

# RESEARCH

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Armed Forces Basic Skills  
Longitudinal Study: Part 1

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# Foreword

The Armed Forces Basic Skills Longitudinal Study shows how large employers have successfully put English and maths at the heart of their respective recruitment and progression regimes; and how with the right support, significant numbers of employees can be engaged in learning. When learning is closely aligned with and supports individuals' work roles, there is a large increase in both active engagement and the achievement of qualifications needed for progression.

The Armed Forces fulfil an important socio-economic role through their commitment to the ongoing skills development of Service personnel, and they make a significant contribution to the delivery of adult English and maths provision, both discretely and within Apprenticeships. This study enables a better understanding of the link between English and maths skills and operational effectiveness, and highlights a number of significant lessons learned for the Armed Forces that will also be of interest to other employers.

The study was commissioned jointly by the Department for Business, Innovation and Skills (BIS) and the Ministry of Defence (MoD) and was carried out between 2008 and 2011. It therefore reflects policy and practice during this period. Since the study was completed there has been a series of developments in relation to English and maths policy for young people and adults. These include the Government's review of English and maths provision for adults and the Wolf Review of Vocational Education for those aged 14-19.

The outcomes of the adult English and maths review were published in *New Challenges, New Chances* (December 2011) and focus on making provision more effective. The Government response to the Wolf Review was published in May 2011, which included accepting the recommendation that young people aged 16-18 continue to work towards English and Maths GCSEs at A\*-C, if they have not yet reached this level.

In addition, the Department for Education is currently reviewing the national curriculum and GCSEs. An important part of this review is to identify what more can be done to ensure higher grades in mathematics and English genuinely reflect good literacy and numeracy skills and knowledge that equip young people for the workplace and for further study.

BIS and the MoD would like to thank all those in the Royal Navy, Army and Royal Air Force who took part in and supported this study and specifically, the Director Educational & Training Services (Army) for his support.

# Executive Summary

*When someone's wounded and they need to be extracted by helicopter, you have to write down quite a bit of information and then pass that through the radio, and I'd be happy to read that off and speak it, but I would not want to be the man who had to write it down because other people have to [use this information] to find out what's happened to that casualty. And that's one of them things where I actually do lie in my pit at night and think, 'Christ, imagine if I did...' When I write half of the letters are back to front, upside down . . . and that's something I am not confident in myself, just to get down and write something if I needed to. It sounds ridiculous, I mean a grown man to be worried about doing that.*

Serviceman interview

## Introduction

The Department for Business, Innovation and Skills (BIS)<sup>1</sup> and the Ministry of Defence (MOD), 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 into Basic Skills in the Armed Forces. NIACE is the leading non-government organisation in England and Wales for all types of adult learning and is committed to supporting an increase in the numbers of adults engaged in formal and informal learning and to widening access to learning opportunities to those who do not traditionally take part in education and training.

The aims and objectives of the study were to:

- To assess the impact of literacy and numeracy skills and literacy and numeracy interventions on the personal and professional development of Service personnel and on their operational effectiveness<sup>2</sup>.
- To make recommendations for the most effective interventions and support for Service personnel in their first two years of service.

The study focused on recruits assessed with low levels<sup>3</sup> of literacy or numeracy skills on joining the Armed Forces, and the support they received during their subsequent two years in uniform.

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<sup>1</sup> Formerly the Department for Innovation, Universities and Skills (DIUS).

<sup>2</sup> The ability to perform those duties and wider responsibilities expected of that individual's rank, job and experience, to the required standard.

<sup>3</sup> Below national Level 1 standard. Level 1 is equivalent to GCSE Grades D-G.

## Research design

The research comprised a three-year investigation into literacy and numeracy learning in the Royal Navy (RN), Army and Royal Air Force (RAF). There were two strands of complementary research: a qualitative exploration undertaken for each of the three Services, and a quantitative study undertaken amongst Army recruits. Each strand was conducted in three stages:

- at the start of recruits' Phase 1 (foundation military skills) training,
- during and soon after their Phase 2 (specialist trade<sup>4</sup>) training, and
- during their first appointment in Service.

The in-depth qualitative study focused on a sample of case studies (22-29 recruits from each Service). The evidence from these groups was supplemented by testimony from the recruits' line managers, trainers and senior officers from their chain of command, as well as from education staff and literacy and numeracy practitioners.

The quantitative study assessed the literacy and numeracy skills levels and reviewed the literacy and numeracy needs and learning of around 1600 Army recruits during their first two and a half years of training and service. The analysis of this representative sample of recruits with low literacy and/or numeracy skills was used to support and complement the qualitative evidence, which, in turn, was used to inform the quantitative evidence.

## Research questions

The study addressed the following set of research questions which were agreed with all stakeholders at the start of the project:

- What is the nature and what are the characteristics of literacy and numeracy provision and support in each Service?
- What are the connections between, on the one hand, literacy and numeracy levels, interventions and military training and, on the other, individuals' subsequent operational effectiveness? What are the links between literacy and numeracy learning and using these skills in each Service?
- How do Service personnel experience literacy and numeracy provision? How do personnel perceive and value literacy and numeracy learning in relation to their professional identity, job performance and career progression?

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<sup>4</sup> For example, marine engineering, gunnery training and catering.

The third and final year of research also allowed scope for enquiring into the literacy and numeracy related features and requirements that are distinctive to each Service, including a consideration of issues arising from Specific Learning Difficulties (SpLDs).

## Main findings and conclusions

**All three Services are strongly committed to helping those personnel with literacy and numeracy needs to improve their skills in order to support more effectively operational capability and workforce development. The culture and organisational context of the Armed Forces greatly influence the development of each Service's literacy and numeracy skills policy, and the design, management and delivery of its literacy and numeracy provision.** The development of the overarching Armed Forces Literacy and Numeracy Policy is shaped by national policy and Government priorities and, like other Departments, MOD has been expected to lead by example. The case for the Services' investing in literacy and numeracy improvements must support the way the 'military does its business', if it is to secure senior management endorsement. Unless provision is sensitive to the operational setting, line managers are reluctant to release their personnel during work time to access literacy and numeracy support. At the same time, learners are less likely to respond enthusiastically to provision that they perceive is not directly relevant to their work and careers.

**The wide variation in the scale of literacy and numeracy needs between the Services has strongly influenced the implementation of their separate Service policies and the scale of investment made in building the infrastructure to deliver, manage and assure their literacy and numeracy provision.** Up to 50% of the Army's 8,000 recruits joined the Service in 2010 with literacy or numeracy skills below Level 1 (L1). This profile has been reasonably consistent over the past ten years. In contrast, the RN and RAF have a very much lower incidence of poor literacy and numeracy skills amongst recruits (1-3% below L1). This reflects the size and share across the Services of technical trades (e.g. engineering) that demand higher qualification entry requirements compared with those specialisations that set few or no academic/vocational entry requirements. Such an uneven distribution is also evident within each Service. Additionally, the recruitment of foreign nationals varies significantly, with some 9,000 serving in the Army, compared with only a few hundred in the RN and the RAF. Most of these have ESOL<sup>5</sup> needs. Simply raising the minimum literacy and numeracy entry standards for all recruits and restricting entry to say, L1 and above, is not a practicable solution for the Army.

**The Services have established a capacity to develop the skills and talents of personnel to the point that they are both operationally effective and (more) employable within Service and in subsequent civilian life.** The Armed Forces all too often must recruit men and women with low levels of literacy and numeracy, and the Services demonstrate how a large employer can successfully fulfil this vital professional and socio-economic function. The evidence confirms the merit of continuing (selectively) to recruit entrants with low level skills, whilst expecting those of very junior rank to make use of increasingly technical equipment and assume new and more demanding responsibilities in fast-changing operational environments. The ability to assimilate the associated training quickly and effectively; to work with flexibility and to exercise the necessary management and decision-making skills (at times, under significant pressure) directly contributes to the Services' operational capability.

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<sup>5</sup> English for Speakers of Other Languages.

**The Study showed conclusive evidence of the importance of literacy and numeracy skills for professional development and operational effectiveness.** Of all the literacy and numeracy skills, sound speaking and listening skills are considered as being the most important and essential for an individual's operational effectiveness at all ranks. During the study, the recruit sample commonly reported their growing confidence to speak with and in front of peers and others. Indeed, improved confidence associated with improving literacy and numeracy skills was confirmed by the research evidence. Having and displaying confidence in the Service environment is considered a most important asset. The impact of those factors contributing to operational effectiveness was found to vary between and within the specialist trade groups. Nevertheless, literacy and numeracy were regarded as necessary for operational effectiveness by the vast majority of recruits, their line managers and senior officers. Neither low levels of literacy and numeracy skills, nor the presence of a SpLD, were judged as an impediment to operational effectiveness amongst the more junior staff questioned. This is perhaps evidence of the extensive training and day-to-day, low-level support that recruits with low levels of skills receive in the Services. Time spent helping and supervising those with poor literacy and numeracy skills to carry out low-level tasks that are considered routine by most others, is time consuming for their peers and line managers. Where such support is extensive and routine, this is likely to corrode the operational efficiency in the workplace. Higher levels of literacy and numeracy skills amongst junior personnel are likely to reduce the reliance on this sort of assistance with everyday tasks and improve overall efficiency. There was widespread agreement amongst line managers and officers interviewed in all Services that the demands on literacy and numeracy become more exacting following a first promotion.

**The contribution of sound literacy and numeracy skills to, and the adverse impact of poor skills on, individuals' operational effectiveness and career progression is a message that needs to be frequently re-enforced amongst all staff and especially young recruits and junior ranks.** Line managers, training managers and senior staff have a responsibility to maintain an appropriate level of awareness across their chains of command. The RN was perhaps the most successful of the three Services in comprehensively communicating the significance of literacy and numeracy to recruits and trainees. However, evidence across the Services suggests that these important messages were not always made in a consistent manner or re-enforced effectively. The frequent changes in appointments that all line managers and trainers experience as the result of the Services' posting regime exacerbate this situation.

**The strong Service ethos generates high expectations of success amongst learners and their line managers alike, which, combined with the strong culture of training and development to prepare for immediate job roles and promotion, contribute to a most positive impact on learner outcomes.** Across all Services, there is an exceptionally high record of achievement in literacy and numeracy qualifications. In the study, the literacy and numeracy of all the sampled recruits improved and there were positive changes in how these recruits reported their skills and difficulties, with overt encouragement and support for individual improvement, progression and 'getting on'. This combined with discrete, intensive literacy and numeracy provision that is delivered in an adult learning environment, contextualised to the specific Service settings and made relevant to workplace scenarios increases learner motivation and engagement – even amongst those with very poor experiences of school education. With their emphasis on relevance to the workplace, the extended use of Apprenticeships during the first two years of service in providing the principal route for Service personnel to secure the necessary

literacy and numeracy improvements is widely supported. This provides many (though as yet, under-exploited) opportunities for embedding literacy and numeracy within vocational training. Securing sound literacy and numeracy skills forms an integral part of the development pathways, as they are recognised as essential ‘enabling’ skills. Indeed, for the RN and Army – and for the RAF from April 2012 – attainment of minimum literacy and numeracy standards is a mandated requirement for promotion to specific ranks.

**It remains unclear how far qualification attainment (especially, of Level 1 and 2 Certificates in Adult Literacy) represent a sustainable development of knowledge and skills.** The Services are concerned that ‘qualification-chasing’, funding regimes and pressures to deliver literacy and numeracy programmes with too little time and that encourage tutors to ‘teach to the test’ are likely not to bring the sustainable skills in the long (or possibly, short) term. MOD policy is driving the wholesale adoption of Functional Skills qualifications across the Armed Forces by September 2012. These qualifications represent the Services’ baseline measures of literacy and numeracy attainment for their personnel. Although these awards will place greater demands on learners, on tutors and on the training organisations, the Services consider that, if introduced effectively, Functional Skills awards will go a long way towards improving the impact of literacy and numeracy provision on the development of sustainable and transferable skills. The attainment of GCSE A\*-C in maths and English is still seen as fundamental to employment and education prospects – as re-enforced in the recommendations of the Wolf Report<sup>6</sup> – and this presents a significant challenge to all major employers, including the Services, in respect of the qualifications and literacy and numeracy levels their employees are – or should be – expected to attain.

**The Services provide appropriate and coherent support to personnel with SpLDs, and principally, dyslexia.** The RAF in particular provides an effective model of supporting those with dyslexic needs throughout the Service career. As such, the Services provide a notable example of how employees can be supported to undertake demanding jobs, despite having a SpLD. However, even with the levels of support available in the Services, it is possible for recruits to pass through training without having their SpLD identified or diagnosed. This demonstrates the difficulty any employer has in addressing all cases of SpLD without exception.

**The current management information systems and procedures appear not to deliver the required operational capability on a consistent or wholesale basis to meet the needs of organisations and stakeholders at various levels.** Recording, tracking and reporting the literacy and numeracy performance of individuals and, corporately for each Service, is recognised as essential to inform *inter alia* the development of support programmes for learners, the quality assurance of provision, and justification for future investment in delivery capacity and capability. Though work to improve the capability has been underway for some time, progress is reported as patchy overall with real improvement in limited areas only.

**Literacy and numeracy policy in the Services represents a model of national significance, with lessons and implications for large employers in non-military contexts.** However, even with a whole organisation approach to the literacy and numeracy

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<sup>6</sup> Wolf, A. (2011), *Review of Vocational Education – The Wolf Report*. London: Department for Education.

improvement, it is a challenge consistently to support all those Service personnel with literacy and numeracy skills needs within the demands and constraints of the intensive training and operational environment of the Armed Forces. The Services are obliged to prioritise their commitments and resources accordingly – at times, at the expense of literacy and numeracy provision to the individual learner.

**It is important that the Services secure an appropriate balance between in-house and external provision (as a matter of policy and day-to-day delivery) and to have plans in place to respond effectively and in a timely fashion to changes in Government funding priorities.** The Services have sought to enhance their own investment in their literacy and numeracy programmes with externally-funded provision. As is the case for many other employers, opportunities to access this externally funded provision have influenced (in some areas, strongly influenced) the organisation's literacy and numeracy policy, implementation plans and the configuration of provision. Indeed, managing the associated risks is a central feature of literacy and numeracy provision across the Armed Forces.

## Principal recommendations

**The Armed Services** should:

1. Maintain strong awareness of the contribution that literacy and numeracy skills make to an individual's job performance, career progression and operational capability across the Services by:
  - Developing/maintaining a network of literacy and numeracy champions at senior stakeholder level (policy/chain of command) and in the workplace.
  - Extending literacy and numeracy awareness training and briefings as part of induction training for specific appointments and roles – such as recruiting/selection staff, military/vocational instructors, Phase 1 and 2 training managers, career management staff and junior officers.
  - Extending local networks of volunteer literacy and numeracy mentors to encourage learner engagement and provide non-specialist support in the workplace.
2. Maintain focus on timely literacy and numeracy provision that effectively engages learners and delivers sustainable skills by:
  - Extending the use of literacy and numeracy provision that is contextualised to relevant vocational and Service settings. This will demand increased liaison between military/vocational instructors and literacy/numeracy practitioners in the development of literacy and numeracy resources and delivery.

- Developing and extending embedded literacy and numeracy provision – especially within Apprenticeship programmes.
  - Maintaining the use of discrete, intensive, literacy and numeracy programmes leading to full qualification and where appropriate, skills profiles linked specifically to job roles and career progression.
  - Consolidating individuals' literacy and numeracy skills development through re-enforced and supported practice on the job or in military training.
  - Maintaining the use of Apprenticeship programmes as the principal route for vocationally-driven literacy and numeracy skills development in the Services in the first 2-3 years of Service, and ensure literacy and numeracy provision is programmed within Phase 1 and 2 training to deliver the greatest benefit for the learner – ideally, front-loaded and/or integrated across the military training.
  - Extending delivery in mixed ability groups through the use of differentiated teaching, blended and personalised learning. On-going Continuous Professional Development (CPD) for specialist practitioners would be needed to support this.
  - Ensuring literacy/numeracy tutors and military training programme managers are prepared effectively to deliver Functional Skills provision ahead of its implementation. Appropriate support for ESOL learners preparing for Functional Skills (English) and Functional Skills (Maths) qualification within Apprenticeship programmes must be provided.
  - Providing greater focus on speaking and listening skills relevant to the specific needs of learners and their job roles by developing a range of CPD programmes for specialist literacy and numeracy staff and, where relevant, non-specialist staff to assess learners' speaking and listening skills, and diagnose/address speaking and listening needs in an accurate and effective way is an important first step.
  - Developing literacy and numeracy provision that effectively complements and supports the development of digital literacy skills for those in Phase 1 and 2 training.
3. Develop effective and co-ordinated MIS capability and procedures to record, track and report literacy and numeracy progress and performance of individual learners, the individual Service and Defence.
  4. Examine the appropriateness of extending to the other Services the current RAF model and practice to identify/support those with dyslexia needs. Further research is needed to determine how best to support the other SpLDs recognised by the Defence policy.

5. Monitor the balance of external and in-house literacy and numeracy provision and the risks associated with over-reliance on external support and the need to build an appropriate in-house capability.
6. Seek to reduce the Services' literacy and numeracy skills training liability for recruits by adjusting minimum literacy and numeracy standards for joining the Services and/or introducing/extending pre-enlistment provision measures that might include:
  - Extended use of military preparation courses.
  - Use of Service bursaries for undertaking FE programmes that provide routes to Service employment.
  - Access to pre-enlistment literacy and numeracy supported self-study resources/programmes (via internet) for those selected to join the Services.
7. The policy that recruits should gain Level 2 literacy and numeracy qualifications within eight years of joining the Services is not widely effective. The policy should either be revised, or additional in-Service mechanisms introduced for its enforcement.

**MOD/BIS** should:

8. Identify an appropriate national forum for large employers to share, review and exploit effective approaches to literacy and numeracy skills improvement within workforce development in order to inform national policy and practice.
9. Consider further review and research into literacy and numeracy skills development in the Services to inform Defence and national policy and practice to include:
  - Examination of the quality of literacy and numeracy provision, including the effectiveness of the teaching and learning approaches and the models of course delivery in relation to the skills gained by Armed Forces personnel - and its impact across a Service career – including costs and benefits.
  - Extended longitudinal study (for a further 5 years) of the Service cohorts.
  - In-depth review of Phase 1 and 2 trainee literacy and numeracy experience and impact.
  - In-depth review of Senior NCO<sup>7</sup> literacy and numeracy learner experience and impact.

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<sup>7</sup> Non-Commissioned Officer

# Chapter 1: Introduction

The Ministry of Defence (MOD) and the Department for Business, Innovation and Skills (BIS)<sup>8</sup>, 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 on the impact of Literacy and Numeracy interventions in the Armed Services.

It is essential that the Armed Forces are in a position to identify and assess the impact of improving the literacy and numeracy skills of Service personnel on their professional and personal development, in order to organise effective and timely literacy and numeracy provision<sup>9</sup>. An evaluation of its collective impact on the organisational performance of the Armed Forces is required to support the business case for continued investment in literacy and numeracy improvement.

The Armed Forces Basic Skills Longitudinal Study (AFLS) presents a profile of literacy and numeracy levels and provision, and shows how these are related to the professional development and operational effectiveness of Service personnel.<sup>10</sup>

The study focused on those recruits assessed with low levels of literacy or numeracy skills on joining the Armed Forces and the formal and informal support they received during their subsequent two and a half years in uniform. The study examines the education and training of the junior, non-Commissioned ranks only, and does not include officers<sup>11</sup>.

## 1.1 The national policy context<sup>12</sup>

In 1999 Lord Moser's inquiry into adult literacy and numeracy skills estimated from the available evidence that one in five adults in England had poorer literacy than was expected of an 11-year old child and an even greater proportion of adults – around 40% – had low or very low levels of numeracy<sup>13</sup>. The Moser report was the context for the launch by the previous Government, in 2001, of the Skills for Life strategy for England, a major initiative designed to raise the levels of literacy and numeracy skills amongst the adult population. A nationwide survey of skills levels carried out in 2003 as part of the Skills for Life strategy supported Moser's conclusions in finding that over 5 million adults had literacy skills below

<sup>8</sup> Formerly the Department for Innovation, Universities and Skills (DIUS).

<sup>9</sup> During the three years of AFLS research, MOD employed the generic term 'Basic Skills' (BS) which included literacy and numeracy; more specifically, the term included reading, writing, speaking, listening and mathematics. In order to encompass the national Functional Skills developments, MOD policy since 2010 is framed as 'Literacy and Numeracy', with provision working towards either Basic Skills awards or Functional Skills or Key Skills qualifications. The phrase 'literacy and numeracy' is used throughout this report.

<sup>10</sup> As explained in Chapter Four, the concept of 'operational effectiveness' was arrived at on the basis of judgements and perceptions of study participants.

<sup>11</sup> Whose minimum entry requirements to the Services demand English and maths GCSE (Grades A\*-C) qualifications.

<sup>12</sup> The Armed Forces operate within all four nations of the UK, as well as overseas. Education is a devolved policy area in the UK; MOD adopts an England-based policy approach to skills improvement. However, the Services must make appropriate adjustments and arrangements in order to align with the separate policy requirements of the other UK nations and to take full advantage of their literacy and numeracy provision, services and facilities.

<sup>13</sup> Department for Education and Employment (DfEE) (1999) *Improving literacy and numeracy: a fresh start. Great Britain Working Group on Post-School Basic Skills chaired by Sir Claus Moser*. London: Department for Education and Employment.

Level 1 (L1)<sup>14</sup>, and 15 million had numeracy skills below L1<sup>15</sup>. A growing evidence base points towards the benefits to individuals and to society of improving adult literacy and numeracy, and the extensive economic, social and human costs of low levels of basic skills<sup>16</sup>.

As part of the Skills for Life strategy, national standards were introduced for adult literacy and numeracy, and these formed the basis of the core curricula and national qualifications in literacy and numeracy<sup>17</sup> at Entry Level (EL), L1, and Level 2 (L2). Basic literacy and numeracy courses up to and including L2 were fully funded by the government and free to participants.

The early target of the Skills for Life strategy was to improve the language, literacy and numeracy skills of 1.5 million adults by 2007 and 2.25 million adults by 2010. Following the publication of the Leitch Review in 2006<sup>18</sup>, the emphasis has moved to the importance of functional skills at a time of economic challenge, with a particular focus on employability and ensuring that people have skills that enable them to find, stay and progress in work. With prominence given to social participation and inclusion, *World Class Skills* (DIUS, 2007) set out a government (Public Service Agreement) target of 95% of adults in England having functional literacy and numeracy by 2020, where functional literacy is defined as L1 in literacy and EL3 in numeracy.

In publishing a new skills strategy for England, *Skills for Sustainable Growth*<sup>19</sup>, the Coalition Government made a commitment to funding provision in full for those without basic literacy and numeracy skills, but signalled a move away from a centrally-determined target system towards a system that gives providers the flexibility to respond to local needs and focuses on improving the effectiveness of provision. In addition, the Government has since completed a review of adult literacy and numeracy provision and set out in *New Challenges, New Chances* the actions that are being taken to make provision more effective.

The previous Government's Skills for Life strategy and current Coalition Government's national skills strategy (2010) provide the general policy context for the Armed Forces Literacy and Numeracy Policy, on which each individual Service policy is based. Armed Forces Policy states that 'sound literacy and numeracy skills enhance the ability of Service personnel to assimilate training more effectively, to cope more readily with the demands of their specific roles and to take full advantage of career opportunities, thereby contributing

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<sup>14</sup> In the National Qualifications Framework (NQF), literacy and numeracy standards are described in five levels. Entry level 1 (EL1) is the equivalent to the standard expected of a 5/6 year old, rising through Entry level 2 (EL2) to Entry level 3 (EL3) that is equivalent to the standard expected of a primary school leaver at 11 years-old. Level 1 (L1) equates to GCSE grades D-G, and Level 2 (L2) to GCSE grades A\*-C.

<sup>15</sup> Department for Education and Skills (DfES) (2003) *The Skills for Life Survey. A national needs and impacts survey of literacy, numeracy and ICT skills*. Norwich: The Stationery Office.

<sup>16</sup> See for example, Parsons, S. and Bynner, J. (2007) *Illuminating disadvantage: Profiling the experiences of adults with Entry level literacy or numeracy over the lifecourse*. London: NRDC.

<sup>17</sup> The Certificate in Adult Literacy and Certificate in Adult Numeracy. In this report these qualifications have been referred to as Basic Skills qualifications to differentiate them from Key Skills or Functional Skills.

<sup>18</sup> Leitch, S. (2006) *Prosperity for all in the global economy – world class skills. The Leitch Review of Skills*. Norwich: The Stationery Office.

<sup>19</sup> Department for Business, Innovation and Skills (BIS) (2010) *Skills for sustainable growth: strategy document*. London: BIS.

to reduced wastage in training and improved retention'<sup>20</sup>. The improvement of literacy and numeracy skills thereby makes a 'significant contribution to Service personnel strategies'<sup>21</sup>.

## 1.2 Research design

This report presents evidence from a three-year investigation into literacy and numeracy learning in the Royal Navy (RN), Army and Royal Air Force (RAF). The study comprises two elements: a qualitative exploration undertaken for each of the three Services, and a complementary quantitative study undertaken for the Army.

The qualitative study took place over three stages and focused on the following initial samples for each of the three Services: 22 recruits from the RN, 26 recruits from the Army and 29 from the RAF<sup>22</sup>. The evidence from these groups was supplemented by testimony from the recruits' line managers, trainers and senior officers from their chain of command, as well as from education staff and literacy and numeracy practitioners. The aim was to explore literacy and numeracy interventions from the point of view of sample participants, and to document and analyse their experiences and perspectives. At each stage of the fieldwork, further questions and issues emerged and, wherever possible, these were pursued at subsequent stages of the project.

The quantitative study for the Army took the form of analysing the literacy and numeracy needs, levels and learning amongst recruits at three stages during their first two and a half years of training and service. Starting from an initial sample of 1622, the study provides an analysis of the literacy and numeracy profiles of a statistically representative sample of recruits. The analysis is used to support and complement the qualitative evidence, which, in turn, is used to inform and explore the quantitative evidence.

A comprehensive account of the methodology used in this study can be found in Part 2, Chapter 4 of this report.

## 1.3 Research questions

The study addressed three sets of research questions which were agreed with all stakeholders at the start of the project:

- What is the nature and what are the characteristics of literacy and numeracy provision and support in each Service?
- What are the connections between literacy and numeracy levels, interventions and military training, and individuals' subsequent Operational Effectiveness? What are the links between learning and using literacy and numeracy skills in each Service?

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<sup>20</sup> Ministry of Defence (2010) *Armed Forces Literacy and Numeracy Policy*, p.1.

<sup>21</sup> Ibid.

<sup>22</sup> In a long term study, it is inevitable that the size of the initial samples will decrease from one year to the next. For details of sample attrition in this study see Appendix B.

- How do Service personnel experience literacy and numeracy provision? How do personnel perceive and value literacy and numeracy learning in relation to their professional identity, job performance and career progression?

The third and final year of research also allowed scope for enquiring into the literacy and numeracy related features and requirements that are distinctive to each Service, including a consideration of issues arising from Specific Learning Difficulties (SpLDs).

# Chapter 2: Literacy and numeracy skills – the Armed Forces context

## 2.1 Introduction

The culture and organisational context of the Armed Forces strongly influence the development of literacy and numeracy skills policy, and the design, management and delivery of literacy and numeracy provision. The case for the Services' investing in literacy and numeracy improvements must support the modus operandi of the military, if it is to secure senior management endorsement. Unless provision is sensitive to the operational setting, line managers are reluctant to release their personnel during work time to access literacy and numeracy support. At the same time, learners are less likely to respond positively to provision that they perceive is not directly relevant to their work and careers. The purpose of this chapter is to describe the principal features of that context which have helped to fashion the Services' literacy and numeracy policies and provision.

The chapter is introductory: it focuses only on the principal features of the military context that have the largest impact on literacy and numeracy policy and provision. Details specific to each of the three Services, in respect of their contexts, policies and provision, are presented in Part Two of this report.

## 2.2 Literacy and Numeracy in the Armed Forces: provision and policy context

The current overarching Armed Forces Literacy and Numeracy Policy (2010) is clear that 'the case for pursuing improvements to the literacy and numeracy skills of our personnel is unequivocal.'<sup>23</sup> It reinforces the MOD's longstanding aim to ensure the literacy and numeracy needs of Armed Forces personnel are addressed at the earliest opportunity in order to enhance their trainability, operational effectiveness and their potential for personal and career development, both in-Service and on resettlement into civilian life. It imposes minimum and annual literacy and numeracy targets on the individual Services and sets out the key principles that are to underpin the Services' literacy and numeracy provision. The policy seeks a whole organisational approach to literacy and numeracy improvement across the Services.

### National policy and impact of funding

The development of the Armed Forces Literacy and Numeracy Policy is shaped by national policy and Government priorities. Like other Departments, MOD has been expected to lead by example<sup>24</sup>.

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<sup>23</sup> Ministry of Defence (2010) *Armed Forces Literacy and Numeracy Policy*, p. 1.

<sup>24</sup> The Armed Forces operate within all four nations of the UK, as well as overseas. Though MOD adopts an England-based policy approach to skills improvement, the Services must make appropriate adjustments and arrangements in order to align with the separate policy requirements of the other UK nations and to take full advantage of their literacy and numeracy provision, services and facilities.

### ***The Skills for Life framework***

The single largest influence at national level has been the previous Government's Skills for Life strategy which set out to improve levels of adult literacy, language and numeracy, to professionalise the teaching workforce and to introduce national curricula and standards. The strategy led to the development of National Standards in adult literacy and numeracy, on which the literacy and numeracy core curricula were based, and new qualifications: the Certificates in Adult Literacy and Numeracy.

While the Adult Literacy and Numeracy curricula cover all the essential skills in a coherent programme, the assessments of the literacy and numeracy certificates do not assess the whole curriculum. Level 1 (L1) and Level 2 (L2) literacy tests (though not the Entry Level tests) require no evidence of speaking or listening skills and minimal writing skills in order to achieve a pass. The Key Skills tests used as part of the Apprenticeship framework use the same assessments, but a portfolio of work is also required and assessed.

### ***Educational levels***

All adult literacy and numeracy qualifications are available from Entry Level through to L2. Entry Level is divided into Entry Level 1 (EL1), Entry Level 2 (EL2) and Entry Level 3 (EL3). These levels are mapped to the National Qualifications Framework.

An individual with EL3 numeracy is expected to have the skills to be able to count, read, write, order and compare numbers up to 1000, add and subtract three digit whole numbers and add and subtract money using decimal notation. Individuals with EL3 literacy skills are expected to be able to use punctuation correctly, listen for detail in explanations or instructions and scan texts to locate information. EL3 in literacy and in numeracy is generally considered about the level expected of a primary school leaver at the age of 11.

Functional Skills qualifications have since been developed to promote the development of transferable skills and their application in practical situations. In the wake of its National Skills and Further Education Strategy<sup>25</sup>, the Coalition Government has commissioned a series of reviews into adult learning and qualifications. These will impact on the adult learning landscape and, in turn, will influence Armed Forces policy in this area and help to fashion on-going Service commitments to literacy and numeracy improvements and the provision made available to Service personnel.

Functional Skills qualifications have since been developed to promote the development of transferable skills and their application in practical situations. In the wake of its National Skills and Further Education Strategy<sup>26</sup>, the Coalition Government commissioned a review of adult literacy and numeracy provision and the Wolf Review of Vocational Education<sup>27</sup>. The outcomes of these will impact on the adult learning landscape and, in turn, will influence Armed Forces policy in this area and help to fashion on-going Service commitments to literacy and numeracy improvements and the provision made available to Service personnel.

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<sup>25</sup> Department for Business, Innovation and Skills (BIS) (2010) *Skills for sustainable growth: strategy document*. London: BIS.

<sup>26</sup> Department for Business, Innovation and Skills (BIS) (2010) *Skills for sustainable growth: strategy document*. London: BIS.

<sup>27</sup> Wolf, A. (2011), *Review of Vocational Education – The Wolf Report*. London: Department for Education.

## **Funding**

Since 2001, young people and adults with literacy and numeracy needs have been entitled to provision that is fully funded by Government in order to achieve literacy and numeracy qualifications (up to and including L2). During that time, increasing focus on Apprenticeships with their integrated literacy and numeracy requirements has also provided additional access to Government-funded literacy and numeracy provision<sup>28</sup> for many. Whilst strongly committed to helping those personnel with literacy and numeracy needs to improve their skills in order to support more effectively operational capability and workforce development, the Services have sought to enhance their own investment in their literacy and numeracy programmes with externally-funded provision. As is the case for many other employers, opportunities to access this externally-funded provision have influenced (in some areas, strongly influenced) the organisation's literacy and numeracy policy, implementation plans and the configuration of provision.

At a time of changing Government funding priorities, there are significant challenges for the Services, which rely on externally-funded provision (through FE colleges and private providers) for the delivery of literacy and numeracy services. Securing an appropriate balance between in-house and external provision (as a matter of policy and day-to-day delivery) and having plans in place to respond effectively and in a timely fashion to changes in funding priorities has become paramount. Indeed, managing the associated risks is a central feature of literacy and numeracy provision across the Armed Forces.

Many of the characteristics of the Service context that impact on literacy and numeracy policy and provision are common across the RN, Army and RAF. The training culture, the training regimes, the demands of operational commitments (often changing at short notice) and pressures of Service life are broadly similar and exert considerable influence on the configuration of literacy and numeracy services that are made available. However, within MOD's overarching framework, each Service has developed its own literacy and numeracy policy and implementation, tailored to reflect its specific recruitment, training and operational needs. The scale and scope of literacy and numeracy needs differ significantly between the three Services *and* within each Service. This has markedly affected the response of each Service in terms of policy detail, literacy and numeracy priorities and their investment in literacy and numeracy infrastructure and opportunities.

## ***Literacy and numeracy provision in the Armed Forces***

The literacy and numeracy support service across the Armed Forces provides initial and diagnostic assessment of individual's needs, the maintenance of individual learning plans and the provision of support programmes leading to nationally recognised qualifications. All literacy and numeracy provision is delivered or supported by qualified, specialist literacy and numeracy staff (both in-house and externally funded) and is organised to meet the needs of learners and (for mandated provision) their employing units. A substantial share of the literacy and numeracy needs of recruits is met through Key Skills provision<sup>29</sup> on accredited Apprenticeship programmes delivered as part of specialist trade training – especially in the RN and the RAF, and increasingly in the Army.

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<sup>28</sup> More often, jointly funded with employers.

<sup>29</sup> Key Skills and all Skills for Life literacy and numeracy provision is being replaced across all the Armed Forces by the adoption of Functional Skills provision and qualifications during 2010-12, in line with Defence policy.

Outside these Apprenticeship programmes, opportunities to access literacy and numeracy support are organised through the network of training units and education centres (in the UK and overseas) in each Service, available either as mandatory training to support military requirements of a specialist trade, role or rank; or as elective training for personal development.

## 2.3 The Service environment

The distinguishing contextual features of the Service environment are described here, along with a number of emerging issues that are returned to throughout the remainder of this report.

### Scale of Need

Each year, up to 50% of the Army's 8,000-10,000 recruits join the Service with literacy or numeracy skills at EL3 or below<sup>30</sup>. About 8-9% of recruits are at EL2 with about 1% at EL1<sup>31</sup>. This profile has been reasonably consistent over the past ten years. In contrast, the RN and RAF<sup>32</sup> have a very much lower incidence of poor literacy and numeracy skills amongst recruits (1-3% below L1). Table 2.1 provides an overview of the recruit skills profiles. This reflects the size and share across the Services of technical trades (e.g. engineering) that demand higher qualification entry requirements compared with those specialisations that set few or no academic/vocational entry requirements. Such an uneven distribution is also evident within each Service. Additionally, the recruitment of foreign nationals varies significantly, with some 9,000 serving in the Army, compared with only a few hundred in the RN and the RAF. Most of these have ESOL (English for Speakers of Other Languages) needs; many join with English speaking and listening skills at EL3 or below.

For the Army, at least, simply raising the minimum literacy and numeracy entry requirements is not currently regarded as a viable or practical solution; there is no confidence that the numbers of recruits required will be found if entry standards are increased.

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<sup>30</sup> Recruitment for 2010 was 8138, although in the years 2008 and 2009 the figure was close to 10,000.

<sup>31</sup> Minimum standards for the Armed Forces are set at EL2. However, EL1 standards are accepted for Army Infantry recruits when the prevailing recruitment climate and Army needs demand as long as the minimum output standards of EL3 for initial training are achieved and appropriate monitoring of the individual is in place.

<sup>32</sup> RAF personnel for the study were recruited prior to the implementation of the current policy and were recruited during the 2009 recruitment 'surge' when service numbers were increased and pressure on the training pipeline was acute.

**Table 2.1: Levels of literacy and numeracy Skills at Initial Assessment (IA) on joining the Service (2010)**

Service	National Levels	Literacy at IA	Numeracy at IA
<b>RN</b> 2,400 recruits	EL3 or below	1%	1%
	L1	24%	24%
	L2	75%	75%
<b>Army</b> 8,100 recruits	EL3 or below	45%	42%
	L1	41%	16%
	L2	14%	42%
<b>RAF</b> 3,000 recruits	EL3 or below	1%	3%
	L1	56%	44%
	L2	44%	53%

Given a much larger scale of need, the Army is unable to meet all its literacy and numeracy requirements from in-house resources alone. Though there are inherent risks in a reliance on external provision, the Army needs to continue building positive and creative partnerships with external providers for the foreseeable future.

### Culture of training and development

The Services have historically recruited all their personnel at the lowest rank and proceeded to 'grow their own', promoting staff to all posts from within the organisation. As such, there is a strong culture of training and development to prepare for immediate job roles and promotion, with overt encouragement and support for individual improvement, progression and 'getting on'. Securing sound literacy and numeracy skills forms an integral part of the development pathways, as they are recognised as essential 'enabling' skills. Indeed, for the RN and Army, attainment of minimum literacy and numeracy standards is a mandated requirement for promotion to specific ranks.

The Services endeavour to make the most of the potential of their personnel throughout their careers by means of education and training. The accreditation of military training and experience, and the opportunity for staff to gain new skills and nationally-recognised qualifications, are significant features of Service culture. In this way, personnel completing their Service engagement are also better placed to secure a second career and make an effective and productive transition back into civilian life. This applies to all staff, whether or not they are suitable for promotion within the Armed Forces. All Services have developed extensive infrastructure to support professional and personal development that is tailored to their needs. This positive learning and development culture generates an expectation of success in training for both the individual and the organisation. This promotes a genuine enabling environment that, if exploited effectively, encourages and motivates Service personnel to engage with and take full advantage of literacy and numeracy as well as other training opportunities throughout their careers.

### The training system

On joining, recruits develop their Service-specific foundation skills during intensive Phase 1 (initial) training before undergoing their trade training (e.g. telecommunications, catering) at specialist Phase 2 training establishments. On successful completion, they assume their

first appointments as trained ratings, soldiers and airmen. As part of their through-career professional development, they undergo further specialist Phase 3 and in-unit trade training and extensive collective unit training, as well as integrated or stand-alone education programmes to support directly this training and their promotion. Literacy and numeracy provision is delivered within these education programmes.

The training system reflects the organisational demands of the Armed Forces. Training is intensive and closely linked to job and rank requirements; programmes are often centralised; and there is persistent pressure to increase training efficiency and to reduce costs. The underlying principle for developing and organising both training and education could be best described as 'just enough, just in time'. Managers, instructors and trainees alike become accustomed to (and most often, expect) training to be highly focused and in direct support of their immediate Service commitments and career advancement. Teaching programmes and resources that are not contextualised to the specific Service setting are not readily tolerated by learners, military instructors and the chain of command; as such, they are likely to have a reduced impact on learning unless they are shown to be highly responsive to the Services' contexts. Training includes a large number of programmes (especially in recruit training units) running frequently, allowing only limited opportunities for individualised provision. The training systems are large, incorporating significant organisational and programming complexity, and there is a high turnover of military instructors as part of the routine posting. The use of civilian instructors provides an essential continuity of provision in many instances.

These features make for systems that are difficult and costly to adjust or change at short notice; they offer little room for experimentation and limited support for teaching and learning approaches that cannot readily be accommodated within the regime. In this context, it is a significant challenge to integrate mandated literacy and numeracy provision, tailored and delivered at a time and pace that meets individual needs in a manner that is sustainable.

Accommodating to the demands of the regime is less of a challenge for literacy and numeracy provision offered outside of the Phase 1 and 2 training pipelines. However, these later programmes are still required to be delivered and taught in a way that is sufficiently flexible to fit around operational commitments and routines.

## Operational environment

The greatest challenge for the Services lies in building a system of literacy and numeracy provision that meets the needs of all personnel, wherever they are stationed across the UK and overseas (including on board ship), and on operations. All personnel are likely to be moved every 18 to 36 months on postings, as well as deployed away from home station on operations or training exercises. The nature, timing and volume of commitments, combined with the Services' posting regime, are such that personnel (and their families) belong to a highly transient and mobile population. Their daily work patterns are demanding, rigorous and far from routine. The operational tempo for some Service units has been high over recent years with personnel either preparing for operations, on operations or on post-operational leave. This significantly constrains opportunities to gain access to literacy and numeracy support and other education provision. If that provision (and the investment in literacy and numeracy support infrastructure) is to be used efficiently (or at all) it must be responsive to the needs of learners and their employing units. This has the effect of forcing the Armed Forces literacy and numeracy services to

ensure that supply matches demand, and that potential demand is fully exploited to best effect. Providing flexible educational support during 'off-duty/down time' for personnel in operational theatres such as Afghanistan, or who are deployed for long stretches at sea, are examples of successful approaches. However, to operate a responsive and flexible service requires close attention is given to the distribution of specialist tutors, their strategic use, their ways of working and teaching and support roles, as well as the use of non-specialist staff and the combination of delivery and learning approaches. It is not uncommon for the prevailing organisational culture to act as a constraint on the degree of change that can be achieved and the pace at which it can be introduced.

The operational commitments and the wider demands of Service life often prevent or dissuade personnel from accessing literacy and numeracy provision. Despite senior management support for literacy and numeracy improvements, the whole organisational approach is not always and consistently translated into effective practice on the ground: line managers, faced with more pressing and immediate priorities, will often frustrate it and are on occasions reluctant to release staff for literacy and numeracy education in work time. Promotion throughout the chains of command of the benefits of sound literacy and numeracy skills to individuals and to the Services' operations is an essential and on-going requirement of literacy and numeracy implementation across the Armed Forces.

## 2.4 Armed Forces Policy on Literacy and Numeracy Skills

### Overarching Policy

The aim of the overarching Armed Forces policy is to address the literacy and numeracy needs of Service personnel as early in their careers as possible to maximise the benefit to both the individual and the organisation. However, the needs of both new entrants to the Services and the significant needs within the rest of the workforce must be addressed.

The principles underpinning the Armed Forces Literacy and Numeracy Policy are that:

- Literacy and numeracy competence is directly linked to an individual's operational effectiveness and therefore, operational capability.
- Personnel will have the literacy and numeracy specified for particular rank, role and training requirements.
- Learning should be progressive and coherent between recruitment, selection, initial training and throughout productive service.
- Individuals have a responsibility, shared with their chain of command, to address their literacy and numeracy needs.
- Appropriate literacy and numeracy guidance and support will be provided wherever the individual is serving, and work time will be made available to address their needs, wherever practicable.
- Learning and accreditation are free to all, with Government funding fully exploited.

- The key literacy and numeracy output is the achievement of a nationally recognised qualification. All literacy and numeracy support must be geared towards achieving this.

New entrants face training that places immediate demands on their literacy and numeracy abilities. Those applicants who do not hold the equivalent of L2 qualifications in maths and English are required to undertake an Initial Assessment (IA) of their literacy and numeracy skills. All applicants must undergo a screening of their speaking and listening skills during the recruiting/selection process to confirm these skills are of at least L1 standards. Single Services should seek to improve the literacy and numeracy abilities of all their recruits by at least one national level and to a minimum of EL3 by the start of their Phase 2 trade training. All Service personnel are required to hold L1 literacy and numeracy qualifications (or their equivalents) within three years of joining and L2 qualifications in literacy and numeracy either by the time they have been in service for eight years or as required by Single Service criteria, for promotion to the rank of senior NCO.

For those already serving, literacy and numeracy needs are addressed at the earliest opportunity, but within timescales that take account of:

- The scale of needs amongst the workforce, particularly within the Army, and its concentration within certain units.
- The continuing high level of operational commitments.
- The need to generate additional and appropriate capacity to meet the scale of need.

Service leavers are given appropriate support, where practicable, to address their literacy and numeracy needs, prior to completing their Service engagement.

In September 2010, new national Functional Skills qualifications were introduced in England. Each Service is currently implementing plans for Functional Skills provision to replace both Basic Skills and Key Skills provision by September 2012 at the latest.

### Policy differences

The overarching Armed Forces policy provides the direction and framework for the individual Services to implement their own approach to literacy and numeracy improvements, tailored to their own specific needs, objectives, constraints and operational environment.

The principal policy differences between the Services are:

- During the recruiting process, and irrespective of qualifications held, the Army and RAF require all applicants<sup>33</sup> to undergo an IA of their literacy and numeracy skills. The RN does not.
- Whilst the RAF adheres to the Armed Forces Literacy and Numeracy Policy by adopting the minimum entry requirement of EL2<sup>34</sup>, its policy states that ‘most trades have a minimum literacy and numeracy standard that can be waived according to overall aptitude scores at the AFCE’<sup>35</sup>. Although academic qualifications are used as a tool to screen entrants when joining the Service, it is the results of aptitude testing at recruitment which, in conjunction with the required trade entry qualifications, largely determine which trades are offered to an applicant<sup>36</sup>. This is not the case for the RN and the Army.
- All RAF entrants undertake testing in literacy and numeracy as part of the Pre-Recruitment Training Course (PRTCs). Under the RAF’s proposed 2011 Functional Skills Policy, individuals have three opportunities to gain L1 Functional Skills qualifications, or L2 for those trades who will complete an Advanced Apprenticeship. Those who fail to do this will either be re-traded where appropriate or discharged from the Service.
- Unlike the other Services, during this study the RAF did not formally link literacy and numeracy progression and attainment to promotion<sup>37</sup>. However, from April 2012 the RAF policy will require airmen to meet L2 standards in literacy, numeracy, speaking and listening before they can attend the Junior Management and Leadership Course (JMCL) for promotion to the rank of Corporal. Meanwhile, the policy will re-emphasise the minimum L1 standards for literacy, numeracy, speaking and listening skills for all airmen leaving Phase 1 training and beginning an apprenticeship programme.

## 2.5 Armed Forces policy on Specific Learning Difficulties (SpLDs)

The Armed Forces Literacy and Numeracy Policy (2010) does not treat SpLDs as a literacy and numeracy-specific issue: ‘Having weak literacy/numeracy skills in itself is not a special educational need or a SpLD [and] having a SpLD does not in itself lead to having weak literacy or numeracy’ (p. 2). MOD has produced an Armed Forces SpLD policy which aims to ensure that Armed Forces personnel with SpLD are identified, assessed and supported in a coherent and effective way in order to maximise their training and learning

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<sup>33</sup> Excluding those seeking Officer commissions whose minimum educational qualification requirements ensure all minimum literacy and numeracy standards are met. The RAF Literacy and Numeracy policy states that the minimum requirement on enlistment is Level 1.

<sup>34</sup> Technically there is no minimum entry requirement for the RAF regimental gunners at RAF Honington.

<sup>35</sup> *RAF Support for Literacy and Numeracy* (Leaflet 2560, AP3379)

<sup>36</sup> Entry standards are dictated by each of the branch and trade sponsors.

<sup>37</sup> In practice, RAF personnel are required to develop their literacy and numeracy skills to specified levels in order successfully to complete leadership and management training courses leading to promotion.

potential<sup>38</sup>. For the purposes of this policy, SpLDs encompasses dyslexia, Meares-Irlen syndrome, dyscalculia and dyspraxia.

During the Services' recruiting and selection processes, which take an holistic approach and are often focused on aptitude, no allowance is made for personnel with a formal SpLD assessment; nevertheless, many personnel with SpLDs are able to pass recruitment tests and enter the training pipeline. However, SpLDs can have significant impact on the training effectiveness and the operational effectiveness of individual recruits. The Services therefore offer individuals advice and guidance on tailored strategies for coping with SpLDs, designed to enable individuals to improve their ability to assimilate training, cope with the demands of work, and facilitate their career progression.

Individuals are responsible for addressing their own needs. The Services are required to provide advice and assistance through specialist SpLD advisers. Each Service must provide support to individuals who have voluntarily come forward or who have been identified by their line manager or instructors as possibly having SpLD needs. They must also ensure that these individuals have appropriate support and work time available to address these needs.

### Service-specific SpLD Policy

At HMS Raleigh all new RN recruits undertake the literacy and numeracy skills IA. Their performance may provide provisional evidence of a SpLD; if so, they are given the Dyslexia Adult Screening Test (DAST), a vision test for Meares-Irlen Syndrome or an interview with an educational psychologist. This process is not repeated at CTCRM, where SpLDs come to light either because difficulties emerge during training or because recruits arrive with a formal Statement of Need. At the time of writing, a new RN policy on SpLDs is being developed.

The Army does not have a separate SpLD policy, but does have a specific policy for dyslexia. This states that the Army's literacy and numeracy specialist practitioners<sup>39</sup> who have completed appropriate dyslexia training are the focus for dyslexia support for all military personnel, and should be the first point of contact when seeking dyslexia advice or support. While these specialists are qualified to conduct screening for dyslexia tendencies, they are not qualified to provide a full diagnosis which must be conducted by a Chartered Educational Psychologist. Individuals may self-refer or be referred (via the Chain of Command) to a dyslexia-qualified BSDM to undertake staged screening and assessment funded by the Directorate of Educational and Training Services (Army) (DETS(A)).

RAF policy<sup>40</sup> directs that SpLD needs are to be identified and supported, using professional help during the training process and productive service, but that they should not affect decisions on recruit entry or subsequent promotion. This is designed to enable

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<sup>38</sup> With one exception the Disability Discrimination Act (1995) is fully complied with by all Services. The Services will take account of SpLDs whenever and wherever possible, but in the case of an individual who is unable to undertake an operational task in the absence of SpLD support, it is not always feasible for that support to be provided. Consideration will be given as to whether it is feasible to provide the support in an operational context; if it is not, then, in accordance with the Joint Services Publication (898 Part Four, Chapter 6), every effort will be made to seek an alternative trade option.

<sup>39</sup> Basic Skills Development Managers (BSDMs)

<sup>40</sup> *RAF Support for Specific Learning Difficulties* (2011)

individuals to make the most of the benefits afforded to them in training for their careers in the RAF. The policy emphasises that SpLDs should be no impediment to a career in the RAF. Since 2011 it has been the responsibility of the individual with SpLD needs already identified to inform their line managers or instructors or SpLD Advisers of their specific needs on arrival at a new station prior to beginning their duties.

# Chapter 3: Provision and impact of literacy and numeracy – an overview

*When someone's wounded and they need to be extracted by helicopter, you have to write down quite a bit of information and then pass that through the radio, and I'd be happy to read that off and speak it, but I would not want to be the man who had to write it down because other people have to [use this information] to find out what's happened to that casualty. And that's one of them things where I actually do lie in my pit at night and think, 'Christ, imagine if I did...' When I write half of the letters are back to front, upside down... and that's something I am not confident in myself, just to get down and write something if I needed to. It sounds ridiculous, I mean a grown man to be worried about doing that.*

Serviceman interview

## 3.1 Introduction

This chapter provides a summary of the role and importance of literacy and numeracy as this applies to the professional development and operational effectiveness of personnel in the Armed Forces. The aim is to identify features and priorities of education and training that are either common to the RN, Army and RAF, or distinctive to one of these Services. The chapter also identifies the strengths of provision, and any challenges that arise in the military context, some of which have implications for large-scale organisations whose workforce includes employees with low levels of literacy and numeracy skills.

Between December 2008 and May 2011, the Armed Forces Basic Skills Longitudinal Study followed a sample of recruits in each of the Services during their first two and a half years of service. The sample was drawn from recruits assessed as having Entry levels of literacy and/or numeracy.

Recruits in all Services are offered a range of trades or jobs based on aptitude test results, qualifications and personal interviews during recruitment. The qualitative study focused on a small number of trades including infantry and warfare roles, chefs, drivers and communications specialists that are eligible to those with low initial qualifications or assessment.

Although the numbers of individuals included in the qualitative samples are small, the evidence is based on repeated examination of respondents, along with a detailed inspection of policy documentation. If and when disparate sources of evidence consistently point towards the same conclusion, this represents a finding of some significance.

A quantitative study was also conducted on the Army, this being the only Service with a sufficiently large number of recruits with low levels of skills to accommodate the scale and

depth of the intended statistical analysis. The initial quantitative sample included 1,622 trainees randomly drawn from all those assessed at Entry Level literacy or numeracy, and who started training in January-March 2009. Excluding those recruits who left the Army during the course of the study, the attrition rate between the first and third stage of fieldwork was 40%<sup>41</sup>, a respectable figure for a study of this type and duration. The evidence is sufficient to provide a representative account of the provision and impact of literacy and numeracy in the Army.

This chapter is written for the general reader. Readers seeking further details of the methodology and the findings for each of the three Services will find these set out in Part Two.

The chapter is organised as follows:

- 3.2 Effectiveness of the Armed Forces Literacy and Numeracy Policy
- 3.3 New recruits: profile and entry requirements
- 3.4 Characteristics of literacy and numeracy provision
- 3.5 Impact of literacy and numeracy
- 3.6 Qualifications, promotion and workplace requirements
- 3.7 Changes in levels of literacy and numeracy
- 3.8 Operational effectiveness
- 3.9 Literacy, numeracy and job roles
- 3.10 Literacy and numeracy skills and career progression
- 3.11 Specific Learning Difficulties
- 3.12 Record keeping
- 3.13 Functional Skills
- 3.14 Recommendations

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<sup>41</sup> For additional information on sample attrition see Appendix B.

## 3.2 Effectiveness of the Armed Forces Literacy and Numeracy Policy

### Introduction

This section provides an introductory assessment of the Armed Forces Literacy and Numeracy Policy<sup>42</sup>, identifying the principal strengths and challenges of a policy designed to apply to the Armed Forces as a whole, whilst also allowing for the differing contexts and demands of each of the three Services.

#### Main findings

The Armed Forces Literacy and Numeracy Policy is effective: it provides a statement of high level support for literacy and numeracy improvement and development, an essential element in ensuring a Whole Organisation Approach to literacy and numeracy provision. There is clear evidence of a high record of achievement in literacy and numeracy; a strong culture of training and development; and the Services are strongly committed to supporting personnel with literacy and numeracy needs.

Literacy and numeracy policy in the Services thus represents a model of national significance, with lessons and implications for large employers in non-military contexts.

It is a challenge consistently to meet both the literacy and numeracy skills needs of all recruits and the training and operational requirements of the Services.

Effective policy implementation is dependent on striking a successful balance between maintaining an overarching single Service policy and meeting the different requirements of each of the three Services.

### Strengths

The Armed Forces Literacy and Numeracy Policy is successfully adhered to, and produces highly significant gains for individual recruits and for the Services. In the Army in particular a large number of nationally recognised literacy and numeracy qualifications are gained each year, and the success rates are consistently high. There is an extensive policy infrastructure and a commitment to a whole organisation approach for delivering literacy and numeracy to personnel at every stage of their career – from enlistment to resettlement back into civilian life.

### Challenges

There are challenges that arise in the context of a training and education system that, in the case of the Army, caters to as many as 10,000 new recruits each year. The pursuit of other organisational priorities inevitably places limits on the scope for provision to be flexible and personalised to the needs of individual recruits, and education has to fit around the demands of the Services' intensive training pipelines and their day-to-day routines and operational commitments.

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<sup>42</sup> The current policy was agreed in December 2010 and was the successor to the Armed Forces Basic Skills Policy, which was in force through the first two stages of the AFLS.

## One policy, three Services

The formulation of policy is designed to accommodate differences across the Armed Forces, and, consistent with the policy itself, to enable each Service to provide an interpretation best suited to its own context. But the differences between the Services are substantial, and in two respects in particular: the significantly larger number of recruits with low levels of literacy and numeracy skills joining the Army as compared with the RN and RAF, and the nature and level of technical demands on recruits when comparing one Service – and often one trade – with another. The extent to which a balance is successfully struck, as between a single Armed Forces policy on the one hand, and Service specific policy and interpretation on the other, plays a significant role in determining the prospects for effective implementation.

### 3.3 New recruits: profile and entry requirements

#### Introduction

This section discusses the levels of literacy and numeracy possessed by new recruits, and the levels and qualifications they are expected to attain. The Army has a far greater number of recruits with low levels of literacy and numeracy than either the RN or RAF; this helps to explain the differences in the scale of engagement and many of the distinctive features of provision that become apparent in any comparison between the three Services.

#### Main findings

The scale and nature of literacy and numeracy provision, and its organisation and delivery in each of the three Services, reflects their widely differing educational profiles. A far higher proportion of new recruits to the Army have low levels of literacy and numeracy as compared with the RN and RAF, and in the current recruiting climate the Army infantry is likely to continue to draw on a cohort of recruits whose levels of skills are below L1.

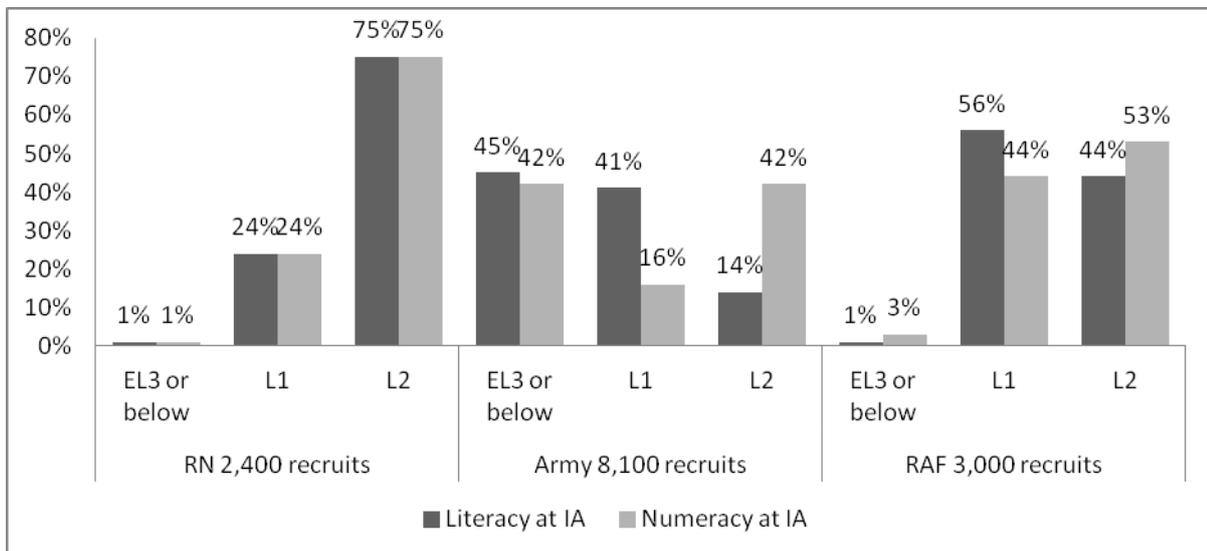
The Armed Services have the capacity to develop the skills and talents of recruits with low literacy and numeracy to the point that they are both operationally effective and (more) employable within Service and in civilian life. Evidence from this study confirms that continuing (selectively) to recruit entrants with low level skills need not be detrimental to operational performance.

At the same time junior personnel are increasingly expected to make use of technical equipment and assume new and more demanding responsibilities in fast-changing operational environments. Sound literacy and numeracy underpin many of the complex skills required to work effectively in these environments. The question arises as to whether there is a case for *selectively* raising the minimum entry requirements in response to the extensive technical demands of some trades, particularly as these arise in the RN and RAF, but also where these feature in the Army.

#### Profile of recruits

In 2010, 45% (about 3650) of all new Army recruits were assessed at or below Entry Level 3 (EL3) in literacy and 42% (about 3400) below EL3 in numeracy; the corresponding figures for the RN were 1% and 1% (approximately 25 recruits), and for the RAF 1% and 3% (about 30 and 90 recruits respectively). These figures are illustrated in Figure 3.1. In 2010, fewer than 100 recruits to the RN, and 29 to the RAF, were operating below Level 1 (L1) in both literacy and numeracy on entry, while for the Army the figure was in the region of 4,000.

**Figure 3.1: Levels of literacy and numeracy skills at Initial Assessment (IA) on joining the Service (2010)**



Of 1,622 recruits in the initial Army quantitative sample, 700 (43%) were assessed at EL3 in *both* literacy and numeracy, 119 (7%) at Entry Level 1 (EL1) in literacy and 58 (4%) at EL1 numeracy. Typical participants were British males aged between 16 and 20. Around 290 (18%) trainees reported having at least one Specific Learning Difficulty (SpLD). Those most likely to report a SpLD were recruits with the lowest levels of literacy and numeracy, including the 69 (34%) recruits with EL1 or Entry Level 2 (EL2) in literacy. Many in the sample had left education after a poor experience of schooling and with few academic qualifications, with 30% of all participants having no GCSE at any grade: 1009 recruits (62%) had left full-time education by the age of 16; 170 (11%) had been permanently excluded from school.

The scale and nature of literacy and numeracy provision, and its organisation and delivery in each of the three Services reflects the widely differing educational profiles described here.

The profile of the qualitative sample in Stage 3 is noteworthy for the number found to have a SpLD: 4 of 14 in the RN, 4 of 14 in the Army and 8 of 13 in the RAF. This highlights the importance of conducting early SpLD screening, particularly amongst recruits with low levels of literacy and numeracy. Section 3.11 reviews examples of systems for identifying and supporting recruits with SpLDs at all stages in their careers.

### Entry requirements

The Armed Forces Literacy and Numeracy Policy states that the minimum entry requirement for all the Services is EL2<sup>43</sup>, although the policy also allows for some flexibility to meet prevailing recruitment and Service needs. Table 2.1 (Chapter 2) confirms that, whilst the Army has the greatest proportion of entrants at Entry Level, the percentage of entrants at EL1 and EL2 across the Service is relatively low. This suggests that the

<sup>43</sup> The minimum requirement in the RAF, as stated in the RAF Literacy and Numeracy Policy, is Level 1.

principal challenge for the Army is to raise skill levels from EL3 to L1, the level demanded within three years of Service by the Armed Forces Literacy and Numeracy Policy. The RAF has a much larger group of entrants at L1 as compared with the RN (56% literacy; 44% numeracy as compared with 24 % in literacy and 23% in numeracy), and this suggests that for the RAF, the major challenge is to raise literacy and numeracy standards to L2. The Armed Forces policy requires that this be achieved within eight years of entry.

The profile of recruits draws attention to a dilemma for the Services. The infrastructure for delivering literacy and numeracy education to recruits with Entry Level skills represents a large claim on resources, including funding for provision and military training time for literacy and numeracy programmes. At the same time, the Services are likely to continue to draw on a cohort of recruits whose levels of skills are below L1. All three Services take seriously their 'duty of care', and aim wherever possible to raise the aspirations, qualifications and skills of their recruits. This should also be seen in the context of the Strategic Defence and Security Review 2010 which specified the need for personnel to undergo the training and education necessary to develop the skills, knowledge and attitudes to operate effectively in an increasingly complex environment<sup>44</sup>. An issue for the Services, then, is how to strike a balance between an efficient and effective use of resources on the one hand, and on the other, a requirement for increasingly higher levels of Service training and education.

### Initial assessment and GCSE qualifications

A significant proportion of recruits in the quantitative sample were both initially assessed at Entry Level in literacy and numeracy and reported having A\*-C GCSE in English or maths. Some allowance should be made for errors associated with self-reporting, and for the fact that GCSE qualifications incorporate standards and purposes very different to those that apply to the process of Initial Assessment. Nevertheless, there is an expectation that a higher grade GCSE in maths and English should provide evidence of numeracy and literacy skills at L2. This raises a question about how far GCSE qualifications serve as a useful proxy for literacy and numeracy levels, not only for the Services, but in all work-related contexts.

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<sup>44</sup> HM Government (2010) *Securing Britain in an Age of Uncertainty: The Strategic Defence and Security Review*. Norwich: The Stationery Office.

### 3.4 Characteristics of literacy and numeracy provision

#### Introduction

This section summarises the provision available in the Services during and after the initial training that recruits receive. The principal features are described in some detail, in order to provide a point of reference for when, in later sections, the provision is assessed for its impact on professional development and operational effectiveness. Some elements of provision – for example, the qualifications available to recruits and SpLD support – warrant a separate discussion and that is provided elsewhere<sup>45</sup>.

During the period of this study the vast majority of literacy and numeracy qualifications were either gained in the context of a Key Skills programme as part of the apprenticeship framework or they were Basic Skills qualifications. However, from autumn 2011 the Services plan to introduce Functional Skills in line with the MOD directive that all literacy and numeracy provision is to lead to Functional Skills qualifications by September 2012.

#### Main findings

Literacy and numeracy provision across the Services is characterised by:

- Discrete, intensive programmes.
- Key Skills/Functional Skills programmes linked to apprenticeship frameworks
- Delivery largely as part of the working day
- Delivery by specialist literacy and numeracy teachers, both from in-house and external providers.

The characteristics of literacy and numeracy provision in the RN, the Army and the RAF demonstrate how the Services have responded to the demands of national and Armed Forces policy on the one hand, and their own contexts and requirements on the other. These do not all pull in the same direction, and there is some evidence that Service and training requirements sometimes take precedence over what would best serve the learning related needs of trainees. Nevertheless, within the constraints the Services operate within, they provide a very largely positive example of literacy and numeracy provision in environments that are often intensely pressurised and uncongenial to education.

The different contexts for each Service lead to very different initial training regimes and the provision of literacy and numeracy qualifications after initial training is highly context specific. At the same time, all Services consider education as part of their 'duty of care' and ensure that recruits continue to have good access to literacy and numeracy provision throughout their careers in the Services.

<sup>45</sup> Qualifications are discussed in sections 3.6-3.7 and SpLDs are discussed in 3.11.

## Army

### **Overview**

The development of the Army Literacy and Numeracy Policy and its implementation are the responsibility of the Director Educational & Training Services (Army) (DETS(A)), on behalf of the Army's Director General (Personnel). Minimum standards of literacy and numeracy skills required to join Phase 2 training, and subsequently to hold specific ranks, are mandated in policy. Literacy and numeracy provision is organised within Phase 1 and Phase 2 training units and managed regionally in the Field Army, through a network of 13 Army Education Centres (AECs) and 94 subordinate ICT-based Learning Centres (eLCs) across the UK and in Army garrisons overseas (principally, Germany & Cyprus<sup>46</sup>). These networks are under the command of military education officers within the Educational & Training Services (ETS) branch.

For the soldiers, literacy and numeracy provision is free at the point of delivery and, most usually, accessed during working time and offered as part of a prescribed military education programme. The overarching aim is to ensure that soldiers have the necessary literacy and numeracy skills to carry out their roles and duties, and to provide them with a set of nationally accredited qualifications. The literacy and numeracy provision leads to Basic Skills, Key Skills and, increasingly, Functional Skills qualifications, and is organised most usually as discrete, contextualised programmes – either 'stand alone' or integrated across military training.

Programmes are delivered either by means of in-house provision using fully qualified and specialist Ministry of Defence (MOD) Basic Skills Development Managers (BSDMs), military education staff and learner support/mentoring staff, or through publicly-funded, external provision, delivered on Army sites by contracted FE Colleges and private providers. Additional support is offered for those diagnosed with SpLD needs such as dyslexia.

As with most Army training, literacy and numeracy provision tends to be intensive, offered on what can be described as a 'just enough, just in time' basis and is fashioned and scheduled so as to be accommodated within the tight military training and operational regimes. In recent years, this has become a particular challenge as a result of the highly pressurised operational tempo.

### **Phase 1 training**

Literacy and numeracy provision is initially delivered at one of five Phase 1 training units:

- Army Foundation College, Harrogate (AFC(H))
- Army Training Centre, Pirbright (ATC(P))
- Army Training Regiment, Bassingbourn (ATR(B))
- Army Technical Foundation College, Winchester (ATFC(W))

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<sup>46</sup> There is also a Theatre Education Centre in Afghanistan to service troops on operational deployment, and learning facilities to support troops stationed in distant and/or isolated locations (e.g. Brunei and Canada).

- Infantry Training Centre, Catterick (ITC(C))<sup>47</sup>

Each unit is dedicated to training specific categories of recruits (based on cap-badge/trade specialisation or age group<sup>48</sup>).

Provision varies between each training unit according to the nature of the military programme and recruit population. For example, a recruit at ATC(P) will receive about 16 hours of literacy and numeracy teaching over 14 weeks, integrated into their military training, while at AFC(H) recruits receive 280 hours over 42 weeks. At ITC(C) the literacy and numeracy provision comprises an intensive two-week programme at the end of the CIC military training (26-28 weeks). In addition, while all recruits are required to meet minimum EL3 literacy and numeracy standards before joining Phase 2 training, some of the units impose more stretching targets according to the recruit cohort and their literacy and numeracy capabilities, and also the length of the Phase 1 training programme. For example, junior soldiers at AFC(H) are required to gain at least L1 in literacy and numeracy prior to commencing their Phase 2 training.

### ***Phase 2 training***

Phase 2 training provides trainees with the technical and specialist knowledge and skills for their chosen trade employment. Currently, around 70% of personnel undertake military training that is integrated within an Apprenticeship programme, at L2 or Level 3 (L3)<sup>49</sup>. The Apprenticeship now represents the principal route for trainees to improve their literacy and numeracy skills (to L1 or L2), and to meet mandated Army literacy and numeracy standards.

All Army apprenticeship schemes are delivered through a combination of military and MOD civilian instructors, and contracted external providers. Though largely offered as discrete programmes, a wide range of delivery models for the Key Skills or Functional Skills components of the Apprenticeship are employed; these are either front-loaded at the start of the Apprenticeship, integrated into military training, or scheduled to be completed when soldiers are in their first appointments in the Field Army.

### ***Provision in the Field Army***

For those in the Field Army not on an Apprenticeship programme, literacy and numeracy support is available through the local AEC or eLC, including the Theatre Education Centre (TEC) facility for those in Afghanistan. Access is either organised by soldiers' line managers (as part of their preparation for promotion to higher rank, or for resettlement ahead of leaving the Service) or arranged through self-referral. One-to-one and small group support over extended periods is available to soldiers, as is the option of e-learning provision. However, most support is delivered through one or two week, intensive programmes. Releasing soldiers for such programmes is the widely adopted option as it can most readily be accommodated within unit commitments, and fits around the day-to-

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<sup>47</sup> Unlike other Phase 1 units, ITC(C) delivers the Combined Infantryman's Course (CIC) comprising both the Phase 1 and 2 programme

<sup>48</sup> Recruits under 18 years join as Junior Soldiers. Adult recruits (described as Standard Entry) undergo separate initial training.

<sup>49</sup> This is set to rise to 95% with the introduction of an Apprenticeship in Public Services for the Infantry at ITC(C) in October 2011.

day demands of a soldier's Service life. (Few soldiers, for example, are able to attend classes once or twice a week, at the same time, over a protracted period.)

Soldiers on operations are encouraged to use their 'downtime' for education, and this is fully supported and organised by the soldiers' unit. Literacy and numeracy provision in overseas AECs and the TEC is comparable in scale and quality to those located in the UK (and the same applies to e-learning support).

## RN

### **Overview**

The primary aim of the RN Literacy and Numeracy Policy is to ensure that all ratings have the literacy and numeracy qualifications required for their first promotion (L1 for Leading Hand [LH], L2 for Petty Officer [PO]) and also to ensure that all trainees possessing only the Naval Maths and English Test (NAMET) qualifications are given an opportunity to gain Basic Skills qualifications instead. Similarly in the Royal Marines (RM) it is required that those promoted to Corporal should have L1 literacy and numeracy standards, and L2 before promotion to Sergeant.

Phase 1 training takes place at either HMS Raleigh, for Navy recruits, or Commando Training Centre, Royal Marines (CTCRM) for Royal Marine recruits. No formal literacy or numeracy programme is provided during this phase, and recruits largely achieve their required levels of literacy and numeracy through the Key Skills or Functional Skills provision offered within the RN's Apprenticeship programmes during Phase 2 military training. Although undertaking an apprenticeship is not a formal requirement, in practice all naval and marine trainees do so<sup>50</sup>. For those who have served in the RN before such programmes were available, this policy objective is achieved by encouraging personnel to gain Basic Skills qualifications through provision that is managed or delivered at one of the ten RN Waterfront Learning Centres<sup>51</sup>.

Literacy and numeracy provision is organised through the Naval Education and Training Service (NETS), as part of its wider educational support for all RN and RM personnel. Working under military unit commanders, civilian Basic Skills Tutors (BSTs) have a specific responsibility for literacy and numeracy skills and SpLDs, and work closely with the learner support staff stationed across the RN's ICT-based learning centre network. These are the main organisations working with ratings and marines to help them achieve L2 Basic Skills qualifications outside of their Phase 1 and Phase 2 training.

### **Qualifications**

The RN Basic Skills Policy established the LANTERN framework (Literacy and Numeracy Testing and Education in the RN) for all recruits who joined after 2006, replacing the previous and unaccredited NAMET arrangements. The main effect has been the phasing out of NAMET courses in favour of programmes leading to the nationally recognised Basic Skills qualifications<sup>52</sup>. The current priority for NETS is to ensure that all RN and RM

<sup>50</sup> Apprenticeships are not mandatory in any of the Services, but in practice all trainees offered an Apprenticeship do take up the opportunity.

<sup>51</sup> There are RN Learning Centres in Portsmouth, Devonport, Collingwood, Sultan, Raleigh, Lympstone, Faslane, Rosyth, Yeovilton and Culdrose.

<sup>52</sup> The Certificates in Adult Literacy and Numeracy.

personnel who do not currently hold literacy and numeracy qualifications are given an opportunity to do so as soon as possible.

All RN and RM trainees undertake an apprenticeship programme. For naval personnel in the Armed Forces Basic Skills Longitudinal Study sample the apprenticeship was at L2 and included a requirement either to achieve Key Skills or Functional Skills at L1<sup>53</sup>, or to provide evidence of holding proxy qualifications, most usually an appropriate GCSE. During the study it was policy at the Phase 2 training centres to ensure that as many trainees as possible gained L2 Key Skills as well as the mandatory L1. For the 90% of trainees who gain L2 Key Skills, no further literacy and numeracy qualifications are required until they seek promotion to Warrant Officer rank<sup>54</sup>.

### ***Learning Centres***

The RN Learning Centres are principally ICT-based facilities with access to services from an external provider. Most RN literacy and numeracy provision is delivered through these tutor-supported, e-learning facilities although they also include learning resources and libraries with adult focused materials such as Quick Reads. The majority of learners attending the Learning Centres need to gain a L2 qualification for promotion to Petty Officer or Sergeant, or are preparing for resettlement into civilian life. In the former group are those newer recruits who have only attained L1 literacy or numeracy qualifications, as well as longer serving ratings who hold NAMET qualifications only.

Learning Centres are managed by BSTs, specialists in teaching literacy and numeracy and diagnosing and supporting SpLDs. Learners with specific needs who are not going to benefit from undertaking an entire certificate course may be referred to the BST, who is able to provide personalised resources and courses of study for individual learners.

### ***Provision on board ship***

Education on board ship falls under the aegis of the military Education and Resettlement Officer (ERO), while all mandated training is the responsibility of the Training Officer.

It is the ERO's responsibility to be aware of the education qualifications of the ship's company, to encourage ratings to take up opportunities for education, and to provide information, advice and guidance on educational matters. The ERO may also organise education classes on board, usually for GCSE or 'A' levels.

Service regulations allow anyone to teach a subject (apart from literacy and numeracy) on condition that they have a qualification at least one level higher than the qualification taught. Hence, an officer with 'A' level maths might volunteer to run a GCSE maths class; however, this officer would not be able to teach numeracy without a specialist qualification.

Personnel working on their literacy and numeracy skills will do so under their own initiative or with remote guidance from one of the NETS officers, all of whom are fully trained to deliver literacy and numeracy. Each ship is visited periodically by a small number of NETS officers, who conduct Initial Assessments and recruit personnel onto literacy and

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<sup>53</sup> Recruits to more technical trades will undertake a Level 3 Apprenticeship which includes L2 Functional Skills as a requirement.

<sup>54</sup> To be promoted to Warrant Officer, candidates need at least two GCSE grades A\*-C, one of which must be English.

numeracy courses. The aim is to visit each ship at least once every eighteen months. The RN is currently conducting a trial on the use of Basic Skills Mentors to support those who are working towards a Basic Skills qualification on board.

## RAF

### **Introduction**

The RAF Literacy and Numeracy Policy (2011) states that sound literacy and numeracy skills help RAF personnel 'to assimilate training more effectively, cope more readily with the demands of their specific roles, and to take full advantage of career opportunities'. The policy implies that 'sound' levels are, at a minimum, equivalent to L1. In line with the MOD directive that all literacy and numeracy provision for Service personnel is to lead to Functional Skills qualifications by September 2012, the provision in the RAF is to be substantially modified in 2011, with the introduction of Functional Skills programmes from September at its two Phase 1 training schools.

Those training to join RAF 'ground' trades (e.g. MT drivers and RAF police) attend Phase 1 training at RAF Halton, while those joining as Regimental Gunners train at RAF Honington. Literacy and numeracy provision varies between these centres, according to the requirements of the trainee cohorts and demands of the employment group.

### **RAF Halton and RAF Honington**

Educational provision at RAF Halton is offered for two hours per week, or approximately 14 hours, over a nine-week programme for each basic skill in total<sup>55</sup>. Trainees move on to Phase 2 training units to undergo their specialist trade training before assuming their first appointment as a trained airman<sup>56</sup> in productive service.

Although Phase 1 and 2 training at RAF Honington is combined into a 24-week programme, during early fieldwork on this study the one week of Key Skills provision took place in week 32, that is, outside of Phase 1 and 2 training. During the final stage of the study this training was re-scheduled to take place in week 24 – that is, in the last week of Phase 2 training<sup>57</sup>. As with RAF Halton, and following its introduction in 2011, Functional Skills will be front-loaded to the beginning of the Phase 1 training programme.

### **Apprenticeships**

Ground Trades personnel<sup>58</sup> leaving RAF Halton begin a trade-specific apprenticeship at L2. The apprenticeships are portfolio based and completed when personnel reach productive service on leaving Phase 2 training. RAF Regimental Gunners work on an apprenticeship in Public Services at L2, the same apprenticeship framework that is followed by Royal Marines trainees.

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<sup>55</sup> There were no literacy or numeracy classes in week one or week nine (the week of the test).

<sup>56</sup> The term 'airman'/'airmen' is used throughout the report as a generic name that includes both men and women.

<sup>57</sup> This also made more educational sense as the Key Skills acquired would help trainee airmen in their military training. During Stage 2, Key Skills tutors also made the point that moving provision earlier would also improve trainees' motivation and engagement.

<sup>58</sup> Ground Trades personnel, as distinct from the RAF regimental Gunners, are non-combatative airmen including MT drivers, RAF police, Logistics/Movements and so on.

Once Functional Skills are introduced, the expectation is that, as with RAF Halton, all airmen will gain a L1 Functional Skills qualification in maths and English soon after joining Phase 1 training, and ahead of starting their Apprenticeship programme during Phase 2 training. L1 is regarded as the level that enables individuals to be functionally competent in relation to Phase 2 specialist trade training, and, following that, productive service in the course of carrying out their duties.

Almost all (96%) of RAF personnel undertake an apprenticeship during Phase 2 training, and this is delivered almost entirely in-house by a combination of MOD civilian and military instructors. The 65-70% of airmen who take one of three advanced apprenticeships are required to gain L2 Functional Skills awards before leaving Phase 1.

### ***Further opportunities for literacy and numeracy education***

Once airmen reach productive service, they are supported to develop their literacy and numeracy skills through Station Education Centres. Airmen can raise their literacy and numeracy qualifications from L1 to L2, or opt to take the relevant GCSE or International GCSE.

Personal Learning Advisors (PLAs) have strong links with many local providers and they facilitate courses for airmen. Through their local colleges and training providers PLAs have access to a wide range of literacy and numeracy provision.

In the RAF there is limited literacy and numeracy provision for airmen deployed out of area (that is, away from their UK station and/or on active service), but this should be seen in the context of the speed at which airmen are deployed as well as the length of deployment. There are, however, Training Officers on operational deployment in Kabul and there is a permanent Station Training and Development Officer in the Falkland Islands<sup>59</sup>.

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<sup>59</sup> All Training Officers must hold a Degree, Higher National Award or NVQ Level 4 – but professional qualifications are also considered. GCSEs/SCEs at Grade C/3 minimum or equivalent in English language and maths are also required. If working in Phase 1 or 2 schools then the officer will have attended the Train the Trainer (TTT) and be appropriately qualified as per Service rules. Similar regulations apply to all three Services

## 3.5 Impact of literacy and numeracy

### Introduction

One objective of this study was to assess the impact of literacy and numeracy levels and provision on professional development and operational effectiveness. It is evident that provision is effective in respect of the high number of qualifications achieved, and in promoting both confidence and a positive disposition to learn amongst many of the recruits. At the same time, a significant issue for all Services is how far qualifications themselves reflect the development of sustainable skills that contribute to the professional development of personnel, and to their ability to become operationally effective.

### Main findings

Provision in the Services is distinguished by an ethos that includes high expectations, high levels of motivation and effective incentives for recruits to succeed - all known characteristics of a positive adult learning environment. It is an urgent priority to improve understanding on whether and how far a Service environment is conducive to literacy and numeracy development over the shorter and longer term. The evidence from this study strongly suggests that the results of any such analysis would be positive.

Many trainees with low literacy and numeracy skills have poor experiences of formal schooling, and negative attitudes towards education; in this context, all the Services – and the RN in particular – have an impressive record in encouraging staff to understand the importance of literacy and numeracy in their careers.

Although there is a high record of achievement in literacy and numeracy qualifications, it nonetheless remains unclear how far qualifications and achievement rates can be taken to represent a sustainable development of skills and knowledge. This point applies not only to the Services but to all adult literacy and numeracy contexts.

Attitudes towards literacy and numeracy were often more positive than attitudes towards literacy and numeracy *qualifications*. It will be important to track any changes following the introduction of Functional Skills, since negative or indifferent attitudes are *prima facie* evidence that the qualifications are not meeting the needs of all trainees.

### Gaining qualifications

Across all three Services there was an exceptionally high record of achievement in literacy and numeracy qualifications (the Key Skills achievement rate is close to 100%, far higher than civilian achievement rates). In the Learning Centres, it is rare for trainees to fail to gain their Certificates in Adult Literacy and Numeracy. In the RAF and RN, just 10%

(approximately) of the apprenticeship intake fail to complete; the non-completion rate for the Army is only marginally higher at 16% (2009-10)<sup>60</sup>.

Nearly all trainees in the three qualitative sample groups gained literacy and/or numeracy qualifications at least one level higher than those they possessed on entry. Evidence from trainees, tutors and senior officers suggests that the levels of success are related to:

- The ethos of the Services which encourages and demands a high level of expectation of success.
- High levels of learner motivation in a context in which short and intensive periods of training are regarded as 'the norm'.
- The degree of the Services' influence over trainees' lives, including the amount of time spent learning and preparing for qualifications.
- Service personnel generally having to achieve qualifications in order to progress to the next phase of training and, in the RN and Army, to gain promotion.
- Levels of discipline, and the respect shown by trainees towards authority figures, including teachers and trainers.
- For a significant number of learners, the literacy and numeracy classes were essentially 'refresher courses'; trainees gaining a L1 qualification were often 'brushing up' on (or re-familiarising themselves with) knowledge and skills they had already gained whilst at school, but subsequently lost through 'skills-fade' (losing skills as a result of no longer using them).
- Ensuring literacy and numeracy provision is relevant to trainees by using resources contextualised to the Service and workplace setting, and delivered in an adult (rather than school-based) context.
- Use of specialist literacy and numeracy practitioners and trained support staff with knowledge and experience of the military setting.
- The promotion by instructors, line managers and other military role models of the importance of sound literacy and numeracy skills in early training and beyond.

### Qualifications and long-term learning progress

Evidence on adult learning<sup>61</sup> suggests that many learners require in excess of 100 guided learning hours (GLHs)<sup>62</sup> if they are to make significant and long term learning gains.

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<sup>60</sup> Very few of these will have failed to complete because of any literacy or numeracy deficiencies; non-completion is more usually due to a change of trade specialisation, extended deployment on operations or early departure from the Service. For a comparison, the national, overall success rate for completion of apprenticeships in 2008/09 was 70.9%.

<sup>61</sup> John P. Comings (2009) Student Persistence in Adult Literacy and Numeracy Programs. In: Reder, S. and Bynner, J. (eds.) *Tracking Adult Literacy and Numeracy Skills: Findings from Longitudinal Research*. New York: Routledge.

<sup>62</sup> These includes not only the hours spent formally training and teaching but also the time spent on tasks related to this in the context of directed self study, distance learning and ICT supported learning.

Provision in the Services is notable, in general, for being short and intensive. Literacy and numeracy provision at RAF Halton or ATC(P), for example, is only a few hours in duration, while staff at RN Learning Centres routinely reported that ratings achieved both L1 and L2 qualifications within a few days. The period allotted to Key Skills or Functional Skills is generally one week (30-35 GLHs) for each subject area, and even less in the case of RAF Honington.

Despite the short duration of much provision, the record of achievement in respect of literacy and numeracy qualifications is impressive. Yet there is a question about the extent to which achievement rates are accompanied by significant and sustainable learning gains. Qualifications are not always a reliable indicator of long-term improvements in learning, and producing these improvements in a short period of time is a challenge. The military context has a large bearing on the effectiveness of provision, and may have a significant and positive effect on trainees' receptivity and ability to learn over a shorter period than otherwise. However, whilst there is some evidence for suggestions such as these, they remain to be rigorously tested.

### **Qualifications and the aims of educational provision**

The Armed Forces Literacy and Numeracy Policy requires that literacy and numeracy education is geared towards the achievement of nationally recognised qualifications, and the evidence from this study demonstrates how effectively this policy has been implemented. However, the policy also states that the main objective of literacy and numeracy provision is to increase recruits' trainability, enhance personal and career opportunities and increase their operational effectiveness. Whilst there is strong evidence that sound literacy and numeracy contributes to these goals, it is less clear how far these same goals are promoted specifically by the literacy and numeracy qualifications offered by the Services.

Current provision is to a large extent a product of the previous Government's national policy and funding regimes, and any evaluation needs to take due account of that and the corresponding emphasis put upon achieving accredited qualifications. But equally the opportunity to gain a national qualification was not the only reason for introducing literacy and numeracy provision into the Armed Forces. The question, therefore, is whether the impressive record on achieving qualifications is matched by the capacity of provision to develop the skills and competencies that enable Service personnel to become more efficient and effective in their professional trades.

### **Organisational support**

The Army is highly supportive of literacy and numeracy skills training and provision, and almost all trainees respected their educational tutors and military trainers. Although a minority complained that education classes were initially 'just like school', most appreciated being treated as adults, and there was a culture of working hard and achieving.

In the Army all interviewed Officers and NCOs reported that literacy and numeracy classes were sufficient for what the Army requires, and all were broadly supportive of the Army's literacy and numeracy provision. They would also support all personnel in their first appointments who wanted to take further educational qualifications wherever practicably possible. However, a significant number of Officers and NCOs interviewed (particularly in

the Infantry) did not appear to appreciate the significance of the impact of poor literacy and numeracy on soldiers' trainability and operational effectiveness, and the teaching time and learner commitment required to address those needs. This suggests a need to raise awareness amongst Officers and NCOs of both the impact of literacy and numeracy skills and the required scale of literacy and numeracy intervention.

Based on the study samples, the RN appears to be the most successful Service in comprehensively communicating the significance of literacy and numeracy skills and the opportunities for related training. Not one person interviewed in the RN was unaware of the role and value of both literacy and numeracy qualifications and skills.

Awareness of literacy and numeracy skills provision and its importance may be less comprehensive in the RAF. However, it must be emphasised that, if so, this may relate to the fact that the RAF attaches the highest priority to supporting and identifying individuals' *aptitudes* for a task or role (however, these are related to literacy and numeracy skills), and that, for any difficulties in reaching the standards required, including any difficulties associated with SpLDs, the Service has a highly effective policy on providing support for all recruits who need it.

### Provision on deployment

Deployment away from home bases and active service on operations provide opportunities for education that arise when personnel are off-duty or on 'down-time'. All the Services provide learning facilities for personnel on deployment. Army provision is available on operations through the use of Learning Development Officers working in deployed units and in the Theatre Education Centre (in Afghanistan). Soldiers have access to e-learning and national testing facilities. A large number of soldiers make use of this provision, success rates are high, and all provision is subject to robust quality assurance. The RN has extensive education provision on board ship, and the delivery of English and maths on board is widespread and well publicised. Concerns expressed by senior staff about low success rate in English and maths GCSE courses suggest that insufficient measures were previously put in place to assure the quality of delivery, and the RN is taking steps to ensure that the quality of teaching will in future meet the high standards expected by the Service.

### Views of Service personnel

Across the three qualitative samples, there is a common pattern to the trainees' attitudes towards literacy and numeracy provision. Initially, the majority were discomforted by a return to 'classroom learning', many reporting that in joining up they had hoped to avoid subjects such as English and maths, but an understanding of the reasons for taking literacy and numeracy courses increased as training progressed.

Although many recruits were positive about their literacy and numeracy achievements, few could recall the subjects taken or the level of qualifications gained. For instance, although all of the RAF Regimental Gunners took an apprenticeship in Public Services while they were at RAF Honington, none could recall the details, and several RN ratings were convinced that they had never taken an apprenticeship. This suggests that, whilst provision was often viewed favourably, particularly in the RN and RAF, the qualifications themselves were not thought of as the most important of achievements gained during

training. Perhaps it is the training rather than the qualification to which the trainees and their line managers attach most importance?

Line managers across the three Services were largely of the view that literacy and numeracy represent core enabling skills for all aspiring sailors, soldiers and airmen<sup>63</sup>. Most Officers and NCOs acknowledged the need for personnel to have sound levels of literacy and numeracy – in particular, speaking and listening. There was also broad agreement that for many Service personnel, literacy and numeracy skills were either learned or reinforced in their day-to-day job roles. This in itself illustrates the central part played in Service life by literacy and numeracy skills.

### **Army**

By the third year of the study, seven of the 14 members of the Army qualitative sample reported that the literacy and numeracy provision received in Phase 1 and 2 training had been useful, and that the Basic and Key Skills classes had improved their confidence. The provision was judged useful not only in view of the qualifications gained, but also because it helped them to carry out their roles and duties more effectively.

Almost all trainees respected their educational tutors and military trainers, and they appreciated being treated like adults. Small groups were found to be conducive to learning, and there was a culture of working hard and an expectation that learners will succeed in gaining their qualifications.

A clear majority of Army trainees in the quantitative study were satisfied with literacy and numeracy provision during Phase 1 (70%) and Phase 2 (67%), and only 6% of trainees reported dissatisfaction. Over half of trainees thought that their classes were relevant to their job in the Army. Two thirds of trainees reported that classes were helpful for Phase 2 trade training, and 85% of recruits reported that Phase 2 literacy and numeracy training (within their apprenticeships) was helpful for their work in the Field Army. Around half of trainees reported that classes had a positive impact on their reading (52%) and writing (49%), as well as on their confidence and their desire to learn further. Almost two thirds of trainees (63%) reported that their numeracy classes had helped to improve their skills.

### **RN**

All the trainees in the sample undertook Key Skills at Maritime Warfare School (MWS), CTCRM, or HMS Raleigh. None failed to attain the L1 standards needed to gain their apprenticeship and several went on to achieve L2 awards. All paid tribute to the flexibility of Key Skills staff, both in allowing those who made rapid progress to finish ahead of time, and for the patience and perseverance shown towards those who struggled. All ratings in the RN accepted the requirement for good levels of literacy and numeracy, they understood the link between literacy, numeracy and promotion, and most were positive about gaining further qualifications. There is a widespread view in the RN that good levels of literacy and numeracy are a normal requirement for daily life.

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<sup>63</sup> The term 'airman'/'airmen' is used throughout the report as a generic name that includes both men and women.

**RAF**

Half of the airman in the RAF sample thought that their literacy and numeracy provision had been positive and useful for their professional and personal lives, and they singled out the confidence gained in speaking by giving presentations as part of Key Skills classes. Indeed, trainees in both the RN and RAF were especially positive about the effects of having to make presentations in Key Skills and other training. On the other hand, about half of the RAF sample reported that the provision had not helped them in their military or personal life in any obvious way.

Five members of the qualitative sample, all of whom were dyslexic, expressed pride at having gained a qualification. However, five members were more equivocal and three considered the gaining of a qualification with indifference.

Eleven airmen considered that their literacy and numeracy skills had improved during their time in the RAF, although only one put this down to educational provision. Most attributed any development in their literacy and numeracy skills to their use and practice in the course of undertaking their roles and duties. This suggests, at least for these trainees, that the most effective means of improving basic skills happens 'on the job'. If so, it should be added that learning 'on the job' may itself be enhanced as a result of previously acquiring skills in the context of formal provision.

## 3.6 Qualification, promotion and workplace requirements

### Introduction

Promotion in the Services is based on meeting (or demonstrating the potential to meet) the knowledge, skill and aptitude requirements for undertaking the duties of a specific rank and associated role(s). This includes appropriate literacy and numeracy skills. For the Army and RN, holding literacy and numeracy qualifications is a pre-requisite for promotion to Junior Non-Commissioned Officer (NCO), Senior Non Commissioned Officer (SNCO) and Warrant Officer (WO) ranks, a requirement that has not previously applied to the RAF<sup>64</sup>. This is permissible within the overarching Armed Forces Literacy and Numeracy Policy and a significant point of comparison between the Services.

### Main findings

Linking literacy and numeracy qualifications to promotion acts as a significant and effective incentive for trainees to achieve those qualifications. It also encourages line managers to support recruits in pursuing these and further literacy and numeracy qualifications.

Although there are similarities between the skills profiles of recruits in the RN and the RAF, there are significant differences in their approaches to promotion. Whilst it is essential to understand the different contexts in which the RN and the RAF operate, and any corresponding differences in the criteria for promotion, there are lessons to be learned from a comparison of the effects of their respective approaches.

The Wolf Report regards the attainment of GCSE A\*-C in maths and English as fundamental to employment and education prospects. By implication, the Report presents a significant challenge to all major employers, including the Services, in respect of the qualifications and literacy and numeracy levels their employees are – or should be - expected to attain. However, the appropriateness of seeking full GCSE A\*-C qualifications in-Service to satisfy literacy and numeracy requirements is likely to be challenged by the Services; this issue merits a more substantial assessment than it is possible to provide here.

### Linking qualifications to promotion

In the RN and the Army the requirement to hold literacy and numeracy qualifications in order to become eligible for promotion is widely understood by trainees, their line managers and the chains of command. The requirement provides an effective incentive for trainees to gain these qualifications and for line managers to promote the importance of improving literacy and numeracy skills.

Although understanding of promotion criteria in the Army, and of the necessity of obtaining qualifications prior to promotion, was widespread, this study revealed that the details were not always so well understood. While 94% of soldiers in the quantitative sample

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<sup>64</sup> The RAF is moving towards the requirement that personnel are required to have a minimum L2 literacy and numeracy qualification before joining the Junior Management Leadership Course (JMLC). Successful completion of the JMLC is a requirement for promotion to JNCO.

understood that they required literacy or numeracy qualifications if they were to be promoted, 11% thought that EL3 qualifications were required for promotion to the rank of Corporal, 27% correctly thought the level required was L1 and 62% believed it to be L2.

In the RN qualitative sample, both trainees and line managers had a good understanding of the qualification requirements, and most of the sample group who did not hold L2 qualifications expressed a desire to attain them sooner rather than later. All interviewees were aware that literacy and numeracy qualifications were offered by the Learning Centres and that there were no financial costs to pursuing these qualifications. When visiting ships the NETS officers systematically identified personnel in need of qualifications for promotion and staff at Learning Centres were of the view that staff were motivated by the need to acquire qualifications.

In general the RAF has not used the attainment of literacy and numeracy qualifications as a criterion for promotion<sup>65</sup> and both the airmen and their line managers in the study sample were less concerned about gaining Basic and Key Skills qualifications than personnel in the other Services. This may have represented a missed opportunity to motivate personnel to gain further qualifications. However, the number of trainees initially operating at Entry Level is very small (1% in literacy and 3% in numeracy). Moreover, the emphasis in the RAF is on the psychometric testing of individuals' aptitudes in the context of assessing their ability to perform at the level required by their role and rank. It has been the RAF position that, if qualifications are treated as a necessary condition of promotion, this could lead to the under-utilisation of some personnel; though lacking qualifications, they may possess the attributes and experience required by the role or rank for which they are to be considered. The tests, therefore, are designed to identify recruits' potential to perform at the operational level required, whether or not they possess the qualifications that would otherwise be expected of them.

### Qualifications expected within 3 and 8 years of joining the Services

A principal finding from the Wolf Report<sup>66</sup> is that English and maths GCSE at grades A\*-C are fundamental to people's employment and education prospects<sup>67</sup>. The government has accepted<sup>68</sup> Wolf's recommendation that learners who at age 16 do not have GCSE A\*-C in English and maths should be required to pursue a course which either leads directly to these qualifications or provides significant progress towards achieving them. Neither Key Skills nor the Adult Basic Skills Certificates should be considered as suitable qualifications in this context, and consideration should be given to introducing a comparable requirement into apprenticeship frameworks<sup>69</sup>.

Wolf raises the question of what represents a sound level of literacy and numeracy skills, and, by implication, the level of skills that employers ought to regard as a basic minimum for their employees to achieve. The Services set out their own evidence of the suitability of the requirements in the Armed Forces Literacy and Numeracy Policy; for example, the L1 and L2 requirements in the Army stem from an extensive mapping of literacy and

<sup>65</sup> But see Ch 2, fn. 14. Links between qualifications and promotions will be implemented in the RAF from April 2012.

<sup>66</sup> Wolf, A. (2011), *Review of Vocational Education – The Wolf Report*. London: Department for Education

<sup>67</sup> Op. cit.: Executive Summary.

<sup>68</sup> Department for Education (2011) *Wolf Review of Vocational Education: Government Response*. London: Department for Education.

<sup>69</sup> Op. cit.: Recommendation 19.

numeracy levels to the generic skills and tasks expected of Junior and Senior NCOs. This was undertaken with a focus on 'functionality' and the application to real-life scenarios. Moreover, the wider scope of the GCSEs lie beyond the Army requirements for specific jobs; therefore the Armed Forces are planning to introduce Functional English and maths qualifications for its Service personnel by September 2012.

This study did not find evidence of the inappropriateness of the three and eight year requirements, beyond the uncorroborated testimony of a small number of line managers and senior officers across the Services. Nevertheless, as noted in Chapter 2, the Strategic Defence and Security Review refers to the need for personnel who are trained and educated to operate in an increasingly complex environment<sup>70</sup>. In this context, the Wolf Report's recommendations might serve to encourage the Armed Forces, along with other large employers, to review qualification thresholds.

### Gaining further Literacy and Numeracy Qualifications

Twelve of the 14 soldiers in the Army qualitative sample reported that they wanted to improve particular areas of their basic skills: numeracy was identified by 10, writing by six and reading by three soldiers, with the prospect of promotion given as the main reason to improve. Ten soldiers reported that they would be happy to take a GCSE, if required.

The RN's positive attitude towards education made an impact on the trainee group. Most were interested in attaining further literacy and numeracy qualifications, and other academic and non-academic qualifications. Not one member of the group questioned the reasons for undertaking further literacy or numeracy qualifications. To these trainees it was obvious that they required the best possible literacy and numeracy skills for a job in the modern Navy.

During their early time in productive service, thoughts of gaining additional literacy and numeracy skills or educational qualifications were a low priority for the airmen in the RAF sample, particularly in the absence of any requirement to gain a L2 qualification for promotion. However, whilst none of the airmen were currently looking to take any further educational qualifications, all 13 wanted to gain professional qualifications related to their trade and saw these qualifications as a route to becoming more competent and effective in that context. This view was shared by their line managers.

Ten airmen stated that they would like to gain more and higher literacy and numeracy qualifications if the opportunity arose later in their careers. Eight reported that would like to gain a GCSE in both English and maths. However, doubts were expressed as to whether a GCSE course could be fitted into the intensive training pipeline.

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<sup>70</sup> Op.cit.: 17.

## 3.7 Changes in levels of literacy and numeracy

### Introduction

The study tracked changes in the levels of literacy and numeracy amongst recruits, starting with evidence from their Initial Assessment (IA) on first joining the Services, and comparing this with the levels attained at later stages of the study. Quantitative analysis allowed for a detailed examination of the progress of Army recruits, and this is therefore given prominence.

### Main findings

Over the course of the study, levels of literacy and numeracy amongst the sampled recruits significantly improved, and there were positive changes in how they reported on their skills and difficulties. Quantitative evidence from the Army sample shows that the largest improvements in numeracy levels were found amongst trainees whose initial levels were lowest.

The rate of change was not always in one direction. The numeracy self evaluation amongst Army trainees improved between Stages 1 and 2 of the study before declining in Stage 3, by which time trainees were testing their skills in the Field Army. This illustrates how the results of tests are often sensitive to context, and confirms the importance, for the Services and other employers, of assessments that will prove accurate and reliable in practical and job related contexts.

It remains unclear how far improvements in literacy and numeracy are the product of educational provision, as distinct from other features of life in the Services. We were, in addition, not able to compare the progress of military cohorts with similar cohorts in civilian life.

Nevertheless, the evidence clearly suggests that the experience of serving in the Armed Forces makes a distinctive and positive contribution to improving the literacy and numeracy skills of its personnel.

A commonly reported benefit was the confidence to speak with and in front of a wide range of personnel. Irrespective of how far these developments are the direct result of literacy and numeracy provision, they are significant examples of positive developments that fully accord with the objectives of the Armed Forces Literacy and Numeracy policy.

Trainees reported on the 'wider' benefits of provision, such as writing a letter, completing a form, or reading a book for pleasure. This underlines the importance of practices such as these, and their contribution to improving performance in more formal professional and examination settings.

### Quantitative evidence

There was a significant improvement in numeracy scores over the three stages of the quantitative study, and recruits with lower initial skills experienced the largest improvement. Those who initially wanted to improve their skills, and those who attended numeracy provision in Phase 1, also showed a significant increase in their skills

In literacy, those who started with higher levels tended to show a higher level of improvement. Those unsure about their reading skills showed a greater improvement rate compared to those who reported that their skills were better than those of their peers.

We were not able, as a result of quantitative analysis, to distinguish the impact of provision from other features of training and life in the Services. In addition, the organisation and delivery of provision varies across training units, and some training units were associated with larger increases in skills than others. There is an important future study to be undertaken into the impact of *high quality provision* on the literacy and numeracy skills of recruits.

The largest rise in confidence in reading occurred amongst the higher literacy skills groups (L1 and L2), and the largest positive change in writing occurred in the lowest skills groups (EL1 or EL2).

By the time they had reached the Field Army, the majority of respondents at Stage 3 reported that they were 'very confident' (20%) or 'fairly confident' (57%) in their maths and number skills, although one fifth (19%) were still 'not very confident' and 4% were 'not at all confident'. It is possible that, once in the Field Army, soldiers were placed in conditions that made new and larger demands on their numeracy, prompting some loss of previous levels of confidence.

### ***Difficulties with literacy and numeracy***

Trainees were asked about any specific difficulties they had with reading, writing or number tasks. Figures from national survey data consistently show that relatively few adults report difficulties in these areas<sup>71</sup>. In this study 31% reported at least one reading difficulty, 60% at least one writing difficulty and 38% at least one problem with numbers and mathematical calculations.

Overall 73% of all trainees reported difficulties with at least one task in reading or writing or numeracy; 60% reported difficulties with writing, and with spelling in particular. During Phase 2 training, 23 of 53 Army trainees who filled in their Arm or Service as 'infantry' on a questionnaire spelt the word incorrectly.

Almost one third of trainees reported at least one reading difficulty. Although there were no significant differences in the number of reported difficulties over the study as a whole, there was a definite improvement in the self-evaluation amongst those with the lowest level of literacy at Initial Assessment. More than half of all trainees reported at least one writing difficulty, and there was a slight decrease in the number of trainees who reported writing difficulties between Stage 1 and Stage 2. As with reading, the largest improvement was found among those with the lower levels of literacy.

Over one third of trainees experienced at least one problem with numeracy. The self-evaluation of recruits improved between Stages 1 and 2, but decreased at Stage 3. We can speculate that, after receiving training in Phases 1 and 2, trainees saw their skills

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<sup>71</sup> See for example Bynner, J. and Parsons, S. (2006) *New Light on Literacy and Numeracy: Results of the literacy and numeracy assessment in the age 34 follow up of the 1970 British Cohort Study (BCS70)*. London: National Research and Development Centre for adult literacy and numeracy.

improve by comparison with their starting point, but they subsequently lowered their assessment having tested and applied their skills in the Field Army.

By the third and final stage of study, 18% of soldiers reported that they needed to improve their reading, 31% their writing and 43% their maths. The group most likely to want to improve their literacy or numeracy were trainees initially assessed at EL1 or EL2.

### Qualitative evidence

Evidence from the three Services highlighted the positive effects of provision on literacy and numeracy skills and on self-confidence, including the confidence to communicate and succeed in training. Seven soldiers in the Army during Stage 3 specifically mentioned how the literacy and numeracy classes had improved their confidence in general, which partly came from the gratification of achieving a qualification<sup>72</sup> and proving this to oneself and to close relatives and friends. Evidence from the Army sample suggests that other 'softer' benefits may accrue, such as raising self-esteem, gaining of a sense of purpose, learning to collaborate and work cooperatively together as part of a team, generating a work ethic, enjoyment of studying and raising aspirations. Two soldiers specifically spoke of how literacy and numeracy classes had raised their aspirations and ignited their interest in learning:

*I really didn't care about anything at school, just wouldn't study for my exams, but then, when I got to Harrogate, it made me realise right, I need to do it, if I want this so badly I need to do it.*

In Stage 3, half (seven) of the soldiers thought that the literacy and numeracy provision they had received in Phases 1 and 2 had been useful to them in their professional lives, not only because of the national qualifications they had gained, but the skills they had learned had helped them carry out their roles and duties more effectively. It is conspicuous that this number included all three of the soldiers from AFC(H). One soldier claimed he had learned far more in his classes at ATFC(W) than he had at school and these skills had been useful to him in his Army career:

In the RAF, trainees most frequently mentioned an improvement in confidence in talking in front of large groups and communicating with a wide range of personnel. These speaking and listening skills have also been shown to be an essential component of operational effectiveness and a core skill for most job roles in the RAF.

In the RN study, evidence from older trainees demonstrated the benefits brought by 'refresher' literacy and numeracy provision to those whose skills had declined or were lost as a result of being out of the formal education system for many years. Improvements for RAF trainees took the form of rising skill levels and the new and more effective approaches to learning that trainees had been taught. Trainees across the Services also reported on the 'wider' benefits of provision, and using their literacy skills in their personal lives – for example, in writing home to a family member. Authoritative research in the United States<sup>73</sup> demonstrates the importance of the impact of literacy provision not only on

<sup>72</sup> It also helped them become more employable when they eventually left the organisation.

<sup>73</sup> See, for example, Reder, S. (2011) 'Scaling up and moving in: connecting social practices views to policies and programmes in adult education', *Literacy and Numeracy Studies*, 16.2 & 17.1.

the ability to perform in tests but also on every-day practices such as writing a letter, completing a form, or reading a book for pleasure. Improvements in practices such as these can also subsequently contribute to an improvement in performance in more formal professional and examination settings.

Despite finding evidence of significant improvements in trainees' literacy and numeracy levels, these were not always associated with educational provision in the minds of the trainees themselves. Rather, they tended to ascribe the improvement to using and practising literacy and numeracy skills in practical contexts; for example, of the 11 members of the RAF sample who reported improvements in their skills only one put this down to educational provision. However, it may be that the use and practise of skills in practical contexts is often only as effective as it is because trainees have previously undertaken formal literacy and numeracy provision. Evidence from the United States has repeatedly drawn attention to the relationship between formal literacy and numeracy education and training, on the one hand, and, on the other, the informal use and practice of skills outside the classroom. The evidence suggests that training can increase the (likelihood of) benefits from informal use and practice, which, in turn, can promote levels of literacy and numeracy as assessed in formal tests. This is a significant area for further research<sup>74</sup>.

Further, not all trainees thought that their skills needed to or had improved: this included several RN ratings who considered that they were able to cope and carry out their roles and duties effectively despite their skills deficiencies, and RAF trainees who did not report using their reading, writing and maths to any great extent

From the RN, there was considerable anecdotal evidence from senior officers that the POs who are qualified to L2 literacy and numeracy perform better than those who qualified under NAMET. This suggests that the LANTERN framework provides for a higher skill level than NAMET and that improving those skills has an impact on the work of a PO. Commanding Officers (COs) on board ship also provided favourable feedback to the NETS service about the impact of their literacy and numeracy provision. As well as providing the qualifications ratings need for promotion, it was reported that there is a benefit to the ship's company which can be seen in terms of boosting morale and professional development.

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<sup>74</sup> See, for example, Reder, S. (2008) The development of literacy and numeracy in adult life. In: Reder, S. and Bynner, J. (eds.) *Tracking Adult Literacy and Numeracy Skills: Findings from Longitudinal Research*. New York: Routledge.

## 3.8 Operational Effectiveness

### Introduction

Literacy and numeracy provision is designed to ‘enhance the ability of Service personnel to assimilate training more effectively [and] to cope more readily with the demands of their specific roles’<sup>75</sup>; in other words, it should make a contribution to ‘operational effectiveness’. This section describes how respondents in the study understood this term, and how they assessed the impact of literacy and numeracy on their own operational effectiveness.

### Main findings

The impact of the factors making up operational effectiveness was found to vary between and within trades. Nevertheless, literacy and numeracy were regarded as necessary for operational effectiveness by the vast majority of personnel interviewed. This is evidence of the need for and importance of the Armed Forces Literacy and Numeracy Policy.

All trainees are required to convey and absorb information swiftly and accurately. This explains why, before all other literacy and numeracy skills, speaking and listening skills were consistently rated as essential by all personnel.

Neither low levels of literacy and numeracy, nor the presence of a SpLD, were judged as an impediment to operational effectiveness amongst the more junior personnel (a view endorsed by line managers). This is evidence of significant levels of support for trainees provided by the Services.

Active service (away from home base and/or on operational deployment) may require the performance of tasks demanding higher level skills in circumstances when support from other team members to complete tasks or provide additional, individual supervision is less readily on offer. In these cases there is a question whether and how far personnel can be said to be operationally effective in the absence of additional support they have received previously in their home base.

### Defining operational effectiveness

The basic definition of operational effectiveness agreed with participating Service personnel was: ‘the ability to do your job, wherever you are – in training or on active service’.

The evidence suggests that there is a basic minimum standard for every trade and rank that any serviceman or woman is required to reach in order to be considered operationally effective. Beyond this, there is scope for this capacity to be enhanced with additional

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<sup>75</sup> *Armed Forces Literacy and Numeracy Policy* (2010), Section 1.

training and experience, allowing personnel to further improve their effectiveness as soldiers, airmen or ratings.

Following further discussion with respondents and using evidence from the preliminary stages of the study, the concept of operational effectiveness was refined so as to include a series of attributes, qualities and skills some of which related to literacy and numeracy and some of which did not:

- General attributes and skills: physical fitness; mental toughness; perseverance; resilience; confidence in own abilities; determination to succeed; passed trade training; experienced in own trade; leadership; flexibility and quick thinking; commitment to team; quick to learn; working as part of a team.
- Literacy and numeracy skills: writing; reading; maths/numbers; mental arithmetic; computing; confidence in talking to all ranks; talking in front of groups; listening; understanding orders and instructions; giving and passing on orders and instructions.

### Literacy, numeracy and operational effectiveness

Almost all trainees considered themselves to be operationally effective, a verdict endorsed by their line managers. In general, SpLDs were not considered to impede operational effectiveness, and the evidence tends to confirm this, certainly in respect of the more junior ranks.

Although the impact of all the factors making up operational effectiveness was found to vary between and within trades, throughout the study literacy and numeracy skills were regarded as necessary for operational effectiveness by the vast majority of trainees. Amongst the quantitative sample for the Army Study, for example, 98% of trainees were aware of the importance of the ability to read, write and to be numerate from an early stage in their training. Airmen and their line managers in the RAF sample perceived literacy and numeracy skills as having a more important role in operational effectiveness as compared with the other Services, presumably because of the relatively high level of literacy and numeracy skills required by the trades featured in the RAF sample.

Sound speaking and listening skills are of primary importance. For the elements related to literacy and numeracy skills, those judged most important for operational effectiveness across the three Services were: 'being a good listener', 'understanding orders and instructions' and 'being able to talk confidently to all ranks'. Army trainees rated 'competence in listening', and 'understanding orders and instructions' more highly than did trainees in the RN or RAF.

The differences between the Army and the other Services were especially marked in the case of ICT, maths and writing. Army personnel – particularly those from the infantry – did not generally consider reading, writing, maths or ICT as important for operational effectiveness. (This was dependent on trade: Royal Military Police would be likely to highlight writing as important given the report writing tasks expected of them, whilst Military clerks would be expected to highlight the importance of the ICT skills that are necessary to support their role.) Sample members from the RAF rated competence in writing, reading

and maths higher than did the other two Services. Although good literacy and numeracy skills were also seen as being important in the RN, and are evaluated as being more important than in the Army, it was only ICT which scored higher than in the other two Services.

However, the Army evidence is mixed on this issue. Evidence derived from the same set of Army respondents suggests that literacy and numeracy skills are considered to contribute significantly to individuals' operational effectiveness. At other points in the research, rather than ranking basic skills against a set of competing attributes, respondents were asked to consider on their own merits the likely contribution of literacy and numeracy skills to professional development and operational effectiveness. A respondent may both regard literacy and numeracy skills as less important than attributes unrelated to literacy and numeracy skills, and at the same time consider literacy and numeracy skills as important in their own right. The evidence from the report as a whole suggests that this represents the position of many respondents. There is also some suggestion that personnel may under-estimate the importance of literacy and numeracy, either by not recognising these skills for what they are, or by not understanding the role of literacy and numeracy in acquiring the attributes they *do* consider as important for operational effectiveness. Thinking quickly and working as part of a team, for example, both often require literacy or numeracy-related attributes<sup>76</sup>.

In the RN study, NCOs identified persistence and resilience, and ICT and maths skills as more important than did the junior ratings, who identified 'talking in front of groups' and 'being a good listener' as being of greater value. All agreed on the need to work as a team and to understand orders and instructions. Most literacy and numeracy skills are essential for chefs, writers, Communication and Information Systems and Seaman specialists. Different trades have different priorities: talking in front of groups was not a major consideration for Chefs and writers, who were also less concerned with having to pass on orders or instructions.

The similarity of responses from interviewees from the Army infantry, the Royal Marines and the RAF Gunners suggests that junior ranks with a combat fighting role regard reading, writing and ICT as less important for operational effectiveness than do those in other roles in the Forces.

A few line managers in the Infantry and RAF Regiment were prepared to consider personnel as operationally effective despite poor levels of reading and writing, and struggling to carry out basic calculations. However, whilst these individuals are operationally effective when assigned to tasks that do not require these skills, or when support from peers and line managers is available, active service (away from home base or deployed on operations) may require the performance of tasks demanding higher level skills in circumstances when support from other team members to complete tasks or provide additional, individual supervision is less readily on offer. In these cases there is a question whether and how far these junior personnel can be said to be operationally effective in the absence of the support they have received previously back at home base. In addition, when support *has to be* provided on a consistent basis, it can sometimes come at the expense of overall workplace efficiency. Some SNCOs report this effect in cases

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<sup>76</sup> See Bynner and Parsons (2007) *op. cit.*

where units include individuals who require frequent and time consuming support for simple and routine operations. In such cases there is likely to be a (limited) trade off between unit efficiency and the provision of effective support for recruits with low level skills. This further implies that higher levels of literacy and numeracy skills enhance the utility of recruits for the Services.

### **Difficulties with literacy and numeracy skills: all Services**

In general, interviewees did not consider themselves hampered in their capacity to be operationally effective in their specific roles by a lack of good literacy and numeracy skills. Along with their line managers, trainees almost always reported that their literacy and numeracy skills had not compromised their operational effectiveness. This is evidence of the significant levels of support and training that trainees with low levels of skills received in each of the Services.

As suggested elsewhere, however, there is a possibility that this assessment will have to be revised following promotion, when personnel are required to undertake more complex and higher level tasks and responsibilities, including more demands on their reading and writing. If that is how it turns out, then there is a sense in which a lack of basic skills does matter at the point at which respondents are reporting no effect on operational effectiveness. For whilst no effect is apparent at the time of reporting, those same levels of basic skills have the potential to impede progress towards promotion and operational effectiveness at a later stage. In other words, a lack of good literacy and numeracy skills may not matter so much now, but, if not improved upon, they may have an impact on operational effectiveness at some point in the future as their career progresses, on their own career and on the effectiveness of the unit.

## 3.9 Literacy, numeracy and job roles

### Introduction

This section examines the role and importance of literacy, numeracy and ICT skills in a selection of job roles in each of the Services.

The qualitative sample groups were selected from those having poor literacy and numeracy skills on entry, and therefore only a restricted range of trades and job roles were open to these recruits. It is reasonable to suppose that the use of literacy and numeracy skills in some of the trades and job roles not covered in this study will be more frequent and at higher levels. What follows, therefore, describes the *minimum* level of literacy and numeracy required by Service personnel in the Services as a whole.

### Main findings

Trainees with sound literacy and numeracy skills are more flexible in the roles they can undertake and are able to work more effectively without supervision. This suggests that improving levels of literacy and numeracy will improve the employability of recruits within the Services.

Sound levels of literacy and numeracy are likely to be essential for most Service roles; hence, for those trainees not yet operating at these levels, improving literacy and numeracy skills should remain as a central aspect of their education.

ICT is increasingly a component of a wide range of job roles in all Services. As senior officers in all Services report that the ICT requirement for all trades will increase in the future, consideration needs to be given by all Services on how they may be able to develop digital literacy skills for all their recruits.

Across all Services and all ranks and respondents included in this study, speaking and listening were regarded as essential for each and every job role. This both underlines the central importance of clear, reliable and accurate communication in the Services and suggests the importance of reviewing the effectiveness of provision designed to support speaking and listening skills.

The study provides further evidence that respondents – in this case, both trainees and line managers – often under-estimate or misrepresent their use of and reliance on literacy and numeracy skills. It is, therefore, reasonable to conclude that the use of literacy and numeracy skills by personnel in relation to their job roles is under-reported in this study. This suggests the importance of raising awareness on the part of trainees and line managers of the importance of literacy and numeracy for any career in the Services. Identifying and re-enforcing the literacy and numeracy skills demands in specific jobs/trades is an important part of any awareness-raising exercise.

### Overview

Trainees in any Service who are competent in speaking, listening, reading, writing, maths and ICT are generally more flexible in the roles they can undertake and are able to work

more effectively without supervision. In short, higher levels of literacy and numeracy can improve the employability of recruits within the Services.

Recruits from the qualitative samples were asked to rank skills according to whether they were essential (constant use), important (general use), not very important (intermittent use) or unimportant (rare use)<sup>77</sup>.

Without correcting for misrepresentation by respondents, reading, writing, maths and ICT were considered as highly important for at least half of the trades examined, and speaking and listening were considered as highly important for every role without exception. But most trainees are likely to be promoted to ranks that make greater demands on their literacy and numeracy skills than those faced when taking part in this study. It is then reasonable to conclude that secure and competent literacy and numeracy are likely to be essential for most Service roles. In that case, for those who are not yet operating at these levels, improving literacy and numeracy skills should be regarded as a central aspect of their education. This, indeed, reflects the Armed Forces Literacy and Numeracy Policy on standards and promotion.

As mentioned above, respondents also tend to under-estimate their use of and reliance on literacy and numeracy skills<sup>78</sup>. Individuals do not always recognise that they are using literacy and numeracy skills, or that these skills are either related to or a precondition of the skills that they *are* aware of using. Not all those interviewed would recognise the numeracy and literacy tasks called upon when reading and using a spreadsheet, whilst some would be aware of the literacy tasks and others aware only of the numeracy involved. Lack of awareness, therefore, extends not only to the use of literacy and numeracy skills but also to their relatedness, and this applies both to individuals who are effortlessly able to use these skills and therefore do not think of them as skills worth commenting upon, and to those with literacy and numeracy needs who are either reluctant to admit to the scale of need, or who have developed compensatory strategies to compensate for the skills need. For these reasons, and as a general rule, individuals are liable to misrepresent or under-estimate their use of literacy and numeracy skills<sup>79</sup>.

## Comparison across the Services

Speaking and listening were the only skills regarded as essential in all trades by the Army sample. Reading was rated as important by all trades other than the Infantry, and maths was rated as not very important or unimportant by members of four of the five trades.

Speaking, listening and reading were rated as important for every RN job role; most of the job roles also required good levels of writing and ICT skills, but only half of the branches or specialisations investigated required good competencies in maths or numeracy.

Speaking and listening were the only skills regarded as essential or important by recruits in all trades in the RAF, whilst reading and writing were regarded as not very important by staff in four trades.

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<sup>77</sup> In the RN interviewees gave examples of the ways in which each of the skills was used in their job roles.

<sup>78</sup> Bynner and Parsons (2007) *op. cit.*

<sup>79</sup> *Ibid.*

### **Speaking**

Interviewees from all trades considered speaking skills as either essential or important to their work. Speaking tasks included speaking clearly and concisely to all ranks, accurately disseminating information, delivering presentations and enabling clear communication. Not a single interviewee regarded speaking as anything other than as essential to the skills required by the rating, soldier or airman.

### **Listening**

As with speaking, not one of the trades regarded listening as anything other than a crucial skill – either essential or important for job roles. For many trades the essential element is to be able to listen to and rapidly understand an order or instruction. For personnel in all Services working in a communications role, high-level listening skills are essential; it is a challenging and complex demand to listen to several different circuits while also ensuring that other NCOs or officers are aware of everything that is communicated. Many line managers rated listening as the most important skills, more important even than speaking.

### **Reading**

Reading was considered as essential or important in two thirds of job roles. It was not identified as essential by those engaged in more directly fighting roles; Marines, infantry and gunners did not regard reading as particularly important and seaman specialists also considered reading less important than many other attributes. Typical examples of how reading was used in trade roles included being able to understand and interpret orders and signals, documentation, manuals and communication logs.

### **Writing**

Writing was regarded as important for fewer roles than speaking and listening. Chefs, writers, warfare specialists (RN), medical staff and RAF police all regarded writing as important for their trade. Most uses of writing arise from keeping logs of communication, making notes of interviews and being able to write emails which will be read by all ranks.

### **Maths**

Maths was considered as important for the same number of trades as writing. While most RAF job roles gave importance to maths, only the Royal Artillery in the Army considered maths as important. Unlike the infantry, the Marines judged maths as important, particularly the mental arithmetic used for keeping track of supplies and ammunition. Maths was required for ordering supplies, mass catering and calculations concerning range, speed and distance.

### **ICT**

A wide variety of ICT skills are required by modern Servicemen and women. A basic level of ICT, or 'digital literacy', is needed to participate in e-learning and training systems and to maintain administrative detail on the Joint Personnel Administration system (JPA). In addition, many personnel require ICT skills to support their job role, and it is these who were most likely to identify ICT as important. Sample trainees from most RAF (ground) trades regarded ICT as important, as did about half of the RN and Army roles (outside the infantry and Royal Armoured Corps (RAC)). ICT tasks arise in relation to using spreadsheets (for stock control, for example), and having knowledge of bespoke military systems, such as the RN NavyStar and Combat Management systems. Senior officers in

all Services report that the ICT requirement for all trades will increase in the future, and that ICT will become an increasingly important skill for the modern Armed Forces.

## 3.10 Literacy and numeracy skills and career progression

### Introduction

The study explored the role and impact of literacy and numeracy skills in relation to the career progression of trainees. One point that emerges is that the value of good literacy and numeracy skills increases as individuals are given higher levels of responsibility; in other words, the impact of poor literacy and numeracy grows with increasing seniority. It is important to acknowledge the significant levels of support provided by the Services to those who need it; nevertheless, in the longer term at least levels of literacy and numeracy skills are likely to have a significant impact on trainees' subsequent careers in the Services.

### Main findings

Sample members were rarely considered to be hampered in their capacity to be operationally effective during the earliest stages of their careers. This is, once again, evidence of the extensive support and training that recruits with low levels of literacy and numeracy skills receive in the Services.

However, there was widespread agreement amongst line managers and officers interviewed in all Services that the demands on literacy and numeracy become more exacting following a first promotion. With increasing seniority, and in almost all cases – there will always be exceptions – low levels of basic skills or a severe SpLD will exert a larger influence on the capacity to be operationally effective and to progress through the ranks.

In general, and from a policy standpoint, it is therefore reasonable to regard sound levels of literacy and numeracy as enabling skills that assist staff take full advantage of training and on-job experience and so support their career.

### Views from sample members

All trainees in the qualitative sample were asked for their assessment of how their career was progressing. It was notable both how positive they were, and that across the three Services, line managers were equally or even more positive than the trainees themselves. Twenty-five of 41 trainees in the combined sample at Stage 3 thought that their career was going very well or better; 11 thought it was OK or 'on track'; and five considered themselves poor or falling behind. In two of these five cases ill-health or injury was the main reason for this assessment. As far as this sample is concerned, therefore, and keeping in mind the level of support that trainees received, it would appear that low initial levels of literacy and numeracy skills did not represent an impediment during the early stages of their careers in the Services.

The principal challenge for those with poor reading, writing and maths is likely to arise following promotion. In the RAF, for example, most line managers interviewed reported that the rank of Corporal represented a point at which the need for good literacy and numeracy skills became particularly evident. The challenge for the Services is to ensure that staff with a profile similar to those in the sample group continue to receive the training and support which will enable them to perform their roles effectively. Whilst all Services

are fully committed to education and training, the RN in particular have instilled in all recruits, and not only during the early stages of training, the value and importance of education.

Across the Services, only three of the 41 recruits reported that they wanted to leave the Service at their first engagement break point after four years' service. On the other hand, most of the rest were committed to long stays with their Service<sup>80</sup>. In the Army there were higher retention rates for those with GCSEs grade A\*-C in maths and English, and those with higher numeracy and literacy skills assessed at Stage 1. It would be worth pursuing further the relationship between levels of literacy and numeracy and length of commitment to the Services.

In the Army sample, most of the soldiers (94%) knew that they needed to have particular literacy or numeracy qualifications if they wanted to be promoted in the Army; however in Stage 3 just over 25% actually knew what that level was.

Thirteen of the 14 soldiers in the qualitative sample reported that literacy and numeracy skills would become more important as they gained promotion, and most thought that this would occur at the rank of Lance Corporal. Line managers considered soldiers with higher levels of basic skills as more flexible and employable within the Army, and that good literacy and numeracy skills enhance a soldier's trainability.

Of the 12 line managers who commented on the effect of literacy and numeracy skills on soldiers' career progression, six reported that it played a large part, including in the early part of the career.

Recruits with higher levels of literacy and numeracy were more likely to want to stay in the Army, and trainees with higher levels of numeracy and literacy were more likely to aspire to gain a commission by the end of their Army career.

No recruits in the RN sample thought that their level of literacy and numeracy skills had impeded their ability to do their job, and no line manager thought that the current skills level of any trainee was a barrier to their immediate progression.

There was agreement amongst sample members that, once personnel reach the rank of Leading Hand, the requirement for writing and 'paperwork' increases enormously. Contributing to appraisals as well as reading and writing reports is demanded even at this first promotion.

All 11 line managers in the RAF sample reported that literacy and numeracy skills were an important part of an overall set of skills for airmen making a career in the RAF. Nine airmen reported that their literacy and numeracy skills had had no effect thus far on their careers, in the sense that they considered that their skills were already at a level that was sufficient for their roles and responsibilities. However, three airmen with severe dyslexia and weak literacy and numeracy skills were concerned about the effect on their career and promotion prospects.

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<sup>80</sup> For a variety of reasons many of the initial sample had been discharged from the Services or were unable to be contacted for this final stage of research.

Officers and NCOs stressed that good communication skills – and particularly oral communication – were important from the earliest stages and throughout a career in the RAF. An NCO, for example, could lose the respect of those under his command if he were to display poor levels of literacy and numeracy skills.

All airmen asked about the link between literacy, numeracy and promotion reported that literacy and numeracy skills became increasingly important with increasing seniority. This view was shared by line managers, who explained that airmen are then required to assume higher levels of responsibility, to possess good administrative and communication skills, including independent writing, and to undertake a wider range of mathematical calculations

Line managers reported their role as facilitating career development, but also stressed that, in order to make a career in the RAF, the individual has to take the initiative and put themselves forward, including those who need to improve their educational qualifications.

## 3.11 Specific Learning Difficulties (SpLDs)

### Introduction

During this study, all three Services followed the Armed Forces SpLD policy, which encompasses dyslexia, Meares-Irlen syndrome, dyscalculia and dyspraxia. The RAF has recently agreed a specific SpLD policy, the Army only has a Dyslexia policy, while the RN is currently finalising its policy on SpLD.

The overall aim of the Armed Forces policy is that personnel with SpLDs are treated appropriately, and that they are assessed and supported in a coherent and effective way. Line Managers and instructors are responsible for initially directing individuals with possible SpLD needs to a SpLD adviser. Following a full assessment by the adviser, an Individual Learning Plan is drawn up for individuals diagnosed, who should then receive appropriate support.

### Main findings

In line with Armed Forces policy the Services provide appropriate and coherent support to recruits with SpLDs. The RAF in particular provides an effective model of supporting SpLD throughout a serviceman's career.

The Services provide a notable example of how employees can be supported to undertake demanding jobs despite having a SpLD.

Even with the levels of support available in the Services, it is possible for recruits to pass through training without having their SpLD diagnosed, demonstrating how difficult it is for any employer to pick up all cases of SpLD without exception.

The Armed Forces policy states, correctly, that there is no necessary connection between weak literacy and numeracy and having a SpLD. There are clearly cases in which an individual may have a SpLD and high levels of literacy and numeracy, or low levels of literacy and numeracy and no SpLD. But it is unwise to conclude from this that SpLD and literacy and numeracy should *always* be treated as entirely separate; in many cases for example, there is *likely* to be a close relationship between severe dyslexia and dyscalculia on the one hand, and difficulties with literacy and numeracy on the other, a relationship which will have implications for the content and organisation of literacy and numeracy provision.

### SpLD and the sample groups

Sixteen of the 41 trainees in the combined qualitative sample had a SpLD, but in only one case did the trainee's line manager consider that the SpLD had any impact on operational effectiveness. Three trainees with SpLDs had been deployed on active service during which period they performed effectively. It therefore appears that those in the sample with SpLDs were sufficiently supported to ensure that they could enter active service without encountering additional significant difficulties. However, these recruits may find that their SpLD has an impact on their careers at some stage in the future, since all interviewees agreed that demands on reading and writing increase following a first promotion.

Across the Services, the diagnosis of and support for SpLDs is particularly evident during Phase 1 and Phase 2 training. The RAF screens all new entrants for SpLD and every trainee is 'risk assessed' for SpLD in Phase 1 training at HMS Raleigh. However, the RN is discussing the option of redistributing resources to allow more support to personnel with SpLDs during later stages in their career. This continuing support of personnel deserves consideration by all Services, and is already policy in the RAF.

There are some roles, including those in administrative trades, which require a great deal of writing, although this is often carried out on computers using standard Word processing packages. In these cases, it should be possible for most of those with low levels of literacy and numeracy skills (partially) to compensate for any difficulties with the use of tools such as 'Spellcheck'. However, those required to take verbatim notes (such as the RAF police), write communication logs or provide instant notes on IED incidents whilst on active service are all in need of high levels of writing skills, and in some cases these may be more severely compromised by a SpLD.

Most of the sample had not informed their line manager of their SpLD. However, the new RAF policy requires airmen to inform their line managers about any SpLDs, in order that their managers can arrange sufficient support for them. This appears to be a positive development, and one which, if shown to be successful, might be adopted by the other Services.

### Support for SpLDs

Policy statements stress the level of support given to SpLDs, and there is evidence of effective support in each of the three Services. The RAF, in particular, provides an effective model of supporting SpLD. All entrants are screened on arrival in Phase 1 and recruits will be identified as at risk of having a SpLD by a SpLD adviser using the Dyslexia Adult Screening Test. Following this test, and if appropriate, the recruit is referred to a qualified Educational Psychologist, whose responsibility it is formally to diagnose a SpLD. This is an example of a thorough and systematic procedure for identifying and diagnosing SpLDs, leaving the responsibility for a diagnosis with a trained and qualified psychologist. Trainees with SpLDs may also be picked up later during Phase 2 or later in Service by line managers, when the demands of the jobs are such that their coping strategies come under pressure. In that case they will be referred to the relevant Station Training Officer or PLA for a further diagnosis, and if a SpLD is confirmed, provided with extra support.

Support across the Services is varied and based on professional recommendations. In the RM, trainees at CTCRM are provided with guidance on organisation, improving memory, study skills and other methods for combating the effects of SpLDs, and this initiative merits consideration by all three Services.

Several trainees required help from colleagues in order to perform at the required standard. The ethos that encourages peer support is commendable, and it allows personnel with SpLDs to retain operational effectiveness when otherwise they might not. However, the fact remains that operational effectiveness is achieved within limits that include the necessity of assistance. In these cases, whilst SpLDs do not get in the way of operational effectiveness, they do nevertheless place a limit on the ability to act independently and without supervision. Personnel are expected to be able to carry out tasks under operational conditions in the absence of support for a SpLD if and when it would be unrealistic or unreasonable to provide that support in those conditions.

## Line managers and SpLDs

Across the three Services the principal responsibility of line managers is to identify any subordinate who is either failing in training or not performing to the required standard; they are *not* required to identify a SpLD as such, and, accordingly, they do not receive formal training in SpLD<sup>81</sup>. They are all required to handle information about individuals' SpLD with appropriate sensitivity and in accordance with Service data protection arrangements; sharing that information as required with necessary line management and training staff.

There remains, however, for all Services, a question about the knowledge expected on the part of line managers. Some managers thought that they would recognise signs of SpLDs, but in general they had little or no knowledge of the conditions that were sometimes responsible for levels of performance that fell below acceptable standards. This raises the question whether Officer and NCO training should include an element on recognising and understanding SpLDs.

## Literacy and numeracy skills and SpLDs

The Armed Forces SpLD policy (2010) does not consider SpLDs to be a literacy and numeracy-specific issue:

*...having weak BS/FS in itself is not a special educational need or a SpLD [and that] having a SpLD does not in itself lead to having weak literacy or numeracy.*

When the cause of a difficulty is a SpLD, then, even if the outcome is a poor level of basic skills, the priority is to respond to the cause and to provide strategies that enable individuals to become operationally effective. But equally, there is likely to be a close relationship between some SpLDs and some literacy and numeracy skills<sup>82</sup>. Indeed, in many cases, it seems unlikely that Service personnel would be identified as having a SpLD unless they were also exhibiting signs of weak literacy or numeracy skills. There is, therefore, a question about the rationale of always treating SpLD and literacy and numeracy skills as wholly separate and discrete.

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<sup>81</sup> However, the RAF supplies SpLD awareness training on request to stations and schools.

<sup>82</sup> For evidence on the relationship between basic skills and SpLDs see Rice, M., and Brooks, G. (2004) *Developmental dyslexia in adults: a research review*. London: NRDC.

## 3.12 Record keeping

### Introduction

In all Services, literacy and numeracy qualifications are entered onto a centralised database – the Joint Personnel Administration (JPA) system. The main issues raised by this study are the extent to which the system is found to be inaccessible or hard to access, and the extent to which the Services ensure that the appropriate data are inputted into the database. Based on interviews, the JPA appears to be used most effectively in the RN, but even here, many line managers do not use it and are unaware that they are able to find out information on ratings' literacy and numeracy skills qualifications if they are prepared to ask. At the same time, the use of other local Management Information Systems (MIS) within the Services to record, collate and report literacy and numeracy information represents a challenge to the overall effectiveness of record-keeping.

### Main findings

Record keeping is a significant issue: if it is not effective line managers and other personnel will often be unable to identify and confirm a recruits' educational record. An effective system, on the other hand, enables the Services to track progress and achievement in literacy and numeracy, and to report performance against Service and MOD targets. Line managers, teaching staff and those involved in soldiers' career management need to be aware of the importance of effective record-keeping and management information.

Whilst details of all trainees' literacy and numeracy qualifications should be entered onto a centralised database, interviewees frequently said it was inaccessible or hard to access. It is unclear to what extent the problems of record keeping are intrinsic to the database or stem from the inefficient or inconsistent use made of it by personnel.

This suggests that either the database should be improved or more effective guidance and incentives should be provided to encourage more effective and routine use.

Whilst the JPA is the primary pan-Services MIS on which to record education qualifications, there are other systems within and across the Services that are integral to the record-keeping and tracking process. There is scope for improving the extent to which information is co-ordinated and shared across these systems.

### Army

The transfer and dissemination of records of Phase 1 literacy and numeracy qualifications to Phase 2 training was patchy and inconsistent. None of the Officers and NCOs interviewed in Stage 2 had looked at any education records in either Phase 2 training or in the Field Army. The majority in Stage 3 paid little attention to soldiers' levels of literacy or numeracy, and became interested only in the course of a recommendation for promotion, or if a problem manifested itself when soldiers were carrying out their duties.

It is possible to find soldiers who have been in the Service for more than three years without having acquired L1 literacy and numeracy qualifications, and for there to be little awareness of these soldiers' educational records.

## RN

In the RN there appears to be a reasonably high level of accuracy and consistency in the way in which records are recorded on the JPA. All those interviewed felt that the records kept on JPA were sufficiently accurate and reliable for most purposes. However, access to the competencies area of JPA, where education records are stored, is restricted. Line managers can gain permission to view this area, but it was apparent that not all line managers were aware that they could easily gain permission to access the records of the personnel serving under them.

Few RN line managers were interested in accessing the educational qualifications, and no line manager was aware of the qualifications of staff under their command.

## RAF

Academic qualifications are primarily used as information to help screen applicants on joining the service. Since there is no link between qualifications and promotion<sup>83</sup>, it is thought unnecessary to hold a record of literacy and numeracy or other educational qualifications when airmen reach productive service<sup>84</sup>. Nearly all line managers were unaware of the literacy and numeracy levels of airmen under their command, tending to show an interest only if literacy and numeracy skills' issues came to light in the course of training or when on deployment.

In keeping with respondents in the Army, and to a lesser extent the RN, many line managers in the RAF reported that it was difficult to access the required fields holding information on staff literacy and numeracy levels. Whilst JPA is the primary pan-Services MIS on which to record education qualifications, there are other systems within the Services that are integral to the record-keeping and tracking process. It appears that these systems do not articulate with each other or with the JPA. This leads to incomplete records and that, in turn, does not encourage staff to use or have faith in the accuracy and reliability of centralised management information systems.

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<sup>83</sup> With the one exception described in Ch. 2, fn. 37.

<sup>84</sup> Nevertheless, this information is held on the JPA.

## 3.13 Functional Skills

### Introduction

In line with the Armed Forces Literacy and Numeracy Policy, by September 2012 all literacy and numeracy provision undertaken by Service personnel must lead to Functional Skills qualifications, replacing Key Skills and Basic Skills awards (at all levels). Functional Skills provision will be adapted to the literacy and numeracy profile of the tasks and roles that personnel are expected to carry out. Learners will be able to improve their skills at a pace and time that meets the needs of each Service and in a form that best prepares them for future training and the next stage of their career. This section describes the views from the Services and the principal challenges at a time of a major development in the Service's educational provision.

### Main findings

The comprehensive introduction of Functional Skills will take place only once this study is completed. But it is a major development that bears directly on one of the principal concerns of this research, for it is expected to lead to qualifications that are better suited to the Services and to the needs of all staff.

If the promise of Functional Skills is even largely realised, this should go a long way towards improving the impact of literacy and numeracy provision on the development of sustainable and transferable skills, a key point on which this study was unable to provide as much evidence as initially hoped for.

Given what this study *has* been able to show – the central importance of literacy and numeracy for operational effectiveness and employability – a significant increase in the demonstrable impact of provision will represent a positive development of the first importance.

This will first require, however, that a wide range of administrative, organisational, and pedagogic challenges are overcome that would otherwise limit or prevent the effective implementation of Functional Skills. These challenges are being addressed as the Services prepare for wholesale adoption of Functional Skills qualifications across their literacy and numeracy provision.

### Views from the Services

Along with personnel charged with organising and delivering Functional Skills, senior staff reported that the introduction of Functional Skills represents a welcome opportunity for the Services. The changing emphasis from simply learning how to do something to choosing and using skills to solve problems underpins the practical approach embodied in military training and complements the day-to-day work of Service personnel. In recent years, concerns were expressed to the effect that the existing literacy and numeracy awards did not provide a sufficient guarantee that personnel will have the knowledge and skills in English and maths to function effectively in the workplace; nor that they will be able to apply these skills within a range of real-life situations. It is thought that, if implemented effectively, Functional Skills and the new qualifications are likely to allay those concerns.

Education staff from all Services reported that the Functional Skills approach combined with its more robust assessment ensure the Functional Skills qualifications are a more effective measure of the required literacy and numeracy skill sets and their application than the equivalent Key Skills and Basic Skills awards. Staff believed they were better suited to equipping Service personnel with the skills they require. Given the challenges involved in replacing Key Skills with Functional Skills, the view from the Services represents an impressive endorsement of the new qualification.

## Challenges

A priority for all the Services is replacing the current Key Skills delivery with Functional Skills as part of the apprenticeship programmes. All Services reported similar challenges.

Functional Skills assessments are more demanding for the learner, and delivery is more demanding for the tutor. All tutors will need training in advance of implementation. Effective delivery and support will also demand more time than is currently programmed for trainees. ESOL learners joining Apprenticeship programmes will need additional support to meet the demands of Functional Skills English and Maths.

Education staff believe that failure rates on Functional Skills programmes are likely to rise substantially in the early stages of implementation, especially where insufficient time is made available for tutors to prepare themselves and learners effectively.

Teaching and learning methods will need to be devised to meet the organisational challenges posed by the requirements of Functional Skills. These are likely to include the widespread use of embedded provision (integrating literacy and numeracy into the vocational elements of a programme) and the adoption of blended, personalised approaches to learning. In seeking to make the Functional Skills provision fit for purpose and more readily accommodated within its intensive training pipelines, the Army is trialling the use of skills profiles to align programmes more directly to the literacy and numeracy skill set personnel require in the next phase of training or job. Provision will work towards the specific profile (with selected components at possibly, EL3, L1 and L2) rather than a full, blanket Functional Skills qualification. The intention is that by building on an individual's existing set of skills, these will improve at a time and pace that meets the individual's needs and those of the Service.

It is widely reported across the Services that national Functional Skills assessment arrangements cannot as yet be adequately accommodated within the training regimes of the Services. In particular the Services require on-demand registration and assessment, and rapid turn-round times for the marking of assessments.

Current arrangements for permitting access to publicly-funded literacy and numeracy provision (excluding Apprenticeships) will place limits on the extent to which the Services can introduce Functional Skills across the UK and overseas, especially in the Army. More flexible arrangements are required for introducing Functional Skills to personnel, wherever they are based.

## 3.14 Recommendations

### General recommendations

#### ***Promoting the importance of literacy and numeracy across the Services***

The Services should maintain strong awareness of the contribution that literacy and numeracy skills make to an individual's job performance, career progression and operational capability across the Services. There is a continuing need in all Services to promote throughout the chain of command the benefits of sound literacy and numeracy skills to all personnel. This remains an essential and on-going requirement of literacy and numeracy implementation across the Armed Forces, especially given the high turnover of personnel and changes in appointments associated with the military postings system. All opportunities to re-enforce this message through literacy and numeracy awareness training should be exploited. Corporals and SNCOs should be used as 'Literacy and Numeracy Ambassadors' or 'Champions' in order to promote the message that good levels of literacy and numeracy are necessary for professional development and operational effectiveness.

#### ***Provision fit for the military context***

The current delivery of literacy and numeracy provision through short, intensive, stand-alone programmes that are contextualised to the military/vocational setting fit the Services' operationally-focused training regime and culture. This will remain the primary approach, and should be re-enforced by the wider adoption of literacy and numeracy provision that is embedded within military training. All literacy and numeracy programmes should always be delivered at stages in military training that best support the learners' assimilation of that training. The fully supported adoption of Apprenticeships within the Services should be used to support this development.

#### ***External and in-house provision***

The Services should monitor the balance of external and in-house literacy and numeracy provision and the risks associated with over-reliance on external support. They should maintain an in-house literacy and numeracy teaching capability (appropriate to individual Service needs) delivered through professionally qualified literacy/numeracy specialist practitioners.

#### ***Minimum literacy and numeracy standards***

On-going review of minimum literacy and numeracy standards for joining the Services and their specialist trades should continue in the light of the changing recruitment environment and the needs of each Service.

The Services should seek to reduce their literacy and numeracy skills training liability for recruits by adjusting minimum literacy and numeracy standards for joining the Services, and/or introducing or extending pre-enlistment provision measures. These might include: extended use of military preparation courses; use of Service bursaries for undertaking Further Education programmes that provide routes to Service employment; access to pre-enlistment literacy and numeracy supported self-study resources/programmes (via the internet) for those selected to join the Services.

MOD should keep under review the appropriateness of adopting full GCSE A\*-C qualifications in English and maths (as recommended as a benchmark for post-16 learners in the Wolf Report) as its measure of literacy and numeracy attainment that most appropriately meets its Service requirements. It is, however, recognised that the adoption of such a measure would be challenging for the Services, and that other options may better suit the need for qualifications that promote job-related functionality and operational effectiveness. Such a review should be conducted early so that its outcome can inform the current plans to introduce Functional Skills provision and qualifications across the Services by September 2012.

The introduction of Functional Skills provides an opportunity to reconsider the policy of 'exemptions'. It is an option not to allow any exemptions from the requirement for Functional Skills qualifications. This would ensure that the Services have clear information about the level of functional mathematics and English undertaken by all personnel, it would represent a strong endorsement of the qualification, and it would serve as an example to other major employers.

The policy that recruits should gain Level 2 literacy and numeracy qualifications within eight years of joining the Services is not widely effective. The policy should either be revised, or additional in-Service mechanisms introduced for its enforcement.

### ***Promoting high standards of teaching and training***

It is a priority to promote high standards of literacy and numeracy teaching and training, and to gather evidence of the impact of high quality interventions on job performance and career opportunities.

Tutors should be trained to teach Functional Skills effectively. It is recommended that the Services develop CPD materials and training for all tutors in the Services who lack a Level 5 Diploma in numeracy or literacy teaching<sup>85</sup>. Military instructors should be trained and supported in re-enforcing the literacy and numeracy skills of their trainees within the vocational training.

### ***Recording literacy and numeracy progress and performance***

The recording, tracking and reporting of literacy and numeracy progress and performance (at individual and corporate level) should be improved and better co-ordinated within and across the Services. The Management Information Systems and associated procedures should be reviewed as a matter of urgency. It is recommended that the effective transfer of learner documents as personnel are moved on to new postings should become a more consistent and reliable practice, and that these records should be accurate and accessible to line managers.

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<sup>85</sup> Under existing policy tutors should have a minimum Level 3 or Level 4 qualification, together with qualifications appropriate to the requirements of the post.

***Linking skills to job and training requirements***

There should be a greater focus on developing sustainable skills as well as qualification attainment.

Speaking and listening skills are vital for operational effectiveness in all roles in all Services. More should be done to provide training aimed at improving the elements of speaking and listening most relevant to recruits' job roles.

Development of digital literacy skills programmes should be undertaken and delivered early in Phase 1 and Phase 2 training to ensure recruits are able to engage effectively with e-learning and training methodologies. Digital literacy skills should be promoted and developed alongside literacy and numeracy.

As currently trialled in the Army, skills profiles linked to job and training requirements could be developed and skills developed in modules of learning undertaken at a pace that meets the needs of the learner and the organisation. The adoption of a skills profile approach will require an adjustment in funding arrangements to accommodate it.

***SpLDs***

Whilst all Services provide effective support for recruits with SpLDs, the RAF in particular provides a model of good practice in how to support SpLDs. MOD should examine the appropriateness of extending to the other Services the current RAF model and practice to support those with dyslexia needs.

It should be a priority for Officers and NCOs in all Services to undergo training or briefings to raise their awareness of how SpLDs can impact on the ability of individuals to assimilate training effectively and be operationally effective<sup>86</sup>. Further research is needed to determine how best to support the other SpLDs recognised by the Defence policy.

***Literacy and numeracy provision as a model of national significance***

Literacy and numeracy policy and provision in the Services represents a model of national significance, with lessons and implications for large organisations in non-military contexts. It should be a priority to share good practice in the Services with employers in other sectors, together with providers of prison education and large apprenticeship schemes. To this end, MOD and BIS should give consideration to establishing a national forum where large employers can share, review and exploit effective approaches to literacy and numeracy skills improvement within workforce development in order to inform national policy and practice.

Literacy and numeracy provision in the military context also represents a site of the first importance for policy and research communities. Above all it should be a priority to understand better the impact on skills development of an environment that includes several conditions known to be conducive to significant learning progress: high expectations, high levels of motivation, an effective whole organisation commitment to raising literacy and numeracy levels and a close link between qualifications and promotion.

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<sup>86</sup> This is related to whether individuals identify themselves as having a SpLD to their line manager, as required by RAF policy.

### **Further research**

It is recommended that MOD and BIS consider further research into literacy and numeracy skills development in the Services to inform Defence and national policy and practice.

This study is closing at a point when the careers of the sample group are developing in ways which will further test their levels of literacy and numeracy. It would be valuable to understand how the Services support these trainees when operating at higher levels following their first promotions.

### **Army**

The Army demonstrates the capacity to accept large numbers of recruits with low levels of literacy and numeracy, and to develop their skills to the point that they are operationally effective and (more) employable within their present and other workplace contexts. This should serve as a leading example of how a major national employer can achieve this challenging objective.

It is recommended that the Army conduct an audit of skills needs following the completion of Phase 2 training, with a focus on recruits with the lowest levels of literacy and numeracy at Initial Assessment. Soldiers should then be briefed about the educational opportunities available to them, in order that they can implement a learning plan in negotiation with their line manager that is closely aligned to the demands of their job role and immediate career development.

Since the organisation and delivery of provision varies across training units, and some training units were associated with larger increases than others, it is recommended that assessments of classroom practice are undertaken at units associated with higher and lower rates of increases in skills, with a view to identifying effective practice.

Soldiers should be encouraged to inform their line managers of a Specific Learning Difficulty when they arrive at their Phase 2 training establishment and their first appointments in the Field Army. Line managers should then have opportunities to provide recruits with greater levels of support.

### **RN**

The RN was perhaps the most successful of the three Services in comprehensively communicating the significance of literacy and numeracy to recruits, and should serve as an example to other large employers of how this whole organisation objective can be achieved.

The RN should consider the option to increase the minimum entry requirement to at least Level 1 for literacy and numeracy, as almost all (99%) current recruits have literacy and numeracy at (at least) Level 1, and approximately 70% have Level 2 in literacy or numeracy.

The study has begun the process of mapping the tasks required in RN branches and specialisms to speaking, listening, reading, writing, numeracy and ICT. Similarly it has started to identify the contribution made to operational effectiveness by the different literacy and numeracy skills. This exercise could be brought to the attention of military as

well as academic trainers, and a further mapping exercise undertaken to illustrate the importance of adequate literacy and numeracy skills for RN job roles.

Further examination is needed of how Adult Literacy and Numeracy and GCSE English and maths can be most efficiently delivered on board ship. Exploration of the civilian teaching qualifications PTLLS<sup>87</sup> and CTLLS<sup>88</sup> for any RN personnel teaching English or maths at any level should be considered.

## RAF

Whilst it is essential to understand the different contexts in which the RAF and the RN operate, the skills profiles of recruits are sufficiently similar to allow for a further examination of the comparative effects of their respective approaches to promotion.

The RAF, through the PLAs, should promote more comprehensively the educational opportunities available to personnel on each station, and via the Defence Learning Portal.

Many airmen would benefit from courses on Study Skills, including how to organise and structure activities, such as the portfolio assignments for NVQs. Currently, trainees with Specific Learning Difficulties are presented with strategies relevant to study skills, and some of these are likely to be beneficial to other trainees. This offer could be integrated into general Functional Skills provision, or provided at Education Centres.

Educational tutors reported that the requirement on new recruits to complete a short piece of free writing was useful for assessing literacy levels, and for gaining insights into potential SpLD. As line managers also reported that this exercise was valuable when repeated in some trades when airmen reach productive service, it is recommended that this practice is extended across all trades.

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<sup>87</sup> Award in Preparing to Teach in the Lifelong Learning Sector

<sup>88</sup> Certificate in Teaching in the Lifelong Learning Sector.

## Final word

This report brings to a close a major three-year longitudinal study. The study provides a unique and authoritative body of evidence on the impact of literacy and numeracy on the personal and professional development of personnel in the Armed Forces, and, in particular, on their ability to carry out their jobs effectively.

Moreover, the study makes an important contribution to the wider evidence base on workforce basic skills: what skills are needed in order for employees to carry out their job role effectively and how employers can best support the development of these skills. Messages from this study will be invaluable to other large employers in the UK and beyond, and should inform national policy and practice on workforce development.

The study is ending at a time of change, both for personnel in the sample – who are now entering a stage of their Service careers where literacy and numeracy skills are likely to become increasingly important – and for literacy and numeracy provision in the Armed Forces, with the introduction of Functional Skills. There is a strong case for a continuing research programme that builds on the solid foundation established by the AFLS, and which extends to include the broader impact of training and education, including economic, social and health related outcomes.

# Glossary of Terms

## Glossary

Acronym	Meaning
<b>AAC</b>	Army Air Corps
<b>AB</b>	Able Seaman, the most junior rating in the RN
<b>ACIO</b>	Army Careers Information Office
<b>ADD</b>	Attention Deficit Disorder
<b>ADHD</b>	Attention Deficit Hyperactivity Disorder
<b>AEC</b>	Army Education Centre
<b>AFC(H)</b>	Army Foundation College, Harrogate
<b>AFCO</b>	Armed Forces Careers Office
<b>AoN</b>	Application of Number – Key Skills numeracy qualification
<b>ARTD</b>	Army Recruiting and Training Division
<b>ATC(P)</b>	Army Training Centre, Pirbright
<b>ATFC(W)</b>	Army Technical Foundation College Winchester
<b>ATR(B)</b>	Army Training Regiment, Basingbourn
<b>AWOL</b>	Absence Without Leave
<b>AWT</b>	Above Water Tactical
<b>BCS70</b>	British Cohort Study (1970)
<b>BIS</b>	(Department for) Business, Innovation and Skills
<b>BKSB</b>	Basic and Key Skill Builder – a diagnostic assessment tool, specified to national standards for adult literacy and numeracy levels.
<b>BS</b>	Basic Skills
<b>BSA</b>	Basic Skills Agency
<b>BSDM</b>	Basic Skills Development Manager
<b>CI</b>	Chief Instructor
<b>CIS</b>	Communications and Information Systems Specialist
<b>CLM</b>	Command, Leadership and Management
<b>CO</b>	Commanding Officer
<b>Cpl</b>	Corporal
<b>CPO</b>	Chief Petty Officer
<b>CS</b>	Communication Skills – Key Skills literacy qualification
<b>CTCRM</b>	Commando Training Centre Royal Marines at Lympstone, Devon.
<b>CTLLS</b>	Certificate in Teaching in the Lifelong Learning Sector
<b>DAST</b>	Dyslexia Adult Screening Test
<b>DETS(A)</b>	Army Directorate of Educational and Training Services
<b>DO</b>	Divisional Officer
<b>DTLLS</b>	Diploma in Teaching in the Lifelong Learning Sector
<b>eLC</b>	e-Learning Centre – An ICT-based learning facility
<b>ELC</b>	Enhanced Learning Credit
<b>ERO</b>	Education and Resettlement Officer
<b>ESOL</b>	English for Speakers of Other Languages

Acronym	Meaning
<b>ETS</b>	Education and Training Service
<b>EW</b>	Electronic Warfare
<b>FPG</b>	Fleet Protection Group
<b>FS</b>	Functional Skills
<b>GED</b>	General Education Development (Test level)
<b>IA</b>	Initial Assessment
<b>ICT</b>	Information and Communication Technologies
<b>ITC(C)</b>	Infantry Training Centre, Catterick
<b>IGCSE</b>	International General Certificate of Secondary Education
<b>ILP</b>	Individual Learning Plan
<b>JMCL</b>	Junior Management and Leadership Course
<b>JNCO</b>	Junior Non Commissioned Officer
<b>JPA</b>	Joint Personnel Administration – the intranet-based personnel administration system used by the three Services.
<b>JS</b>	Junior Soldier
<b>KS</b>	Key Skills
<b>LANTERN</b>	Literacy and Numeracy Testing and Education Royal Navy, the naval framework for literacy and numeracy training.
<b>LCM</b>	Learner Centre Manager
<b>L/Cpl</b>	Lance Corporal
<b>LDO</b>	Learning and Development Officer
<b>LH</b>	Leading Hand
<b>LLN</b>	Literacy, Language and Numeracy
<b>Lt Cdr</b>	Lieutenant Commander
<b>MI</b>	Meares-Irlen Syndrome
<b>MIS</b>	Management Information System
<b>MOD</b>	Ministry of Defence
<b>MODREC</b>	Ministry of Defence Research Ethics Committee
<b>MWS</b>	Maritime Warfare School. Naval training centre based at HMS Collingwood.
<b>NAMET</b>	Naval Maths and English Test – the predecessor of LANTERN.
<b>NATcen</b>	National Centre for Social Research
<b>NETS</b>	Naval Education and Training Service
<b>NCO</b>	Non-Commissioned Officer
<b>NES</b>	National Employers Service
<b>NIACE</b>	National Institute of Adult Continuing Education
<b>NRDC</b>	National Research and Development Centre for Adult Literacy and Numeracy
<b>NVQ</b>	National Vocational Qualification
<b>OC</b>	Officer Commanding
<b>OPS</b>	Operational Performance Statement – the standard of operational effectiveness
<b>PGAC</b>	Potential Gunners Awareness Course
<b>PGSC</b>	Potential Gunners Selection Course
<b>PLA</b>	Personal Learning Advisor
<b>PO</b>	Petty Officer

<b>Acronym</b>	<b>Meaning</b>
<b>POC</b>	Point of Contact
<b>PRMC</b>	Potential Royal Marines Course – a training session held for potential marine recruits
<b>PSA</b>	Public Service Agreement
<b>PTLS</b>	Personal Thinking & Learning Skills
<b>PTTLS</b>	Preparing to Teach in the Lifelong Learning Sector
<b>QA</b>	Quality assurance
<b>QCF</b>	Qualifications and Credit Framework
<b>RA</b>	Royal Artillery
<b>RAC</b>	Royal Armoured Corps
<b>RAMC</b>	Royal Army Medical Corps
<b>RCMO</b>	Regimental Career Management Officer
<b>REME</b>	Royal Electrical and Mechanical Engineers
<b>RLC</b>	Royal Logistic Corps
<b>RM</b>	Royal Marine
<b>RO</b>	Reporting Officer (during airmen's appraisals)
<b>SAC</b>	Senior Aircraftmen
<b>SfL</b>	Skills for Life
<b>Sgt</b>	Sergeant
<b>SNCO</b>	Senior Non Commissioned Officer
<b>SpLDs</b>	Specific Learning Difficulties
<b>STDO</b>	Station Development Officer
<b>SuTs</b>	Soldiers under training
<b>TAT</b>	Trade-Ability Test
<b>WO</b>	Warrant Officer

## Equivalences of Rank across the Services

RN	RM	Army	RAF
Commander	Lieutenant Colonel	Lieutenant Colonel	Wing Commander
Lieutenant Commander	Major	Major	Squadron Leader
Lieutenant	Captain	Captain	Flight Lieutenant
Sub Lieutenant	Lieutenant	Lieutenant	Flying Officer
Midshipman	Second Lieutenant	Second Lieutenant	Pilot Officer
Warrant Officer 1	Warrant Officer Class 1	Warrant Officer Class 1	Warrant Officer
Warrant Officer 2	Warrant Officer Class 2	Warrant Officer Class 2	
Chief Petty Officer	Colour Sergeant	Staff Sergeant	Flight Sergeant
Petty Officer	Sergeant	Sergeant	Sergeant
Leading Hand	Corporal	Corporal	Corporal
	Lance Corporal	Lance Corporal	Lance Corporal (RAF Regimental Gunners)
			Senior Aircraftman
Able rate (AB)	Marine	Private	Leading Aircraftman

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