

# RESEARCH

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Armed Forces Basic Skills  
Longitudinal Study: Executive  
Summary

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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.

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

## 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?

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

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