Introduction

It is imperative that the Armed Forces are in a position to identify and assess the impact of improving the literacy, language and numeracy skills of Service personnel on their professional and personal development in order to organise effective and timely Basic Skills (BS) provision. Evaluating its collective impact on the organisational performance of the Armed Forces is required to support the business case for continued investment in BS improvement. The Ministry of Defence (MoD) and the Department for Innovation, Universities and Skills (DIUS) have commissioned the National Institute of Adult Continuing Education (NIACE) and the National Research and Development Centre for adult literacy and numeracy (NRDC) to conduct a study that will provide the evidence the Armed Forces need.

The study is in two phases. The first and preliminary phase is now complete. This briefing summarises Phase 1 and explains the need for Phase 2, a three-year Longitudinal Study, due to complete in 2011.

Phase 1

The first phase included a literature review, Service case studies, and the piloting of research instruments for Phase 2. Summaries of the findings are provided elsewhere in this pack.

The literature review examined the impact of BS improvements on retention, performance, trainability, individual well-being and welfare. The impact on learning, the value of integrating BS in vocational programmes, and the role of the organisational culture in BS learning were also reviewed.

The detailed case studies included group and one-to-one interviews with 55 personnel across the Armed Forces (including civilians within Service education centres).

The piloting of research instruments included information gathering from briefings and interviews with Army personnel and recruits, and the development of questionnaire and BS assessments. These are to be used in the computer-assisted personal interviews to be conducted to support the tracking of recruit performance in Phase 2 of the study.

Phase 1: Key Messages

- Despite the significant advances the Services have made in addressing their BS challenges in recent years, the scale of the BS needs across the Armed Forces requires further comprehensive assessment, especially in the Royal Navy (RN) and Royal Air Force (RAF). There are large gaps in the information held on the numbers and profiles of those legacy personnel1 with BS needs.

1 Those personnel joining the Services before the MoD Basic Skills Policy was introduced in 2004.
• Effective tracking of the BS progress of individuals as they move frequently between postings, operational commitments and extended exercises is an ongoing problem that undermines efficient management of provision.

• Research evidence on the detailed impact of improving literacy, language and numeracy skills on organisations and their BS learners is far from comprehensive, in the Services, in other specific contexts and nationally. The specific relationship between these improvements and operational effectiveness, business efficiency, retention and trainability, for example, have not been tested objectively and the wider benefits remain uncosted. Phase 1 of the study demonstrates the need for further research; in particular, for research that extends across all three Services.

• Although there is much anecdotal information on how strongly BS impact on the Services’ Phase 1 and 2 training, the systematic mapping of literacy, numeracy and language skills to job requirements and military training programmes (already started in parts of the Armed Forces) would assist the further development of policy and provision. That provision can then be better streamlined to specific trades and specific points of the training pipeline.

Other Key Messages

• Individuals with low BS can place a burden on the chain of command. Low BS are associated with: being detained at the Military Corrective Training Centre; being involved in accidents; being Absent Without Leave and being given lower performance ratings by commanding officers.
Longitudinal Study of the Impact of Basic Skills Improvements in the UK Armed Forces
Fifty per cent of line managers report that BS training for selected members of their team has been very or fairly effective in improving these individuals’ operational effectiveness and day-to-day efficiency at work. However, learners themselves tend not to identify an immediate impact on day-to-day performance.

Successful BS provision requires a whole organisational approach. Getting their immediate line managers and the chain of command on side to improve soldiers’ BS was identified most frequently by Army BS learners as an area for improvement.

‘Embedding’ combines the development of literacy, language and numeracy skills with vocational or other skills training, by integrating BS within another learning programme. ‘Embedding’ is associated with higher retention and success rates on vocational courses, and higher levels of attainment of BS qualifications. Within the Armed Services, embedding can demonstrate how BS are relevant to the core military training.

**Phase 2**

- The second phase is a three-year longitudinal study, to include a qualitative and quantitative strand. Given the much larger numbers of personnel with identified BS needs in the Army, the quantitative strand will focus solely on Army recruits. Rich, in-depth qualitative case studies will focus on all three of the Armed Services.
- The study will assess the impact of BS educational and training interventions on the operational performance, attainment and career progression of sailors, soldiers and airmen/women within their first few years of Service.
- A sample of 1,000+ Army recruits joining their initial training between November 2008 and March 2009 will be tracked, and their BS improvements and interventions monitored through Phase 1 and Phase 2 training and during their first appointments in the Field Army. The in-depth qualitative strand will follow and study recruits and other personnel in the RN, Army and RAF.
- Each case study will provide a detailed profile and assessment of the learner (including their history, learning progress and Service experience), and will incorporate the perspectives of tutors, line managers and Commanding Officers.
- Interim reports will be submitted after each stage of the fieldwork. A final report will be launched at a national event in June 2011, and widely circulated amongst the Armed Forces and other national stakeholders.

This national study will provide a significant contribution to the development of national policy and good practice, not only in support of the Armed Forces but also in relation to other workplace sectors.

Further information can be found at: [www.niace.org.uk](http://www.niace.org.uk) and [www.nrdc.org.uk](http://www.nrdc.org.uk)
The Impact of Basic Skills Improvements on Retention in the Armed Services

The Retention Problem

The Armed Services (as at 1 January 2008) are undermanned by 5,520 personnel (3.1 per cent). This reflects an ongoing imbalance between recruitment, retention and planned/contracted engagement. Continued poor retention (especially during the first four years of service) undermines the full contribution that effective recruitment makes to the manning equation. The present challenging recruitment climate means that recruitment for some Service trades continues to extend among comparatively less qualified applicants. This increases the Services’ training liability – if all recruits are to meet Service operational standards. It is clear that too many personnel leaving early (through Premature Voluntary Release – PVR – or through failure in training) means that the Services do not get the best return for their significant investment in recruitment, training and development.

‘For the cases that we examined, we calculated that the department spent £74 million to retain 2,500 trained people compared to an estimated cost of £189 million to recruit and train the equivalent number of replacement personnel to the end of Phase 1 training’.

National Audit Office (2006)

Factors Affecting Retention

Personnel surveys highlight the pressures on family life and the frequency and intensity of operations as key factors in decisions to leave the Services. For example, in the Army Continuous Attitude Surveys, the top two retention-negative factors are the impact of Army lifestyle on personal/domestic life and the effect of operational commitment and overstretch. Similarly, the Airmen and Non-Commissioned Aircrew Leavers’ survey shows that ‘family stability’ is the most common factor in the decision to leave the RAF. However, factors such as the impact on family life, which are reported as reasons for leaving the Armed Services, tend to be similar to the areas of dissatisfaction for those who also remain in the Services. Therefore, more work is needed to show what turns common sources of dissatisfaction into drivers of decisions to quit the Services.
Surveys of personnel applying for PVR in the Army and RAF have highlighted the belief that it would be difficult to start a second career if they stayed longer in the Services. Therefore, greater publicity around the value of in-Service education and training opportunities in preparing personnel for future civilian employment may have a role in improving retention.

Isolating the role of Basic Skills (BS) learning in retention using attitude surveys is difficult. This is partly because surveys have not been designed to draw out the contribution that literacy and numeracy skills development makes, but also because it is likely to be through engagement and achievement in other learning and training that the impact of BS will manifest itself.

**Basic Skills Pathways**

Research in the US military shows a small, but statistically significant, increase in retention among participants in BS courses, particularly during the first two years of service (Sticha et al, 2003). In order to build on this research and gain a greater understanding of the role of BS learning in retention, it is useful to focus on the pathways through which BS learning may affect retention. Although BS learning may not directly affect decisions to remain in or to leave the Services, it may affect the factors that are known to matter, such as job satisfaction and commitment to the organisation.

Figure 1 illustrates some potential pathways through which BS learning may impact retention: Pathways A–E show possible retention-positive effects and Pathways H and I show retention-negative effects. For example, BS learning may increase retention by enabling Service personnel to engage more effectively with in-Service learning.
Figure 1: Potential BS Pathways

- Confidence
- Organisational commitment
- Social networks and relationships
- Success in training
- Promotion prospects
- Personal development opportunities
- Intentions to remain
- Civilian employment opportunities
- Basic skills learning
- Basic skills learning
- Met expectations
- Confidence
- Basic skills learning
and personal development opportunities (Pathway F).
This highlights that research into the impact of BS learning on retention is closely connected to a wider set of questions about the effects of BS learning.

Further empirical research is needed to test the nature and strength of a range of potential pathways connecting BS with retention.

Further Research Questions

• What are the key mechanisms through which improving BS can deliver a positive impact on retention in the Armed Forces?
• What sorts of BS learning interventions should be offered, and when, in order to maximise the positive effects on retention?

Further information can be found at: www.niace.org.uk and www.nrdc.org.uk

References

National Audit Office (2006), Recruitment and Retention in the Armed Forces. London: TSO.

The Services have a responsibility to ensure their personnel are fully prepared to meet the demands of their rank and their specific appointment, are well placed to respond to the required training and, in the longer term, to take advantage of career opportunities. Poor literacy, language and numeracy skills hamper their ability to respond effectively to these requirements and opportunities. Knowing specifically how and in what ways improvements in these Basic Skills (BS) impact on day-to-day performance and the ability of personnel to respond to training would help inform the development and targeting of BS provision as well as future investment decisions.

**Multiple Dimensions of Performance**

It is important to distinguish different aspects of performance, such as teamwork, coping with change, using technology, quality of work, speed, error rate and working safely, and to consider how the effects of BS improvements differ across these dimensions. Research into the impact of elective learning in the Army has identified two overarching dimensions of operational effectiveness. The first dimension concerns the ability to deal with routine unit activities, such as personal administration and managing kit and equipment. In Army research, commanding officers and subordinate managers have reported the adverse impact of poor BS on the day-to-day performance of some of their soldiers, the increased management burden
this brings and the cumulative impact this has on unit efficiency. The second dimension concerns what the soldier then does carrying out specific operational tasks, at times in hostile, combat environments – for example, the ability to calculate and relay correct grid references or to write an accurate patrol report.

Most of the available research evidence about the impact of BS on performance is drawn from the Army context. Through qualitative research, associations have been found between low BS and:

- being confined to the Military Corrective Training Centre
- being involved in accidents
- going Absent Without Leave.

Quantitative research has not yet established the extent to which these associations reflect the causal impact of poor literacy and numeracy skills.

**Trainability**

The enabling role that BS learning plays in preparing Service personnel to engage more effectively with military training has formed a key part of the case for investment in BS learning in the Armed Services. Firstly, much training specifically requires Service personnel to provide evidence of good literacy, language and numeracy skills. For example, most personnel undertake accredited apprenticeship schemes, with Key Skills (KS) qualifications forming part of the award. Speaking and listening skills at Level 1 have been shown to represent the minimum level required to engage effectively in Service training. Secondly, even when BS are not independently tested, they may be involved in key activities or aspects of training. For example, training in map reading requires Service personnel to use their numeracy skills. Thirdly, even when BS are not an explicit focus or obvious component of military
training, Level 1 and 2 BS may enhance the ability of personnel to assimilate training. BS are sometimes seen as ‘metacognitive skills’ (Hudson, 2007), which support the acquisition of further skills and the ability to ‘learn how to learn’. This was a common theme in interviews with Army commanding officers about the value of elective learning (Hanlan et al, 2004).

**Coping Strategies**

Service personnel are often able to develop practical coping strategies, which reduce the short-term impact of poor BS levels. For example, they rely on memory, or depend on colleagues to carry out BS tasks for them. However, in the long term, this is likely to affect their ability to engage effectively with training and to cope with new challenges, thus reducing the overall flexibility of the Armed Services to respond to changing technology, roles and working practices.

** Thresholds in Basic Skills Levels**

There is preliminary evidence of critical thresholds in BS levels, with the relationship between BS and some aspects of performance evident only below Level 1. Mapping of the BS demands of different roles, tasks and training courses within the Army has revealed the wide range of BS demands on soldiers during different phases of training and at different stages of the career. For example, generic private soldier tasks, such as calculating ammunition requirements for range work and reading intelligence reports, were assessed at Level 1 or above. Mapping of the BS requirements of all training courses is important, in order to identify personnel who are operating below required levels and to ensure that appropriate support is provided.
Applying Basic Skills Learning at Work

There are mixed findings about the extent to which Service personnel are able to apply BS learning in their day-to-day roles. Half of Army line managers in the recent Army BS survey (2006) report that BS improving operational effectiveness and day-to-day efficiency at work. However, less than a third of BS learners in the Army reported that their training ‘showed them how to use it in their job’ and less than a quarter felt it made a difference to how they do their job now. This suggests that further work may be needed to tie the benefits of BS learning more closely to day-to-day job roles, for example, through an expansion of embedded or contextualised provision.

Making Training and Publications Accessible

Alongside the provision of BS training and support, the literacy and numeracy demands of training courses and key publications should be reviewed and, where appropriate, adjusted to accommodate the BS levels of trainees. This might include reducing the reliance on delivery methods that involve high BS demands, such as extended lectures that require personnel to take written notes simultaneously. The readability of important publications and training materials should also be reviewed against the literacy levels of the potential audiences.

Further Research Questions

• What are the key dimensions and measures of operational performance and operational effectiveness, and how does the impact of BS improvements differ across these dimensions? What are the cost-benefit implications for investment in improving BS?

• How can the Services ensure that BS provision prepares Service personnel for the literacy and numeracy demands of day-to-day roles and for future advancement?

Further information can be found at: www.niace.org.uk and www.nrdc.org.uk

References


Getting the Right Fit

Ensuring Basic Skills (BS) provision for Armed Forces personnel fits around operational commitments, the existing training regimes and the demands of Service life is a significant strand of the Services’ BS implementation strategies. To date, the use of discrete, often short intensive programmes has largely been adopted to meet the needs of learners and their employing officers. Such discrete provision does not always provide the flexibility, cost effectiveness or, most importantly, the sustainable skills improvement that the Services demand. The use of literacy, language and numeracy provision that is embedded within military training is potentially a very effective approach that should be exploited within a mix of delivery options.

What is Embedded Learning?

Embedded learning combines the development of BS with vocational or other skills, by integrating BS within another learning programme. This is achieved by teaching those specific elements of literacy and numeracy that directly support the development of vocational skills at the most appropriate time to deliver the maximum benefit. Embedded programmes have dual learning goals: in both BS and in the ‘host subject’. Embedding should be distinguished from contextualised approaches. The latter uses the context directly relevant to the interests and needs of learners as vehicles to teach literacy, language and numeracy. For example: using the audit of an ammunition store as a scenario for teaching arithmetic rules. The primary learning goal here is improving BS.
Embedded provision should not be seen as BS learning ‘by stealth’, thus the role of BS within other learning activities should be explained to personnel on embedded programmes.

**Benefits of Embedding**

- Embedding is associated with higher retention and success rates, both on vocational courses and in higher levels of attainment of BS qualifications. Embedding has the potential, not only to enhance BS learning within the Armed Services, but to support achievement in trade-specific training.
- Through embedding, BS learning can be situated in contexts that are meaningful for learners.
- Embedding encourages learners to value BS and increase motivation. It can be particularly valuable for learners with previous negative experiences of education, because it helps to differentiate the learning experience from mathematics and English lessons in school.
- Embedding can help to normalise BS learning and avoid any stigma associated with more targeted approaches.

**Requirements for Successful Embedding**

The development of embedded approaches within the Armed Services should be informed by research into the organisational, attitudinal, resource and expertise requirements that underpin successful embedding.
• The effectiveness of embedded approaches depends on both vocational and BS content being delivered by tutors with specialist skills and knowledge. Approaches in which vocational and BS instructors collaborate in delivery tend to be much more successful than models in which vocational tutors are also responsible for the BS content. Building in sufficient time for joint planning between military trainers and BS specialist teachers will be essential to the effective development of embedded programmes within the Armed Services.

• Embedding raises professional development needs for both vocational and BS teachers: to develop their understanding of the ‘other’ subject and to develop expertise in embedding itself. Any expansion of embedded provision within the Armed Services will require investment in training for both military trainers and civilian BS tutors.

• Ownership of the embedding agenda by vocational staff is important to the effectiveness of embedded programmes, and is likely to be particularly crucial within the Armed Services. Vocational ‘embedding champions’ have been employed within some organisations to communicate the benefits of embedding and to ensure it meets vocational requirements. A similar approach might facilitate buy-in to embedded approaches within the Armed Services and ensure that the embedding agenda is driven by military training staff as well as education officers.
The Place of Embedding in the Armed Services’ Training Regimes

The Army BS policy describes embedding as the preferred option for the delivery of literacy and numeracy. Embedded approaches are consistent with the policy of integrating BS learning into the career progression route. However, embedded approaches are currently the exception rather than the norm within the Armed Services, and research among BS learners and line managers in particular in the Army suggests that there is currently limited support for embedding as a means of enhancing BS provision. This may be due to a lack of awareness of embedded models, or concern about the challenges involved in integrating BS learning into military training.

There is potential for the embedded approach as an alternative to discrete KS provision within apprenticeships or to discrete tutor-led BS provision for new recruits. In each case, a detailed assessment of the BS demands of the military/vocational training is needed. The integration of literacy and numeracy should not be forced when BS do not have a naturally supporting role within the wider learning programme. It is likely that a combination of discrete, contextualised and embedded provision will be required to fully meet Armed Services’ requirements.

Front-loading of KS provision within apprenticeship programmes can enhance learning and achievement, and may be the best approach when resources or expertise are insufficient to support fully embedded delivery.

Further Research Questions

- What are the opportunities and challenges for embedding within military training and how can these best be exploited?
- What is the optimum blend of provision in terms of cost-effectiveness and efficacy of the Services’ training regimes? What is the best option for individual learners?

Further information can be found at: www.niace.org.uk and www.nrdoc.org.uk

Images: Crown Copyright from www.defenceimages.mod.uk
The Role of Learning and Organisational Culture in Basic Skills Learning in the Armed Services

Context is Everything

The culture and organisational context of the Armed Forces strongly fashion the design, management, configuration and delivery of workforce development. The Forces’ business case for investing in Basic Skills (BS) learning must fully support the ‘Services’ way of doing things’ if it is to gain senior management buy-in. Unless the BS provision is sensitive to the operational setting, then line managers are reluctant to release their personnel during work time to access provision. At the same time learners are less likely to respond enthusiastically to provision that they perceive is not directly relevant to their work.

Organisational Perspectives on Workplace Basic Skills

Three overarching organisational perspectives on workplace BS learning have been identified in the research literature (Payne, 2002). Each perspective can help to inform the Armed Services’ overall approach to BS.

• The workplace as a site for BS learning emphasises the continuity between workplace BS and other forms of adult learning. Within this approach, workplace BS courses are often seen as an access point for individuals who might not otherwise engage with BS learning, and as a springboard to other forms of education and training. This perspective is relevant to personnel who may have failed in school and are offered a second chance at learning in the Armed Services. It also shows how BS learning can be a platform for the continued engagement of personnel with lifelong learning.

• Situated literacies highlight that skills are both developed and used in specific social contexts, with important implications for workplace learning. This underlines the importance of ensuring that BS learning is tailored to the contexts and purposes of Service personnel. BS tutors must have sufficient understanding of their respective Service environments to make learning relevant and meaningful.
for learners. It also implies a limit to the extent to which BS learning in the Armed Services can be modelled on other workplace BS courses.

- **Functional analysis** identifies the specific demands for literacy and numeracy skills in the workplace and emphasises programmes designed to meet these needs. A functional perspective can help to support the transfer of BS learning from the classroom to day-to-day tasks. It is also an essential part of making the ‘business case’ for BS learning to key stakeholders.

**Diverse Approaches to Basic Skills Within the Services**

A wide range of organisational approaches to BS is evident, both within and between the Services. This includes differences in the targeting and timing of provision, and the extent to which BS improvements are tied to career progression. Models of provision include tutor-led BS, discrete BS provision in education centres, integrated Key Skills (KS) provision in apprenticeship programmes, e-learning and self-directed learning undertaken whilst on operations. It is also important to consider the impact of the learning and organisational cultures of key partner organisations, such as local FE colleges and Learndirect centres, through which a significant proportion of BS and KS provision is delivered.

**A Whole Organisation Approach to Basic Skills**

Workplace BS learning is most successful when it is supported by a ‘whole organisation approach’ to BS, of which ownership of BS issues within the organisation is a crucial aspect of this. Levels of support from commanding officers and managers will strongly influence the uptake of learning opportunities among Service personnel, and the extent to which positive cultures develop around BS learning. Getting line managers and the chain of command more on side to improve soldiers’ literacy, language and numeracy skills, is the most significant improvement area identified in the Army Basic Skills Survey (2006). Frequent postings (every 18–36 months) for all Service personnel can create challenges, especially in ensuring consistent senior and middle management support for BS provision (BSA, 2007).

The role of ownership in determining the impact of BS learning is recognised within the Armed Services’ BS policies. Aligning BS standards to career progression is part of a drive to transfer responsibility for achieving MoD BS improvement targets to the chain of command. This represents an important shift in organisational culture in relation to BS education. This approach is supported by research into workplace learning, which suggests that tying job retention or progression to BS requirements, for example, through licence to practice requirements, can have positive effects on the development of a learning culture.

**Elective or Compulsory Learning?**

Increasing commanding officers’ and managers’ engagement with BS issues may affect the extent to which BS can be characterised as an ‘elective learning’ opportunity within the Armed Services. Different degrees of voluntariness are currently evident in approaches to the Services’ legacy populations compared to new recruits. The latter are much more likely to be required to undertake BS provision. Army research shows fairly strong

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1. Those personnel already serving when the Armed Forces BS Policy implementation was imposed (1 April 2006)
support for a mandatory approach for those with identified needs, with six in ten line managers agreeing that those with poor BS should be ordered to go on training.

**Peer Support**

Informal peer support, alongside formal BS mentoring schemes, is a crucial part of developing a positive learning culture around BS in which difficulties can be acknowledged and addressed. Among the most positive findings from the Army Basic Skills Survey (2006) are those that relate to learners’ willingness to encourage colleagues to get involved in learning. Three quarters of learners agreed that it would be useful for some of their friends and colleagues in the Army to seek BS support. Three in five reported that their own learning experience prompted them to encourage others to get help with their own literacy, language and numeracy skills.

**Connecting Learning with Work**

Focusing on qualifications as a key outcome of learning can foster a narrow understanding of workplace BS learning, as consisting only of formal discrete episodes of training. A formalistic and qualifications-orientated approach also risks detaching BS learning from job performance. Future research might consider how roles and working practices can be reconfigured to expand opportunities for informal BS learning within the Armed Services, whilst fitting around training and management regimes and the demands of Service life.

The Learning Development Officer (LDO) role has emerged within the Army to support the improvement of workplace learning that is organised/delivered on and around the job by line managers, trainers and mentors. LDOs (all specialist education officers) focus on improving the support, teaching or mentoring skills of the directing staff. Until now, centralised, formal training away from the workplace has been the norm within the Armed Services, but this is expensive and time consuming. It is also anticipated that the emerging approach will encourage embedded learning and on-job learning.
Further Research Questions

- How, and to what effect, do learning and organisational cultures fashion BS provision and arrangements for accessing that provision?

- How can opportunities for informal BS learning be recognised, expanded and dovetailed with formal training programmes, in and outside the workplace, in order to lead to recognised qualifications?

Further information can be found at: www.niace.org.uk and www.nrdc.org.uk

References


The Services as an organisation as well as individual employing officers have ‘duty of care’ responsibilities to safeguard the welfare and well being of personnel under their command. That responsibility extends to their families and dependants. Although serving in the military, Armed Forces personnel continue to function within the broader civilian society. Improving literacy, language and numeracy skills within the wider defence community through Service initiatives and arrangements will assist individuals in operating beyond the Service environment. This has benefits for the UK and society as a whole.

**Confidence and Self-Esteem**

A wide range of evidence shows that participating in Basic Skills (BS) learning often leads to increased confidence and self-esteem. Within the Army, half of respondents to a learners’ survey (2006) reported that their course had given them confidence. Over half of learners also felt that BS training encouraged them to take another personal development course, suggesting that BS education can enhance the confidence of Service personnel to engage with further learning opportunities. Benefits for the confidence and self-esteem of BS learners are also fairly widely recognised by line managers in the Army. This suggests that gains in confidence within the classroom translate, to some extent, into increased confidence in other aspects of learners’ working lives.
Health
Participating in adult learning has a range of positive effects on psychological and physical health. For example, individuals who take part in learning are more likely to give up smoking and to increase their exercise levels. There is also a positive relationship between individual health and BS levels. For example, women with higher literacy levels and men with higher numeracy levels are less likely to be amongst that group suffering depression. Further work is needed to interpret these findings for the Armed Services context. Service personnel face distinctive physical and psychological challenges at work, but also have access to work-based healthcare and support services with potentially equalising effects.

Social Capital
Participation in adult learning has positive effects on social engagement and tolerance. Individuals with better developed literacy, language and numeracy skills also tend to report more tolerant attitudes and have higher levels of political engagement than those with lower skills. This suggests that Armed Services BS provision has the potential to lead to positive attitudinal and behavioural changes among personnel. However, again, assessing the relevance of general evidence about the social benefits of adult learning for BS learning in the distinctive environment of the Armed Services is complex.
Family Effects
BS improvements among Service personnel may have positive effects on the cognitive outcomes of their children through the intergenerational transfer of skills. There are significant positive effects of parents’ BS on their children’s performance in cognitive tests, even controlling for a wide range of other factors such as parents’ qualifications and parental IQ. Recent research finds no significant differences between mothers and fathers in terms of the transfer of skills to children.

Economic Benefits to Wider Society
BS learning in the Armed Services benefits wider society by preparing Service personnel to engage more successfully with the employment market in their transition to civilian life. Individuals with higher BS are more likely both to be employed and to command higher wages. These effects persist even after controlling for other important influences on earnings, such as individual ability and family background.

Wider Benefits of Different Forms of Adult Learning
The individual and social benefits of adult learning differ according to the type of learning programme. For example, academic accredited courses are associated with more significant and consistent changes in social and political attitudes than other types of
courses. Employer-provided training seems to have a wider range of positive effects compared to other courses, including increased life satisfaction, decreases in racist and authoritarian attitudes and increased memberships of civic organisations. Further research is needed to identify why academic, vocational and employer-provided courses seem to differ in their effects, and where BS learning in the Armed Services fits within this picture.

Within the research on the wider benefits of adult learning, learning is sometimes framed in terms of creativity, breaking out of routines, and questioning and extending personal and intellectual boundaries. It is important to consider whether very structured, often short-term, BS and KS courses, of the type that are common within the Armed Services, will have the transformative effects that have been attributed to this kind of learning.

Further Research Questions

- To what extent does increased confidence brought about by BS learning translate into increased confidence in other areas of life and work for BS learners in the Armed Services?
- To what extent does evidence of the wider benefits of adult learning in general apply to the specific case of BS learning in the Armed Services?

Further information can be found at: www.niace.org.uk and www.nrdc.org.uk
Introduction

As part of the Phase 1 pilot phase of the Longitudinal Study of the Impact of Basic Skills (BS) Improvements in the UK Armed Forces, the National Research and Development Centre for adult literacy and numeracy (NRDC) conducted a series of in-depth interviews and focus groups with 55 Service personnel and made site visits across the three Services. The purpose of the case studies was:

• to gather contextual detail to support the development of a survey on the impact of BS improvements amongst Service personnel during their first three years’ of Service;
• to provide a snapshot review of each Service’s approach to supporting BS learners, with a view to informing a decision about the sample for the forthcoming longitudinal survey, and providing a rationale for a further suite of case studies as part of the future study.

This summary paper provides:

• an overview of the BS provision in the Armed Forces;
• findings from the Phase 1 pilot study;
• an overview of the forthcoming Phase 2 of the Longitudinal Study (2008–2011).

Basic Skills in the Armed Forces

The aim of the overarching Armed Forces BS Policy (May 2006) is to ensure that the BS needs of Service personnel are addressed at the earliest opportunity in order to enhance their trainability, operational effectiveness and their potential for personal and career development. It imposes minimum BS standards and annual targets on the Services, and sets out the key principles that are to underpin the Services’ BS provision. Within this overarching framework, each Service has developed its own BS policy and implementation plans tailored to reflect its specific recruitment, training and business/operational needs. The scale and scope of BS needs differ significantly between the three Services. This too has affected each Service’s response in terms of BS policy detail, the relative BS priorities and their specific investment in BS infrastructure and opportunities. Common across all the Services is their understanding that sound literacy, language and numeracy skills are critical in enabling individuals to maximise their potential and take advantage of Service training and career opportunities. Access to free BS support (within work time, where practicable) and access to a range of contextualised BS learning opportunities that fit around operational commitments and the demands of Service life are fundamental principles of the Armed Forces BS framework. Table 1 summarises the BS needs and requirements across the Services.
### Table 1

<table>
<thead>
<tr>
<th>Scale of BS needs among recruits</th>
<th>Army</th>
<th>Royal Navy</th>
<th>RAF</th>
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<tr>
<td></td>
<td>Up to 50% with literacy or numeracy skills at Entry Level (EL) 3 or below</td>
<td>5–8% of annual intake assessed at EL3 or below in literacy or numeracy</td>
<td>Overall 8% of intake assessed as EL3 (26% of RAF Regiment and 2% from other trades)</td>
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<tr>
<th>Minimum literacy and numeracy (L&amp;N) recruit entry standards</th>
<th>EL2 L&amp;N¹ Level 1 (L1) English Speaking and Listening (S&amp;L)</th>
<th>EL3 (RN/RM) except for specific trades</th>
<th>EL3 for RAF Regiment. L1 (L&amp;N) for non-trades L2 (L&amp;N) trade specialists L1 S&amp;L</th>
</tr>
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</table>

| Progression requirements | EL3 L&N by start of Phase 2. ² L1 L&N within three years’ service. L1 literacy (and from 2009) numeracy for Corporal rank. From 2012, L2 L&N for Sergeant rank | L1 L&N to Leading Hand or on completion of 3 years’ service whichever is soonest L2 L&N is required for promotion to Petty Officer/Sergeant or on completion of eight years’ service whichever is soonest | L2 L&N within eight years’ service |

| Voluntary or mandatory participation | Mandatory in Phase 1 and when linked to promotion | Mandatory when linked to promotion | Voluntary |

| Promotion links | Linked | Linked | Not linked |

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1. EL1 standards are accepted for Infantry recruits as part of Army trial (2007–08)
2. Personnel in all three Services undergo Phase 1 (initial recruit) training followed by Phase 2 (specialist trade) training and, during their careers, periods of specialist Phase 3 training
The BS service across the Armed Forces provides initial and diagnostic assessment of individuals’ needs, the maintenance of individual learning plans and the provision of support programmes leading to nationally recognised qualifications. All BS provision is delivered/supported by appropriately qualified, specialist BS staff and organised to meet the needs of learners. A substantial share of the literacy and numeracy needs of recruits is met through Key Skills (KS) provision on accredited Apprenticeship programmes delivered as part of specialist trade training – especially in the RN and RAF and increasingly in the Army. Outside these programmes, BS opportunities are organised through the network of Phase 1 or 2 training units and education centres (in UK and overseas) in each Service. Where possible, the use of publicly-funded external BS provision (through FE colleges and private providers) is fully exploited locally to meet the needs of Service personnel.

**Phase 1 Study – Findings**

Phase 1 of the study identified specific areas of interest or concern that warrant detailed examination as part of Phase 2 of the longitudinal study. These are summarised below.

**Effectiveness and Use of Basic Skills Assessments**

BS assessments are conducted at recruitment or early in initial training in order to establish the suitability of individuals for Service, the likely scale of BS needs among recruits and to assist BS provision planning. The relationship between the individuals’ recruitment data, their specific BS assessment data and their subsequent in-Service performance record requires further exploration. This will establish how effective the BS assessments are, how the assessment data is collated/managed, what data analysis is carried out and how findings from the analysis are to be used.
The distinctions between screening, initial and diagnostic assessment, and later formative and summative assessment in relation to the BS support offered to individuals can often appear unclear.

- When should they be offered and administered within the Services, and by whom?
- How well do they inform the BS provision offered to BS learners?
- How should they be used to inform the design and delivery of military and vocational training?
- How useful and reliable are proxy BS qualifications in indicating currency in literacy/numeracy skills?

**Basic Skills: Service Perceptions and Engagement**

The importance and value of investing time, resources and funding in improving the literacy, language and numeracy of Service personnel is fully accepted in principle among policy makers. However, translating policy into practice across the chains of command is often frustrated by prevailing operational and resource constraints. Critical too is the (personal) commitment of line managers at all levels to support the BS agenda, and the motivation of individual learners to take advantage of available BS opportunities.

- What affects line management and learner engagement with the Services’ BS agendas?
- How does line management support (or lack of it) impact on learner participation and achievement?

**Functional Skills**

The anticipated migration from a national BS framework to a Functional Skills (FS) framework (from 2010) will make extended
demands on the Services’ training provision.

• What are the nature, scope and scale of these demands in the Service context?

• How best should the current BS/KS provision arrangements in the Services be adjusted to take account of the new FS requirements?

Service Training Context

Fitting the system of BS provision around the demands of Services’ training pipelines and the idiosyncratic context of Service training is an overriding consideration. At the same time, ensuring the timely delivery of BS support, tailored to individual learners’ needs and leading to sustained skills improvements, presents challenges for BS tutors and military training managers alike.

• What are the most effective BS interventions to meet organisational and individual needs?

• What models of embedded BS provision deliver the greatest benefit for the Services and the individual?

Flexible Models and Working with External Providers

Across the Services there were strong examples of how BS provision, both internal and external, are adapted to meet the needs of the Armed Forces and its personnel. The use of flexible and innovative models of delivery (including embedded provision, e-learning and e-teaching) and flexible programming, such as front-loading and multi-disciplinary interchange, bring advantage for the individual and business. These models require further examination in both the single Service and Defence training contexts. Where highly collaborative relationships with local external providers have been developed, they have impacted favourably on Service provision and provision planning. In order to inform future practice, the nature, scope and exact benefits of all these various ways of working need to be explored further and articulated.

Back-Classing

When trainees are injured, in rehabilitation or back-classed, they are given additional opportunities to develop their BS in tandem with their military skills.

• What, if any, is the relationship between poor BS and failure in mainstream military training?

• To what extent do BS improvements impact on performance in Phase 1 and Phase 2 training?

• What scale of BS improvement is needed to bring about required gains in military training?

• In what ways can the back-classing approach be used effectively to support increased awareness and development of BS?

Basic Skills, Key Skills and Specific Learning Difficulties

The Ministry of Defence’s (MoD) Specific Learning Difficulties (SpLD) policy (2007) has extended its earlier focus on supporting dyslexic learners to those with dyscalculia, dyspraxia and Meares-Irlen syndrome. Diagnosis and SpLD support services across the Armed Forces are well established in some parts of the Services but limited in others. They appear more systematically and routinely available in the RN and RAF. Variation within and between the Services appears to reflect available resources. How the effectiveness of this SpLD service and
specialist interventions can be improved, in particular to support the BS/KS learner, is a focus of future study.

**Operational Effectiveness**

The relationship between improving BS and an individual’s ability to assimilate training more quickly and effectively is acknowledged in Armed Forces BS policy and among those taking part in this pilot study. There is recognition (albeit largely intuitive) that sound BS underpin operational effectiveness. However, the precise relationship between improved literacy, language and numeracy and operational effectiveness is complex and not simple to measure. Describing the relationship between the contributory factors and establishing the impact are essential:

- for underpinning the Services’ business case for future, ongoing investment in BS provision
- for securing/consolidating the proactive support across the Service chains of command for improving the BS of their personnel.

This is a primary strand of the Longitudinal study.

**Progression, Promotion and Retention**

‘Getting on’ and being promoted are strong drivers running through the Service culture. Effective job performance, proven ability within the demanding military context and the ability to take advantage of training and career opportunities are critical to secure progression. It is also acknowledged that these factors greatly influence an individual’s decision to leave the Service prematurely and the organisation’s willingness to pre-empt, support or discourage that decision. How poor BS and securing improved literacy, language and numeracy skills contribute (directly or indirectly) to these decisions are not fully understood. The Longitudinal Study will address this.

**Recruits and Trainees**

The recruits and trainees that took part in the pilot fieldwork were highly motivated to succeed in their Service careers. Even those who had been back-classed owing to inadequate progress in training spoke positively of the extra training and BS support they received. There was an overall acknowledgment that the Service actively seeks to help its personnel improve themselves and maximise their potential. This includes providing appropriate opportunities for those who need extra support. Recruit responsiveness to Service training, and specifically to BS opportunities, need to be reviewed in light of the nature and timing of the provision as well as the recruits’ own motivation, previous learning/work experiences and family background.

**Military Trainers**

There are many examples of good practice and innovation across the BS provision in the Services. In broad terms, provision is mostly offered as discrete programmes, delivered or managed by specialist BS/KS tutors. Involvement of military training staff in the direct BS/KS support (inside or outside their vocational courses) is patchy – although the growing contribution of volunteer BS mentors drawn from military staff is acknowledged. BS awareness training among instructors, training school managers and other stakeholders is bringing benefits. However, embedding BS/KS provision within military training is in its infancy in the Services. The Longitudinal Study will explore how best this can be developed in
the context of each Service and where it has been implemented and what impact it has.

Management Information (MI)

Extensive data on individuals’ performance in training and at work is collected in the Armed Forces. However, the capability to transfer/manage learner records effectively and efficiently across and between the various MI systems within each Service and to track learner progress throughout their service appears not to be robust or effective enough. Much work to improve the situation is currently in hand. How this data could be better organised and related to other personnel data sets in order to evaluate more effectively the impact of poor/improving literacy, language and numeracy skills will be a strand for further examination in the Longitudinal Study.

Phase 2 of the Longitudinal Study

The aims of Phase 2 of the Study are:

- to assess the impact of improving the literacy and numeracy skills of Service personnel on their professional and personal development and collectively on the organisational performance of the Armed Forces
- to recommend the most appropriate interventions and support for personnel in their first three years of Service
- to inform the wider national workplace agenda.

The Study will incorporate a quantitative research survey of 1,000+ Army recruits and in-depth, qualitative case studies of 60 personnel drawn across the RN, Army and RAF.
Quantitative Survey

A sample of 1,000+ recruits (with Entry Level literacy and/or numeracy skills) joining initial Army training between November 2008 and March 2009 will be tracked until January 2011. They will undergo a series of BS assessments and interviews as they progress through Phase 1 training, Phase 2 training and in their first appointments (including any deployments on operations). Participation will be voluntary, with selection support from the Services. The sample will contain an enhanced share of women and foreign national recruits in order to allow for meaningful analyses of the information provided by these groups.

Qualitative Case Studies

Twenty volunteer personnel (all meeting the Study’s sampling criteria) from each Service will be the subject of case study research. They will be tracked and interviewed throughout the three-year Study period. At each case study intervention, a cluster of interviews will be carried out in order to gather additional input from each recruit’s line manager(s), BS/KS tutors and, if appropriate, his/her Commanding Officer.

Education officers from each of the three Services will work with the research team to focus the design, scope and intervals of the qualitative strand. Validation meetings with Service staff throughout the three-year study will discuss emerging findings from both the quantitative and qualitative analyses.

Further information can be found at: www.niace.org.uk and www.nrdc.org.uk

3 Where appropriate, the sample will include those who have already completed Phase 1 & Phase 2 training, and who have experience of operational deployment.