# Narrowing the gap: An exploration of the ways technology can support approaches to narrowing the gap for underachieving and low-achieving learners in secondary schools

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Introduction

The research programme presented here comes under the Harnessing Technology Programme[1] and specifically addresses how technology can be used to meet the challenge of equipping young people with the skills to participate in learning throughout their lives. The specific focus is on low-achieving and underachieving learners, with the aim of identifying and analysing a range of effective pedagogical approaches that may help to narrow the gap for such students in secondary schools.

The Narrowing the Gap project involved two distinct phases: an initial review of the literature followed by a programme of field research. This report presents the field research.

In phase one, the literature review explored how previous research had defined the target populations and identified the interplay of factors linked to low achievement or underachievement of learners. With these parameters established, the field research focused on current strategies proven to be effective in supporting learners identified as low-achieving or underachieving in a range of schools. Essentially we asked how technology can be used to reduce the attainment gap between low-achieving and underachieving learners and the majority of students in secondary schools.

The scope of the study was broadened to explore questions that arose from the initial fieldwork. In this further work we aimed to capture key activities at the interface of primary and secondary schools. The literature review had highlighted this period of transition as a critical event in many pupils' lives. For some children, this transition opens up opportunities, but for others it proves to be traumatic.[2] [3] Teachers have identified adjustment to the school context as critical to a child establishing a place within the school community.[4]

A further output emerging from this project (not presented here) is a set of examples of good practice that hold promise for addressing the problems associated with the target learners. These have been developed to provide a range of 'Virtual school' teacher-support materials [these materials are planned to be launched end of February 2010]. Alongside the research evidence, they provide guidance for future policy development.

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[1] Becta, 2008
[2] Anderson et al, 2000
[3] Lucey and Reay, 2000
[4] Dockett and Perry, 2004

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Key goals guiding the field research were:

1    to identify local authority policies related to low-achieving and underachieving learners

2    to establish schools' and classroom practitioners' definitions of low-achieving and underachieving learners

3    to establish the extent to which there is agreement between practitioners' perceptions of low achievement and underachievement and the way these are defined by the research

4    to evaluate the implications for effective practice if there is a misalignment between practitioners' perceptions and the established research evidence

5    to illustrate a range of different effective pedagogical approaches that may indicate suitable practices for narrowing the gap

6    to provide evidence of the barriers and enablers of technology in supporting underachieving learners

7    to identify examples of good practice related to technological advances (and digital resources) that can help shape, improve and sustain underachievers

8    to provide sound and relevant data that sustains Becta's role as a resource for support providers and other agencies working to develop the use of technology in narrowing the gap for low-achieving learners in secondary school.

Although not part of the original research brief, we investigated the potential differences between primary and secondary school perceptions of low achievement and underachievement, along with the resulting strategies that might ensue from such differences. We also endeavoured to identify low-achieving and underachieving learners' personal views of their school life.

## Key messages

This project explored how various educational stakeholders conceptualise low achievement and underachievement. Central to the project was the exploration of strategies that support low-achieving and underachieving learners and serve as examples of good practice. In particular, there was a focus on how technology can be used to help improve educational attainment of both low achievers and underachievers.

We found that:

- there is a high level of agreement among educational stakeholders as to what constitutes low achievement and underachievement
- establishing effective practice to tackle the problems of low achievement and underachievement is seen as a priority goal at all levels of the educational system. However, overlapping policies and responsibilities at the local authority level have the potential to cause confusion and less effective action on the ground.
- the concept of readiness for learning in terms of both cognitive and social development, is key to many learners' achievement in school
- technology can be seen as a beneficial but not exclusive approach to resolving the problems associated with low achievement and underachievement
- learner profiling has become widespread with the increased availability of technology. Many effective strategies start with detailed profiling of the individual pupil.  The seemingly mundane 'workhorse' functionalities of technology should not be underestimated.
- an individual learner's self-efficacy, an essential component of academic achievement, can be improved through a variety of strategies that provide the learner with success in an educational setting.
- the research here found numerous ways in which the technology supported the individual's self efficacy, from making it possible for the reticent child to speak in class through making learning more active and more relevant to the learner.

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## The challenge

### Narrowing the gap for low achievers and underachievers

Education has long been seen as the key driver to a fairer society, but one of the key challenges it must address is finding ways to enthuse and engage our low-achieving and underachieving learners.

While working to improve the lives of all young people, the biggest challenge continues to be that of narrowing the gap in opportunities and outcomes between the majority of learners and those who are most vulnerable or who fail to fully benefit from the educational system. This minority includes a worrying and persistent cohort of children at secondary-school level who can be classified as either low achievers or underachievers. As many as 26,000 students (5%) leave school without any GCSEs and over 75,000 fifteen-year-olds (17%) have a low level of literacy despite 11 years of compulsory schooling.

A successful educational experience is not just a matter of improving the academic performance of students, although this is an important dimension of the Narrowing the Gap programme. There are many ways for young people to achieve. There are many ways for young people to achieve. Although developing expertise in one area might be at the expense of another, this is an opportunity to develop individual talents and strengths. While the development of sound interpersonal skills, so vital in the workplace, is also important.

The reasons why some young people fail to benefit from all that the UK education system offers derive from a complex mix of factors, including basic intellectual and emotional capacities, socio-cultural background, home environment and the quality of the education environment. However, despite the complexity of circumstances surrounding low achievement and underachievement, there is a clear common denominator: for learners to achieve, they must engage with the learning process.

### Key issues

The key issues associated with low achievers and underachievers were explored in detail in the [Literature review](#).

What follows is a summary of those issues:

- **Motivation is a prerequisite to success but must be translated into engagement and persistence.** Underachieving learners often lack the ability to persevere, and they need encouragement to stay focused. Software with frequent feedback and rewards has been shown to increase time on task.

- **Motivation is not just an issue for low achievers; without it even able learners will perform below potential.** Technology, particularly video games for boys, has proved to be highly motivating.

- **Many young people do not experience a home environment that adequately prepares them for, or supports them in, their school-based learning – this becomes a greater challenge when they also attend failing schools.** The lack of routine in some homes leads to a culture shock when some pupils come to school. Technology is now being used to develop the cognitive (attention) and social (turn-taking) skills that are essential for a successful school experience.

- **External pressures, particularly peer pressure, can lead to educational alienation.** Technology can give a street edge to learning, which makes it more acceptable to such groups.

- **Young people from socially disadvantaged backgrounds are more at risk of underachieving.** Learners in disadvantaged areas are often the most positive and appreciative of the technology available in their schools. Schools really make a difference here. Technology has the potential to level the playing field in learning and give opportunities for achievement to all children.

The remainder of this report focuses on the strategies that schools and local authorities are using to raise the performance of these two groups of students.

## Methodology

### Sample schools

Two groups of schools were recruited.

Comprising the first group, were eight secondary schools from different local authorities and diverse locations across England. Each of the schools had been identified as e-active and held a clearly articulated inclusion agenda. In essence, they were schools exhibiting good practice. However, the schools differed on a range of criteria. Two of the eight schools were single sex; there were seven large schools (over 1,000 students); and four of the schools were from disadvantaged areas. While all of the schools were multicultural, one school had a predominantly ethnic minority intake. Within each of these eight schools, we identified a teacher consultant to act not only as a contact point but also as a participating researcher.

The selection was made across a wide spectrum of the secondary sector for two reasons. Our first aim was to expand the potential range of strategies for narrowing the gap that we would observe among our sample schools. In this sense we hoped to capture innovative approaches to working effectively with either low achievers or underachievers. The second aim was to identify, if possible, strategies seeming to work across very different environments. Such strategies, we argued, could potentially be generalised across the secondary sector. Identifying such strategies was a core goal of the project.

Critical to the work with this first school group was the identification of a teacher consultant from each school to work in partnership with the researchers. These consultants provided the first point of contact into the school, acted as operational managers of the work within their school, and collectively provided a practitioner-based expert group to comment on the evidence and refine the materials emerging from this project.

The second school group comprised four secondary schools and two primary schools sitting within one local authority. The two primary schools were feeder schools to one of the secondary schools. The schools were widely dispersed across this geographically large authority, which has pockets of affluence as well as extensive areas of deprivation.

Our selection of this local authority was based on two criteria: the authority had a significant cohort of low achievers and underachievers and had recognised the Narrowing the Gap agenda as a priority action for all of its schools. The initial purpose for working with this group was to ascertain whether or not the practitioners would validate the findings from the first group of schools. This remained the primary aim. A secondary purpose emerged from our fieldwork with the first group which,

along with evidence from the literature, suggested that the transition from primary to secondary school is a pivotal point in many pupils' lives. With agreement from the funder, we adapted the study to allow us to investigate strategies used to ease that transition and to document any differences in approach to low achievers and underachievers across the sector boundary.

## Summary of the fieldwork data collection

In part one of the fieldwork we recruited our first school group, comprising eight schools. We invited each school to send a teacher to act as practitioner-consultant to the project for a working day at the University. This event was used to test ideas and to refine our data-gathering techniques.

All eight schools were visited by fieldworkers during the following two months, with some receiving follow-up visits during the autumn. In total, data was collected during those visits from:

- 10 focus groups with learners
- 23 classroom-based lesson observations
- 21 semi-structured interviews with teachers
- 4 discussions with groups of teachers
- 8 semi-structured interviews with members of senior management teams.

Upon completing part one of the data collection, a further research event was convened with our practitioner-consultants to review the evidence.

In part two of the fieldwork, we recruited an additional six schools from within one local authority alongside the support of the Head of Improvement from the Department for Children and Young People. All six schools were visited and data was collected from interviews and discussion with six members of senior management teams and four teachers.

## Defining low achievement and underachievement

The concepts of both low achievement and underachievement have a breadth of meaning, ranging from achieving no qualifications to failing to keep up with the grades of peers. In terms of academic performance, working definitions are as follows:

- Low achievement is referenced to the group norm.
- Underachievers are not confined to children who perform badly – some of the brightest are underachievers.
- Underachievers are those who are not reaching their full potential.

Key goals 2 and 3 required us to establish the perceptions of low-achieving and underachieving learners within the first group of eight schools, and to assess the extent of agreement both across the schools and with previous research findings.

Drawing on the [literature review](#) 45 potential characteristics of low-achieving and underachieving students were identified. Both positive and negative descriptive labels were created: for example, a student might be described as 'easily distracted' or as one who 'tries hard'. These 45 descriptors were presented to 21 practitioners, including senior managers and classroom teachers, from the first group of eight secondary schools. The teachers taught a variety of subject areas, including business studies, English, French, information technology, Spanish, design and technology, and mathematics. The teachers were asked to specify whether each of the given characteristics described their personal concepts of low-achieving or underachieving students.

Teachers could elect to ascribe a characteristic to either low achievers or underachievers, or they could ascribe the label to both groups. They could also decide the descriptor fitted neither group; in addition, they could create a new descriptor if necessary. Figure 1 (next page) presents a network analysis of how teachers attributed a particular characteristic either exclusively to one group or to both groups'.[5] It should be noted that the size of the descriptor label relates to the number of times a characteristic is attributed to either or both target groups.

Figure 1 clearly demonstrates that there is overlap between the perceived characteristics of a low achiever and an underachiever. For example, both groups are characterised as easily influenced but more significantly as being bored and having a poor work ethic. However, there are also key characteristics ascribed to only one of the two target groups: low achievers have characteristics which present challenges to effective learning. Often identified as having specific learning difficulties, poor reading skills and problems of social integration, these students are perceived as having some measure of special educational needs. Of the two groups of learners, low achievers alone have positive characteristics such as 'tries hard' ascribed to them.

While low achievers and underachievers are perceived as sharing many characteristics, those assigned to underachievers only are largely behavioural and negative. These learners are distinguished by their below par performance and their disengagement from the learning process, at times manifested through poor attendance at school. Negative social characteristics such as disregard for others are also noted. However, it is equally important that some teachers recorded that

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[5] See Borgatti et al, 2002 for a fuller description of the method of analysis.

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these students are unchallenged by the educational process, suggesting that there is a need to do more to engage them.

**Figure 1: Teacher perceptions of low-achieving and underachieving students.**



Low achievers only

Underachievers only

Low and Underachievers
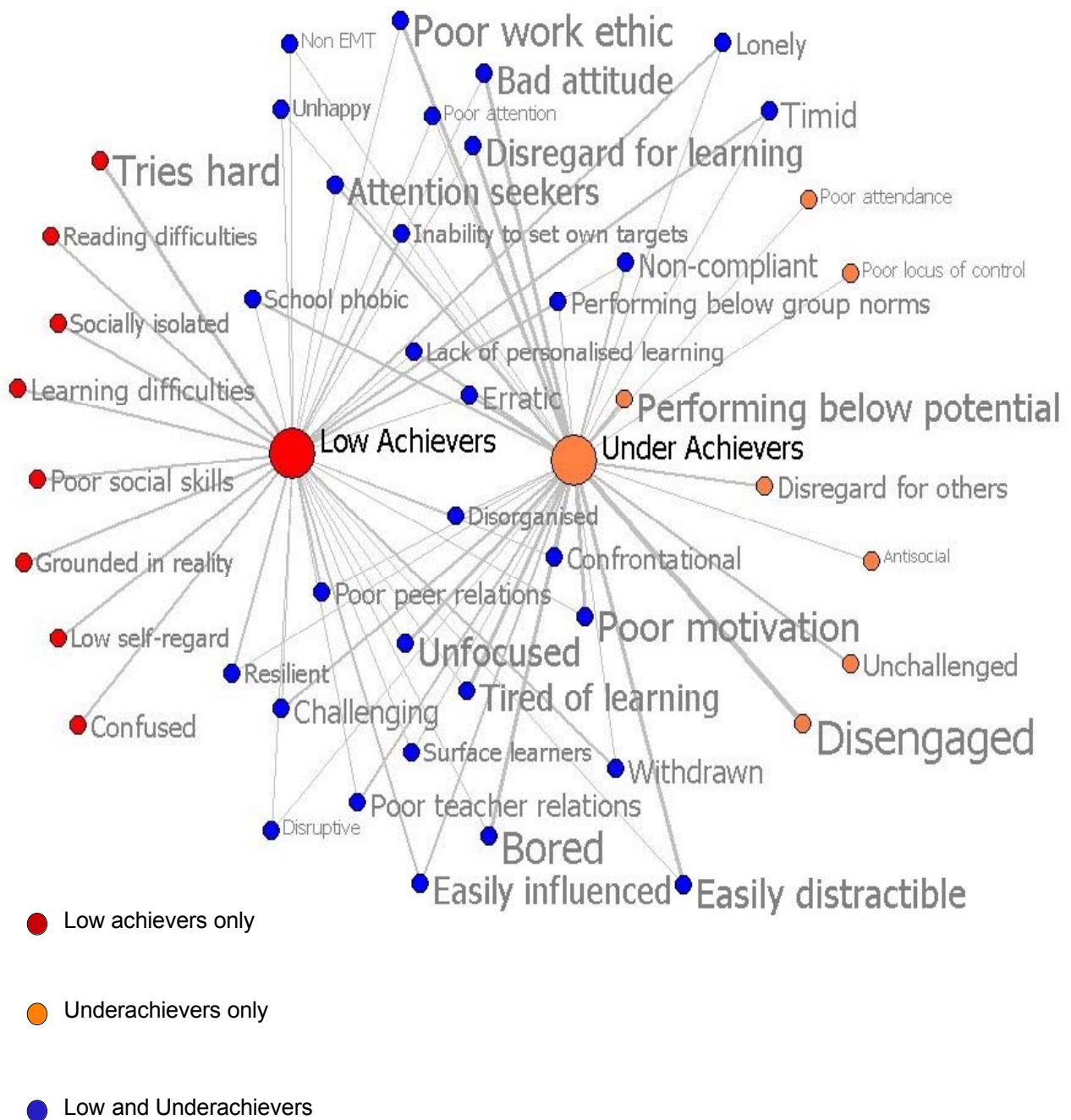
It is apparent from this analysis that the teachers in this sample at some level do share a collective view of low achievers and underachievers. While outward behaviours may be shared across these two groups of students, there are underlying and noteworthy differences between teachers' perceptions of these learners. We anticipated that these differences would require some level of divergence in the strategies used to effectively work with and support each of these two learner groups.

To validate the findings from part one of our fieldwork, we asked staff in the second group of schools simply to define low achievement and underachievement in their own terms. Three related structured interview schedules for secondary heads, primary heads and teachers were used to establish the practitioners' conceptualisations of low achievers and underachievers.

The three following examples from one secondary head and two primary heads plainly resonate with the understanding of these two concepts from the first sample group.

> **A low achiever:** A learner who tries hard but does not meet the age-related targets. It is highlighted that in any group of pupils, there will always be lower achievers as not everybody will meet the norms.
>
> **An underachiever:** Somebody who may be bored and distractible.
>
> Primary 1, Headteacher

> **A low achiever:** Seen as learners who are not reaching the national standard level. It is highlighted that it is necessary to look at a learner's background. For instance, a learner may have a chaotic lifestyle or a special educational need where they are achieving the best they can in their individual circumstances.
>
> **An underachiever:** A learner who is not reaching their potential.
>
> Primary 2, Headteacher

> **A low achiever:** One who may be achieving their targets, but these targets will be low. May have a statement of special educational need and therefore may be achieving at a good level within their ability range.
>
> **An underachiever:** A learner who is not achieving their target grades (within good reason, as there may be other factors involved). They are seen as being lazy.
>
> Secondary 11, Senior management team

Here and elsewhere, a positive sympathy for low achievers was noted. The schools realised that while these learners may not be achieving the national target grades, they often try their best and are praised for this. There was an implied lack of sympathy for underachievers that came through in the earlier analysis, although schools still recognised the need to work to re-engage these students with the learning process. Perhaps what is emerging here is a judgement about deserving versus undeserving poor learners. This echoes the literature on the culture of poverty that describes a class of people whose behaviour and attitudes turn their poverty into a closed world of dependence.[6] This negative attitude to the poor, and in this case poor learners, is still a feature of social policy in the UK.

In contrast to the lack of clarity over the key concept of personalisation, as evidenced in Impact 07,[7] [8] there is a greater consensus both across schools with a very disparate intake of learners and across all levels within schools as to what it means to be a low achiever or underachiever. The former are largely defined on individual learner characteristics while the latter are defined by individual performance. Practitioners' views of low achievers and underachievers are also aligned with the findings from the extensive research literature on this topic.

However, delving deeper into the actual cognitive and behavioural characteristics that represent both groups, the picture becomes less clear. As Figure 1 reveals, some characteristics are quite easily linked solely to low achievers (for instance, tries hard) or to underachievers (for instance, performing below potential, disengaged) but there is also considerable overlap of behavioural characteristics.

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[6]   Katz 1989
[7]   Underwood et al 2007
[8]   Underwood and Banyard 2008

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## Where are the gaps?

The aims of this project include identifying and making available to practitioners examples of good practice in schools. Empirical evidence as to the effectiveness of such practice is contained in the literature review and in reports such as the NFER review.[9]

We have identified three main gaps that need to be bridged if successful educational outcomes are to ensue. These are:

- gaps in individual learner competencies
- gaps in opportunity to achieve both within school and outside school
- gaps in achievement, including failure to achieve the required national benchmarks but also failure to achieve personal potential.

The gaps referenced here are essentially in the performance outcomes of low achievers and underachievers and also in the opportunities available to those two groups of learners. Opportunities are not confined to resource issues such as access to digital technologies; they also include personal attributes of the learners that allow them to take up the opportunities provided in and outside of school to support their learning. Similarly, while level of academic success is a key difference between the best performing students and low achievers and underachievers, there is also a disparity in behaviours that are critical to educational success.

### Local authority policies related to low achievers and underachievers

While the Department for Children, Schools and Families (DCSF) has spearheaded the Narrowing the Gap initiative nationally, within our sample of local authorities this term is not widely used. This does not show an indifference to this key educational agenda on the part of local authorities. Each of the six local authorities who have contributed to this research recognises the need to support low-achieving and underachieving learners, but action in this area tends to be incorporated into other policies, especially those related to inclusion. However, the action to narrow the gap is central to the local authority in which we are undertaking our cross-authority study.

### Policy gaps

There is then a wide debate and concern about issues related to the Narrowing the Gap agenda. It is not obvious that the policy and implementation are joined up. We note that documents from the DCSF refer to narrowing the gap, but within local authorities the work is commonly subsumed under broader objectives such as inclusion. In schools also it is commonly dealt with under other objectives.

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[9]Kendall et al, 2008

A further policy gap can be seen in the accepted measures of achievement which drive implementation of Narrowing the Gap policies. The interventions in secondary schools are driven and measured by grades at GCSE. As noted above, achievement can come in many forms; by focusing on GCSE outcomes the policy is self-limiting because it excludes all those whose many talents and abilities are not captured by GCSE.

In contrast, policies related to special needs or inclusion focus on re-engaging the learner with education. This is clearly shown in Figure 2 (next page). Here a simple frequency count of key terms in the policy documents for mainstream education (upper) and special needs (lower) is represented graphically. It shows both the overlaps and the differences in focus of these two key groups within one local authority. In the upper diagram, performance and standards are the key concepts; in the lower diagram, there is a focus on the individual learner's difficulties and how they are to be overcome. The different cultures of these two policy groups can create barriers to effective working.

However, two of the local authorities in our sample had developed a cross-authority action plan for narrowing the gap. For example, Secondary 4 is part of the 'Leading Edge' group, which has regular meetings with teachers from the local authority (alongside local authority representatives) interested in working towards narrowing the gap. There is an emphasis within this school on staff development. The school encourages teachers to act as researchers and to publish in the school's own publication, which is used to promote good practice and research findings throughout the school. There are also strong links with the local authority, and a group of teachers from schools across the authority have developed a number of priority areas for consultation. The most recent of these was the 'assessment for learning' project. Teachers here argue vociferously that strong links among teachers within the same authority and with local authority representatives are fundamental for progress on narrowing the gap initiatives.

**Figure 2: Key terms in one local authority's mainstream (upper) and special educational needs (lower) policy documents**

## Identifying effective strategies to support low achievers and underachievers within the sample schools

While there is strong consensus as to the characteristics of low achievers and underachievers, there are areas of both collective agreement and fundamental difference in the strategies employed to address the educational problems associated with these groups. The level to which technology underpins these strategies is very similar for some but not all activities.

In the literature review we noted nine main strategies from the research literature currently being used to support low achievers and underachievers. These are:

- improving results by monitoring behaviour
- authentic learning
- using learner self-assessment
- practice makes perfect
- changing the student perceptions of the classroom
- just-in-time tutoring
- Non English Mother Tongue learners
- improving executive functions
- using biofeedback to ameliorate the problem of ADHD

Variations of most, but not all, of these strategies were employed within the sample schools.

### Key examples from the field evidence

A summary table of the strategies used within the sample schools is presented in Appendix A. This section of the report presents a series of vignettes and comments illustrating these strategies.

#### Improving results by monitoring behaviour

All of the schools within this study used some form of information system for monitoring and analysing learner behaviour, achievement and progress. This was linked with rapid digital communication of the outcomes of this monitoring to practitioners, and increasingly to the learners and also their parents. In the latter case communication via e-mail or texting is increasing. This monitoring of behaviour can lead to a reduction in persistent absenteeism, a factor in academic underachievement. More subtle profiling of low-achieving and underachieving learners to produce personalised programmes of work can result in increases in the school's percentage of students attaining the national target of five GCSEs.

Research into the role of technology as a key aspect of strategies for school improvement supports the value of this close monitoring.[10] [11]

> Persistent absenteeism is a factor in academic underachievement; a first step to effective learning is regular attendance. Many schools are now using technology to monitor such behaviour, and this 11-16 Technology College abandoned its previous paper-driven system for the custom-built system which records both good and bad learner behaviour based on 5 levels (1-5), where the previous paper system tended to focus on bad behaviour. Level 3 behaviour (positive or negative) triggers notification to parents, where they can be contacted by either e-mail or post. Learners and their parents also receive a weekly summary of their behaviour.
>
> Secondary 13, Senior management team

School 5 actively embraces and implements strategies to work towards the Government's initiative for real-time reporting to parents by 2010. The school uses monitoring software to keep track of student progress and achievements and easily identifies those at risk of becoming low achievers and underachievers.

**But how does the school use the data?**

Evidence shows that school leadership is highly significant for learner outcomes in deprived contexts.[12] While most schools are monitoring learners, the way this data is used varies with the strategic goals of each school. A widely used management system for this purpose is the Schools Information Management System (SIMS), which is designed to give schools the freedom to track and target issues pertinent to them.

The variations in data handling and use are clearly seen in the examples below where the decision to target all learners, or to focus on key groups of learners, has profound effects on the both students and the school.

In Secondary 4 at the start of the academic year, staff meet with all Year 7 learners individually to identify their 'outstanding' areas of expertise or skill. Failure is unthinkable in this school, and all of the learners are deemed to be special. In essence, the school boosts learners' self-worth at a critical period of school transition when individuals may be feeling particularly vulnerable. Learner self-worth is clearly linked to positive progress through the educational system. Listen to the Headteacher's podcast.

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[10] Underwood et al, 2008

[11] Hollingworth et al, 2008

[12] DCSF, 2009

A further example from School 4 is their ability to target specific learners who have the potential to reach the national benchmark of five good GCSEs.

> Identification of underachieving students at the end of Year 10 was the first step to designing a personalised programme of support for each student. Each student was allocated a personal mentor, and his or her progress was monitored throughout the year. This has allowed the school to increase its percentage of students attaining five GCSEs. The detailed knowledge of each learner provided by the system allowed teachers to produce a more targeted programme of work for each individual. The learner was provided quick and informed knowledge of when things were going right and when they were going wrong. The former proved to very motivating while the latter helped individuals to reduce errors in thinking before they became fossilised in their minds.

> Secondary 4, Senior management team

> This school has specifically set out to support underachieving students through its Personalised Learning Project with Years 8-10. The LA-funded project is aimed at those not making two levels of progress as predicted in key curriculum areas of English and mathematics. The school actively uses LA and in-house target-setting and achievement data to determine the groups. These groups include those achieving above national norms but below their identified personal potential. The strategy is not centred around the C/D borderline (as is often found) but simply on the metric of failing to progress two target points over the year. Two teaching assistants have been employed specifically to work with Year 8 and 10 students to raise educational awareness and progress.

> Secondary 5, Headteacher

Differences in framing educational goals were also found within one local authority. Schools from this local authority have access to similar sets of data from which they are able to build a picture of each individual's performance and potential. Three schools are using the data to track the performance of learners and also to address issues of low achievement and underachievement. However, they differ in the ways they present the data to their learners.

At School 9, before receiving their individual profiles all learners attend an assembly at which the key message is that 'attitude not ability' is the key determinant of academic success. They are then shown their individual profiles based on value added performance data. Learners are shown a range of possible outcomes they can achieve depending on their level of engagement with their learning. This profile is based on the concept of 'learners like you', which shows the learner how individuals of similar ability went on to achieve. The school does not give single

grade targets for each subject, which they believe can be de-motivating, but prefers instead to give the range of possible outcomes for similar learners.

In contrast, School 10 uses the profile data to provide clear grade targets for learners. Learners receive a folder with a series of letters on the front representing their target grades for the subjects they are studying.

Finally, School 11 not only allows all learners access to their grades, but also makes each learner's progression available to all other learners in that particular class. The school has a 'top 100 learners' list which is made public throughout the school. The factors that contribute to a learner's place within the list are: attendance and punctuality, merits, target grades and achievement of targets. The school argues that this approach motivates learners, and some even request the full list to see where they are placed in the list of 200 learners each school year.

The effectiveness of these different strategies in raising the performance of low-achieving and underachieving pupils needs further exploration.

> The response to monitoring is varied but the Year 7, 8 and 9 reading groups are typical of the strategies emerging from reflection on the data. This school set up a peer mentoring programme where older students help and coach those struggling with basic literacy skills. This strategy aims to raise abilities early to avoid later literacy difficulties.
>
> Secondary 4, Senior management team

**Readiness for learning**

Monitoring learners' behaviour and performance fulfills the essential functions of increasing individual attendance in school and providing the teacher, the parent and the learner with detailed knowledge of behaviour and performance. A key message from the schools is that learners must be 'ready to learn' before they can engage effectively with school. This resonates with the research literature, which shows that low achievers and underachievers have weak basic cognitive skills and are not prepared for the act of learning; that is, some children are ill-equipped for school[13].

We noted in the literature review that there was increasing interest in preparing learners' cognitive and affective skills so they can fully benefit from their life in school. This was also visible in the schools here, with a range of intervention strategies, such as nurture groups and allotment groups, employed to support learners who are of concern.

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[13] Diamond, 2001

**Nurture groups**

Within a single local authority, two primary schools use a strategy of nurture groups to support struggling learners. These groups are seen as key for pupils who struggle to concentrate for an extended period within a lesson and who need extra support in building up social and emotional skills.

> Nurture groups are used to support learners who are not able to focus for a full period of a lesson. Such pupils are withdrawn from mainstream teaching for a few sessions a week. These sessions in the nurture room are designed to ensure the learner is successful. Male learners have shown vast improvements in their motor skills from working on a 'Lego' task. These alternative activities boost self-esteem and confidence among a group of pupils who often see themselves as failures and school-phobic.
>
> Primary 1, Headteacher

> The nurture unit in this school supports a small group of learners who require social, emotional and behavioural support. They work on social and emotional aspects of life, such as emotional feelings and friendships. The nurture unit is regarded as being beneficial to such learners, and demonstrates good improvement. Most children who receive support from the nurture unit spend the morning with their regular class before joining the unit after lunch. The unit makes good use of ICT by using computers and in particular the Nintendo Wii. It is highlighted that the use of the Wii has seen improvements in learners' hand-eye coordination, balance, and in self-esteem. Also, it is indicated that this small group of learners goes to lunch together and enjoys each other's company.
>
> Primary 2, Headteacher

The strategy of the nurture group is also used at secondary level.

> This school has identified a problem group of underachieving, economically disadvantaged white boys. In conjunction with two other secondary schools, the school has targeted raising the self-esteem of this group. Currently the school has around 30 boys on this programme. They work on practical projects and are encouraged to think more widely about their career options. For example, if they dream of becoming a footballer, they are made aware of other options in this field such as being a linesman or a sports physiotherapist. This programme occurs from November to April to help them become ready to pick their GCSE option modules. The boys report back and make a PowerPoint presentation to parents. This is a new initiative but the schools will be tracking the boys' progress to check effectiveness of the programme.
>
> Secondary 11, Senior management team

This idea of a nurture group is positive to both those in need and those in the mainstream classrooms. Those in the nurture groups have the opportunity to enhance their social and emotional skills, and these newly-developed skills allow them to integrate into mainstream lessons. Furthermore, the use of technology has demonstrated a positive effect in the way that it can motivate learners to complete tasks and make a focused effort in order to be rewarded through the use of technology such as the Wii. Additionally, other learners can benefit from the calm working atmosphere encouraged both when the target pupil is withdrawn and when he or she returns in a more attentive state.

**Attentional training**

Learners who enter school with poor inhibitory skills are often seen as disruptive, rude and out of control by teachers. For the individual, this lack of competence often leads to frustration and disaffection from school. However, learners can be trained effectively in these skills, and the results can be very positive not just for the individual but for the class as a whole. This was clearly demonstrated within one of the schools in this study.

School 1 targets the ability of learners to attend and listen. A computer-delivered listening programme provides a half-hour per day, 10-week experience for those children who find it difficult to attend. The school has found an improvement in general listening skills, ability and confidence. The listening programme here has been successfully used to reduce behaviours associated with ADHD. In such cases the programme trains children to inhibit their immediate response to any situation and to reflect before speaking or acting. The effectiveness of such cognitive training

is well documented. While the program was used with all learners, it proved particularly effective for those learners deemed to have weak self-control.

## Inclusion strategies

Strategies for inclusion often focus on the physically or economically disadvantaged learner. The provision of laptops for visually-impaired learners, dyslexic learners and learners from impoverished home environments is common in these schools and in many others across the country. However, many learners who are not categorized as disadvantaged still struggle to be heard in class. Finding ways for these learners to have a voice is essential if they are to progress. The use of innovative ways of expressing their ideas, rather than traditional text, has been shown to be highly effective with boys in particular [see videos Extending confidence using technology in RE lessons and Netbooks and whiteboards in English secondary classrooms].

## Resources that aid the personalisation of learning

Many of the schools demonstrated a good use of interactive resources to aid learners across all abilities.

SAM learning[14] is popular among the schools to support subject areas geared towards GCSE attainment. This website is designed for all abilities, allowing learners to assess themselves, complete activities online and track their progress. The website is also designed so that teachers can keep track of learners' progress.

MyMaths[15] was something that many teachers found valuable as it gives students immediate feedback on their performance. The teachers could also vary the level of complexity to enable personalisation of the tasks. Students could complete a piece of work more than once, and would often do so to improve their score as an element of self-competition and improvement [see video Interactive whiteboards and other technologies in maths].

.Technology is essential in providing greater autonomy over learning, enabling learners to assess their progress and work at a speed comfortable to themselves.

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[14] SAM Learning
www.samlearning.com
[15] MyMaths
www.mymaths.co.uk/

**Authentic learning**

Many schools set problem challenges for their learners to encourage engagement in learner-relevant activities. For example, on a personal learning and thinking day for Year 7, teams of learners are given a challenge to complete, for example ridding the school of litter. Learners assess themselves and evidence the skills they can bring to the team. The challenge enables learners to fit into the team by using their self-assessed, individual talents. The teams research the issue and create a five-minute PowerPoint to present their ideas in front of a panel of judges.

Schools argue that activities like these are important and exciting for learners, because learners get out there and 'do it for themselves'. The schools have shown that, by focusing on support for low achievers and underachievers, they have managed to capture, enthuse and sustain educational development. In particular, they argue the benefits of making links to authentic learning with diploma students, where they can see the practical benefits of using technology to support learning.

> Making tasks and activities real to students, so they can see the additional benefits for use of skills outside the classroom environment – this has been beneficial and encouraging. Some considered underachieving at the traditional level (for instance, failing to meet targets in English and maths) are often found to use technology to support their literacy and numeracy skills in the world beyond the classroom or in practical-based activities. They use software to meet goals in activities that relate to real-work environments.

> Secondary 5, Senior management team

**Facilitating integration: tools to allow engagement**

Technology can overcome barriers that prevent some learners from taking a full part in the educational process. At a more prosaic level, the technologies to help children with dyslexia and dyspraxia (laptops, voice recognition software and text-to-speech software) are relatively cheap, but can make a big difference to children's academic performance.

With the use of netbooks and interactive whiteboards, this English teacher's students have found more freedom to decide how they respond to tasks and present their work [see video Netbooks and whiteboards in English secondary classrooms]. The technology is also engaging low-achieving and underachieving learners more in lessons, and motivating them to work on projects in their own time.

**Resource access in the home**

School 1 offers a sixth-form computer scheme as a way to ensure digital support for these learners. All sixth-form students can opt in. They pay £25 a month for the two years of sixth form for a laptop and technical support and then keep the computer at the end of the sixth form.

School 4 places learning materials, including those for homework, on the learning platform on Monday morning. This allows flexible working for learners, who can access material at a time of their choosing. The school is piloting students taking aspects of the European Computer Driving Licence (ECDL) modules at home. However, before learners can have this flexible approach to learning, they must have completed and passed a number of other modules in the course. This flexibility has been seen to enhance engagement and also independence of learners.

**The technological sweet**

A number of teachers explained how they use technology as a reward. For example, one English teacher told her students that they could only do a podcast if they had completed all of their other activities. This prompted a number of students to spend time outside of lessons completing tasks because they wanted to do the podcasts. In this way, the podcasts acted as an extrinsic reward.

The nurture groups use the concept of extrinsic reward to some effect but this raises the question of potential impact on the pupil who is working hard at school but not getting access to fun activities such as Wii sports. This was not a concern for this school, however.

**The transition process**

Transitional activities are aimed at all children and include teacher visits, taster days and games. In both of the primary schools, contact is made by the secondary school teachers to meet and greet children in order to ease the transition process. Additionally the Year 5 and Year 6 pupils go into the secondary school for taster days, where they become familiar with the surroundings and the teachers. The secondary school has around 14 main feeder schools with which it has contact, but it actually draws pupils from over 30 primaries.

> Some teachers make visits to the primary school so the learners feel comfortable with the teachers and become familiar with them. For example, the French teacher will visit the Year 5 and Year 6 classes to teach a few lessons.
>
> Primary 2, Headteacher

> The Education Welfare Office had provided computer games for learners that centre on transition from primary to secondary school. These games aid their knowledge and understanding of secondary school in order to make them comfortable with the transition. The games consist of activities such as 'walking to school correctly'
>
> Primary 2,Headteacher

**Strategies for low achievers and underachievers**

The primary schools made special transition arrangements for low achievers as defined by designations of Special Educational Needs (SEN). In both primary schools the special educational needs co-ordinator (SENCO) knows all the names of the children with a registered SEN. The SENCO works with the family of feeder schools for the receiving secondary school, and records full profiles of children in order to flag up those most in need.

In contrast, there are no specific strategies or activities aimed at underachievers. The receiving secondary school, however, has repeatedly observed notable differences between boys' and girls' academic maturity at their point of entry to secondary education. The school notices that girls' literacy, handwriting and general presentation skills are generally more advanced than those of boys from a very early age. They indicate that a large proportion of boys do not like to read, and they suggest that there should be more 'boy-friendly' material available. At Year 7 the gap in performance is wide between boys and girls, with the latter being significantly advantaged, but it is reduced to around 15% by Year 11 due to school-targeted literacy throughout the school years. While this remains a noticeable difference, it is perceived as a very real narrowing of the gap that was identified at that start of secondary schooling.

**Learner voice**

Although not originally part of the research brief, the work was extended to investigate how learners in our target populations experienced their school environment. Could the learners identify key people, places or objects within the school that gave a sense of how they interacted with, and within, the educational environment? Learners were asked to identify and capture, through a series of photographs, aspects of their school that were important to them personally. We also asked them to give a brief statement explaining why they had selected that image. In order to do this we developed a PowerPoint presentation consisting of ten slides into which the learners inserted ten images, one per slide. The explanation of why the image was significant to the learner was to be written into a speech bubble. These photographs represented key aspects of a learner's school life from his or her own perspective. People, places and objects not recorded were not necessarily unimportant to the child, but they were not of central interest.

The activity was designed to be non-threatening and to minimise the level of writing skills necessary to contribute. In this way, we sought to make the task accessible to all learners. However, learners responded to the task in different ways. Two thirds of the learners completed the task as requested. Of those who took photographs, the number of photographs varied from one to the full 10 requested. Just under half of the learners drew on clip art to represent elements that were important to them. This moved the focus away from school to life in general.

The outcomes of this task have proved interesting even though many learners did not adhere to the brief that we set for them. A comparison of responses from two groups as to the importance of technology to these children is illuminating. Figure 3a shows that technology is not a focus for our learners in school, but is much more important in their out-of-school life. Figure 3b shows that learners use technology primarily for entertainment and communication outside of school.

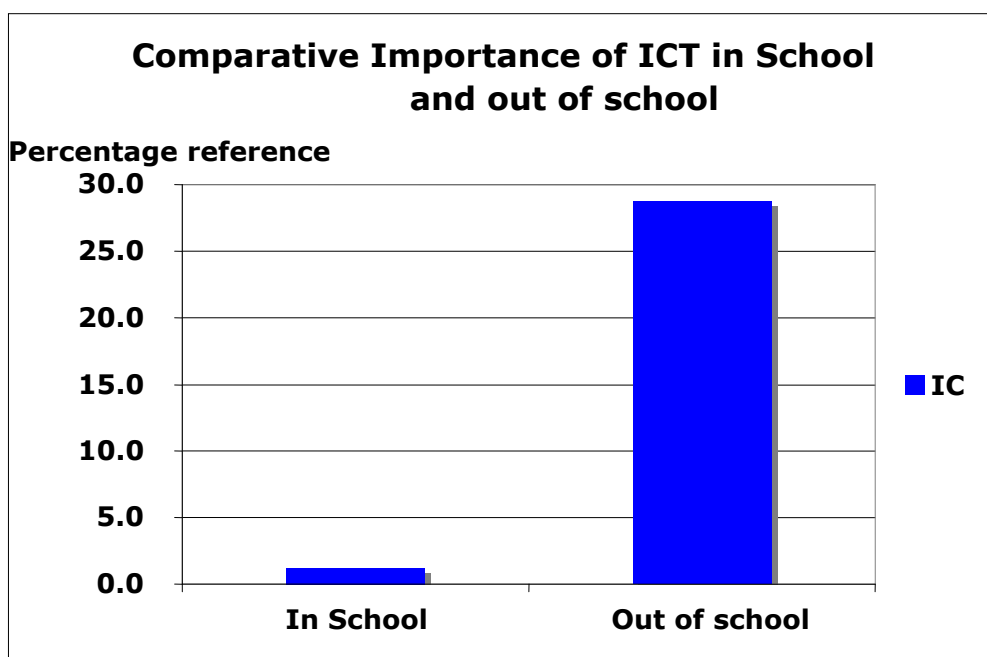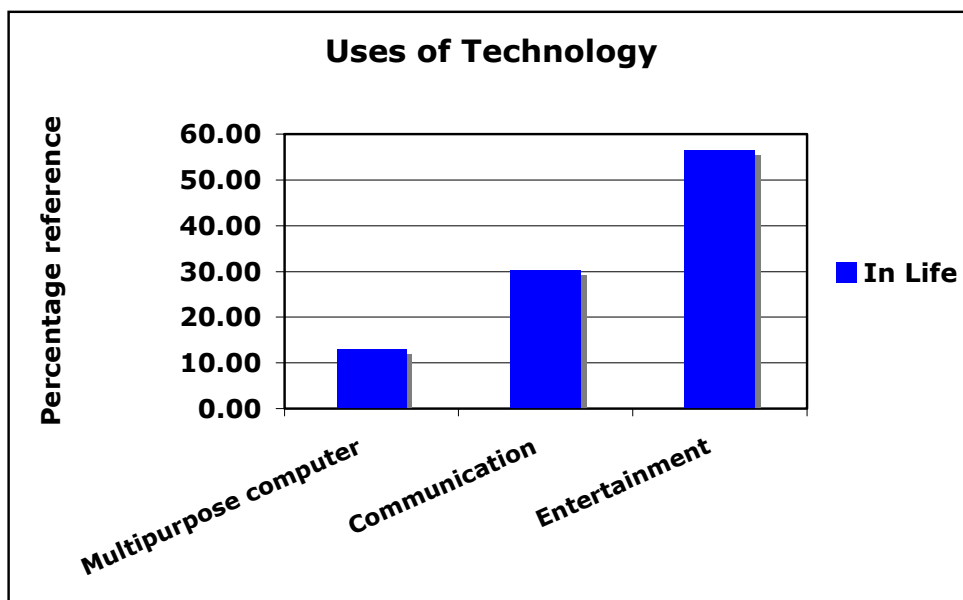**Figure 3a:  Comparative importance of ICT in and out of school**

NOT PROTECTIVELY MARKED

Figure 3b:  The uses of ICT out of school

**Uses of Technology**

(Bar chart titled "Uses of Technology". Y-axis labelled "Percentage reference" from 0.00 to 60.00 in increments of 10.00. Legend: "In Life". Categories on X-axis: Multipurpose computer (approximately 13), Communication (approximately 30), Entertainment (approximately 56).)

The main focus of attention for those learners who completed the task as requested was essentially on school symbols often connected to rules or on social spaces such as the bench used with friends at break. School is increasingly the place where the next generation meets face to face. They then go home and text, phone or go online to contact their social group. This is an interesting social phenomenon but outside the remit of this report.

## Conclusion

There is a high level of agreement among various educational stakeholders as to what constitutes low achievement and underachievement, with the former being related to the characteristics of the individual learner while the latter is defined by the individual's performance.

Establishing effective practice to tackle the problems of low achievement and underachievement is seen as a priority goal at all levels of the educational system.

Despite this recognition of need, there is some confusion in the overarching strategy development. While the DCSF has a clear policy on narrowing the gap, the implementation of that policy at local authority and school levels is diffuse and is represented under a myriad of other policies. However, some local authorities have a set of narrowing the gap task groups, and these are seen as productive at senior management and classroom levels in schools.

While technology is not the answer to all the difficulties associated with low achievement and underachievement, it is central to many of the strategies in use in the schools within this project.

Detailed and timely monitoring is crucial for identifying and intervening in the academic trajectories of all learners. Iterative individual learner profiling is seen as a prerequisite to success. Although the schools within this sample use data in many different ways, they share commonalities of practice. School culture, through the setting of in-house educational goals, may result in a standards performance approach in one school compared with a personal development approach in another. Individual profiling allows schools to target their efforts towards the development of learning skills and training in those cognitive skills essential for an effective classroom experience.

A school environment based on clear analysis of individual performance allows learners, parents and teachers to work towards a common goal, which can positively influence learners' academic achievement. There is a willingness in the research schools to engage with parents as partners in supporting the development of the child. Technology allows frequent and just-in-time contact with parents, and this is seen as a vast improvement over the yearly or even termly parents' evenings. Additionally, technology can facilitate and enhance learner engagement within the classroom - a prerequisite to meeting the ultimate goal of raising attainment.

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## Appendix A

### Illustrative strategies to resolve issues of low achievement and underachievement

Table 1 illustrates the strategies actively used to support low-achieving and underachieving learners in our sample schools. It is a categorisation of activities but does not represent a statement of spread throughout the sample of schools. The shaded strategies are ICT-rich. The ticks represent the number of teacher consultants who feel that these statements apply to either one or both groups.

### Table 1: Strategies used to support learners

|  | Strategy | Standard practice | With low | With under | Comments |
|---|---|---|---|---|---|
| Monitoring | Data tracking and identification from residuals | ✓ | ✓ | ✓ | Part of administrative duties of the school; allows close and easy identification of all student progress, especially low achievers and underachievers. |
|  | Learner profiling | ✓ | ✓ | ✓ | Useful for identifying problems or mismatches but also for setting aspirational performance targets. In one school, if a student is below the predicted pattern, teachers use the information at parents' evenings to understand the student as an individual in an attempt to comprehend underachievement. |

## Table 1 (continued)

|  | Strategy | Standard practice | With low | With under | Comments |
|---|---|---|---|---|---|
| Mentoring | Peer support |  | ✓✓ | ✓✓✓ | Can be used to push both low achievers and underachievers. For example, it is used for some of Key Stage 4 material and academic subjects, as well as with sixth-form students. |
|  | Engage parents if feel student needs support | ✓ | ✓✓✓ | ✓✓✓ | Real time reporting to parents is crucial.<br><br>School 10 teachers report to parents online with all teacher-student and teacher-parent messages accessible to parents. |
|  | One-to-one support | ✓ | ✓✓✓ | ✓✓ | One-to-one support is essential for low achievers but sometimes can be targeted at underachievers so they have a peer or staff mentor to give formative feedback. |

## Table 1 (continued)

|  | Strategy | Standard practice | With low | With under | Comments |
|---|---|---|---|---|---|
| Skills development | Provide differentiated templates or frames to support individual learner's work |  | ✓✓✓ | ✓ | Although time restrictions can be problematic, differentiated help sheets can be beneficial with extreme low achievers or those with difficulties starting curriculum tasks. Writing frames may include the start of a sentence. Regarded by some primary schools as a strategy used in secondary schools. |
|  | Put material on the learning platform or email it to students | ✓✓ | ✓✓ | ✓✓ | Internet resources are powerful for supporting learning. An example from science: when some learners do not understand a diagram drawn on the board, presenting a colourful interactive diagram can bring it to life and enhance their engagement. |
|  | Study skills support | ✓ | ✓ | ✓✓ | Appropriate to all students across all curriculum subjects, although perhaps seen as more fundamental to low achievers and underachievers. |

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## Table 1 (continued)

| | Strategy | Standard practice | With low | With under | Comments |
|---|---|---|---|---|---|
| Skills development (continued) | Provide immediate feedback on performance | ✓✓ | ✓✓ | ✓✓ | This works for all learners. Focus on regular formative assessment and feedback is crucial for improving and maintaining high performance levels. Also, it provides an opportunity to meet specified objectives in appropriate amount of time. An example: MyMaths used with online homework assessments and immediate feedback to students on their performance via a traffic light scheme. |

NOT PROTECTIVELY MARKED

## Table 1 (continued)

| | Strategy | Standard practice | With low | With under | Comments |
|---|---|---|---|---|---|
| Engagement | Maintain attention by task rotation/ switching | | ✓✓✓ | ✓✓✓ | To keep engagement and attention, focus on short activities throughout lessons. |
| | Computer-based interactive quick fire games | | ✓ | ✓✓✓ | Shown to work well with Diploma students to allow focus and interest in activities. However, there is a recognition that not all students will be able to compete. |
| | Use voting system to engage | ✓ | ✓✓✓ | ✓✓✓ | Some schools use this as a standard strategy, but it is more prevalent in classrooms where learners are disengaged or have a low attention span. |
| | Develop links to extra-curricular activities | | ✓✓✓ | ✓✓✓ | Important to capitalise on learner strengths and interests. Capitalising on own strengths leads to attitude change in classroom. |

## Table 1 (continued)

| | Strategy | Standard practice | With low | With under | Comments |
|---|---|---|---|---|---|
| Authentic working | Make the content relevant to learners' own experiences | ✓ | | ✓✓✓ | Relevance to own experience captures understanding and engagement; useful for all students but essential for the distracted and disaffected. This is the underpinning principle of nurture rooms. |
| | Offer college schemes/ courses a couple of days per week | | ✓ | ✓✓ | Work-related learning is key to many disaffected learners. |

## Table 1 (continued)

NOT PROTECTIVELY MARKED

| | Strategy | Standard practice | With low | With under | Comments |
|---|---|---|---|---|---|
| Personalisation | SENCO | | ✓✓✓ | ✓ | For curriculum support, students tend to be taken out of lessons and brought up to mainstream standard with additional support.<br><br>Educational support is also regarded as fundamental to re-engagement with curriculum by underachievers. |
| | Alternative curriculum / qualifications, for example, BTEC rather than traditional syllabus | | ✓✓ | ✓✓✓ | Targeted at low achievers struggling with traditional curriculum and underachievers not interested in academic learning. Relevance to everyday practice and topics with real-world relevance, e.g., diploma students. |
| | Writing frames with start of sentence given | | ✓✓✓ | | Tend to be useful with the extreme low achievers or those who face difficulties starting curriculum tasks in time frame. This could be seen as more of a primary school strategy. |

**Table 1 (continued)**

|  | Strategy | Standard practice | With low | With under | Comments |
|---|---|---|---|---|---|
| Personalisation (continued) | Develop autonomy over developing appropriate learning styles | ✓✓✓ | ✓✓✓ | ✓✓✓ | Enables learners to choose their own style of learning; different ways of working or using tools may allow low achievers to meet objectives without the standard methods, eg, A-Level art sessions and digital technologies. |
|  | Behavioural techniques to maintain learning within classroom activities |  | ✓✓✓ | ✓✓✓ | Techniques to help the individual develop positive behaviours are targeted at children with ADHD. |
|  | Appropriate target setting at different curriculum levels |  | ✓✓✓ | ✓✓✓ | For both groups, set targets against their own abilities rather than norm referencing. Low achievers may never meet the norm but can improve and show development/ achievement if targets appropriate to them. |

## Table 1 (continued)

|  | Strategy | Standard practice | With low | With under | Comments |
|---|---|---|---|---|---|
| Flexible working | Option to complete modules of ICT out of the classroom | ✓✓ | ✓✓ | ✓✓ | Standard practice across school and curriculum topics; strengthens school-home links, but LPs are seen as vital in this role. |
|  | Providing laptops into the home | ✓ | ✓ | ✓ | Distribution of equipment often focuses on needs related to disabilities and deprivation. This is an equity issue for many schools. Example: Ten Year 7 students have been given netbooks to use at home to see if this has an impact on their learning. These students were selected on the basis of not having access to computers at home. |

## List of associated materials

### Associated materials include:

- **The** Narrowing the Gap Literature review 2009 [http://partners.becta.org.uk/index.php?section=rh&catcode=_re_rp_02&rid=17003]

- **6 x two minute teacher/learner videos**
    - Ben Maddison, Religious Education [http://partners.becta.org.uk/index.php?section=rh&catcode=_re_vi_ng_03&rid=17422]
    - Rima Hashim, Mathematics [http://partners.becta.org.uk/index.php?section=rh&catcode=_re_vi_ng_03&rid=17419]
    - Zoe Enser, English [http://partners.becta.org.uk/index.php?section=rh&catcode=_re_vi_ng_03&rid=17417]
    - Celine Jamet, French [http://partners.becta.org.uk/index.php?section=rh&catcode=_re_vi_ng_03&rid=17415]
    - Rob Taplin, Art [http://partners.becta.org.uk/index.php?section=rh&catcode=_re_vi_ng_03&rid=17421]
    - Adam Martin, Physical Education [http://partners.becta.org.uk/index.php?section=rh&catcode=_re_vi_ng_03&rid=17414]

- **3 x 1 minute learner videos**
    - Text book: Learners use video cameras on their mobile phones to explore the concept of dynamic equilibrium. [http://partners.becta.org.uk/index.php?section=rh&catcode=_re_vi_ng_03&rid=17424]
    - Art: Learners explain how technologies used in art support their confidence and learning. [http://partners.becta.org.uk/index.php?section=rh&catcode=_re_vi_ng_03&rid=17425]
    - Technology: Learners discuss how relevance and purpose in the real world are important to them, and they address the ways in which they can use technology to bring their ideas to life.

[http://partners.becta.org.uk/index.php?section=rh&catcode=_re_vi_ng _03&rid=17426]

- **Four stand-alone podcasts**
    - Jim Fanning, Assistant Head (10 minutes)
      [http://partners.becta.org.uk/index.php?section=rh&catcode=_re_vi_ng _03&rid=17430]
    - Helen Burns, History Teacher (10 minutes)
      [http://partners.becta.org.uk/index.php?section=rh&catcode=_re_vi_ng _03&rid=17431]
    - Gareth March, Science Teacher (10 minutes)
      [http://partners.becta.org.uk/index.php?section=rh&catcode=_re_vi_ng _03&rid=17428]
    - Dr Bevan, Headteacher, Southend High School for Boys (20 minutes, separated into chapters)
      [http://partners.becta.org.uk/index.php?section=rh&catcode=_re_vi_ng _03&rid=17432]