes *et al.*, 2003) and other literature (see for example, Giangreco and Doyle, 2007; Giangreco *et al.*, 2005) suggests that this support is not always given to pupils in such a way that, as a result, they are more included in the school. Indeed, there is a potential tension between the impact of TA support on supporting individual learning and the impact on participation with peers: for example, with the practice of withdrawal from mainstream classrooms (Farrell, 2000; Fox *et al.*, 2004). Therefore, although TA support is a widely accepted response to the inclusion of children with special educational needs in mainstream schools, the way this is organised is crucial to whether children participate effectively in the classroom and school.

There are also questions about whether the presence of TAs to support pupils has had the desired impact on all pupils' academic attainments, including those with SEN. For,

although there are many reports on the work of TAs (e.g. Lee, 2002; Neil, 2002, Butt and Lance, 2005), almost all of which express positive views about their impact on pupils' learning, there are a number of practical issues concerning the training and support that TAs which need to be addressed in order to ensure that pupils do benefit. As Farrell *et al.* (1999) pointed out 10 years ago, simply placing a TA, who may be untrained and with little or no experience of working with children who have SEN, next to a child with disabilities will not necessarily result in a successful learning experience for the child.

### **Research background**

Since the first EPPI-centre review on the impact of paid adult support staff 2003 (Howes *et al.*, 2003) there have been other numerous additional publications on the various aspects of the work of TA both in the UK and overseas (for example, Mistry *et al.*, 2004; Werts *et al.*, 2004; Wilson *et al.*, 2003). Furthermore the work of teaching assistants in relation to promoting inclusive practice permeates the chapters of two recent books on inclusion and special education (Florian, 2007; Ainscow *et al.*, 2006). The assumption underlying the rapid rise in the numbers of TAs is that TAs can help to raise standards in schools. And indeed, although HMI reports and other publications refer to the vitally important role of TAs and other support staff, at the time of the original review, Giangreco *et al.* (2001a) pointed out that there had been no systematic review of international literature that had focused on the key question of whether the presence of support staff in classrooms had an impact on raising standards. More recently, Giangreco and Doyle (2007) review their concerns about the failure of TAs support to bring about improved learning and participation reflecting the need for further systematic reviews of the literature in this area. To quote Blatchford *et al.* (2008) 'the general view in schools was that support staff did have an impact on pupil attainment, behaviour and attitudes; the problem headteachers faced was proving it'.

This reflects ongoing unease among teachers and researchers that, despite the rapid increase in the number of TAs now working in schools, which has broadly been welcomed, there remains continuing uncertainty about the impact that they have in raising academic standards, in helping pupils to participate and on their wider impact in schools.

### Definitional and conceptual issues

Definitional and conceptual issues are described below.

#### Mainstream schools

Mainstream schools were defined as those schools, in the UK and abroad, that cater for the education of children of compulsory school age within their locality. Studies of schools that serve a wide range of children in their locality (as defined in that national context) are included. These were normally mainstream (i.e. non-special) schools in the state sector.

#### Adult support staff

Paid or unpaid adults working, directly or indirectly, to provide general or targeted support to pupils within schools

#### 1) PAID AND UNPAID SUPPORT

‘Paid adult support’ included those employed by a school (or local authority), on a permanent or temporary contract, to support pupils..

‘Unpaid adult support’ included volunteers who agree to share their expertise, in a structured or regular way, to benefit schoolchildren.

#### 2) DIRECT OR INDIRECT SUPPORT TO PUPILS

‘Direct’ support workers included teaching assistants, special support assistants, or ‘paraprofessionals’ (US), learning mentors, and child welfare support workers, such as school

nurses. ‘Indirect’ support is provided by staff such as librarians, laboratory technicians and educational welfare officers. Type of support has been defined by Blatchford *et al.* (2008) in a recent report on the deployment and impact of support staff in schools. They derive six types of support; however, this review will only consider the first four types outlined, as follows:

- 1.Support for teachers and/or the curriculum
- 2.Direct learning support for pupils
- 3.Direct pastoral support for pupils
- 4.Indirect support for pupils

The remaining categories<sup>1</sup> did not appear relevant to an adult support staff role focused (directly or indirectly) on improving pupil outcomes.

#### 3) GENERAL OR TARGETED SUPPORT

*General* support was considered to include:

- activities undertaken in the ‘classroom’ (widely defined to include library and sports facilities) to support the learning of *all class members*
- activities undertaken to provide ‘roving’ support for the learning of individual pupils within a teaching period aimed at *whole group teaching*

*Targeted* support was considered to include:

- o activities undertaken within or outside the classroom to support the learning of individual or small groups of pupils aimed at increasing their participation and achievement
- o activities undertaken to support the learning and participation of all pupils vulnerable to exclusionary pressures, not only those with impairments or any pupils who are categorised as ‘having special educational needs’

<sup>1</sup> Support for the school (administrative/organisational) and Support for the school (physical environment)

## **Review questions and approach**

1. What is the impact of adult support staff on the participation and learning of pupils in mainstream schools?
  - 1.1. What are the support processes that lead to impacts on pupils?
2. What is the impact of support staff on mainstream schools?
  - 2.1. What are the processes that lead to these school outcomes?

## *Approach*

Two aspects of each publication were considered: firstly, whether the publication was concerned with ‘impact of adult support staff’, as defined above; and secondly, given fulfilment of this first criterion, whether it specifies what type of support produced the impact, and in what circumstances.



## CHAPTER TWO

# Methods of the review

### **Type of review**

This review was conducted between May and October 2008. It was systematic, following the EPPI-Centre guidelines (2001a) and comprised five stages: literature searching and identification; selection of literature in accordance with inclusion criteria; mapping and quality evaluation of identified publications; data extraction; and final synthesis.

### **User involvement**

For the original review, extensive consultations were undertaken with teachers, adult support staff and others working in schools, as well as a number of influential academics, to illuminate the issues of importance for the review. Time constraints for the current review prohibited this type of consultation, although the team had the benefit of the earlier discussions.

However, detailed discussions were undertaken with representatives of the Department for Children, Schools and Families (DCSF), which informed the conduct of the review. In addition, as the team were based in the School of Education, University of Manchester, a number of on-site experts were available to consult. As part of the literature identification process, the team also contacted a number of external experts in the field (national and international - see Appendix 1.1), with a view to identifying key publications, grey (or unpublished) literature, and further important contacts.

### **Identifying and describing studies**

#### ***Defining relevant studies: inclusion and exclusion criteria***

Studies were included in the review if they were.

1. Published in the English language.
2. Provided empirical data.
3. Addressed the impact of adult support for pupil learning within mainstream schools.
4. on adult support for pupil learning within mainstream schools (3 to 16 years of age).

#### ***Identification of potential studies: search strategy***

A database of potentially relevant publications on 'paid adult support staff' existed from the original review. This was supplemented by a search of appropriate educational electronic databases covering books, journal articles, conference papers and proceedings, and reports. A search strategy was developed for this part of the process. Other sources which aided the identification of potentially relevant studies included personal contacts within the School of Education, University of Manchester, and as indicated above. These contacts

identified a number of relevant and ongoing research studies within this field of interest or suggested sources of unpublished/grey literature. In addition, a forum for teaching assistants was accessed and searched for relevant publications.

### ***Screening studies: applying inclusion and exclusion criteria***

There were three screening phases for relevance: raw (as generated by electronic databases); title and abstract only; and full text. References screened at the raw stage and considered potentially relevant to the review were downloaded and saved into an EndNote database. Four independent reviewers, assessed titles and abstracts for relevance to the review. Any studies that a reviewer was unsure whether to mark as relevant were flagged and discussed between the reviewers. Where, following discussion, the relevance of a publication was still unclear, the full text was obtained.

### ***Characterising included studies***

Studies identified as relevant to the review were examined and described using EPPI-Centre Educational Keywording sheet (EPPI-Centre 2002), plus additional review-specific keywords.

#### *Identifying and describing studies: quality-assurance process*

1. The reviewers worked closely to ensure that the inclusion criteria and keywording system were used consistently.
2. The reviewers kept in contact with EPPI-Centre link person with a view to ensuring that the methods were applied correctly and consistently with other review teams.

## **In-depth review**

### ***Moving from broad characterisation (mapping) to in-depth review***

The mapping exercise demonstrated that few relevant studies described the impact of support staff other than TAs, and, where they did this, was in addition to, rather than instead of, TAs. A decision was made, therefore, to focus the review on the TA category alone (see mapping categories in Appendix 3.1). No identified study evaluated the impact of support staff on school leadership and therefore this issue could not be reviewed.

### ***Detailed description of studies in the in-depth review***

Full reports of studies were interrogated at this stage using a set of standard data-extraction questions devised by the EPPI-Centre (2001a) alongside review-specific data-extraction questions. Studies were analysed thematically, by impact keyword, with each of the four reviewers taking responsibility for one or two themes.

### ***Assessing quality of studies and weight of evidence for the review question***

As in the 2003 review, the Review Group used the 'weight of evidence' tool (EPPI-Centre, 2001a), a procedure for judging the weight of evidence of each study to provide an indication of which ones should be seen as contributing most significantly and robustly to understanding the impact of paid adult support. There are three key elements to this judgement: trustworthiness, appropriateness of design and analysis, and relevance of focus.

- Weight of evidence A: Taking account of all quality assessment issues, can the study findings be trusted in answering the study question(s)?

- Weight of evidence B: Appropriateness of research design and analysis for addressing the question, or sub-questions, of this specific systematic review.
- Weight of evidence C: Relevance of the primary focus of the study (including conceptual focus, context, sample and measures) for addressing the question or sub-questions of this specific systematic review.
- Weight of evidence D: Taking into account quality of evidence (A), appropriateness of design (B) and relevance of focus (C), what is the overall weight of evidence this study provides to answer the question of this specific systematic review? A, B and C were considered equally in coming to this judgement.

See chapter 2 of the technical report for further details on how study quality was assessed.

### ***Synthesis of evidence***

The synthesis of findings used the conceptual framework outlined in Chapter 1. These key concepts are interrelated in practice, and impacts on one individual or process is likely to impact further on related individuals or processes. The synthesis is therefore structured by the research questions and within this by the coherent areas of impact defined in the rationale for the review and identified in the literature.

#### *Overall approach to and process of synthesis*

Using the structure afforded by the expected impacts of the adult support, as conceptualised in this review, the literal and heuristic findings from included studies were combined in a synthesis of knowledge on the research questions.

Synthesis took place at the findings level. Approach to synthesis was determined by the nature of the literature identified and is discussed briefly at the beginning of each section.





## CHAPTER THREE

# What research was found?

### **Studies included from searching and screening**

As searching was likely to generate a large number of publications, the inclusion/exclusion criteria were applied rigorously from the outset. As noted above, there were several stages in generating the sample of studies to be mapped for inclusion in the review. The inclusion criteria had been discussed at length among the Review Group and clear guidelines were set.

The initial phase of searching and screening involved evaluation of 'raw' lists of papers generated through keyword searching on electronic databases, websites and other sources. Display lists of publication listings were scanned to select only those which related directly, or could relate indirectly, to support staff in schools. In this way, 2,638 out of 3,574 publications were excluded in the first phase because they were clearly irrelevant to the current review. Details of potentially relevant publications (N=519) were stored in an Endnote database and then uploaded to the EPPI-Reviewer database.

417 papers on adult support, identified for the 2003 review, were saved in an Endnote database. These were uploaded to the EPPI-Reviewer database. The latter were screened as part of the 2003 review, but required re-screening for the current review due to the additional inclusion criteria on school impacts

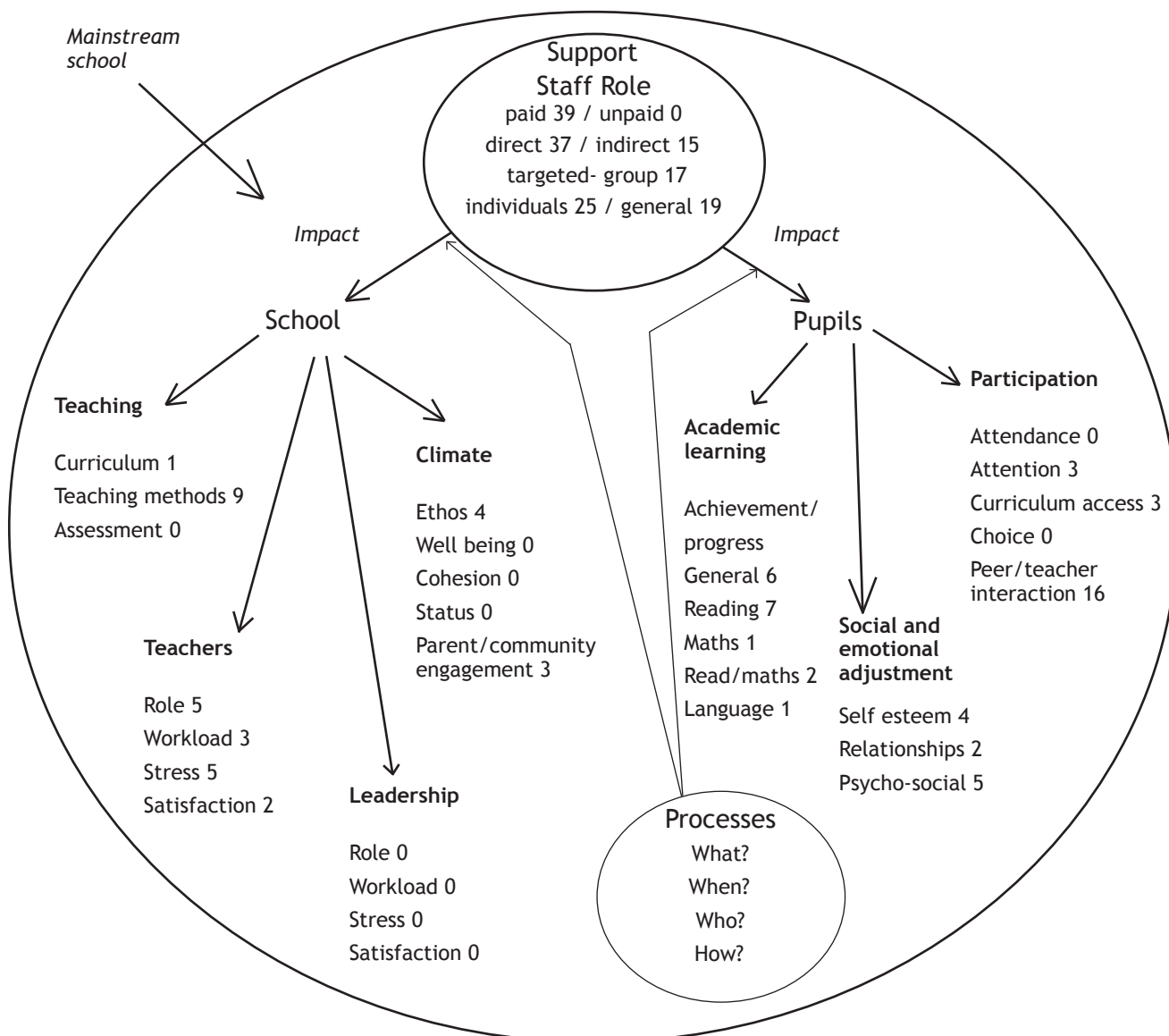
and wider definition of adult support staff used. The two datasets were combined and 936 citations went through the second phase of screening, evaluation of title and abstracts. Of these, 319 were considered to be relevant, or potentially relevant to the review. Where reviewers were unsure of relevance, the full text was sought to confirm status.

The above publications were combined with 24 publications included in the 2003 review and three articles added through additional handsearching (n=27); 48 duplicates were removed. The full text of the remaining 298 citations was sought. However, we were unable to obtain 66 of these in the timeframe available for the review. Full document screening proceeded, therefore, on 232 publications. A considerable number of these were not relevant to the review on inspection of the full text. The remaining 48 studies reported in 52 publications were included in the mapping exercise. Of these, 35 studies (in 39 reports) were subjected to the in-depth review. This filtering process is outlined in Figure 3.1 of the Technical Report.

### **Characteristics of the included studies (systematic map)**

The included studies comprised 39 publications from five countries, although the majority reported English/Welsh or US-based studies. The overwhelming majority of studies examined TA support in primary schools (that is age range

**Figure 3.2:** Included reports on impact of adult support staff on pupils and schools (N = 39, \*categories not mutually exclusive)



5-10 years), although a few conducted studies across nursery and primary, or primary and secondary schools. Most studies also addressed TA support to pupils with additional needs, comparatively few focused on general support to pupils in the classroom. The methodologies employed were also wide ranging. Those addressing impacts on academic attainment tended to be quantitative methodologies, whereas those addressing other impacts largely employed qualitative or mixed methods: that is, reported the perceptions of teachers, TAs or, rarely, pupils themselves.

### Summary of results of map

Figure 3.2 summarises the distribution of studies across the conceptual model used to underpin the review.

## CHAPTER FOUR

# What were the findings of the studies?

### Synthesis of evidence

The review asked two questions:

- What is the impact of adult support staff on the participation and learning of pupils in mainstream schools?
- What is the impact of support staff on mainstream schools?

The quality of the evidence on which this review is based is provided in Table 4.1.

**Table 4.1:** Weight of evidence analysis of included studies (N = 39)

Weight of evidence	Trustworthy	Rigorous	Relevant	Overall
	WoE A	WoE B	WoE C	WoE D
Blatchford <i>et al.</i> (2001)	High	Medium	High	High
Blatchford <i>et al.</i> (2006)	High	High	High	High
Blatchford <i>et al.</i> (2007)				
Blatchford <i>et al.</i> (2008)	High	High	High	High
Bowers (1997)	Medium	Medium	Medium	Medium
Boyle <i>et al.</i> (2007)	High	High	High	High
Broer <i>et al.</i> (2005)	High	Medium	High	High
Butt and Lance (2005)	Medium	Medium	High	Medium
Causton-Theoharis (2005)	High	High	High	High
Cremin <i>et al.</i> (2005)	High	High	High	High
Frelow <i>et al.</i> (1974)	Medium	Medium	Medium	Medium
French and Chopra (1999)	High	Medium	Medium	Medium
Gerber <i>et al.</i> (2001)	Medium	Medium	Medium	Medium
Giangreco <i>et al.</i> (1997)	High	High	High	High
Giangreco <i>et al.</i> (2001)	High	High	High	High
Grek <i>et al.</i> (2003)	High	High	High	High
Hemmingsson <i>et al.</i> (2003)	High	High	High	High

Lacey (2001)	Medium	Low	Low	Low
Loos <i>et al.</i> (1977)	Medium	Medium	High	Medium
Malmgren and Causton-Theoharis (2006)	High	High	Medium	Medium
Miller (2003)	High	Medium	High	High
Moyles and Suschitzky (1997a)	Medium	Medium	High	Medium
Moyles and Suschitzky (1997b)	Medium	Medium	High	Medium
Muijs and Reynolds (2003)	High	High	High	High
O'Shaughnessy and Swanson (2000)	High	High	High	High
Robertson <i>et al.</i> (2003)	High	Medium	High	Medium
Rose (2000)	Medium	Low	High	Medium
Savage and Carless (2005) Savage and Carless (2008) Savage <i>et al.</i> (2003)	High	Medium	High	High
Tews and Lupart (2008)	Medium	Medium	High	Medium
Vadasy <i>et al.</i> (2006) Vadasy <i>et al.</i> (2007)	High	High	High	High
Vander Kolk (1973)	Medium	Medium	Medium	Medium
Wang and Algozzine (2008)	High	Medium	High	High
Welch <i>et al.</i> 1995)	High	High	High	High
Werts <i>et al.</i> (2001)	Medium	High	Medium	Medium
Werts <i>et al.</i> (2004)	Low	Low	Medium	Low
Woolfson and Truswell (2005)	Medium	Medium	Low	Medium

As number of high quality studies were available to consider the impact of support staff on academic achievement or progress, and a smaller number on participation characterised by academic engagement. However, for other themes, and sub-themes, the evidence relied for the most part on the views and experiences of teachers and support staff themselves. These qualitative studies were also largely conducted in a rigorous manner. That is, they provided detailed description of methods employed, demonstrating their validity, and used techniques, such as triangulation, to strengthen reliability of findings. Data was clearly presented, using examples illustrating the veracity of the conclusions drawn, and any limitations of the research were discussed. However, a few qualitative studies reviewed, or at least their reporting, was of low quality. Most of these studies were excluded from the review. In these cases, this was due to poor methodological rigour, lack of clarity in reporting, or because they were based on the perceptions of a single person.

## Summary of results of synthesis

The review sought evidence on the impact of support staff on pupils and mainstream schools. Support staff were defined as adults performing teaching assistant or equivalent roles in mainstream schools - in this report, referred to as 'teaching assistants' (TAs). Impacts were defined as pupil impacts (participation, academic or social/emotional) or school impacts (teaching, teacher, climate). The findings from 19 high, 14 medium and 2 low quality studies are summarised in the points below.

### *Pupil impacts*

#### *Participation*

- The findings in relation to TA impacts on participation of pupils with SEN present a mixed picture. Fourteen studies were identified, including six high, six medium and two low quality studies. Of the 14 studies,

seven (two high and five medium quality) reported a negative impact where over reliance on TA support, or too much support, hindered pupil interaction with peers and teachers, undermined opportunities for self-determination, or led to pupils feeling stigmatised.

- Four studies (two high and two low quality) suggested that TAs had a positive impact on pupils with SEN in relation to maintaining engagement in academic activities, and where appropriately trained in supporting communication with peers. Two studies reported mixed findings, which supported those summarised above. One study reported a 'neutral' finding. TA support to pupils with autistic spectrum disorders did not improve or interfere with pupils' interactions with teachers.
- Five studies (two high and three medium quality) reported on the impact of TAs on participation of all pupils and four of these presented a positive view. The presence of TAs in a mainstream classroom was found to help pupils engage in academic tasks and activities. One high quality study reported mixed findings, supporting the above conclusion in relation to engagement in learning, but suggesting that, where support was focused more intensely, this could have a negative effect on interaction with the teacher.

#### *Academic*

- Seven of eight high quality studies on targeted support for literacy to individuals or small groups suggested that trained and supported TAs had a positive impact on pupils' progress. The remaining study reported mixed findings, with improvements in reading enhanced in those year groups where reading is emphasised.
- Only two studies, also of high quality, addressed targeted support for numeracy; one of these found no impact on numeracy skills, while the other found mixed evidence. The former adopted a notably different approach from that described in studies on literacy support, which might account for this finding. The latter study found positive impacts only in year groups where skill development in numeracy was emphasised.
- One further high quality study evaluated the effectiveness of a language intervention and found a positive impact of suitably trained speech and language TAs on language skills.
- Two studies on targeted support (both high quality) and three on general support (two high and one medium quality) reported positive perceptions on the part of teachers, parents/carers and pupils themselves regarding the impact of TAs on academic development.

#### *Social/emotional*

- Four of the six studies reviewed (one high and three medium quality) reported positive impacts of TA support on psychosocial development. The two remaining studies (one high and one medium quality) presented mixed findings. There was a general perception on the part of teachers, parents and pupils with learning difficulties that TAs can promote social and emotional development in children. However, perceptions of pupils with learning disabilities suggested that they recalled developing friendships with their TAs rather than with their peers.
- One medium quality study also found that TAs were not successful in undertaking therapeutic tasks aimed at supporting children with emotional and behaviour problems. It was suggested that the intervention may have been too brief to be effective.

#### *Processes supporting positive pupil impacts*

- TAs appear effective where trained and supported to deliver specific interventions to individuals or small groups. However, the intervention itself should be robust: that is,

for example, delivered appropriately and implemented over a sufficient period of time to have an effect.

- Support to individuals needs to be finely tuned to their needs to provide sufficient support with learning or communication as necessary, but to promote pupil self-determination and social interaction wherever possible. Support for participation therefore requires TAs to be acutely aware of the individual needs of the pupils they are supporting and to make finely balanced judgements as to the possible impact of their presence in encouraging/discouraging learning and participation.
- The type of balanced TA support suggested above can provide supported pupils with experiences that enhance or improve their self-esteem or confidence, and may impact on behavioural issues.
- There is a perception on the part of teachers, reported in one medium and two high quality studies, that TAs have reduced their workload. While much of this has been due to the removal of clerical tasks to administrative staff (high quality study), classroom-based TAs have also contributed towards this impact (high quality study).
- There is some evidence, from three high and one medium quality studies, that the presence of motivated support staff increases satisfaction, and reduces stress levels of teachers in mainstream classrooms.
- The additional support, perceived by teachers to have a positive impact on pupil's learning experiences and progress, was also noted to have an effect in increasing teacher's job satisfaction (two high quality studies).

## **School impacts**

### *Teaching*

- Use of TA support allows teachers to engage pupils in more creative and practical activities.
- Teaching with the support of a TA allows the teacher to spend more time working with small groups or individuals.

### *Teachers*

- The literature identifying impacts on teachers comprised four high, three medium and one low quality study. Evidence from one high and two medium quality studies suggests that one impact of support staff has been for a shift in the teacher's role towards more managerial responsibilities.
- Two studies (pre SENDA 2001), one high and one low quality, suggest that individual support to pupils with disabilities may hinder teachers in assuming a full role in relation to the education of these children.
- There was some evidence (in one high and one low quality study) that TAs could have a role in promoting parental engagement in school, both in relation to their child's daily activities and, where appropriate, in developing their own numeracy skills.

### *Climate*

- Two high, three medium and one low quality study provided some evidence on issues of school climate.
- Two high and one medium quality study offered some evidence that TA input appeared to generate a more inclusive ethos. Using teacher/TA teamwork to support small groups within whole class activities was seen by researchers and TAs to promote a 'more inclusive' ethos in two high quality studies. Children with learning difficulties were not singled out as being in receipt of 'special' attention using this approach. This was also reflected in a study (medium quality) that reported comments from pupils with learning difficulties themselves. They suggested that TAs facilitated their inclusion in mainstream classes.

*Processes supporting positive school impacts*

- Support appears more effective when incorporated into a ‘team teaching’ approach, where the TA is used as a resource to support individuals or groups within the classroom. Planning and evaluation within ‘team’ meetings act to improve facilitation for pupils and enhances the teacher/TA relationship.
- Assistance from TAs in providing some of the support to less cooperative individuals or groups of children helps to reduce teacher stress levels.
- Using a team approach to supporting small groups of children within the class as a whole can make the support to children who are underachieving or who have disabilities, part of routine teaching practice with all children, and hence less stigmatising.
- TAs can provide a useful link with parents, through informal or routine contacts, to promote their engagement in school and learning.

***Gaps in the literature***

Any review can only represent the literature identified within the timeframe for the work, seen through the values and experiences of those conducting the review. The value of systematic review such as this is the transparency with which the evidence is presented, allowing the reader to evaluate the processes that have led to the synthesis of literature. In this review, there were a number of significant ‘gaps’ in the literature, as defined by this Review Group. These gaps are detailed below.

*Pupil impacts***ACADEMIC**

- The strongest evidence available in relation to pupil outcomes concerned progress in literacy for children who are underachieving. There is therefore a lack of evidence of the

impact of TA support on the wider curriculum, and on normally developing children.

**PARTICIPATION**

- There was a dearth of information on the impact of TAs on curriculum adaptation. As this is arguably a major role for TAs, particularly in relation to pupils with SEN, more research on the impact of TAs in this area is required.

**SOCIAL/EMOTIONAL**

- The literature on the impact of TAs on social and emotional development was very small. Despite some indication in the literature that a consequence of some of the ‘academic’ support for pupils impacted on social and emotional development, in the view of parents or teachers, there was no substantive appraisal of the impacts of TA support in relation to pupils’ self-esteem or confidence, their relationships with others or regulating their emotions.

*School impacts***TEACHING**

- Although a number of studies were identified in relation to impacts on teaching, none provided detailed analysis of the mechanisms involved. In order to disseminate good practice, it is important that such studies should include details of how outcomes were achieved in addition to measures of their benefit.

**TEACHERS**

- The impact of TA support on teachers is not a primary focus of research in much of the wider literature at the present time. While the work of Blatchford *et al.* (2001-2008) has made important inroads here, additional direct research is needed on the mechanisms of TA support that impact on and have implications for role, workload, satisfaction and stress, to ensure that teacher training, career paths and support can be appropriately configured.

## LEADERSHIP

- No research was identified on the impact of TA support on school leadership. In the conceptualisation for this review, it was conceived that additional numbers of staff in mainstream schools and the implications for management of this wider workforce would have emerged in the literature. That the Review Group identified none at all, despite exhaustive searches, suggests that this has not yet surfaced as an issue within the research community, if not within schools themselves.

## CLIMATE

- The impact of TAs on school climate is not a current focus for research, despite a high profile in educational discourses. This appears a significant oversight.

The points above summarise the key findings from the review. Echoes of these issues are discussed elsewhere in the literature (see for example Giangreco *et al.*, 2005). The Review Group therefore concludes that, although many of these findings are not new, nevertheless, bringing them together in the form of this review may be helpful to the wider audience with an interest in promoting personalised learning to pupils, effective teaching practice and an empowered workforce.





## CHAPTER FIVE

# Implications, or ‘What does this mean?’

### **Strengths and limitations of this systematic review**

Any research in the field of education practice needs to respond to a range of complex challenges. School contexts are constantly evolving in response to changing legislation and policy guidance. Hence, against this backdrop of competing priorities, it is not always possible to conduct rigorous definitive studies. The literature reviewed here reflects this issue. Traditional experimental studies were, for the most part, employed in relation to academic outcomes for pupils, although some were apparent in relation to the participation (engagement) of pupils in their classwork; these were, on the whole, of high quality. The rigour of the qualitative studies was much more variable, although some were also rated overall as being of ‘high weight of evidence’ (WoE D). Many of the remaining studies were not rated as highly in relation to their overall quality; however, in most cases there was a consistent message which permeated the findings and therefore added credibility to the overall conclusions.

The main data was obtained from UK and US studies. This may reflect the surge in use of TAs in these countries, not apparent in other countries in the world. However, the members of the Review Group were surprised not to find relevant studies from Australia where the use of TAs is also common. It is unlikely that the database searches missed Australian

studies; however, as with any review, it must be acknowledged that this review synthesises the literature which the reviewers were able to find and collect within the short timeframe for the work.

The majority of studies were based in primary schools, so the findings ostensibly have more limited relevance for TA impacts in secondary schools. Nevertheless, many of the issues highlighted are likely to have equal importance for secondary schools, and, in terms of peer interactions among young people, these are arguably likely to be amplified. Studies were generally focused on the impact of TAs on students who were underachieving or who had a disability. It was also clear that the impact of support staff on school leadership has not, so far, been a focus of research. Nor was the unpaid voluntary support provided within schools a particular focus. A single study was identified and clearly did not provide a sufficient ‘body’ of knowledge for this review.

Particular strengths of the review were the wide ranging literature searching strategies, and the extensive collaboration among the four reviewers. Co-location, within the same institution, was key in this ongoing contact; it allowed the reviewers to consider the emerging literature with a clear vision of the parameters within which it was set.

## Implications

The findings of this review complement and add further depth to the findings of the earlier review on the impact of paid adult support on pupils (Howes *et al.*, 2003). In addition, it provides evidence on the wider impact of support staff on aspects of schools themselves. The main implications of the review for policy, practice and research are described below.

## Policy

### Pupils

- The studies reviewed here suggest that TAs play an important role in supporting policy initiatives as they are rolled out across mainstream schools. Well trained and supported TAs can effectively support the learning and participation of pupils at the whole group level, in small intervention groups, and on a one-to-one basis where necessary, working with normally developing children, those with learning difficulties, and those with the most complex disabilities. This finding, therefore, has implications for policy on TA deployment, which needs to promote and require effective programmes for this group to enable them to support pupils with a wide range of abilities appropriately and in the full range of learning interactions (1:1, small group and whole group).

### Schools

- Policy driving the deployment of the TA workforce has been successful in providing support for teachers on a number of levels and in delivering benefits to pupils. To enhance emerging TA impacts, it is necessary for policy to promote effective management, training and mentoring of these staff in clearly delineated roles.
- Within teacher training policy, it is important to communicate the nature of the collaborative working required if TA support is to be employed to its best effect. Teachers need to be appropriately trained in team working approaches during initial

or postgraduate training programmes.

This includes, for example, teachers acknowledging the knowledge and important perspective that TAs bring on pupils and their responses to classroom activities. It will be important to monitor the ongoing effect of the emphasis now given to collaborative working in professional standards for teachers.

## Practice

### Pupils

- Findings suggest that, where properly trained and supported, TAs can have a positive impact on pupil progress. It was clear, however, that progress was more marked when TAs supported pupils in discrete well defined areas of work on particular aspects of learning. There is therefore a strong case for the deployment of well trained TAs to support pupils (individually or in groups), in collaboration with the class teacher. The evidence reported here suggested that support for literacy may be a particularly productive area.
- As in the earlier review on support staff, the findings suggest that support to individual pupils should be combined with supported group work that facilitates all pupils' participation in class activities. The implication here is that TAs should not, normally, work on an exclusively 1:1 basis with pupils. Pupils with particular learning needs may require this type of support at times, but their learning and participation are facilitated where this is kept to a minimum and provided within the context of support to groups.

### Schools

- Similarly this, and the earlier review, found evidence emphasising the importance of allocated time for teachers and TAs to plan programmes of work. It is important that, in this way, support is embedded as 'standard' school practice to overcome notions of 'difference' engendered in the past by provision of support to pupils with SEN.

- Where TAs are used to support participation in the classroom, TAs and teachers need to work as a team, with the type and extent of support provided being planned on an individual basis. TAs should be deployed as part of the class teacher's wider strategy for achievement of learning objectives across the whole class, and not assigned exclusively to a particular individual.
- Within the school environment, TAs are more effective if they are part of the staff team, where their contribution to whole school decision-making is valued, and where the complementary roles of teachers and TAs are more clearly delineated to the benefit of these professionals, parents and pupils alike.

### **Research**

As noted above, the literature included in this review employed a wide range of methodologies and was of variable quality. Those studies with unacceptably poor methodologies were excluded from the review, while more moderately rigorous studies were included. The Review Group acknowledges that the challenges of conducting rigorous research within service settings, such as schools, will continue to be an issue. However, an accumulation of modest studies supporting a particular finding over time will lend strength to issues that are particularly difficult to capture in school-based educational research.

It was evident, however, that the research literature was not evenly spread across the areas considered important for this review. Those areas that are in need of additional research attention are highlighted below.

#### *Pupils*

- Although there was a considerable literature on the impact of TAs on progress in literacy for children who were underachieving in this area, there was little on their impacts on wider academic achievements. This is a potential area for further research, bearing in mind the finding that support with discrete areas of the curriculum by specifically trained TAs appears to have the greatest impact.
- No substantive literature was found on the impact of TAs on adapting the curriculum to make it more accessible to pupils. With increasing numbers of children with disabilities included in mainstream schools, TAs are likely to have some role in adapting learning materials to making learning activities accessible. In addition, in relation to those with complex disabilities, differentiation between TA support for physical access (physical and medical needs) and TA support for learning requires disentangling. Research on this role is therefore needed.
- Similarly, few studies addressed the impact of TAs on the psychosocial adjustment of pupils. With the emphasis on resistance to exclusionary pressures in relation to children with emotional and behavioural disorders, the role of TAs in supporting this aspect of the curriculum is an under-researched issue, and worthy of more attention.

#### *Schools*

- Although a limited amount of literature was reviewed concerning the impact of TAs on teaching, the studies identified did not elaborate on the impacts in any detail. More often, these 'impacts' were incorporated into studies where the main focus was on pupils. Research, in the form of ethnographic or detailed case studies, is therefore required specifically focused on the impact of TAs on teaching in mainstream classrooms, so that effective practice is understood and can be adopted more widely.
- Similarly, there is little specific research on the processes whereby TAs impact positively on teachers. The message that teachers want and appreciate support from TAs is clear, but the mechanisms operating to maximise benefits to teachers have not been extensively explored.

- Notions of ‘climate’ are prevalent in discourses on schools. The atmosphere of any school clearly impacts on those who work or study within its walls; however, research that specifically addresses ‘climate’ is absent from the literature. The few studies included for review under this theme mentioned aspects of ‘climate’, without engaging in an exploration of the wider implications of identified aspects, such as ‘inclusive’ classrooms or ‘parental engagement’ in school or their child’s learning. There is therefore enormous potential for further research in relation to these issues.

Particularly conspicuous by its absence was literature on the impact of support staff on leadership within schools. Given the rapid and relatively recent rise in the numbers of TAs working in schools, the Review Group had expected to find some literature on the impact of this development on the leadership and management structure in schools, particularly secondary schools. As some schools have now promoted TAs to become non-teaching special educational needs co-ordinators (SENCOs), this is also an area in which the Review Group expected to find some research. There is, therefore, a good deal of room for research into these issues.



## References

### Studies included in map and synthesis

*Studies excluded from in-depth review are marked with an asterisk\*.*

Blatchford P, Martin C, Moriarty V, Bassett P, Goldstein H (2001) *Pupil adult ratio differences and educational progress over reception and key stage 1*. London: Institute of Education, University of London.

Blatchford P, Bassett P, Brown P, Martin C, Russell A, Webster R, Haywood N (2006) *The deployment and impact of support staff in school: report on findings from a national questionnaire survey of schools, support staff and teachers (strand 1, wave 1, 2004)*. London: Institute of Education, University of London.

Blatchford P, Bassett P, Brown P, Martin C, Russell A, Webster R (2007) *The deployment and impact of support staff in school: report on findings from a national questionnaire survey of schools, support staff and teachers (strand 1, wave 2, 2006)*. London: Institute of Education, University of London.

Blatchford P, Bassett P, Brown P, Martin C, Russell A, Webster R, Babayiçit S, Haywood N (2008) *Deployment and impact of support staff in schools and the impact of the national agreement: results from strand 2 wave 1 - 2005/06 report*. London: DCSF.

Bowers T (1997) Supporting special needs in the mainstream classroom: children's perceptions of the adult role. *Child: Care, Health and Development* 23: 217-232.

Boyle J, McCartney E, Forbes J, O'Hare A (2007) A randomised controlled trial and economic evaluation of direct versus indirect and individual versus group modes of speech and language therapy for children with primary language impairment. *Health Technology Assessment* 11.

Broer SM, Doyle MB, Giangreco MF (2005) Perspectives of students with intellectual disabilities about their experiences with paraprofessional support. *Exceptional Children* 71: 415-430.

Butt G, Lance A (2005) Modernizing the roles of support staff in primary schools: changing focus, changing function. *Educational Review* 57: 139-149.

Causton-Theoharis JN (2005) Increasing peer interactions for students with severe disabilities via paraprofessional training. *Exceptional Children* 71: 431-434.

\*Chapman L, Ware J (1999) Challenging traditional roles and perceptions: using a transdisciplinary approach in an inclusive mainstream school. *Support for Learning* 14: 104-109.

Cremin H, Thomas G, Vincett K (2005) Working with teaching assistants: three models evaluated. *Research Papers in Education* **20**: 413-432.

\*Duffield J (1998) School support for lower achieving pupils. *British Journal of Special Education* **25**: 126-134.

Frelow RD, Charry J, Freilich B (1974) Academic progress and behavioral changes in low achieving pupils. *Journal of Educational Research* **67**: 263-266.

French NK, Chopra RV (1999) Parent perspectives on the roles of paraprofessionals. *Journal of the Association for Persons with Severe Handicaps* **24**: 259-272.

Gerber SB, Finn JD, Achilles CM, Boyd-Zaharias J (2001) Teacher aides and students' academic achievement. *Educational Evaluation and Policy Analysis* **23**: 123-143.

Giangreco M, Edelman SW, Luiselli TE, MacFarland SZC (1997) Helping or hovering? Effects of instructional assistant proximity on students with disabilities. *Exceptional Children* **64**: 7-18.

Giangreco F, Broer SM, Edleman SW (2001) Teacher engagement with students with disabilities: differences between paraprofessional service delivery models. *Journal of the Association for Persons with Severe Handicaps* **26**: 75-85.

Grek ML, Mathes PG, Torgesen JK (2003) Similarities and differences between experience teachers and trained paraprofessionals: an observational analysis. In: Vaughn S, Briggs KL (eds) *Reading in the classroom: systems for the observation of teaching and learning*. Baltimore: Paul H Brooks.

Hemmingsson H, Borell L, Gustavsson A (2003) Participation in school: school assistants creating opportunities and obstacles for pupils with disabilities. *OTJR: Occupation, Participation and Health* **23**: 88-98.

Lacey P (2001) The role of learning support assistants in the inclusive learning of pupils with severe and profound learning difficulties. *Educational Review* **53**: 157-167.

\*Layton L, Upton G. (1997) Classroom support assistants helping to promote pre-reading skills. *Education 3-13* **25**: 36-41.

Loos FM, Williams KP, Bailey JS (1977) A multi-element analysis of the effect of teacher aides in an 'open'-style classroom. *Journal of Applied Behaviour Analysis* **10**: 437-448.

\*Lynas W (1999) Supporting the deaf child in the mainstream school: is there a best way? *Support for Learning* **14**: 113-121.

Malmgren K, Causton-Theoharis J (2006) Boy in the bubble: effects of paraprofessional proximity and other pedagogical decisions on the interactions of a student with behavioural disorders. *Journal of Research in Childhood Education* **20**: 301-312.

\*MacKay T (2000) *A liaison teacher in a community adolescent out-patient team: an intervention study: final report, December 2000*. Glasgow: Greater Glasgow Primary Care NHT, Department of Community and Adolescent Psychiatry.

Miller SD (2003) Partners-in-reading: using classroom assistants to provide tutorial assistance to struggling first-grade readers. *Journal of Education for Students Placed At Risk* **8**: 333-349.

\*Monda-Amaya, L.E, Dieker, L, Reed, F (1998) Preparing students with learning disabilities to participate in inclusive classrooms. *Learning Disabilities Research and Practice* **13**: 171-182.

\*Monzó LD, Rueda RS (2001) *Sociocultural factors in social relationships: examining Latino teachers' and paraeducators' interactions with Latino students*. Santa Cruz: University of California, Center for Research on Education, Diversity and Excellence.

Moyles J, Suschitzky W (1997a) *Jills of all trades: classroom assistants in KS1 classes: summary and recommendations*. London: University of Leicester/ATL.

Moyles J, Suschitzky W (1997b) The employment and deployment of classroom support staff: headteachers' perspectives. *Research in Education* 58: 21-34.

Muijs D, Reynolds D (2003) The effectiveness of the use of learning support assistants in improving the mathematics achievement of low achieving pupils in primary school. *Educational Research* 45: 219-230.

O'Shaughnessy TE, Swanson HL (2000) A comparison of two reading interventions for children with reading disabilities. *Journal of Learning Disabilities* 33: 257-277.

\*Powers S (2001) Investigating good practice in supporting deaf pupils in mainstream schools. *Educational Review* 53: 181-189.

Robertson K, Chamberlain B, Kasari C (2003) General education teachers' relationships with included students with autism. *Journal of Autism and Developmental Disorders* 33: 123-130.

Rose R (2000) Using classroom support in a primary school: a single school case study. *British Journal of Special Education* 27: 191-196.

Savage R, Carless S (2005) Learning support assistants can deliver effective reading interventions for 'at-risk' children. *Educational Research* 47: 45-61.

Savage R, Carless S (2008) The impact of early reading interventions delivered by classroom assistants on attainment at the end of Year 2. *British Educational Research Journal* 34: 363-385.

Savage R, Carless, S, Stuart M (2003) The effects of rime- and phoneme-based teaching delivered by learning support assistants. *Journal of Research in Reading* 26: 211-233.

\*Slavin RE, Yampolsky R (1992) *Success for all: effects on students with limited English proficiency: a three-year evaluation*. Report No.29. Baltimore: The Johns Hopkins University, Center for Research on Effective Schooling for Disadvantaged Students.

\*Sproston B (1997) What role can be fulfilled by an external support teacher to maintain students who present mainstream schools with behaviour management difficulties. *Emotional and Behavioural Difficulties* 2: 4-13.

\* Swann WL, Loxley A (1998) The Impact of school based training on classroom assistants in primary schools. *Research Papers in Education* 13: 141-160.

\*Takala M (2007) The work of classroom assistants in special and mainstream education in Finland. *British Journal of Special Education* 34: 50-57.

Tews L, Lupart J (2008) Students with disabilities' perspectives of the role and impact of paraprofessionals in inclusive education settings. *Journal of Policy and Practice in Intellectual Disabilities* 5: 39-46.

Vadasy P, Sanders E, Peyton J (2006) Paraeducator-supplemented instruction in structural analysis with test reading practice for second and third graders at risk for reading problems. *Remedial and Special Education* 27: 365-378.

Vadasy PF, Sanders EA, Tudor S (2007) Effectiveness of paraeducator-supplemented individual instruction: beyond basic decoding skills. *Journal of Learning Disabilities* 40: 508(18).

Vander Kolk CJ (1973) Paraprofessionals as psychotherapeutic agents with moderately disturbed children. *Psychology in the Schools* 10: 238-242.

Wang C, Algozzine B (2008) Effects of targeted intervention on early literacy skills of at-risk students. *Journal of Research in Childhood Education* 22: 425-439.

Welch M, Richards G, Okada T, Richards J, Prescott S (1995) A consultation and paraprofessional pull-in system of service delivery: a report on student outcomes and teacher satisfaction. *Remedial and Special Education (RASE)* **16**: 16-28.

Werts MG, Zigmond N, Leeper DC (2001) Paraprofessional proximity and academic engagement: students with disabilities in primary aged classrooms. *Education and Training in Mental Retardation and Development Disabilities* **36**: 424-440.

Werts MG, Harris S, Tillery CY, Roark R (2004) What parents tell us about paraeducators. *Remedial and Special Education (RASE)* **25**: 232-239.

\*Williams M, Thorogood L, Jones D (2002) How school volunteers can help to raise standards and enthusiasm for literacy. *Early Child Development and Care* **172**: 371-377.

Woolfson R, Truswell E (2005) Do classroom assistants work? *Educational Research* **47**: 63-75.





## Appendix 1: Authorship of this report

This work is a report of a systematic review conducted by the Educational Support and Inclusion Group.

The authors of this report are:

Alison Alborz (University of Manchester)  
Diana Pearson (University of Manchester)  
Peter Farrell (University of Manchester)  
Andy Howes (University of Manchester)

They conducted the review with the benefit of active participation from the members of the review group.

For further information about this review, please contact:

Alison Alborz  
School of Education  
University of Manchester  
Room A6.17 Ellen Wilkinson Building  
Oxford Road  
Manchester M13 9PL

Tel: 0161 275 3342  
Email: [Alison.alborz@manchester.ac.uk](mailto:Alison.alborz@manchester.ac.uk)

For further information about the work of the EPPI-Centre, please contact:

EPPI-Centre  
Social Science Research Unit  
Institute of Education, University of London  
18 Woburn Square

Tel: +44 (0)20 7612 6397  
Fax: +44 (0)20 7612 6800  
E-mail: [EPPIAdmin@ioe.ac.uk](mailto:EPPIAdmin@ioe.ac.uk)

## **Review Group**

Alison Alborz, University of Manchester

Diana Pearson, University of Manchester

Peter Farrell, University of Manchester

Andy Howes, University of Manchester

## **Conflicts of interest**

There were no conflicts of interest.



## Appendix 2: The standard EPPI-Centre systematic review process

### **What is a systematic review?**

A systematic review is a piece of research following standard methods and stages (see figure 1). A review seeks to bring together and ‘pool’ the findings of primary research to answer a particular review question, taking steps to reduce hidden bias and ‘error’ at all stages of the review. The review process is designed to ensure that the product is accountable, replicable, updateable and sustainable. The systematic review approach can be used to answer any kind of review question. Clarity is needed about the question, why it is being asked and by whom, and how it will be answered. The review is carried out by a review team/group. EPPI-Centre staff provide training, support and quality assurance to the review team.

### ***Stages and procedures in a standard EPPI-Centre Review***

- Formulate review question and develop protocol
- Define studies to be included with inclusion criteria
- Search for studies - a systematic search strategy including multiple sources is used
- Screen studies for inclusion
  - o Inclusion criteria should be specified in the review protocol
  - o All identified studies should be screened against the inclusion criteria
  - o The results of screening (number of studies excluded under each criterion) should be reported
- Describe studies (keywording and/or in-depth data extraction)
  - o Bibliographic and review management data on individual studies
  - o Descriptive information on each study
  - o The results or findings of each study
  - o Information necessary to assess the quality of the individual studies

**At this stage the review question may be further focused and additional inclusion criteria applied to select studies for an ‘in-depth’ review.**

- Assess study quality (and relevance)
  - o A judgement is made by the review team about the quality and relevance of studies included in the review
  - o The criteria used to make such judgements should be transparent and systematically applied
- Synthesise findings
  - o The results of individual studies are brought together to answer the review question(s)
  - o A variety of approaches can be used to synthesise the results. The approach used should be appropriate to the review question and studies in the review
  - o The review team interpret the findings and draw conclusions implications from them

*Quality assurance (QA) can check the execution of the methods of the review, just as in primary research, such as:*

- Internal QA: individual reviewer competence; moderation; double coding
- External QA: audit/editorial process; moderation; double coding
- Peer referee of: protocol; draft report; published report feedback
- Editorial function for report: by review specialist; peer review; non-peer review



The results of this systematic review are available in four formats:

**SUMMARY**

Explains the purpose of the review and the main messages from the research evidence

**REPORT**

Describes the background and the findings of the review(s) but without full technical details of the methods used

**TECHNICAL  
REPORT**

Includes the background, main findings, and full technical details of the review

**DATABASES**

Access to codings describing each research study included in the review

These can be downloaded or accessed at  
<http://eppi.ioe.ac.uk/cms/Default.aspx?tabid=2438>

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Evidence for Policy and Practice Information and Co-ordinating Centre (EPPI-Centre)  
Social Science Research Unit  
Institute of Education, University of London  
18 Woburn Square  
London WC1H 0NR

Tel: +44 (0)20 7612 6367

<http://eppi.ioe.ac.uk/>

<http://www.ioe.ac.uk/ssru/>

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telephone: +44 (0)20 7947 9556 email: [info@ioe.ac.uk](mailto:info@ioe.ac.uk)