SUMMARY

Background

Behaviour management has been the focus of considerable research, publication and professional development in the field of education. Consequently, there is a plethora of information and strategies to inform those involved in teacher education and school development. In spite of this, pupil behaviour remains an area of concern for policy-makers, schools and their teachers. The issue of how best to train and support teachers to manage pupil behaviour is an issue of considerable importance if policies for increased inclusion, raising attainment, and widening participation are to be effectively enacted in educational settings. The government is committed to improving the management of behaviour in schools via a range of initiatives[1]. Initial teacher education (ITE) is an essential component of these initiatives in that it provides a unique opportunity to establish the foundations for effective practice. Behaviour management is an area consistently identified by newly qualified teachers (NQTs) as an area of professional expertise in which trainees feel they would benefit from greater support as they enter teaching (Buell *et al.*, 1999; Cains and Brown, 1996; Cains and Brown, 1998a; Cains and Brown, 1998b; Gallio and Little, 2003). In response to these perceptions, the Teacher Training Agency (TTA) has strengthened the expectations for teacher training in relation to behaviour management via *Qualifying to Teach*, the new Standards and Requirements for Qualified Teacher Status (QTS) (TTA, 2002). One way to enhance opportunities for trainees to achieve these demanding expectations is to build an evidence base to support tutors in providing effective ITE training for behaviour management. This systematic review was commissioned by the TTA in order to contribute to such an evidence base. In preparing for the review by examining relevant literature, there was evidence that '*teachers adopt strategies based on ideology, common sense or school based effectiveness but rarely on evaluated effectiveness*' (Olsen and Cooper, 2001). In the light of these findings, and in the knowledge that another TTA-funded review (Harden *et al.*, 2003) had been commissioned that was concerned with strategy use for pupils with emotional and behavioural difficulties (EBD), it was decided that the review could best support ITE tutors by:

- a focus on the purpose and *outcomes* of behaviour management (i.e. the promotion of effective learning behaviours)

- an emphasis on the theoretical underpinnings of behaviour management in school contexts

- the consideration of a conceptual framework for learning behaviour that would allow trainees to explore and understand the determinants of learning behaviour and make sense of, and evaluate, the efficacy of the many strategies offered to them during their training

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[1] Reported at TTA behaviour event March 2003, including the setting-up of a Professional Resource Network for Behaviour (TTA) and Department for Education and Science (DfES) Key Stage 3 Behaviour and Attendance Strategy service training for schools.

Aims of the review

The overall aim of the review was to inform ITE tutors about the theoretical underpinnings of learning behaviours in school contexts in order to enhance ITE in behaviour management for trainees. In essence, we were concerned that this review should contribute to training that allows trainees to reflect upon the *purpose* of behaviour management. All too often teachers and the media perceive behaviour management to be solely concerned with establishing control over disruptive pupils. With this perception, it is not surprising that trainees continue to report that they feel inadequately prepared given that they cannot realistically anticipate and prepare for the entire range of pupil responses they will experience in the classroom. As a consequence, trainees and teachers continue to seek more and more strategies in the hope that they will be better able to cope with anticipated classroom disruption. While skills in delivering a range of strategies are clearly a *necessary* part of an NQT's survival toolkit, they are not, in themselves, *sufficient* to secure the confidence and competence sought by the trainee.

We were concerned that trainees should have access to research about theoretical explanations for learning behaviours as a way of securing increased understanding of the behaviour of their pupils. Additionally, we wanted to address teacher perceptions that they were not 'behaviour specialists' by concentrating on the end purpose of behaviour management: that is, securing effective learning behaviour. It is in this area – promoting learning behaviour through subject teaching – that trainees could focus on the interdependent relationship between learning and behaviour, and so foster the foundations for effective behaviour management in schools.

Clearly, 'learning behaviour' is a construct that is not easily defined and this review acknowledges the complexity of the variables linked to societal, family and school environments that influence pupil behaviour in the classroom. This complexity is often perceived as a barrier to trainees because they are aware that they do not have control over many of the pupil, family and cultural influences that shape pupil behaviour. It was thus seen as important that a conceptual framework (see Figure S.1), that would allow trainees to explore and understand the determinants of learning behaviour, should underpin this review.

Figure S.1: Conceptual framework – behaviour in school contexts
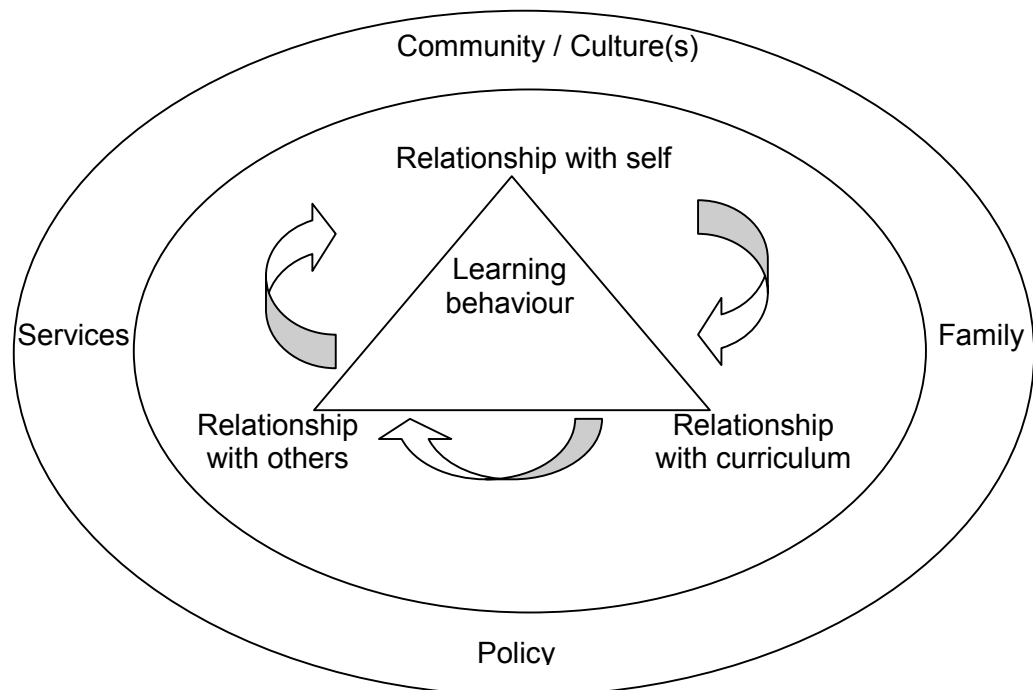
The review thus had three key elements:

1. To examine how researchers used theories to explain learning behaviour

2. To explore what is known about children's learning behaviour in school contexts

3. To examine the utility of the review's underpinning conceptual framework for end users

Review question

The review question emerged from the underlying conceptual model adopted by the researchers and the prescribed need for the review to be of use to tutors in enhancing ITE for behaviour management. The review question frames the context within school environments and is based on Bronfenbrenner's 'Ecological Systems Theory' (1989). The school context is viewed as a '*microsystem*' that '*is a pattern of activities, social roles and interpersonal relations…*' (Bronfenbrenner and Morris, 1998, p 1013). The review question posed was:
How do theories explain learning behaviour in school contexts?

In order to answer the review question, it was necessary to address the following component questions:
How have theories been used to explain learning behaviours in schools contexts?

What kinds of theories have been used to explain learning behaviour in school contexts?

What learning behaviours, in school contexts have been explained by theories?

Answers to our research question would be of use to ITE tutors and school-based mentors who have responsibility for initial teacher training. Routes to teacher training are varied and it is important that information from this review can be used in a range of training contexts. It is also believed that findings from this review will be of use to national and local education authority (LEA) policy-makers and strategists who seek to make an impact on improving learning behaviour in school contexts. It is important for LEA teachers and schools that there is some progression, continuity and coherence in the development and maintenance of effective learning behaviour in school contexts. With this in mind, we engaged a broad based Advisory Group in the formulation of our research question but with a bias towards ITE. External reviewers of the final report included an academic and researcher in special educational needs (SEN) and inclusion, a representative from the national body responsible for initial teacher training (TTA), a headteacher with specific expertise in behaviour management, and an academic/researcher with significant experience in both behaviour and teacher education.

Methods

The review was conducted using the procedures and guidelines for systematic review of research in education formulated by the Evidence for Policy and Practice Information and Co-ordinating Centre (EPPI-Centre) at the Institute of Education, London. A wide-ranging search was carried out for studies, written in English, published between 1988 and 2002, covering theoretical links to learning behaviour in school contexts for pupils aged 3-16 years. The search for studies involved searching relevant electronic databases and journals online, following up citations in other reviews, handsearching journals shelved in the library and using personal contacts. Inclusion and exclusion criteria were applied to studies before full texts were read and labelled, resulting in studies being excluded because of insufficient relevance to the review question. Due to the short timeframe of the review, stringent criteria were applied in order to select the final studies for the in-depth review. The search process, keywording and in-depth review were compliant with recommended EPPI-Centre quality assurance procedures (EPPI-Centre, 2002a, 2002b).

Findings

Identification of studies

Our initial search, using broad inclusion and exclusion criteria, developed from the review question and the underlying conceptual framework, identified 218,353 citations in handsearches and in non-limited searches of electronic databases (see Figure 3.1). This search lacked specificity, so in order to identify studies linking theoretical explanations of learning behaviour to teacher training, new searches were conducted using limited and combined search terms. This resulted in a lower yield. At this point, it was found that many of the citations yielded were still not sufficiently relevant to the focus of the review. Consequently, the inclusion criteria were refined further and these more specific

conditions were applied to the research reports. Finally, 46 studies were found to be relevant to all of the (refined) inclusion criteria and none of the exclusion criteria. These 46 'included' studies were used to describe the 'systematic map'.

Systematic map

The 46 included studies were characterised using a series of keywording categories. Ten categories were in accordance with the EPPI-Centre *Keywording Strategy for Classifying Educational Research* (EPPI-Centre, 2002a) and five categories of review-specific keywords were added: theories, behaviour, relationships, learning outcomes and SEN; details of findings from the mapping of studies are detailed in section 5.1.2.

Mapping revealed the following.

Context

- The educational settings in which the studies were undertaken were evenly distributed between primary and secondary (Table 3.4). The majority of studies (65%) were either American (18), or English (12) (Table 3.5).

- The majority of studies were concerned with learners in the 5-16 year age group (Table 3.3). There were only eight (16%) studies that focused on the pre-school, 0-4 year age range. This was expected, given the wording of the research question and search terms.

- Thirty-nine out of the 46 studies (84%) were concerned with mixed sex grouping (Table 3.12). This may reflect gaps in research in relation to theoretical explanations of gender differences in the distribution and acquisition of learning behaviours.

- The studies reflected a range of types of relationships extant within school contexts (Table 3.7). Relationships with peers (26 studies, 57%) and teachers (29 studies, 63%) were the most frequently use categories.

- Thirty-four of the 46 studies were either cross-curricular/general or did not have a specific focus on curriculum issues (Table 3.8 and Table 3:9).

Researcher's use of theory:

- Mapping suggests that researchers rarely used experimental studies that seek to establish the role of theory in manipulating, predicting or influencing the development of learning behaviours (Figure 3.4). It was more common for theory to be used to 'shed light upon' learning behaviours, either by exploring relationships or evaluating research outcomes. Social theories were more commonly found in researcher-manipulated evaluations and exploration of relationships (38%). Cognitive theories were more common in exploration of relationships (44%) as were developmental (57%) and learning theories (50%).

Types of theories referred to

- Over half the studies included more than one type of theory (Figure 3.2). The most frequently found theories in the included studies were classified as social (21 referents), cognitive (18 referents) and affective (17 referents). This

suggests that those involved in researching learning behaviours are interested in the interplay of feeling, thinking, and doing/interacting. Eleven of the studies using social and/or cognitive perspectives made direct reference to the work of Piaget and Vygotsky. Affective theories were related to reasoned action, Maslow's theory (and school attachment) and Bowlby's attachment theory. When theories were mapped in relation to age, it was found that social theories were most common in the 0-4 year age range and cognitive in the 5-10 years, closely followed by social theories. In the 11-16 year age group, however, there was an even spread of cognitive, social and affective theories with very few addressing behavioural or developmental theories (Table 3.14). This may suggest that researchers have differing priorities in relation to type of 'learning behaviour' and different phases of education: that is, pre-school (social developmental); primary (cognitive development/learning); secondary (personal development and responsibility involving emotional, social and cognitive development); and that these differing priorities are associated with the selection different theoretical explanations. In looking at combinations of theories used (Figure 3.3), it is interesting to note that researchers have linked cognitive theories more frequently with social theories to explain learning behaviour than with affective theories. This may suggest that the link between affective and cognitive development needs to be further emphasised in research into learning behaviour.

Learning behaviours

- A range of terms was used to describe learning behaviours. Studies reflected the complexity of learning behaviour and were consistent with a view that behaviour used to describe learning reflect that learning in school contexts is influenced by the interaction of a range of individual, curricular and social variables. Learning behaviours described in studies were categorised by the review team, using review-specific keywords extracted from qualified teacher status (QTS) standards (TTA, 2002) (see Appendix 2, Tables 2.1.i and 2.1.ii). These were engagement; collaboration; participation; communication; motivation; independent activity; responsiveness; self-regard; self-esteem; responsibility; disruptiveness; disaffection and 'problems'. The most commonly used category was 'engagement' which occurred in 43% of the studies. Table 3.16 sets out these age groups and shows the frequencies of particular learning behaviours for each group. In the 0-4 years age group, the frequencies of learning behaviours that were recorded are fairly evenly spread. However, there was a narrow choice of learning behaviours (19) in relation to the number for school-age children (average = 55) with no studies that included self-regard, self-esteem, disaffection or disruptiveness among learners in this age group. Even allowing for the few number of studies in the 0-4 age group, this finding may support the view expressed above that researchers construe 'learning behaviours' to have differing priorities at pre-school than other stage of education. In the 5-10 years age group, engagement, collaboration and participation are the most common learning behaviours recorded, and this is also true for the 11-16 year-olds.

- The mapping of learning behaviours also revealed that there were far fewer references to 'negative' than to 'positive' learning behaviours in relation to theory. This may reflect a need for more research in this area, but it is also possible that studies that propose strategies for dealing with problematic

behaviours in schools include elements of theory. This review did not include studies about behaviour management strategies, which were reviewed by another team (Harden *et al.*, 2003).

In-depth review and synthesis

Owing to time constraints, we were restricted in the number of studies that we could review in depth. Following advice from our Advisory Group, we used the combined inclusion criteria of representativeness (in relation to the systematic map) *and* methodological rigour. This involved applying the inclusion criteria outlined in section 2.2.3 *in combination with* judgements made about the quality of studies and weight of evidence for the review question. Five out of the 46 included studies were selected for the in-depth review, using the criteria that all included studies should be acceptable quality as judged by the review authors (and subsequently corroborated through the data-extraction process by the application of the EPPI-Centre's weight of evidence – achieving medium or high weight of evidence) *and* should be address the themes of the overall systematic map in relation to 'theories', 'learning behaviour', 'explain' and 'school contexts' (Table 4.1). The criteria were not applied systematically to the whole map so the in-depth review is illustrative rather than systematic. It should be noted that findings from these studies are not necessarily transferable to all contexts as only one study (McDermott *et al.*, 2001) analysed data from a sample that was representative of the wider population of pupils (USA) and suggested that the study's findings could be generalised accordingly.

The five studies consisted of the following: one that sought to test the interaction between the amount of on-task interaction between students of differing ability, type of teaching role ('supervisor' v/s 'developer') and progress in cognitive growth, as measured by a psychometric test of cognitive ability (Ben-Ari and Kedem-Friedrich, 2000; sample size = 1,017); the relationship between goal structure in the classroom and incidence of disruptive behaviour (Kaplan *et al.*, 2002; sample size = 388); the relationship between identified student learning behaviours (e.g. motivation and self-discipline, verbal and non-verbal learning) and cognitive, social (school) and emotional factors (McDermott *et al.*, 2001; sample size = 1,268); an examination of the relationship between affective factors (e.g. attitude, self-efficacy) and learning behaviour in Maths and English for average and low attaining pupils (Norwich and Rovoli, 1993; sample size = 28); an examination of what constitutes effective self-regulation of goal attainment (Oettingen *et al.*, 2000; sample size = 55).

Characteristics of studies in the in-depth review

Context (See Table 4.1.)

- The educational settings in which the studies were undertaken were one primary, two secondary and one middle school and one using national census data from age range 6-17 years. Three of the studies were American, one was English and one was German. This data is representative of studies included in the review with the exception of the study carried out in Germany.

- Four of the five studies were concerned with learners in the 5-16 year age group. This was expected, given the criteria for selecting studies for the in-

depth review and is representative of the 46 included studies. The remaining study was concerned with primary 8-11year-old pupils.

- All studies were concerned with mixed sex groups. This is representative of the 46 studies included in the review.

- The studies reflected a range of types of relationships extant within school contexts. All studies were concerned with more than one relationship: pupil with teacher = 4; pupil with peer = 2; pupil with parent = 1; pupil with school = 2; and pupil with self = 3. This data is representative of the 46 studies included in the review.

- In looking at the curriculum context, two of the studies were concerned with Maths; one with Maths and English; one did not specify a curriculum area; and one was concerned with learning a modern foreign language. This distribution differs from that of the 46 included studies which were weighted towards studies that did not focus on a particular curriculum area.

Weight of evidence

Three of the five studies (Kaplan *et al.*, 2002; Norwich and Rovoli, 1993; Oettingen *et al.*, 2000) were considered to provide high weight of evidence in relation to the review question and two of these were additionally considered to be high weight (Norwich and Rovoli, and Oettingen *et al.*) in terms of methodological rigour, the other being of medium weight. Of the other two studies, one (Ben-Ari and Kedem-Friedrich, 2000) provided high weight in terms of methodological rigour and medium weight in terms of answering the review question; the other (McDermott *et al.*, 2001) provided medium weight evidence in terms of both rigour and relevance to the review question. In terms of weight of evidence, all studies provide high to medium evidence. However, given the relatively few studies selected for in-depth review, findings from the review are considered to be tentative and developmental.

The tentative conclusions drawn from the studies in the in-depth review that clearly linked their theoretical framework to their results are outlined below.

Theoretical explanations of learning behaviour

(1) *How have theories been used by researchers?*
Four of the five studies were 'driven by theory' because a particular theory was included in the research design and was explored or tested in the research process. In examining the methodological rigour of these studies, there is preponderance for high weight of evidence (three out of four studies). The fifth remaining study provided medium weight evidence for the use of theory to 'explain' the research findings. The evidence from these studies suggests that theories do have potential for explaining learning behaviours and informing teachers' use of strategy development and evaluation for the promotion of effective learning.

(2) *What kind of theories have been identified by researcher?*
In seeking to explain learning behaviour, there is high weight of evidence that researchers have used theories that combine cognitive affective and/or social perspectives (Table 4.2). This is consistent with a view that learning behaviour is

influenced by the interaction of how the learner thinks, feels and interacts. Four of the studies related to theories concerned with the influence of affect on cognition and learning behaviour. Theories referenced in these studies were Reasoned Action Theory (Ajzen and Fishbein, 1980), Fantasy Realisation Theory, (Oettingen, 1996), achievement goal theory of motivation in education (Ames, 1992; Anderman and Maehr, 1994; Nicholls, 1989) and self-efficacy (Bandura, 1982). The one study concerned with social factors on cognition made reference to the social constructivism of Piaget (1926) and Vygotsky (1962, 1978). These findings provide high weight evidence that researchers view the development of learning behaviour as an interactional process underpinned by relationship building.

(3) *What learning behaviours have been explained?*
Product, participation and person?

All except one of the studies in the in-depth review were concerned with a range of learning behaviours (Table 4.1).

Overall, it is difficult to make judgments about researchers' constructions of learning behaviour based on the focus of their studies and their choice of descriptors of learning behaviour. However, there is strong evidence that researchers have been pragmatic in selecting descriptors of learning behaviour by deciding what is needed for learning in school contexts and then researching those behaviours. There is thus a preponderance in the studies of learning behaviours that result in learners staying on a prescribed task in group settings (engagement, motivation, participation, collaboration, communication). These essential learning behaviours are deemed by researchers to be influenced by person centred variables subsumed by the construct 'self-efficacy'[2].

In the light of researchers' use of descriptors, learning behaviours described below have been grouped under: the 'product' of learning (on-task); the 'participation' aspect of learning in a group setting (participation, engagement communication, collaboration, etc.); and the 'person' (self-esteem, self-regard, self-efficacy).

'Product' (on-task) centred learning behaviours

Motivation and self-discipline: Not surprisingly, all studies in the in-depth review were concerned with studying the variables that relate to learners being able to start, and stay, on-task. These core 'on-task' learning behaviours are commonly referred to as 'motivation' and 'self-discipline'. This evidence supports the value that researchers concerned with learning place on securing and maintaining such behaviours. This is presumably because in school settings they are perceived to be positively related to achievement, manageability of the class and the promotion of independent learning. Findings from individual studies were as follows:

- Persistent effort and goal attainment can be enhanced by teaching strategies to pupils.

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[2] Giallo and Little (2003) '*Self-efficacy is conceptualised as an individual's judgement of his/her ability to execute successfully a behaviour required to produce certain outcomes (Bandura, 1986; Gibson and Dembo, 1984). Such beliefs are thought to be an important moderator between an individuals knowledge and skills and his/her behaviour*' (p 22).

- Achievement goal theory can explain motivation and discipline and/or self-regulation (Ames, 1992; Anderman and Maehr, 1994; Nicholls' 1989)[3].
- 'Learning to learn' behaviours are identifiable and teachable (e.g. target-setting and achievement).
- A curriculum that focuses on 'performance' learning is less motivating than a pedagogy and curriculum that seeks to secure 'mastery' learning.
- Classroom goal structure is an important predictor of variance in pupils' lesson behaviour.
- Motivation is improved if positive outcomes are made meaningful, feasible and accessible to pupils.
- Personal mastery, goal orientation is negatively related to disruptive behaviours.
- Performance-approach goals are positively related to disruptive behaviour.
- Attainment in school learning is attributable to a combination of cognitive, teaching, and motivation-affective factors.
- Motivation and disciplined behaviour are significant predictors of teacher assigned grades but play no part in predication of standard test scores.

Engagement – task-related: Four of the five made reference to terms that described learner participation with the task. This 'engagement' with the task was referred to in three out of the four studies and can be reasonable assumed to be inherent to 'motivation', which was the focus of four out of five studies. This supports the view that researchers see securing engagement/involvement with the task as an important component of effective learning.

Participation (social)-centred learning behaviours

Engagement – social: Given that the review was concerned with learning behaviour in 'school contexts', it is not surprising that researchers used learning behaviour descriptors that focused on the social relationships between pupils, their peers and teachers. Terms used were 'participation',' responsiveness', 'collaboration' and 'communication'. Three of the five studies made explicit reference to one or more of these terms, and one referred to the social dimension of pupil's perception of success.

Findings from individual studies provided medium to high weight evidence of the following:

- Social interaction is pivotal to cognitive development and influences the development of learning behaviour in school contexts.
- Heterogeneous grouping paired with a 'developer' teaching style enhances pupil engagement and social participation. This is linked to improved attainment for average to lower attaining pupils.
- Interactions between teachers and pupils convey messages about goal orientation and influence pupils' learning behaviours, relationship with the curriculum and, in turn, pupils' own goal orientations.

Person-centred learning behaviours

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[3] This focuses on the *meaning* students construe for school and learning,

Behaviours relating to the individual's 'relationship' with him/herself are seen by researchers to play a crucial role in key learning behaviours, such as motivation, engagement participation and independent activity. Descriptors used to define 'person-centred' learning behaviours were 'self-esteem'/'self-regard' and 'independent activity', and 'responsibility'. Three of the studies referred directly to either one of these; the other two included self-perception, perceived optimism, and socio-emotional adjustment as person-centred variables linked to motivation. Findings from individual studies were as follows:

- Self-efficacy, conceptualised as an individual's judgement of his/her ability to execute successfully a behaviour required to produce certain outcomes (derived from cognitive social learning theory, for example, Bandura, 1982), is important to the understanding of learning behaviour. This is linked to the finding that behaviour is determined by the *intention* to perform that specific behaviour. Past learning behaviour is the strongest predictor of pupils' self-efficacy and their current learning behaviour.
- Pupils' intentions to engage in learning are more significant than externally applied pressures from significant others.
- Motivation and self-discipline are reliable predictors of learning behaviour and achievement.
- The development of behaviour for learning is essentially a responsive process during which the learner seeks to make sense of the learning situation from his/her perspective.
- Self-esteem and self-regard are linked to pupils' perceived self-efficacy.
- Self-efficacy is a useful variable in gaining a better understanding of effective learning processes and academic outcomes.
- Pupils' perception of the potential barriers to learning and their ability to overcome these are expressed in pupils' behaviour intentions.
- Expectations of personal success correlate with persistent effort.
- Low self-efficacy and low attainment are correlated with disruptive behaviour in males.
- The recognition and valuing of individual student achievement is negatively related to disruptive behaviours.

Actions and contexts that could promote positive behaviours and decrease negative behaviours
Medium to high weight evidence suggests that practices in relation to promoting good behaviour (QTS S1.3) and managing behaviour (S3.3.9) could be improved by the following:

- promoting mastery orientation rather than performance orientation
- using heterogeneous groupings and facilitative teaching approaches
- promoting on-task verbal interaction between pupils
- working in partnership with pupils in goal-setting so that a shared understanding can be established in relation to anticipating and addressing barriers to learning
- discouraging competitive classroom contexts and encouraging positive inter-personal relationships

Interpretation of review findings suggest that positive learning behaviours might be also enhanced by:

- teaching that places emphasis on developing effective learning behaviour through subject teaching
- encouraging the application of theory and conceptual frameworks to the task of selecting and evaluating the use of strategies for behaviour management
- redressing the balance between behavioural approaches to behaviour management to include understanding, use and evaluation of cognitive and affective strategies
- enhancing existing assessment procedures to include formative assessment of social, emotional and behavioural indicators of learning
- teaching and assessment that seeks to develop shared understanding of learning behaviour between pupil and teacher coupled with the adoption of assessment practices that value personal achievement
- developing increased integration of the 'social' and 'academic' in recognition of the contribution of personal, social, cultural and family factors on learning and achievement; one way this might be achieved is by the integration of targets from personal, social and health education (PSHE) and citizenship into subject teaching.

Conclusions

Strengths of the review

The systematic review process has been powerful in enabling us to identify empirical evidence in relation to how theories explain learning behaviour and to specify particular school contexts. Additionally, the focus upon process and the inclusion of regular quality assurance and quality assessment procedures helped to minimise bias, maximise parity and provide 'weighted' conclusions and recommendations. In addition to providing a systematic map that characterises existing research relevant to the focus of this review, the process also enabled the review team to identify gaps in recent research.

Limitations of the review

Due to the timeframe of the review and the requirement for the review to directly inform practice, the Review Group restricted their search to empirical studies. It is acknowledged that, in adopting this search strategy, the inclusion of theoretical discussion pieces, and reviews of empirical research were not included beyond the keywording stage. In order to manage the review within the timeframe allocated to the process, it was also necessary to apply strict inclusion and exclusion criteria. Consequently, studies that had to be excluded included those that linked theories and behaviours outside school contexts (but which could usefully inform behaviour management within educational settings). The review's conceptual framework included principles derived from Bronfenbrenner's 'Ecological Systems Theory' (1989) and sought to understand the interactive processes that impact upon pupils' learning. By limiting the review to a focus upon in-school contexts (in order for the review to be manageable within its timeframe), it is probable that many studies examining other determinants of behaviour (such as relationships within the family or community, or psycho-biological factors) were excluded. Consequently, the review did not fully address the range of possibilities integral to the 'Ecological Systems Theory'. The timeframe for the review was such that only a very few studies could feasibly be

included in the in-depth review and these were selected for illustrative purposes rather than by applying the criteria systematically to the whole map. The findings from this review are thus considered to be tentative.

Implications for policy and practice for ITE in behaviour management

(Detailed in sections 5.3.1 and 5.3.2)

These implications have been interpreted from the review findings. Given the limitations of the review (see previous section), these implications should be regarded as tentative.

- It should be useful for ITE trainers to examine critically the interdependent relationship between learning and behaviour. This would allow trainees to be made aware that the promotion of 'behaviour for learning' could be the foundation of effective behaviour management.
- Interpretation of the review findings suggests that a sound professional knowledge and understanding of the theoretical underpinnings of learning behaviour would enhance training in behaviour management in ITE.
- Findings support the view that researchers *perceive* that there are generic components of learning behaviours, although some components may be subject-specific. These subject-specific components may explain pupils' differing attainment and behaviours in different lessons. It is tentatively suggested that the promotion of effective learning behaviour can be considered to be intrinsic to effective teaching and learning, and should be addressed by teachers/tutors/and mentors through their subject teaching.
- It might be useful for behaviour for learning to be given greater priority within the ITE curriculum in order to reduce the risk of 'behaviour management' being a separate 'add on' component within ITE.
- CPD for ITE tutors will need to address any identified shortfall in staff expertise in relation to the promotion and management of effective learning behaviour through subject teaching.
- The inclusion of some core SEN specialist standards (TTA, 1999) into any mandatory NQT requirements may enhance ITE training for behaviour management and better prepare teachers for the inclusion of pupils with social emotional and behavioural difficulties (SEBD).
- ITE training could usefully enhance opportunities for trainees to become familiar with assessment approaches that include social, emotional and behavioural indicators of learning.
- It may be useful to consider the production of national guidance for the promotion of learning behaviour and resolution of difficulties to which ITE students can refer and share with mentors. Such guidance would enable some consistency of training between the range of ITE providers.
- ITE students could usefully experience school placements that offer opportunities to bridge 'special' and 'mainstream' provision and identify strategies for promoting effective learning behaviour.
- It would be useful for 'relationship management' to be addressed through the ITE curriculum for trainee teachers. Relationship management skills for pupils could be enhanced through greater integration of the academic and social curriculum.

Implications for research

(Detailed in Chapter 5, section 5.3.3)

- It would be useful to compare findings from this systematic review with other forms of engagement with the literature: that is, narrative reviews and non-empirical forms of enquiry.
- It would be useful to build upon this review by addressing the question: How do theories explain teaching behaviour in school contexts?
- There is a need to research whether teachers' understanding and knowledge of the theoretical underpinnings of learning behaviour leads to improvements in classroom practice.
- It is necessary to explore what kind of classroom experiences and tasks would enable trainees to improve their practices in relation to promoting effective learning behaviour.
- It is necessary to identify and develop (probably by links between mainstream and specialist settings/schools) pupil assessment that includes affective, cognitive and social indicators relevant to the development of effective learning behaviour.
- There is a need to explore further the construct of self-efficacy and associated links to resilience in school contexts; this is pertinent to both pupils and teachers.
- It would be very useful to identify the early years precursors of effective learning behaviour.
- An exploration of gender difference in learning behaviour in school contexts may help to explain and address why behavioural problems are more prevalent in males.
- It would be useful to examine the link between teacher behaviour and the development of effective learning behaviour by pupils.
- It could be important to examine the relationship between learning behaviours and ethnicity, and to examine if school and teacher perceptions fit those of the pupil and parent/guardians.
- It would be pertinent to address the question: How can we better understand disruptive/problem behaviours in relation to effective learning behaviours?