



Better
Skills

Better
Jobs

Better
Health

Beyond the Brand

English and maths requirements for entry to nursing and other health related vocational programmes, at Higher Education Institutions in England

Dr Finbar Lillis
Skills for Health Associate
Fellow of the Institute for Workbased Learning, Middlesex University

Contents

Executive Summary

- 1 Introduction
- 2 How the research was done
- 3 What English and maths entry requirements are set by HEIs and why?
- 4 A national strategy for supporting English and maths skills development in the healthcare support workforce?
- 5 Conclusions
- 6 Recommendations

Appendix

Bibliography

Acknowledgments

Thank you to Bridging Programme Reference Group members for their initial thoughts and thanks to all those who responded to the survey and to the following interviewees and correspondents.

Alex Stevenson	Head of English, Maths and ESOL	Learning and Work Institute
Alicia Whittaker	Education & Development Coordinator	East Cheshire Hospice
Anand Pandyan	Professor of Health and Rehabilitation / Head of School	Keele University
Andy Mattin	Director of Nursing and Quality	Central and North West London NHS Foundation Trust
Angelo Varetto	Head of NOS, Qualifications and Apprenticeships	Skills for Health
Anthony Westacott	Learning & Development Team leader	Avon and Wiltshire Mental Health Partnership
Chris Rawden	Head of Operations (Nursing)	The Open University
Clare Pryke	Associate Director (Recruitment Operations)	University of Bradford
Clare Winter	Admissions Tutor	University of Brighton
Clive Matthews	Director of Employer Engagement	Bournemouth University
Dawn Grant	Project Manager, Talent for Care	Health Education England North West London
Diana Smith	Teaching and Learning Coach ESOL, Lexis, Basic Skills & Access	Derby College
Dr Mark Hodds	Mathematics Support Lecturer	Mathematics Support Centre Coventry University
Eleanor Humphries	Student Nurse	University Hospital Coventry and Warwickshire
Elizabeth Ryan	Education Business Manager	South Western Ambulance Service NHS Foundation Trust
Frances Haig	Skills for Practice Lead	University Hospital Southampton

Gill West	Senior Lecturer, Child Nursing	Canterbury Christ Church University
Jane Hadfield	National Programme Manager Talent for Care (Degree Apprenticeships)	Health Education England
Jenny Rehman	Team Leader	Derby College
Julie Bliss	Senior Lecturer	King's College London
Kirsi Kekki	Policy Officer	Unionlearn
Lisa Mauro-Bracken	Academic Group Lead Foundation Degrees	University of Worcester
Lucy Blandford	Head of Professional Education	Gloucestershire Hospitals NHS Foundation Trust
Mandy Bancroft	Director	University of the West of England
Mark Gradwell	Professional Lead Diagnostic Radiography/Senior Lecturer	Department of Radiography, School of Allied Health Professions, Faculty of Health and Wellbeing, Canterbury Christ Church University
Mary Somerville	Institute of Vocational Learning and Workforce Research	Bucks New University
Nicola Morgan	Learning and Development Manager	Frimley Health NHS Foundation Trust
Pam Bridger	Senior Nurse (Practice Development)	Maidstone and Tunbridge Wells NHS Trust
Rod Ward	Senior Lecturer & Admissions Tutor for Adult Nursing	University of the West of England, Dept. of Nursing & Midwifery
Rosemarie Simpson	Senior Consultant	Skills for Health
Sue Southwood	Head of Maths and English	Education and Training Foundation
Tim Bryson	Project Manager	Sn@p Assessment

Executive Summary

Origins and scope of this study

The origins of this study lay in reports of varying and unexplained Higher Education Institution (HEI) English and maths entry requirements for health related vocational programmes. These were reported to present an obstacle to workforce planning and progression for employers and their Healthcare Support Workers (HCSWs), especially where the choice of HEI was limited and the position of the HEI inflexible.

Health Education England (HEE) commissioned Skills for Health to conduct a scoping study and produce a report by Spring 2017, to find out more about these practices and to gather views from HEIs, healthcare employers and others on possible improvement actions, and to make suggestions if appropriate, for developing a national English and maths strategy as an action within Talent for Care¹ (HEE 2017).

Other questions and issues, that emerged around HEI English and maths entry requirements in conducting this study, reflected deeper concerns in general among survey respondents and interviewees, about adult basic skills² in English and maths in the sector. These concerns were symptomatic of the wider issue of low basic skills in the adult population in England at large (Małgorzata, et al. 2016) and the lack of significant improvement in steps taken to improve them (ibid.). The questions that gave rise to this study are examined in that wider context.

Findings

The apparent complexity and range of maths and English requirements set HEIs for entry to nursing and other health related vocational programmes, at Higher Education Institutions in England, can be explained as honest attempts to be flexible in applying requirements, and/or emanating from genuine differences between the literacy and numeracy demands of different HEI health related vocational programmes and professions. But there were inconsistencies between (and within) HEI practices which suggested other causes. (Chapter 3)

In this study, responses to a survey and discussions in follow up depth interviews (Chapter 2) suggest objective rationales for set English and maths entry requirements were most often missing. Qualifications in English and maths (and their brands) are seen as proxies for skills, with little analysis available which compares the content and demand of set qualifications with, for example, literacy and numeracy requirements included in Nursing and Midwifery Council (NMC) education standards.

Reference points used by HEIs included: assumed national standards; a belief that qualifications set for entry are a regulatory 'requirement' or that they 'meet a requirement';

¹ See <https://www.hee.nhs.uk/talentforcare/wideningparticipation> for details of the HEE Talent for Care and Widening Participation strategies.

² In this report, 'basic skills' should be taken to mean the baseline level 1 of [English and maths] performance on the PISA scale (Programme for International Student Assessment). Basic skills are '...elementary skills to read and understand simple texts and master basic mathematical and scientific concepts and procedures...' (Hanushek and Woessmann 2015: 9,21). 'Low' or 'weak' basic skills in this report, are those below this threshold. In England, 'Functional Skills' replaced the term 'Basic Skills' in 2010 – which replaced 'Key Skills' in 2001 - and include English, maths and ICT but not Science. Other terms are used in the other countries of the UK and Northern Ireland (ETF 2015: 5) and are described differently.

the latter blurring a distinction between the two. An implied risk to the public if entry requirements were not met were also cited in several rationales offered, though no evidence was offered that showed how achievement of the specific qualifications set for entry obviated that risk.

Additional testing by some HEIs at interview indicates that HEIs are not entirely confident that the qualifications they set for entry are sufficient to ensure candidates will succeed on programme, or ensure the safety of the public while the student is on placement.

Assessment of competence dominates the discourses of English and maths learning, at all levels. Teaching and learning in English and maths appears to be dominated by remedial, rescue attempts to help those seeking to progress to pass assessments to gain entry to HE, and/or to succeed on programme, or to demonstrate they can work competently after they are qualified.

Relationship to wider ‘basic skills’ issues in the sector, symptomatic of the adult population in England at large

The research also found that the issues raised through the survey and interviews reflect and connect to wider issues in the sector and in HEIs that need attention, concerning English and maths skill acquisition and assessment and their everyday use at work in healthcare, at all levels, and are symptomatic of issues in the adult population in England in general. ‘In England, ‘9 million people struggle with basic quantitative reasoning or have difficulty with simple written information’ (Małgorzata, et al. 2016: 9). The proportion of adults with weak basic skills in English and maths in the health sector appears to be consistent with those in the same position in England. (Skills for Health 2011). **Chapter 1** explores the relationship between this study and the wider picture of adult English and maths skills in England.

Scope and support for a ‘national strategy’

83.5% of survey respondents said that ‘a national strategy’ for supporting English and maths skills development in the healthcare support workforce would be useful, with respondents and interviewees suggesting a variety of improvements that could be made. What a ‘national strategy’ might mean in practice is explored **Chapter 4** and reflected in the recommendations in **Chapter 6**.

What opportunities are available to make improvements in the sector?

Recommendations (Chapter 6) to this report say the sector should *connect* to national policy and action on basic skills in English and maths and make an action plan which draws on local practice and research intended to address basic skills weaknesses in the sector. In summary, these are:

1. Connect to Government strategic policy initiatives, designed to improve basic skills in English and maths in England. In doing so, identify how weak basic skills impact on current strategic initiatives within the sector, especially Talent for Care, Apprenticeships and quality standards for Apprenticeship provision.

2. Develop a long-term action plan which recognises and addresses weak basic skills in the health sector, in the national policy context designed to improve weak adult basic skills in English and maths.
3. Search out research and practical actions currently being undertaken in the sector (and in other sectors, where relevant) which are designed to improve basic skills in English and maths, at *all* levels of training and occupation in the sector. Connect these to Government funded programmes addressing weak adult basic skills teaching and learning and to an action plan for the sector.
4. Develop baseline information about the state of adult basic skills in the sector, at all levels and occupations.
5. Work with HEIs to address the specific issues identified through this study, concerning English and maths HEI entry requirements, in the context of the wider strategic actions outlined above. A detailed subset of actions, recommended to address the issues that gave rise to this study, are set out in Chapter 6.

NOTE: Though beyond the scope of this study, recommendations 1-4 could be extended to include in basic skills, the application of basic 'scientific concepts and procedures' in healthcare learning, included in 'elementary skills' in the PISA scale (Hanushek and Woessmann 2015: 9,21).

This report addresses the questions the research set out to investigate and hopefully makes some practicable recommendations. The issues of clarity and consistency around HEI English and maths entry requirements will not easily be resolved in isolation from a wider debate and action on the development of English and maths skills in the healthcare workforce.

1. Introduction

- 1.1 The origins of this study lay in reports of varying and unexplained Higher Education Institution (HEI) entry requirements for health related vocational programmes. These were reported to present an obstacle to workforce planning and progression for employers and their Healthcare Support Workers (HCSWs), especially where the choice of HEI was limited and the position of the HEI inflexible.

This study set out to examine the following questions - and to make suggestions if appropriate, for developing a national English and maths strategy as an action within Talent for Care (HEE 2017).

- What HEI English and maths requirements are set for entry to HEI health related vocational programmes?
- What is the relationship of these requirements to NMC Nursing and Midwifery (or other HCPC regulated) national standards for health professions?
- What rationales are given by HEIs for required English and maths qualifications and or any internal tests of applicants and or any other entry requirements concerning English and Maths?
- What do HEIs do if applicants fail to meet their English or maths entry requirements?
- What do Employers, FE and HE providers do to assist applicants from the workforce who need help to meet HEI English or Maths entry requirements?

Health Education England (HEE) commissioned Skills for Health to conduct a scoping study and produce a report by Spring 2017, to find out more about these practices and to gather views from HEIs, healthcare employers and others on possible improvement actions, and to make suggestions if appropriate, for developing a national English and maths strategy as an action within Talent for Care³ (HEE 2017).

Other questions and issues, that emerged around HEI English and maths entry requirements in conduct of this study, reflected deeper concerns among survey respondents and interviewees about adult basic skills⁴ in English and maths in the sector. These concerns were symptomatic of the wider issue of low basic skills in the adult population in England at large (Małgorzata, et al. 2016) and the lack of significant improvement in steps taken to improve them (ibid.). The questions that gave rise to this study are examined in that wider context.

3 See <https://www.hee.nhs.uk/talentforcare/wideningparticipation> for details of the HEE Talent for Care and Widening Participation strategies.

4 In this report, 'basic skills' should be taken to mean the baseline level 1 of [English and maths] performance on the PISA scale (Programme for International Student Assessment). Basic skills are '...elementary skills to read and understand simple texts and master basic mathematical and scientific concepts and procedures...' (Hanushek and Woessmann 2015: 9,21). 'Low' or 'weak' basic skills in this report, are those below this threshold. In England, 'Functional Skills' replaced the term 'Basic Skills' in 2010 – which replaced 'Key Skills' in 2001 - and include English, maths and ICT but not Science. Other terms are used in the other countries of the UK and Northern Ireland (ETF 2016: 5) and are described differently.

- 1.2** In work to establish and support employer use of the Skills for Health Bridging Programme⁵ (Skills for Health, 2017), a range of practices were identified in setting and operating English and maths requirements for entry to ‘pre-registration’⁶ nursing programmes at Higher Education Institutions (HEIs) in England (Lillis, Skills for Health 2015).

English and maths competency requirements for those seeking entry to ‘pre-registration’ nursing degree programmes varied among HEIs and reportedly varied within individual institutions over time (Skills for Health 2016; Somerville 2015).

Employers themselves were not always clear what level and type of English and maths competence was required (and how this should be evidenced or demonstrated) and were sometimes unsure whether their ‘local’ HEI position represented a national requirement (to meet national standards or regulations) or was a position adopted by the HEI individually from an interpretation of national standards, and or from a position the HEI had formulated itself (ibid.)⁷

There are tensions between opening up access to HEI Health related vocational programmes to ‘non-traditional applicants’ and the perceived capacity of these to succeed academically (Bateson, et al. 2016), especially perhaps, when there is an oversupply of academically well qualified applicants. This study found that this tension can extend (at some HEIs) to a lack of confidence in non-traditional qualifications in English and maths and a resistance to considering those applicants holding them – hence the call for transparent analysis of English and maths entry qualifications against HSC regulator education standards (Chapter 6).

- 1.3** Desk research (Somerville 2015) profiled all entry requirements for ‘pre-registration’ Nursing Degree programmes, including English and maths, describing a complexity of information facing applicants and a wide range of requirements set by HEIs for entry, with inconsistencies in the treatment of and regard for equivalent qualifications, across HEIs in England.

Nursing (NMC 2010a) and Midwifery (NMC 2010b) education standards for example, do not currently specify that (or which) qualifications in English and maths must be achieved before entry to ‘Pre-Reg’ Degree Programmes⁸ but do contain statements on competency expectations for entry and by completion of the Degree Programme, (For example, NMC 2010a: 55, 134, 2010b: 12, 40). This study found that some HEIs claimed that Nursing and Midwifery Council (NMC) standards require specified qualifications for entry to HEI while other HEIs were clear that this was not the case.

⁵ The Skills for Health Bridging Programme was developed by Skills for Health and HEE in response to Recommendation 7 of the Cavendish Review (Cavendish 2013). ‘HEE and the LETBs should develop new bridging programmes into pre- registration nursing and other health degrees from the support staff workforce in health and social care...’

⁶ The term ‘pre-registration nursing education’ describes the programme that a nursing student in the United Kingdom undertakes in order to acquire the competencies needed to meet the criteria for registration with the Nursing and Midwifery Council (NMC 2010a).

⁸ Except for Non- European Economic Area (EEA) applicants for whom there are qualification requirements (NMC 2010a: 55, G3.1.2a, NMC 2010b: 13)

The demands and content of English and maths national qualifications may shift and do so without reference to Health and Social Care (HSC) regulators⁹ and their standards; one sensible reason for regulators to concentrate on maintaining the currency of education standards, rather than best-guessing the content and demand of the next iteration of national English and maths qualifications. HEIs could however, make the relationship between HSC regulator standards and their entry requirements much clearer.

1.4 The Skills for Health Bridging Programme Reference Group (which includes HEIs, Further Education (FE) providers, Awarding Organisations, Healthcare employers, Health Union representatives, Council of Deans of Health (CoDH) and Health Education England (HEE) recognised that healthcare employers and employee applicants should at least, be better informed about:

- HEI English and maths requirements for entry to HEI health related vocational programmes
- The relationship of these requirements to NMC (and other HSC regulator) education standards for health professions
- HEI rationales for required English and maths qualifications and or any internal tests of applicants and or any other entry requirements concerning English and maths and the relationship to current national standards, where these are in place
- What HEIs do if applicants fail to meet their English or maths entry requirements
- What Employers, FE and HE providers do to assist applicants from the workforce who need help to meet HEI English or Maths entry requirements.

HEE commissioned this study in response. This study gathered information about these practices and listened to what respondents had to say about basic skills in English and maths; the issues, what was being done and what might be done to improve practice on several related fronts.

1.5 Concerns about English and maths skills and how they are taught and assessed go well beyond the Healthcare support workforce - and were often expressed by HEIs and employers responding to this study,

“...This [approach to English and maths teaching and assessment] is not conducive to success or to embedding these components for future life skills - in addition to work and study. I believe there is a considerable drop in standards of English and maths with many learners, both recent school leavers and more mature students. I believe we do a disservice nationally by not ensuring the most suitable method of teaching is undertaken as part of the programme for these skills.”

⁹ [The Professional Standards Authority](#) oversees 9 Health and Social Care regulators in the UK. ‘...the regulators we oversee ‘register’ health and care professionals working in occupations that Parliament has said must be regulated. For example, doctor, nurse, pharmacist and paramedic.’

Improvements are being made in the sector. This report notes examples of practice and research intended to change things for the better. What is needed is both individual and collective admission that there are all kinds of issues with English and maths skills (and qualifications) in the sector, one which is not isolated from the effects of weak basic skills in English and maths found in England's adult population at large, and discussed below. An open conversation in the workforce, and among employers, FE and HE providers would be a good start. Coordinated and sustained effort to make long term improvements will be needed too.

The wider picture of Adult basic skills in English and maths in England

1.6 OECD and other studies

'In England, '9 million people struggle with basic quantitative reasoning or have difficulty with simple written information' (Małgorzata, et al. 2016: 9)

This study should be viewed in the context of wider analyses of adult basic skills in English and maths (or in literacy and numeracy) in England, illustrated in successive studies, since 2000, especially: the results of 'Skills for Life' surveys conducted by Government (DfES 2003; BIS 2011); and more recently, the OECD report (Małgorzata, et al. 2016) on adult skills; studies of attitudes and understanding of English and maths skills and qualifications among employers (ETF 2015). Some OECD evidence is useful for dispelling possible assumptions, about older workers, migrant workers and HEI students' basic skills.

1.7 Adult basic skills in English and maths in the health sector

Skills for Health (2011) developed and used tools to establish a baseline of English and maths skill levels in the health and social care sector, producing estimates of skill level across the healthcare workforce 'Agenda for Change bands 1-8' which are largely consistent with those from the OECD (Małgorzata, et al. 2016); the proportion of adults with weak basic skills in English and maths in the health sector appears to be consistent with those in the same position in the wider population in England.

1.8 Younger learners with weak basic skills

Employers and education providers in England are obliged to deal with the consequences of low standards of English and maths performance at the end of initial schooling at age 16 (Małgorzata, et al. 2016: 11), where 'standards are especially weak in England'. 30% of all 16-19 year olds have low basic skills and a proportion of these will be Apprentice HCSWs.

Negative consequences of weak English and maths skills for a third of the population at age 16, recur through continuing education and in performance at work. (Scarpetta, et al. 2010)

1.9 Older workers

Older sections of the population in England (aged 55-65) have similar levels of basic skill to the same age group in other countries, while 16-19 year olds are 'lagging badly behind.' (Małgorzata, et al. 2016: 10, Fig. 1)

1.10 Migrant workers

'The presence of migrants does not significantly alter the overall picture' of English and maths skill levels among adults in England (Małgorzata, et al. 2016: 27). This is not to say that those who are speakers of other languages do not have different language learning needs from native speakers of English. Their presence in the workforce does not however, significantly contribute to the overall weakness in basic skills levels in England.

1.11 Higher level (HEI) students and basic skills in English and maths

Issues in English and maths performance on programme and at graduation was raised by HEIs in depth interviews for this study - and with 1 in 10 HEI (degree) students with weak English and maths skills – i.e. below RQF¹⁰ level 2 (Małgorzata, et al. 2016: 52, Fig. 3.1), rising to 1 in 5 among those with or pursuing level 4 and 5 qualifications (in and outside HEIs), this is perhaps not surprising. HEI interviewees reporting poor performance in English and maths on programme are likely to be wary of applicant claims for English and maths competence at entry, especially where the HEI has limited means of addressing poor basic skills, 'I teach midwifery. I'm not an English teacher.' One recourse reported by HEIs, was to use additional tests at interview to further filter out those with poor basic skills and or to identify those applicants likely to have basic skills weaknesses once admitted and on programme.

The new orthodoxies brought by the Government's Teaching Excellence Framework (TEF) (DfE 2017a) will 'recognise [Higher Education] institutions that do the most to welcome students from a range of backgrounds and support their retention and progression'. This may help encourage HEI institutional action on basic skills.

A likely demand for higher English and maths skills from Health professionals at work will mean teaching 'basic skills' in HE will need to go beyond the 'remedial'. The role of the nurse is evolving and becoming more complex, requiring nurses to become 'expert communicators', when more nurses are expected to diagnose and assess patient needs, 'take a structured history', and use 'communication skills for therapeutic conversations, including bereavement and behaviour change.' (CoDH 2016: 10, 4.1.1, 13, 4.3.2). As more is expected of health professionals, more demands will be made on their skills in English and maths.

1.12 Widening participation in higher level health programmes and improved English and maths skills

A number of factors are now crucial in healthcare workforce planning: the introduction of the Apprenticeship levy; the removal of NHS bursaries for undergraduates and introduction of student loans; the introduction of Nursing Associates and the Nursing Apprenticeship and the development of Degree Apprenticeships (UK Government Agencies 2017) in other healthcare professions – all will all raise aspirations among the current workforce and expectations among employers. All will need at the very least, level 2 basic skills in English and maths to succeed and HCSWs often lack them (Bateson, et al. 2016: 37-38 5.5.1), and may as a result not manage to progress to higher learning or if they do, may not succeed when they get there.

¹⁰ See <https://www.gov.uk/what-different-qualification-levels-mean/list-of-qualification-levels> for an explanation of qualification levels in qualification frameworks, in the UK and elsewhere.

'Widening the participation' of many will be required for these policy initiatives to work. There are imaginative innovations that are intended to shift admissions practice (Bristol University 2017) but in the immediate future, HEIs are likely to stick to conventional approaches which recognise attainment over potential.

People from disadvantaged backgrounds are more likely to be among the 30% of those 16-19 year olds with poor basic skills or, have failed General Certificate in Secondary Education (GCSE)s in English and maths at school and then gone on to achieve Functional Skills qualifications while learning at and for work (Vignoles, et al. 2010). Investment in their basic skills (whether or not they apply for entry to an HEI) improves their economic and life chances (Bostock and Steptoe 2012) as well as their performance at work.

The issue of weak basic skills is not however confined to those who did not do well at school. With 1 in 10 graduates from English HEIs leaving with only very basic skills in English and maths (including some who entered with GCSEs), there is room for HEIs to do more to develop the basic skills of students alongside higher level study (Małgorzata, et al. 2016: 63-67), whether or not they entered university with non-traditional qualifications. In this study, some HEIs describe how they do this and one HEI outlines its research on methods to improve the maths skills of student nurses. (4.17)

Connecting and planning actions

1.13 National policy and actions on basic skills

There are several national policy initiatives and actions that the sector could benefit from and should connect to, including:

- The work to raise the standards of basic skills education of 16-19 year currently underway (Ofqual 2015) should begin to bring improvements to post 16 English and maths learning and qualifications in England and greater clarification about the status of (fewer publicly funded) English and maths qualifications. Ofqual is working to improve the validity of Functional Skills qualifications – with more consistency in design and more standardisation of results across Awarding Organisations; guidance on Functional Skills question design; using formal regulatory action where there are issues, continue to monitor and improve Functional Skills qualifications in response to changes in Functional Skills curricula. These actions should begin to address concerns expressed by employers (ETF 2015: 11) and the OECD (Małgorzata, et al. 2016) in its recommendation to improve alternatives to GCSEs in English and maths.
- New Functional Skills qualifications will be introduced in 2019 (ETF 2017). Improved clarity about the status (and comparative content and demand) of Functional Skills qualifications should help to effect recommendations made in this report.
- The work of the Education and Training Foundation to build the capacity of FE to teach contextualised English and maths should and could be extended to include employer/providers in the health sector.
- Healthcare employers could require Apprenticeship providers to contextualise the teaching of basic skills in English and maths in vocational learning. Contextualisation was

seen as effective by employers and education providers responding to this survey, a view borne out by research and current studies. (ETF 2014; Małgorzata, et al. 2016)

1.14 What opportunities are available to make improvements in the sector?

Recommendations (Chapter 6) to this report say the sector should *connect* to national policy and action on basic skills in English and maths and make an action plan which draws on local practice and research intended to address basic skills weaknesses in the sector. In summary, these are:

- 1 Connect to Government strategic policy initiatives, designed to improve basic skills in English and maths in England. In doing so, identify how weak basic skills impact on current strategic initiatives within the sector, especially Talent for Care, Apprenticeships and quality standards for Apprenticeship provision.
- 2 Develop a long-term action plan which recognises and addresses weak basic skills in the health sector, in the national policy context designed to improve weak adult basic skills in English and maths.
- 3 Search out research and practical actions currently being undertaken in the sector (and in other sectors, where relevant) which are designed to improve basic skills in English and maths, at all levels of training and occupation in the sector. Connect these to Government funded programmes addressing weak adult basic skills teaching and learning and to an action plan for the sector.
- 4 Develop baseline information about the state of adult basic skills in the sector, at all levels and occupations.
- 5 Work with HEIs to address the specific issues identified through this study, concerning English and maths HEI entry requirements, (see Chapter 6 for details), in the context of the wider strategic actions outlined above.

NOTE: Though beyond the scope of this study, recommendations 1-4 could be extended to include in basic skills, the application of basic 'scientific concepts and procedures' in healthcare learning, included in 'elementary skills' in the PISA scale (Hanushek and Woessmann 2015: 9,21).

2. How the research was done

2.1 Initial desk research

Desk research included a review of relevant published literature (in and outside the UK), including analyses of basic skills, or literacy and numeracy in the adult population in England and elsewhere; NMC (and other HSC regulator) English and maths requirements for entry to qualifying HEI programmes, in texts of published standards; research which reviewed what and how HEIs interpret NMC education requirements for entry to Nursing programmes, including a review of the range of evidence required by HEIs, including qualifications, grades, level and type; internal HEI tests and their composition (where made available), and relationships between such tests, where given, to HSC regulator education standards and regulations; literature concerning widening participation and progression in the healthcare support workforce and a review of current policy reports in England relevant to the study, including Apprenticeships and funding, reform of GCSE English and maths and Functional Skills curricula, teaching and qualifications. The desk research took place between September and November 2016. Review of additional material continued to April 2017.

2.2 Online survey

Online survey questions are included in an Appendix. 12 of 17 questions enabled open text responses. Text analysis looked for patterns of information and opinion across responses to these questions.

Skills for Health circulated the survey to HEI contacts, Council of Deans of Health (CoDH), Healthcare employers, Further Education (FE) providers, Trade Unions, awarding organisations and all other contacts on the Bridging Programme database. Bridging Programme Reference Group members were asked to circulate the survey link to their contacts. The survey link was also sent to each HEE Area Widening Participation Lead and to Awarding Organisations offering Skills for Health approved qualifications. Details of the research and a survey link was circulated through the National Skills Academy of Health bulletin for health and social care employers and training providers, and included in the Bridging Programme newsletter during the period the survey was open.

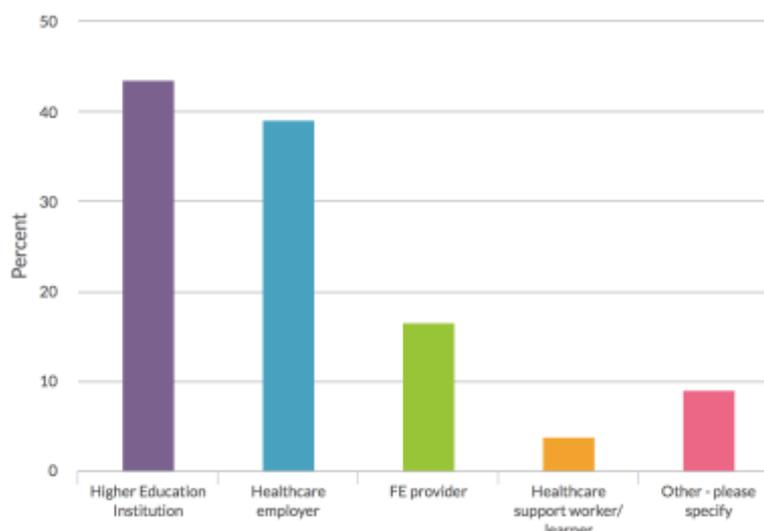
The survey was conducted by Skills for Health and open for responses between November 18th, 2016 and February 2nd, 2017.

2.3 Who responded to the survey?

There were 190 responses, with 90 complete and 54 partial responses. Test data and responses providing respondent contact detail only (a further 46), were excluded in analysis.

- 34 HEIs (58 HEI respondents)
- 52 Healthcare employers
- 28 FE providers
- 5 HCSWs
- 12 'Others'

Figure 1



58 responses were made by respondents from 34 Higher Education Institutions. In some cases, responses were made by multiple respondents from one HEI, to reflect different entry requirements (and different viewpoints) concerning multiple health related vocational programmes offered by the same HEI. In other cases, one response was made by one faculty or HEI representative and covered a range of programmes relevant to the study.

52 responses were made by Healthcare employers, 6 of whom described themselves as also being FE providers.

22 responses were made by Further Education Providers.

5 responses were made by Healthcare Support Workers.

12 responses were made by 'Others' and included respondents from the TUC (Unionlearn), one HSC regulator, Awarding Organisations, HEE representatives and leads and individuals working in non HCSW related roles in the health sector.

2.4 Depth interviews

25 follow up depth interviews were conducted by phone, with a proportional sample of the online respondents (across sub-categories), from among the 65 respondents willing to be interviewed.

The interviewee's survey response was shared and used as a starting point for discussion, the interviewee encouraged to talk and explore in more detail their responses to open questions in the survey. The interviewer concluded each interview with a summary of the discussion which included how the project might make practical recommendations for action which would take account of the respondent's views. The number of interviews was arrived at by setting a minimum number of 15 interviewees from across the organisation types

targeted for the survey and extending the quota to 25, to find out if there were variations in patterns of response (i.e. any substantively different information or viewpoints emerging using the same survey questions).

2 further interviews were conducted in the same way, with representatives of the Education and Training Foundation (ETF) and the Learning and Work Institute, who were sent the online survey questions in advance.

Each interview was recorded with the interviewee's permission and lasted a minimum of 30 minutes. Notes were taken during each interview. Analysis of responses was made by listening to each recorded interview. A list of those interviewed can be found in 'Acknowledgements'.

2.5 Quotations

Unless otherwise stated, all quotations in this report are taken from written responses to the online survey, or from recorded interviews.

NOTE: By its nature this is not a quantifiably definitive study, but given the range of respondents and the detail and consistency between the broader literature on the subject and the many responses and interviews, we believe the results validate the report's conclusions and recommendations.

3. What English and maths entry requirements are set by HEIs and why?

This chapter examines the key themes of the study, summarising and then analysing what was said in answer to survey questions and depth interviews. Survey questions can be found in the Appendix.

3.1 What English and maths requirements are set for entry to HEI health related vocational programmes?

- Most HEI respondents (34 of 39) required applicants to hold GSCE English and maths, grades A-C for application to enter one or more Health related vocational programmes. However, of these 34 HEIs, 21 accepted 'equivalent' qualifications, including 14 who specifically referenced Functional Skills qualifications in English and maths at level 2.
- A further 5 HEI respondents set 'Functional Skills level 2' qualifications as the minimum for entry.
- 2 respondents (1 HEI, 1 FE offering level 5 Programmes) said that 'mature' or 'experienced' applicants may be exempted from meeting their minimum (GSCE grades A-C) English and maths entry requirements.
- 5 HEIs respondents said that applicants meeting the minimum requirements for application and called for interview were required to sit a numeracy test and (in 4/5 cases) a literacy test on the day of interview.
- 13 HEIs did not reference an acceptable alternative or equivalent qualification to a GSCE grade A-C in either English or maths.
- Health related vocational programmes where specified, always included Nursing (and or Nursing specialisms).
- 7 respondents provided website links. These websites confirmed the respondents' outline of requirements in their survey response.
- No HEI survey respondent mentioned the currency of English and maths qualifications (i.e., how long an English or maths qualification can be held and still remain valid for entry).

Almost all responses focussed on English and maths entry requirements for pre-registration Nursing degree programmes, offering brief outlines of English and maths entry requirements for other vocational Health programmes in HE.

In this study, HEIs were being asked directly what their English and maths entry requirements were and (in interview) how they applied them. Taken together, these rules and how they are interpreted are even more difficult to track in published information, especially where the HEI makes exceptions to its published requirements.

Where an HEI offers only one or two ways in, it is easier for it to describe its requirements; e.g., 'Lowest accepted English and Maths GCSE grade C.' Although this in turn influences how such HEIs appear to perceive applicants,

'I'm not aware of any obvious difficulty' [with English and maths entry requirements], and effectively, what else it might do for those whose applications are rejected. 'Currently applicants appear to meet the criteria we set.'

Those HEIs that offer more ways to enter their programmes have more to explain to potential applicants,

'Normally we require GCSE grade A-C in Maths and English. We look at level 2 of the National Qualifications Framework, which includes, but is not limited to, GCSEs, iGCSEs, Key Skills and Functional Skills level 2.'

These two positions stand at either end of a spectrum of survey responses from HEIs. The more open the HEI was to possibilities, the more individualised was their approach and response to potential entrants,

'If students do not have formal qualifications to this level or have alternatives, we may still be able to consider their application.'

Sometimes this flexibility was not always visible in written descriptions. Where non-traditional learners were encouraged, for example, to 'enquire first' before going through the admissions process, there were sometimes problems with their application when they did not:

'We also follow up directly applications they [the HEI] has rejected. Agreements we have had as employers with HEIs are not passed down to admissions teams and we do have good applicants rejected - we follow this up.'

Where there is a potential advocate for applicants (An Access to HE Diploma or BP tutor or a Healthcare employer) there may be better scope for organised and systematic negotiation. As well as clearer, more standardised written information about entry requirements, establishing (and maintaining) a working relationship between Healthcare employers with an interest in HCSW progression and HEIs considering applications is essential, especially where entry requirements are flexible and individualised.

The complexity of and differences between HEI English and maths entry requirements for health-related vocational programmes in HE could be variously explained as: honest attempts by HEIs to be flexible in applying their own requirements, in order to be inclusive of people with 'non-traditional' qualifications and experience; stemming from genuine differences between the literacy and numeracy demands of different HEI health related vocational programmes and HSC regulator requirements; a means of filtering potential candidates where there is an oversupply; beliefs about the brand, validity or otherwise of particular English and maths qualifications. One or more of these explanations were offered in depth interviews.

3.2 What rationales were offered by HEIs for their set English and maths entry requirements?

3.2.1 Beliefs and concerns about GCSEs

15 survey respondents offered the rationale that qualifications set for entry were 'a requirement', or 'met a requirement' of a HSC regulator. Of these:

- 9 HEI respondents said that the specified English and maths qualifications set for entry to health related vocational programmes were 'a requirement' of the NMC or HCPC.
- 6 HEI respondents said that their entry requirements in English and maths 'met requirements' set by the NMC.

Almost all respondents adopted a relative position where GCSE English and maths were rationalised as a requirement for entry, claiming these qualifications were at an 'accepted' or 'national standard' or had 'equivalence with other institutions' requirements, or were a 'benchmark' against other HEI programme entry requirements.

1 claimed GCSEs were at 'a recognised standard unlike equivalents'; 1 suggested GCSEs were set for entry 'for public safety and professional competence'. 1 said, 'applicants need to be able to calculate drug administration accurately and record notes for the women in their care. These may be scrutinised by legal teams.'

However, some HEI respondents and interviewees said that qualifications in English and maths did not always guarantee skills in practice:

- 'There are a number of candidates who HAVE these GCSEs who are not particularly numerate or literate.'
- 'Maths at GCSE is a particular problem, hence our rationale to run the 'Numeracy in Health and Social Care Practice' module.'
- 'Working knowledge and demonstrable ability in maths and English, may be different to qualifications.'

HEIs often expressed an anxiety about performance in English and maths after admission, during their programmes. The adequacy or otherwise of qualifications to meet programme and practice requirements was questioned,

'We have found GCSEs, especially in Maths, to be a poor indicator of numeracy in many candidates. Therefore, we seek evidence of the ability to undertake calculations such as would be required in clinical settings rather than algebra or trigonometry.'

Only 2 of the 39 HEI responses suggested their HEI had compared the content and demand of English and maths qualifications set for entry with HSC regulators' professional requirements.

3.2.2 Missing explanations

Beliefs that qualifications set for entry were a regulatory 'requirement' or that they 'meet a requirement', the latter perhaps blurring a distinction between the two (to the reader) perhaps constitute a rationale? Implying a risk to the public, if set qualification entry requirements were not met was also cited in several explanations offered, though it was not clear how achievement of the specified qualifications obviated such risks.

What was missing from almost all HEI responses and interviews and in analysis of published information (Somerville 2015), was evidence of analysis of the content and demand of English and maths qualifications (of whatever type) that were set for entry; how these related (or did not) to HSC regulator education standards, and what the applicant needed to know, do or understand to succeed on programme at the HEI, and any close assessment of how required qualifications minimised the risks that concerned HEIs and employers.

3.2.1 The brand value of English and maths qualifications

'GCSE' is a familiar and trusted brand; HEI views about the brand value of English and maths GCSE and other qualifications are in line with those expressed more generally by the public, employers and by young people (ETF 2015: 3-4; Ofqual 2013). Qualifications in English and maths were often seen by HEIs in the study as a proxy for skills, and this is not unusual (ETF 2015, 2016), as employers and the public in general also value qualifications according to their perceived 'brand' and make assumptions about the content and demand of qualifications. Hence perhaps, the absence of rationales; qualifications are meant to 'stand for' skills, even if in practice they do not always do so.

In the current world of FE, Government says that young people achieving GCSE grade D in English and maths should re-sit the examinations while they are still at school or College. The Chief Inspector of Schools view is that it 'remains unclear' whether GCSE is the 'best way of ensuring that students have the English and mathematical skills needed for their intended career'. (OFSTED 2016). 'Over 70 per cent start college without these [GCSE English and maths] qualifications. This is an enormous challenge, given the huge numbers of resits' and, 'For many students, an alternative level 2 qualification may be a more appropriate means of improving their English and mathematics and ensuring that they are ready for work.'

The Ofqual review of Functional Skills qualifications (2015) should help to overcome these policy obstacles. The proportion of those in the healthcare support workforce without GCSE A-C grades in English and maths is likely to be high (Skills for Health 2011). A more objective view of the value of level 2 Functional Skills qualifications (as exhibited by 19 of the 34 HEI respondents to this study) will help to widen the participation in healthcare learning and work in all communities in England and at all levels, as well as improving progression prospects for those already in the healthcare support workforce - without undermining standards for HEI entry.

3.2.3 Maths and English qualification entry requirements and NMC standards

Claims that specific qualifications were 'required' to meet Nursing or Midwifery standards were not valid. The current published standards make no reference to qualifications in relation to literacy or numeracy requirements. (NMC 2010a, 2010b)

However, health professionals interviewed working in different branches of nursing and nurse education, emphasised aspects of English and maths capability they saw as essential for nurses in their particular fields,

'We want people that can write good accurate statements - good clinical records [describing] the deteriorating patient... their general mental state... their physical state'.

NMC standards (2010a: 45) 'recognise the particular vulnerability of infants and young children in relation to accurate medicines calculation.' One interviewee teaching Children's nursing was concerned about some nurses' cognition – that they understood what they were doing - essential for cross-checking drug calculation results for accuracy,

'In Children's nursing, there are some complex situations that the nurses need to be proficient at. My experience is that a number of nurses do not 'understand' the calculations that they are carrying out.'

No rationale for setting particular English and maths qualifications for entry perhaps, but clear expectations (and concern) about how nurses use English and maths skills in their profession. Nursing standards do not (and perhaps cannot) specify requirements at this level of detail, given the range of programmes and branches of the Nursing profession. Qualifications also change and given their history, may continue to do so.

The demands of HSC regulator education standards are therefore, necessarily interpreted by HEIs and employers. A good reason to scrutinise entry qualifications closely then, to establish whether they adequately prepare applicants for entry to different HEI vocational programmes in health and where appropriate, specialist branches of study and profession in each programme.

New Standards in Nursing and Midwifery are currently in development and are planned to be ready for consultation in the Spring of 2017 (Nursing) and Spring 2018 (Midwifery) NMC 2017a). The standards are being revised to take account of the 'unprecedented change in healthcare' and new legislation. Greater demands and new complexities in these roles (CoDH 2016) make an even stronger case for comparative analysis of the efficacy of English and maths qualifications set for entry.

The job of this study is not to best guess the outcome of the current NMC standards review. Correlative analyses of set entry qualifications in English and maths, when those new NMC standards are out for consultation, and then finally published for use should be carried out. HEIs, regulators, employers and learners need to know not only which qualifications are set for entry but why.

3.2.4 Entry requirements and safety

The claims made that public safety may be at risk if the applicant did not hold a GCSE in maths or English were not substantiated. However, in interview, HEIs and employers *were* clear about potential risks and sought ways to minimise these, through set qualification requirements and additional internal assessments.

Four types of risk were identified in interviews with HEIs and employers: risks to the public, risks to the learner of failure on programme, and risk to the institution of failing to retain students. Employers also identified risks of failure to meet regulator standards and in

litigation, should they be held responsible if the institution or its qualified staff were found to have failed the public.

Entry qualifications are therefore used as part of each institution's strategy to minimise one or more of these risks. How useful any risk assessment can be, which makes assumptions about how certain qualifications may or may not minimise these risks, is questionable.

3.2.5 Rationales for setting additional English and maths tests at interview

Rationales for setting entry tests in English and maths included: 'We set tests for all 'competitive programmes'; 'Because of the gaps in students being able to apply their numeracy and literacy skills to the course'; to test that candidates could use 'basic arithmetic concepts' and 'grammar and punctuation' at the time of interview, whatever entry qualification they held. '[We adapt] the numeracy tests to suit the various professions (Radiography for example, use different numeracy skills to other professions)'; 'We currently also require applicants to pass a multiple-choice numeracy and literacy test for nursing and radiography entry. 5 HEIs volunteered this information. Other HEIs may or may not use literacy and numeracy assessments at interview.

One HEI said that tests were used only to inform rather than dictate admissions decisions and in all cases HEIs said where tests results were 'borderline', performance in other parts of the interview were taken into account.

In setting these tests, HEIs must hold a view of what English and maths skills and knowledge are needed by applicants, to meet standards and avoid the risks outlined (3.2.4). Using additional tests to make admission decisions may suggest a lack of confidence in the content of English and maths qualifications to act as an acceptable proxy for skills and (or) that candidates should be tested to find out if they can (still) use specific English and maths skills, prior to admission. The HEI may believe different tests are needed for some programmes. '[We adapt] the numeracy tests to suit the various professions. Radiography for example, use different numeracy skills to other professions'.

Assessment tests dominated the discourse of English and maths learning in the survey and interviews; internal tests at all stages being used by different HEIs to both supplement entry qualifications in making decisions about who should enter Health related vocational programmes and to check between and at 'progression points' that students were able to continue to function in maths and English, as the demands of the programme and practice became more complex, evident for example in 'guidance related to numerical assessment', (NMC 2010a: 104).

One interviewee described how internal English and maths tests are used, from entry as a HCSW to (over time) working as a Nurse in their first qualified job,

'Some employers...test HCSWs when they join [not all], then if they want to go on, they're tested through the University's pre-programme screening, and or meet whatever the HEI's requirements are for entry to the programme... and if we [the employer] were seconding them with salary support we would assess them, as we always have more applicants that we've got places... then they're probably tested [by the HEI] periodically through their programmes, then many would have another test at an assessment centre before going into their first qualified job.'

This use of assessment to mitigate risk at every stage of development is discussed under 'Additional Assessment' in Conclusions, Chapter 5.

The case for an open review by HEIs of the suitability, content and demand of English and maths qualifications required for entry to the range of HEI health related vocational programmes seems unquestionable. Whether assessment tests at interview are also required should be an outcome of such a review. There may well be a case for their use but this should be universally understood and accepted and explained by those that use them - HEIs and healthcare employers.

Such a review would help in improving the general transparency of English and maths requirements (at all stages) and inform a discussion of teaching and learning of English and maths at work in healthcare support, in preparation for entry to (and on programme at) HE health-related vocational programmes.

3.3 How are each HEI's English and maths requirements (and rationales for these) communicated to potential learners and healthcare employers?

All 38 HEI respondents cited HEI websites, UCAS and promotional materials. 15 respondents referenced (variously) HEI admissions services (to check acceptable English and maths equivalencies), open days, outreach activities and partnerships with schools, colleges and employers and careers events. One said, 'all students are invited to information events prior to application at which these requirements are clearly set out.'

Where tests were to be taken at interview, one respondent said, 'test papers for maths and literacy are sent out with the invitation to interview so students are aware of requirements on the day.'

Desk research examining all entry requirements set for NHS funded Nursing Programmes in England (Somerville 2015) found that 'non-traditional' applicants (those without A levels) would have a difficult time simply finding out and comparing minimum requirements for entry to Nursing Programmes in England, estimating at least 9 hours work to search the entry requirements of 52 institutions, (Somerville 2015: 10) using the most efficient routes to the information, and assuming a significant degree of expertise and commitment in doing so.

Ironically, more flexible entry requirements are likely to need more description and the more individualised the HEI response to enquiries, the more open to potential interpretation are their written entry requirements.

The desk research does not claim to say how HEIs interpret these requirements in admissions. Somerville calls for 'improved standardisation' of presented information, setting an example of how this could begin to be done, in Appendices to her (2015) report.

3.4 Identifying HEI English and maths entry requirements. How do Employer/FE providers find out what these are?

5 (of 13) FE respondents said there was often 'confusion and mixed messages' from HEIs on their requirements,

'Universities state it is the requirements of NMC - however NMC have recently advised this is not correct and whilst it is suggested it is up to the individual universities to make the

decision...’ ‘we have to predict their [HEI] expectations from previous experiences of others accessing the process.’

However, 2 responses suggested that it was important for FE and employers to build partnerships with HEIs through,

‘Attendance at HE Advisers conferences and meetings’, and ‘...work in partnership with the universities’.

4 (of 13) FE respondents described their own FE (rather than HEI) English and maths requirements and how they supported applicants to achieve these.

3.5 What do HEIs do to assist applicants from the healthcare support workforce, who need help to meet HEI English or Maths entry requirements?

HEIs may find out that HCSW (and other) applicants need help with English and maths prior to, at application, at interview and or on programme and their responses to this question reflected this:

- Where applicants did not meet HEI entry requirements in English and maths (an acceptable qualification and where applicable, passing of literacy and numeracy tests at interview) 15 (of 38) HEI respondents said they: ‘directed’ or ‘signposted’ applicants to FE provision including, ‘FE providers’, ‘adult education centres’, ‘appropriate courses’ and ‘Learn Direct’ and Self-help texts.
- 1 said, ‘[we] suggest the key skills level 2 qualification [now Functional Skills] which maybe a quicker route than GCSE’.
- 2 respondents said (respectively) that they did, ‘nothing’ and ‘we don’t’.
- 14 HEIs were involved in work to help prepare HCSWs to develop their English and maths skills in preparation for entry.

3.5.1 Support for HCSWs prior to application

There was a full spectrum of responses to this question, from significant English and maths support given to HCSWs - through healthcare employers and Unionlearn and by HEIs - in preparation for entry to HE - to no support at all, where applicants not meeting entry requirements were rejected during the first stage of the admissions process.

HEIs have, until recently, been almost overwhelmed with applications for places on Health related vocational programmes, though that position is reported to be changing quite rapidly (Marangozov, et al. 2016). The setting and strict application of entry requirements (not just in English and maths) has been one way of managing a high volume of potential applicants.

However, provision of English and maths support to potential HCSW applicants by FE/employer providers and Unionlearn - in concert with an HEI – shows that some HEIs (up to 14 in this study) were willing to help employers identify and develop the basic skills of capable healthcare support staff prior to entry, regardless of whether there was an oversupply of potential candidates with 16-19 school or FE acquired entry qualifications.

1 HEI said they worked with ‘employers to advise them on preparation of their staff for HEI courses’, and another that, ‘Some NHS employers have in-house forms of preparation.’

4 HEI respondents said English and maths support was offered to HCSWs prior to entry, offering:

- ‘Pre-study classes and workshops for both Maths or English’,
- ‘A bridging module in academic skills...to a cohort of HCAs which has worked to improve their English capacity’,
- ‘a Transitions Module for healthcare support staff. This Module includes achievement of our English and Maths entry level criteria.’
- ‘...modules for study skills and a numeracy module where the healthcare support staff or the wider community who wish to access our professional programmes.’

HEIs setting additional internal tests at interview offered all applicants a variety of ways of preparing for these tests:

- ‘preparation sessions on a one to one basis if required’,
- ‘the faculty website also includes test papers for the selection events.’

4 HEIs said they offered ‘equivalency tests’ where applicants did not hold the required entry qualifications:

- ‘For some equivalency testing can also be an option’,
- ‘We support students to complete a university equivalency test’,
- ‘Foundation Degree students...are offered a [HEI] Equivalency Test’, ‘
- ‘internal tests for English and maths rather than asking them to retake any GCSEs’,
- ‘...equivalency examinations available at a cost of £50.00’.

3.5.2 HEI assistance to students on programme

5 HEI respondents chose to outline what they did to assist students’ English and maths skills development after admission to their programmes including, ‘expresso maths and study skills’, ‘GCSE English and Maths whilst the students are studying with us’, ‘Ad Hoc support is provided for those who request for it from within the School and via the central University Support Services’, ‘learning materials via the Open Learn platform that help them to develop their skills in these areas’, ‘support sessions available through the language centre and a maths group at the university’. 1 suggested, ‘As students progress through the FD [Foundation Degree], their level of confidence and abilities increase enabling them to complete the English/Maths requirements [for transfer to Degree programmes] at local FE providers’.

Ideally, HCSW applicants should be as well prepared for HE study as possible, prior to making an application. HEIs are obliged to provide additional English and maths support to students that need it while on programme, whatever qualifications they held at admission, in order to improve students' chances of successful completion. What this support constitutes will vary. (See also 3.6 below).

3.6 What do HEIs do if applicants fail to meet their English or maths entry requirements?

There are two possible points where applicants may fail to gain entry; firstly, where they do not have the qualifications required to make the application; secondly, at interview, where they fail literacy and or numeracy assessments tests set by the HEI. Some responses to the question reflected these one or two stage processes at each HEI.

28 (of 37) HEIs directed applicants elsewhere: '[We] advise them of which aspect they failed and direct them to support external to the university' and 'suggest they 'reapply for next cycle'.

HEIs said they might accept and offer support on programme to candidates who were close to passing the HEI's test/s at interview, 'dependant on the rest of the interview outcomes'. 1 HEI has 'moved to using these [internal tests at interview] as a diagnostic rather than a way to screen out applicants'. 1 said, 'sometimes we recommend the student should be assessed for dyslexia or dyscalculia'. One FE/HE provider offered 'Further face to face teaching and attendance - preparation for re-sits'.

3.7 Do applicants from the healthcare workforce face any difficulties in meeting HEI English and maths entry requirements?

Where the HEI only accepted applicants for interview that met their minimum requirements, HEIs (5) said they had no knowledge or information about any difficulties that unsuccessful HCSW applicants might face.

Where difficulties were reported, there was almost equal emphasis on English and maths. 24 (of 38) described the difficulties that some HCSWs faced gaining entry to programmes and speculated why. They said that those HCSWs that do struggle, have 'often been out of formal study for some years and find this challenging'; have 'a lack of confidence in relation to these areas; often have had poor past experiences of learning and completing exams'; have 'issues with the ability to research, read and interpret research articles', and say 'basic maths skills such as decimals and conversions sometimes are an issue', as are 'Grammar, spelling, punctuation'.

3 said that practicalities (access to funding and timely access to provision of GCSE programmes) presented difficulties for applicants, including, 'Funding and finding suitable courses due to them working shifts'; 'many students who don't have the necessary qualifications at the time of application cannot access provision locally that runs over a timeframe that allows them to achieve the required outcomes in time to apply.'

1 said that speakers of English as a second or other language have 'issues in reading and writing English. Some have studied IELTS [International English Language Testing] but at a very low level.'

6 HEIs said there were issues with the qualifications they set for entry. 'Innumeracy seems to be found in applicants with a range of initial qualifications, including GCSE'; 'I think that the standard of a Maths GCSE requires skills that are not relevant to healthcare education'; '...there a number of candidates who HAVE these GCSEs who are not particularly numerate or literate'; 'working knowledge and demonstrable ability in Maths and English, may be different to qualifications'.

2 suggested employers could do more: 'The NHS appears to not place importance on this standard which is astonishing considering the complexity of care relating to numeracy and literacy'; 'Anecdotal evidence would suggest that this group would benefit from support in the workplace to enhance their skills in the areas of literacy and numeracy.'

3 HEIs responding said suggested that 'Applicants coming from the existing workforce appear to face no more difficulties than anyone else'.

Responses to this question (and other survey questions) seem to suggest HEIs encounter student difficulties with literacy and numeracy more generally: 'Overall, for our 7 different disciplines applicants have a wide range of skills in numeracy and literacy, but generally we have many students who struggle with meeting the basic requirements of the profession.' This weakness in basic skills is in tune with OECD studies of basic skills among HEI graduates in England (Małgorzata, et al. 2016). (See 1.11)

These difficulties span a wide range of issues – some of which need to be accepted and addressed strategically by the sector, even if the difficulties faced by HCSWs are not much different to those of the wider population. In taking a wider view, the health sector could learn from policy initiatives designed to improve English and maths skills strategically, in the British Army for instance (Learning and Work Institute 2017) and the current capacity building work in the Further Education sector (ETF 2017).

The sufficiency or otherwise of set entry qualifications to provide evidence of applicants' English and maths preparedness for entry should be reviewed. See 'Recommendations' (6) below.

3.7.1 ESOL

Few survey respondents made direct references to HCSWs who spoke other languages. In interview, some respondents alluded to the 'additional difficulties' a speaker of other languages might face, though not in detail. The relationship between Functional Skills and ESOL (English for Speakers of Other Languages) learning and assessment and the potential pitfalls for providers, is summarised well by the Learning and Work Institute (2016).

As discussed elsewhere in this report, English language skills required by NMC education standards (2010a, 2010b) are described fairly briefly and in broad terms, yet the language (IELTS) qualification requirements set for a variety of non-UK qualified nurses are quite specific (NMC 2017b). The relationship between NMC education standards and the rationale for requiring an IELTS (International English Language Testing) qualification is relative. 'The NMC uses IELTS because it has international use and recognition within nursing and midwifery. Most other healthcare regulators in the UK also use it.' (NMC 2017b). One question could be: is there any evidence of analysis which shows an explicit relationship between NMC education standards and the IELTS qualification, and its content and demand at different levels?

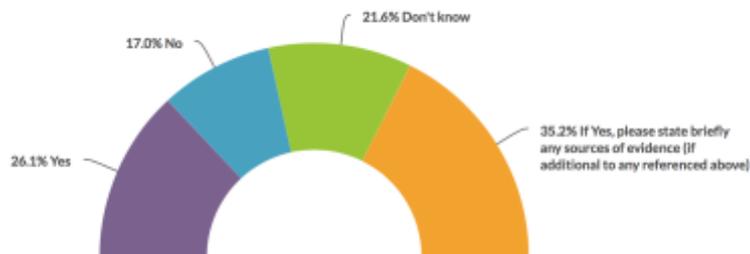
Following an interview with an FE manager, one experienced ESOL tutor and Teaching and Learning Coach outlined their thinking on English and maths learning in and through Functional Skills and GCSE qualification programmes.

“I don’t think GCSE maths is automatically easier to teach just because it includes less language content than Functional Maths. It depends on the learners’ starting points. I also think Functional Maths (problem solving) offers a really good framework for content based language instruction for ESOL learners due to the emphasis on literacy and the necessity for lexical development inherent within the qualification. The smaller range of topics than GCSE also offers a bit of space in the delivery model to embed more speaking and listening and communication activities around the type of mathematical situations which may arise in the work place and provide a further layer of employability skill development.”

This illustrates how the different demands of GCSE and Functional Skills English affect ESOL speakers’ acquisition of maths skills *and* lexical development in English. The structure of the Functional Skills qualification also affects how the ESOL student can develop practical speaking and listening skills through (Functional Skills) maths problem solving. This is a useful example of how Functional Skills and GCSE qualification programmes should be analysed for their efficacy – for work and entry to HEI study.

3.8 Do more learners face difficulties in meeting maths (rather than English) HEI entry requirements?

Figure 2



Prior to this research project, there were anecdotal reports from healthcare employers and FE providers of HCSWs facing more difficulties with maths than with English, (Lillis, Skills for Health 2015).

Responses to this question show that when asked directly, less than half (23 of 57 respondents) suggested this was the case, and most reporting difficulties with maths did not cite formal evidence. 19 others said 'No' and 17 said 'they did not know'.

Of those that said there were more difficulties with maths than with English, 5 cited evidence from candidates' (failure of) tests at interview, and 15 reported anecdotal evidence from HEI or FE staff, employers and self-reports, describing students as 'fearful of maths', 'embarrassed or nervous' about their ability to meet maths entry requirements, saying some 'find it hard to complete simple tasks, like adding up taking away'.

3.9 Have HEIs observed repeated patterns of difficulty?

19 (of 37) HEIs said 'no' and 18 'yes'. In saying no, roughly half of respondents explained that they did not know or could not say, from any formal evidence. Roughly half said that HCSWs have 'similar levels of numeracy and literacy to the general population of applicants'. 6 cited failure of applicants in interview tests, specifying for example 'drugs calculations', 'grammar and punctuation' 'fractions, decimals and conversions'. 4 suggested evidence was kept by admissions tutors.

4. A National Strategy?

This chapter summarises suggestions most often shared by survey respondents and interviewees. These inform the subsequent conclusions and recommendations. (Chapters 5 and 6)

Many of the suggestions require broader action on basic skills in English and maths in the healthcare sector. These have informed Recommendations 1-4 (Chapter 6).

The question of what constituted ‘a national strategy’ was deliberately left open so that respondents could make their own suggestions.

4.1 Overview

83.5% of all respondents agreed or strongly agreed a national strategy for supporting English and maths skills development in the healthcare support workforce would be useful. There was majority support for this view in each respondent sub-category.



All those in favour made suggestions about what ‘a national strategy’ should include. Although the question was left open, there was a high degree of consistency in actions proposed within and across respondent categories. Respondents often made the same points of principle about English and maths for healthcare support work and higher level healthcare learning.

There were few comments on what specific skills were needed but concerns were repeatedly raised that some HCSWs lacked basic arithmetic concepts and writing and reading skills for work. HEIs suggested there were similar problems with some students admitted, from all educational backgrounds. In fairness, the question of which English and maths skills people needed was not asked directly.

Respondents suggested an analysis of the basic arithmetic concepts and writing and reading skills needed, building consensus about what (and how) English and maths skills should be developed and recognised, for work *and* progression to HE, moving on to how attainment should be recognised through suitable qualifications or internal assessments.

Most respondents said English and maths skills should be fully integrated into what people learned for healthcare work. This would mean healthcare workers and employers becoming

more aware of the English and maths skills they are using (and how these are developed) and how these are needed to function effectively at work every day. Responses suggest that the sector needs to stop viewing English and maths simply as 'qualifications' needed to progress onto the next educational programme or role and to see (and teach and learn) English and maths skills as fundamental for healthcare work and day to day life.

4.2 Arithmetic concepts

Most respondents that chose to comment on which maths skills HCSW should have were concerned that many did not hold or were able to use basic arithmetic concepts; students were 'lacking maths savvy', with 'no understanding of what they were calculating', and that these skills had not necessarily been acquired early on at school: 'Most healthcare professionals will need to be able to perform calculations of the level expected of an 11-year-old.'

Employers taking on HCSWs suggested that many did not appear to have acquired basic arithmetic concepts at school at 'upper key stage 2' (DfE 2017b), including 'percentages, multiplication, decimals and generally being able to use numbers in relation to Healthcare. For example, totalling fluid charts, converting kilos to pounds', Others said maths skills development needed to be seen as continuous, from 'basic numeracy skills advancing to the administration of medication', difficult when fundamental concepts have not been embedded in early schooling.

4.3 English

There was little specificity about which English skills were needed. 'Essential grammar, spelling, punctuation etc.', 'essay construction, reading writing for professionalism'; the 'basics' of producing writing and interpreting different forms of writing.

4.4 ESOL

Two respondents referred to English and maths for speakers of other languages:

- 'Literacy should include an opportunity for people who have English as a second language to understand colloquial and slang expressions used in everyday speech, to enhance their understanding of working in the UK...English taught [should] include healthcare terminology which would in turn support the [HCSW] role.'
- 'Pay particular attention to ESOL - many [HCSW] staff are brilliant at their roles but may not have English as their first language.' The relationship between ESOL and basic skills learning in English and maths for healthcare should be reviewed. See Recommendations (6)

4.5 Relevance and functionality for work and study - and skills for progression (see also 1.13, 4.11, 5.4 and Recommendation 5.1.)

All respondents, including almost all HEIs, repeatedly suggested that English and maths skills development should 'build on an analysis of what is actually required'. Relevance – learning what was needed for the job – would help HCSWs to see English and maths as integral to learning for work, and experience:

- ‘Direct and practical links [are needed] between the content of English & Maths curriculum and everyday skills required in the Health and Social Care employment sector.’
- ‘The option for employees to access courses facilitating learning related directly to healthcare related English and maths skills. This would provide the context to help adult learners to understand the purpose of the required learning.’
- There was a relationship between relevance and building confidence:
- ‘Numeracy sessions should be relevant for the role [of] the healthcare worker... taught in a non-confrontational manner, bringing enjoyment and appreciation for the need for numeracy in the workplace [and] build on the confidence and ability of the people we wish to encourage into the role.’
- ‘Support not only [for] work English and maths but also outside of work...[this] should enable staff to gain confidence and then be able to move to other roles more easily’.
- ‘More concentration on Numeracy and Language/Communication skills than pure mathematical/literary knowledge.’

4.6 Teaching English and maths – improving the capacity of FE and Employer/FE providers

Respondents in all categories talked about English and maths teaching and learning, ‘in house’. ‘Healthcare support workers need to be supported by the practice development teams in Trusts to complete maths qualifications (particularly) - via support for them to attend this at college or if possible in house’. There was recognition that vocational teaching staff might need additional skills themselves. There should be ‘government funding for public services organisations, to enable them to employ functional skills tutors who could run classes and do one to ones where required, to assist any staff who need to upskill.’ And a call for specialist qualified staff. ‘[English and maths] should be delivered / taught by persons qualified to teach and guide English and maths through their professional qualification and skill rather than passing this on to trainers / assessors / support assistants to try and "get through"’. These ideas are echoed by employers across sectors (ETF 2015) and in international studies (Hanushek, Woessmann 2015; Małgorzata, et.al. 2016).

4.7 Learning environments and practical support

Time to learn, at times to fit in with work commitment was required, with ‘greater flexibility of access for working students’ and ‘paid time from work to undertake classes/exams’, and ‘Access to online assessments for staff so we can see what level they are achieving and onsite provision, so we can support our staff to progress.’ Employers recognised that capable HCSW staff need better English and maths skills to continue to develop professionally: [we have to] ‘Provide time and funding to enable these students to undertake these subjects because they will have valuable clinical skills’.

4.8 A whole organisation commitment to English, Maths and ESOL - and understanding of the benefits

'The strategy should cover English and maths literacy as well as ESOL up to level 2. It is important to spell out what the impact of improved English and maths skills is for both employers and employees. The strategy should include employer partnerships with unions and providers...Focus on English and maths skills should be included as a whole organisation approach including induction, personal development plans, apprenticeships and traineeships and building progression routes.'

4.9 Initial and ongoing assessment

The absence of baseline information about the English and maths skills of HCSWs from entry to employment onwards is an issue repeatedly referred to in earlier work (Bateson, et. al 2016) Baseline information about each HCSW's English and maths skills (at least) is needed, for employers - and the sector more widely - to understand the scale of improvements needed in the sector and to plan (and assess the effectiveness of) interventions:

- 'An early identification [of low basic skills], e.g. at interview for a job, not just when they want to engage in future learning. Often the apprenticeship is delayed as they do not have the correct entry requirements. If identified when they started working, they could start functional skills earlier, also this would help for their job.'
- 'Some type of pre-entry course into healthcare or compulsory English and maths tests at interview. So, the employer can assess the level of ability prior to employment.'

If diagnostic assessment shows that action is needed, the employer needs a plan for improvement. 'Local colleges working in partnership with the Trusts to deliver the required training following initial diagnostic testing. Support for staff not achieving to carry out remedial training. Funding to support the training and assessment process.'

4.10 English and maths progression within the healthcare support workforce

The drive for this study came from longstanding questions about progression opportunities for healthcare support workforce capable of moving on to HE vocational learning in Health. Employer respondents were often as concerned about those HCSWs who were likely to stay in their role but who needed significant support to progress to qualifications at level 2 and 3. 'Clarity is needed regarding how we support staff to get from Entry 2 and 3 to level 2 - should it be part of mandatory essential skills?'

4.11 HEI understanding and consistency in recognising of Functional Skills qualifications

There was widespread support from HEIs for a functional, contextualised approach to English and maths teaching and learning. Over half of all HEIs responding accepted Functional Skills qualifications in English and maths as equivalent to GCSE A-C passes for entry. Yet the potential unpredictability of HEI views about the admissibility of Functional Skills qualifications has a significant impact on Healthcare employers trying to make progression plans for their capable HCSW staff, especially where their choice of HEI was limited.

'It should be what we actually need the person to be able to do, not just a certificate that gives us employees who can work out algebra but not a fluid balance chart.'

'Functional Maths, English and ICT. An acceptance by the HEI that this is equivalent to GCSE for adult learners who are not just out of school with a GCSE.'

'It is very difficult as it changes all the time, I would presume depending on the number of applicants. Learners also find it difficult as they are told at careers events that they can use their Functional Skills, call the HEI and are told by the person on the phone - no they can't.'

4.12 Common HEI entry requirements? Or transparent and consistent terms?

There were calls for both 'common' and 'consistent' requirements for entry for HCSW (and other) applicants to HEI health related vocational programmes:

- 'A clear and consistent approach to be used wholly across the board.'
- 'Develop a tariff of qualifications that count but also a list of qualifications & providers that the individual can access to meet entry requirements.'
- 'A programme of development deliverable by educational providers listed on Apprenticeship provider list that is standard, has a qualification attached but is accepted by HEIs. This should be functional skills.'
- 'It should identify what is required by the NMC and so that applicants are clear about whose decision it is to apply GCSE grade only.'
- 'Numeracy needs to be relevant to the professions. Physiotherapists do not need the same as nurses and nurses do not need the same as radiographers, etc.'
- 'Clear levels of expectation with clear rationale of why it is necessary in the context of current practice. Identified providers with standardised offer.'
- 'Make the application process more standardised - but each HEI course differs slightly so there needs to be flexibility.'

'Common', as in 'the same', seems an unlikely prospect, and respondents outlined apparently defensible reasons for setting different English and maths requirements. A 'consistent' approach that is presented clearly and understood by all should be achievable.

4.13 Preparation programmes for entry to HE

Offering 'bridging' type programmes (Lillis, Skills for Health 2015), may help to prepare HCSWs for HEI entry, though such programmes require a high level of English and maths competence for HCSWs to undertake them and succeed,

'There is a potential for utilising a bridging programme which provides learners with the required English and maths skills. This could be implemented over the summer, prior to the start of each academic year'.

4.14 Additional English and maths assessments

Additional assessment tests (where mentioned) were talked about in terms of standardisation – at exit to meet standards (NMC 2010a), as well as entry:

- ‘Nationally agreed numeracy and literacy assessments which all applicants must meet in addition to GCSE equivalent qualifications, with test centres so that applicants do not need to do multiple tests which have no national standard or equity.’
- ‘National tests (in addition to qualification entry requirements)’
- Two interviewees associated with the ‘Capital Nurse’ project (HEE 2016; NHS Healthy London Partnership 2017) talked about a common (post-qualification) English and maths assessment test that any Newly Qualified Nurse (NQN) across London could take, which would be mutually recognised by all employers, ‘so that Nurses would not have to take multiple tests.’
- One reference was made to tests being used for ‘Diagnosis of English and maths skills for *screening in*, not screening out applicants.’

Additional assessment tests are discussed in Conclusions (5.6) below.

4.15 Maths support on HEI programmes

Imaginative approaches like these are potentially transferable,

‘Some students are freaked by maths so we have introduced a ‘maths buddy’ scheme to support students. The maths buddies are PhD students and offer students support on a one to one basis - but this is only after they start the programme.’

A much more active and explicit integration of English and maths skills into HEI vocational programmes in health should be considered.

- ‘Maths and English [should be] incorporated in the University course.’
- ‘There could be additional classes within the FD programme and/or nursing course that supports students struggling with Maths. Creating access to the programme being developed in the maths department which focuses on the relevant skill base needed for Nursing/Paramedics would allow students to study this while studying for FD.’
- ‘Mentoring and pastoral support to build confidence. practice sessions, real life activities using maths and English; [i.e.] on the job use so that the maths/English is relevant; tutorial support both one to one and groups.’

4.16 Recognition of value and level of English and maths achievements through FDs

‘In relation to English, if a student has passed the FD (FD courses provide extra support on academic writing skills, critical review of literature and evidence-based research) then this should be considered as an equivalent criteria/qualification [to a GCSE in English].’

4.17 Learning from research: 'self-explanation training'

One current research project¹¹ involves the use of "self-explanation training",

'...to help [HEI Pre-Reg Nursing Degree] students understand the mathematics on their courses better and to help them unpick the non-procedural questions, like drug calculation questions, in order to answer them more effectively. Self-explanation training has been shown to be effective in different subjects, such as physics, biology and high school level geometry in mathematics as well as mathematical proofs at university level. Initial results are positive - self-explanation training appears to offer an improved understanding of nursing mathematics but, interestingly, it has a bigger effect on being able to answer non-procedural questions (compared with questions such as "what is 0.625 as a fraction in its lowest form?"). It also helps students regardless of prior experience and knowledge (GCSE grade in mathematics has been taken as a covariate) and helps each year of study equally. This is a small-scale study (N= 26) but it does appear to show that self-explanation training provides immediate gains in understanding of nursing mathematics. The next step will be to determine whether it has longer term gains and retention.'

This and other research projects in the health and other sectors should be identified and their results used to inform a national strategy for the sector.

4.18 A national strategy supportive of local approaches

'This is a very important part of our future workforce planning and provision. We work with local partners to try and address this and a national approach would be helpful.'

'Anything that can be done in this area will be appreciated and supported.'

'It would be good to have more support materials available for in-house support.'

¹¹ Findings from this Coventry University research are due to be presented by Dr Mark Hodds at the *IMA, CETL-MSOR and Teaching Mathematics and its Applications the Mathematics Education beyond 16: Pathways and Transitions* Conference, Birmingham, July 2017.

5. Conclusions

There are two dimensions to the results of this study:

1. A description of the current position on English and maths HEI entry requirements for health related vocational programmes (Chapter 3) and what could be done to improve matters Recommendation 5 (Chapter 6).
2. Actions that people responding to the study said are needed to address low basic skills in the healthcare sector, (with a number of these suggestions about what could be done nationally), are summarised in Chapter 4 and reflected in Recommendations 1-4. (Chapter 6)

The following conclusions concentrate on 1 above; analysis of the results of the study for the healthcare sector but should be read and understood in the wider context of low basic skills in the adult population in England at large (Chapter 1) and the actions discussed and recommended in this report, to address low basic skills in the healthcare sector (Chapters 4 and 6).

5.1 What English and maths qualification entry requirements are set by HEIs?

Most HEI respondents (34 of 39) stated that GCSE English and maths, grades A-C were a requirement for application to enter one or more Health related vocational programmes. However, of these 34 HEIs, 21 accepted 'equivalent' qualifications, including 14 who specifically referenced Functional Skills qualifications in English and maths at level 2. A further 5 HEI respondents set 'Functional Skills level 2' qualifications as the minimum for entry.

Almost all responses focussed on English and maths entry requirements for pre-registration Nursing degree programmes, offering brief outlines of English and maths entry requirements for other vocational Health programmes in HE.

5.2 Entry requirements and minimising risk

Claims made that public safety may be at risk if the applicant did not hold a GCSE in maths or English were not substantiated. However, in interview, HEIs and employers described various potential risks if students and Nurses were not competent in English and maths and sought ways to minimise these, through set qualification requirements and additional internal assessment tests. Four types of risk were identified in interviews with HEIs and employers:

- risk to the public when the student is on placement
- risk to the student of failure on programme
- risk to the institution of failing to retain students
- risk of failure in litigation against employers

Entry qualifications are used as part of each institution's strategy to minimise one or more of these risks. How useful any risk assessment can be, which makes assumptions about how certain qualifications may or may not minimise these risks, is questionable.

5.3 Fairness, transparency and consistency

There are multiple perspectives on 'entry requirements' and what these mean to the institutions that set them. Only two HEIs offered an objective, defensible rationale for their English and maths qualification entry requirements. No comparative analysis was provided, of the relationship between the content and demand of set qualifications and HSC regulator education standards, or the demands of academic study.

The case for or against accepting specified English and maths qualifications for HEI entry was largely unsubstantiated. This is unfair to applicants where alternative qualifications are not accepted for entry by HEIs. HCSWs applying to HEI health-related programmes with Functional Skills (and other alternative) English and maths qualifications may be excluded by HEIs that do not accept alternatives to GCSEs in English and maths, with no objective rationale provided by the HEI for doing so.

The potential unpredictability of HEI views about the admissibility of Functional Skills qualifications has a significant impact on Healthcare employers trying to make progression plans for their capable HCSW staff, especially where the choice of HEI is limited.

5.4 Functional English and maths learning, contextualised in healthcare

There was widespread support from HEIs, HC employers and FE providers for a functional, contextualised approach to English and maths teaching and learning. HCSW understanding of how English and maths skills work and are used in different contexts can help embed concepts and an understanding of how English and maths are applied in different branches of nursing and other health professions.

5.5 Learning support for HCSWs from HEIs, FE providers and Unionlearn prior to application

There was provision of English and maths support to potential HCSW applicants by FE/employer providers and Unionlearn - in concert with an HEI, even where there was an oversupply of potential candidates with 16-19 qualifications.

Establishing (and maintaining) a working relationship between Healthcare employers with an interest in HCSW progression and HEIs considering applications is essential, especially where entry requirements are flexible and individualised.

5.6 Additional assessment tests

In addition to any set qualification requirement, internal assessment tests of English and maths skills were being used by employers and HEIs for two quite different purposes:

- Diagnostically; to find out what English and maths skills new HCSW entrants have, or to ascertain what support a new HEI entrant may need on a Level 2 /3 Apprenticeship or an HEI programme;
- As an alternative or a supplement to set English and maths HEI entry requirements, or within Nursing Degree programmes at 'Progression points' (NMC 2010a, 201b) or by employers as a condition for employment as a Nurse, in addition to (and possibly after) achievement of a Nursing Degree.

These assessment tests are being used (in the main) to either reassure the HEI that an interview candidate has a chance of succeeding on a learning programme or to reassure an employer that a qualified nurse's competence in English and maths is sufficient for the job - and that they are not a risk to the public, or the institution.

Where used in screening for HEI entry, such assessment tests suggest a lack confidence in English and maths qualifications set for entry, and after qualification, that employers lack confidence in the professional qualification achieved on completion of the Degree to verify that the Nurse is sufficiently competent in English and maths to practise. In London, employers and some HEIs involved in the Capital Nurse Programme plan to offer standardised online Maths tests within the final year of Nursing Degree study, according to interviewees.

These practices suggest there are wider concerns about English and maths competence at all levels of healthcare work and internal assessment tests, used for summative assessment, are replacing (or at least supplementing) external qualifications as a means of judging the English and maths competence of students - and staff.

The validity of assessment tests – how their content relates to HSC regulator education standards, (inter)national standards in English and maths and whether online summative tests can effectively assess the application of English and maths skills in practice – requires some analysis, as does the relationship of diagnostic and summative assessment tests to HSC regulator education standards.

'It is not possible to predict who will pass the numeracy and literacy tests used at selection events, on occasion they are also failed by applicants who already have a first degree. This could be anxiety, or their first degree may have been scientific in nature with limited writing required.'

Employers interviewed who were using assessment tests to screen applicants stressed how important it was for the public and the institution to be protected from those without the necessary basic skills in English and maths to practise safely. It is perhaps too late for the employer (and in their view, not their job) to do much about low basic skills once a person has qualified and such tests appear to be a relatively quick way of screening out those who may present a risk. However, this shows that there must be issues with basic skills development on HEI programmes which are not being addressed (Małgorzata, et al. 2016) in the context of vocational learning. Formative assessment throughout the programme of contextualised basic skills can be a positive tool in teaching (Derrick and Ecclestone 2008), though its use to monitor basic skills development depends on the capacity of the provider to incorporate basic skills into learning something else, in this case, higher academic and vocational skills in Health.

5.7 ESOL

Few survey respondents made direct references to HCSWs who spoke other languages. In interview, some respondents alluded to the 'additional difficulties' a speaker of other languages might face, though not in detail. There is no national data on the numbers of HCSWs whose first language is not English. The case study (3.7.1 above) shows how different expertise and approaches are needed to support the English and maths skills development of HCSWs with first languages other than English.

5.8 Is maths more of a problem for HCSWs than English?

There is insufficient evidence to conclude that maths skills are more of an issue for HCSWs seeking to enter HE than English. A significant number of HEI respondents (23/39) believed they were, but it was not entirely clear from responses how. Poorer performance in maths tests was reported by HEIs and FE providers (that mentioned them). 'Fear' of maths was more widely reported than poor performance.

5.9 A national strategy for supporting English and maths skills development in the healthcare support workforce – an overview of responses

These suggestions inform recommendations set out in Chapter 6. (See chapter 4 for details). Respondent and interviewee suggestions coalesced around these themes:

1. Improved understanding of and practice in 'basic skills' learning for the healthcare support workforce, with actions to encourage:
 - Identification of those with low basic skills in English and maths (at all occupational levels in the sector) and practices which help them develop '...elementary skills to read and understand simple texts and master basic mathematical and scientific concepts and procedures...' (Hanushek and Woessmann 2015: 9,21).
 - Better understanding of the relationship between ESOL and basic skills learning in English and maths (and science) for healthcare support work.
2. Adoption of a whole organisation commitment to integrated English, Maths ESOL (and science) learning among healthcare employers - and understanding of the benefits.
3. Action to improve the capacity of FE and healthcare Employer/FE and HE providers to teach contextualised basic skills in (at least) English and maths.
4. Better understanding of how 'basic skills' for work and study need ongoing development throughout life, for career, economic and social progression.
5. HEIs should be encouraged to:
 - Better understand Functional Skills qualifications and respond more consistently in recognising their purpose and value.
 - Adopt transparent and consistent maths and English entry requirements for HEI health related vocational programmes.
 - Offer and or participate in preparation programmes for entry to HE and improve support for those with low basic skills on HEI health related vocational programmes.
 - Learn from research into methods for improving English and maths skills during HEI health related vocational programmes - at work and at the institution.

6. Recommendations: A national strategy for supporting English and maths skills development in the healthcare support workforce

The issues which gave rise to this study were found (on investigation) to be symptomatic of problems with weak basic skills in the adult population in England at large and symptomatic of a wider set of issues with basic skills in English and maths in the sector. The many suggestions for a national strategy made by respondents and interviewees for this study (Chapter 4) have informed these recommendations and should be revisited when recommended actions begin.

Recommendations 1-4 aim to *connect* to national policy and action on basic skills in English and maths. Though beyond the scope of this study, recommendations 1-4 could be extended to include in basic skills, the application of basic science concepts in healthcare learning, included in 'elementary skills' in the PISA scale (Hanushek and Woessmann 2015: 9,21).

Recommendation 5 (and a subset of actions) are intended to address the specific issues that gave rise to this study and will require actions on basic skills on a wider front in the sector (1-4), to be effective.

- 1 Connect to Government strategic policy initiatives, designed to improve basic skills in English and maths in England. In doing so, identify how weak basic skills impact on current strategic initiatives within the health sector, especially Talent for Care, Apprenticeships and quality standards for Apprenticeship provision.
- 2 Develop a long-term action plan which recognises and addresses weak basic skills in the health sector, in the national policy context designed to improve weak adult basic skills in English and maths.
- 3 Search out research and practical actions currently being undertaken in the sector (and in other sectors, where relevant) which are designed to improve basic skills in English and maths, at all levels of training and occupation in the sector. English and maths research projects in the health and other sectors should be identified and their results used to inform a national strategy for the sector (see 4.17 for example: Self-explanation study, Coventry University). Connect these to Government funded programmes addressing weak adult basic skills teaching and learning and to an action plan for the sector, for example, current work to improve the English and maths teaching skills of vocational tutors by the Education and Training Foundation (1.13).
- 4 Develop baseline information about the state of adult basic skills in the healthcare sector, at all levels and occupations.

- 5 Work with HEIs to address the specific issues identified through this study, concerning English and maths HEI entry requirements for health related vocational programmes, in the context of the wider strategic actions outlined above.

The following subset of recommendations reflect suggestions made by survey respondents and interviewees; a series of practicable actions designed to make a start:

- 5.1 The relationship between the English and maths skills HCSWs need every day - and need to progress through HEI study to higher level professional roles - should be described and mutually understood by employers and HEIs. English and maths skills development (and assessment) should be 'functional'; i.e., contextualised in and for healthcare support work. Qualifications should attest to the holder's functional capabilities in English and maths for healthcare support work, to inspire confidence and security in the value of such qualifications for healthcare support work and for entry to HE.

To achieve these objectives:

- a. An analysis is required, of the English and maths skills that HCSWs need to function effectively and to meet HSC regulator education requirements for entry to higher level vocational programmes.
 - b. HCSW Apprenticeship Standards should be analysed to identify English and maths skills required to achieve them, contextualised in healthcare vocational learning.
 - c. An analysis is required, of the English and maths skills needed for successful entry to HEI health related vocational programmes and options for English and maths development as part of a preparation process for application and entry to HE.
 - d. Qualifications and internal assessments should be used to attest to the English and maths skills required for an agreed purpose, whether at work or for study. All English and maths qualifications used to attest to competence as a HCSW and or for entry to HEI health related vocational programmes should be scrutinised by employers and HEIs, to assess their content and demand and validity of assessment against their analysis of the English and maths skills needed for healthcare support work and progression.
 - e. The relationship between ESOL and basic skills learning in English and maths for healthcare should be reviewed within the context of actions 5.1 (a-d) above.
- 5.2 A clear, consistent position from HEIs about which English and maths qualifications they will or will not accept for entry is needed, as well as an explicit rationale which explains why. Almost all healthcare employers and most HEIs responding to this study said this should become the norm. To achieve this:
 - a. A comparative analysis of qualifications, tests and other assessments with HSC regulator education standards and academic requirements should be undertaken.
 - b. HSC regulator education standards should be examined for commonalities and differences; this would help employers and applicants plan (HCSW) English and

maths learning programmes. It could also contribute to an analysis of different English and maths skill requirements within different nursing roles and ensure the right English and maths skills are developed within vocational FDs (including Nursing Associate and Assistant Practitioner programmes) to support potential for further progression.

- c. The job of this study is not to best guess the outcome of the current NMC education standards review. However, comparative analyses of set entry qualifications in English and maths should be carried out, when those new standards are out for consultation and then finally published for use.

Appendix

Survey Questions

Skip logic was used to direct questions according to organisational type. Respondents could select more than one organisational sub category.

Open questions from the survey were used as prompts in depth interviews.

English and maths requirements and entry to Health related HEI vocational programmes in England

What English and maths requirements are set for entry to HEI vocational programmes in Health? How are these requirements met and understood by employers and learners? Please help us find out.

1. Please select from the following. NOTE: If for example, you are a Healthcare employer and an FE provider, you can tick both boxes. Questions will pop up for all the categories you tick. Higher Education Institution / Healthcare employer / FE provider / Healthcare support worker/ learner / Other - please specify
2. What are the English and maths requirements for entry to health related vocational programmes at your HEI? Please state these briefly and/or add a website link. If the requirements vary between Programmes you offer, please indicate how.
3. What is your HEI's rationale for setting these requirements?
4. How are your HEI's English and maths requirements (and rationales for these) communicated to potential learners and healthcare employers?
5. What do you do to assist applicants from the healthcare support workforce, who need help to meet HEI English or Maths entry requirements?
6. What difficulties do potential entrants face and how are these addressed?
7. In your experience, do applicants from the healthcare workforce face any difficulties in meeting HEI English and maths entry requirements? If so, can you describe these?
8. Have you observed repeated patterns of difficulty? Yes/No
If Yes, please state these briefly and how they are recorded
9. In your experience, do more learners face difficulties in meeting maths (rather than English) HEI entry requirements? Yes / No / Don't know
10. If Yes, please state briefly any sources of evidence (if additional to any referenced above)
11. What do you do if applicants fail to meet your English or maths entry requirements?

12. Tell us about your experience of identifying HEI English and maths entry requirements. For example, how do you find out what these are? Is the rationale for these requirements clear to you? Please outline recent and current experiences.
13. What is/was your experience as a learner and potential entrant to an HEI Health related vocational programme?
14. Tell us about your experience of meeting HEI English and maths entry requirements for Health-related vocational programmes. This could include additional learning in English and maths, any exams you took, or tests you had to take at the HEI, how you got on, how you were helped and what difficulties you faced.
15. Can you briefly describe your experience and interest in this research?
16. Do you agree that a national strategy for supporting English and maths skills development in the healthcare support workforce would be useful? Strongly agree / Agree / Neutral / Disagree / Strongly disagree / Don't know
17. If you agree, what should it include? If you disagree please say why.
18. Please add any further comments.
19. We would like to conduct phone interviews with a small sample of different respondents. If we went ahead with an interview, we would mail you to arrange a time to call that suits you.
20. Could we talk to you about your response to the survey? Yes / No

Bibliography

- Allan, H., Westwood, S. (2016) 'English language skills requirements for internationally educated nurses working in the care industry: Barriers to UK registration or institutionalised discrimination?' *International Journal of Nursing Studies*, 54. pp. 1-4.
- Bateson J., Griffin, R., Somerville, M., Hancock, D., Procter, S. (2016) *Different people, different views, different ideas: Widening Participation in Nursing and Radiography Degrees*. London: Institute of Vocational Learning and Workforce Research, Bucks New University.
- Bell, D., Blanchflower D. (2010), 'UK Unemployment in the Great Recession'. *National Institute Economic Review*, 214 (1): R3–25,
- Bostock, S., Steptoe A. (2012) "Association between Low Functional Health Literacy and Mortality in Older Adults: Longitudinal Cohort Study". *British Medical Journal*, 344, March.
- Bristol University (2017) 'Bristol scholars' <http://www.bristol.ac.uk/study/teachers/post-16/scholars/> [Accessed 1 March 2017].
- Cavendish, C. (2013) *An Independent Review into Healthcare Assistants and Support Workers in the NHS and social care settings*. London: Health Education England.
- Council of Deans of Health Shape of Caring Advisory Group (2016) *Educating the Future Nurse – a paper for discussion: Our initial views on the key outcomes of future registered nurse education, across all four fields*. UK: London
- Department for Business Innovation and Skills (2011) *Skills for Life Survey: Headline findings*. BIS Research Paper Number 57. UK: London.
- Department for Business Innovation and Skills, Department for Education (2016) 'Post-16 Skills Plan' (also known as 'The Sainsbury Review') <https://www.gov.uk/government/publications/post-16-skills-plan-and-independent-report-on-technical-education> [Accessed 4 October 2016].
- Department for Education (2017a) 'Teaching Excellence Framework'. <https://www.gov.uk/government/collections/teaching-excellence-framework> [Accessed 2 April 2017]
- Department for Education (2017b) 'Upper key stage 2 - years 5 and 6' <https://www.gov.uk/government/publications/national-curriculum-in-england-mathematics-programmes-of-study/national-curriculum-in-england-mathematics-programmes-of-study#upper-key-stage-2---years-5-and-6>. [Accessed 20 March 2017].
- Department for Education and Skills (2003) *The Skills for Life survey: A national needs and impact survey of literacy, numeracy and ICT skills*. DfES Research Brief RB49. UK: London.
- Derrick, J., Ecclestone K. (2008), 'English-language Literature Review', *Teaching, Learning and Assessment for Adults: Improving Foundation Skills*. Paris: OECD Publishing.

Hanushek E., Woessmann, L. (2015) *Universal Basic Skills: What Countries Stand to Gain*. Paris: OECD.

Health and Care Professions Council (2013) *Standards of proficiency: Radiographers*. London: HCPC

Health Education England (2014) *Talent for Care A national strategic framework to develop the healthcare support workforce*, Part of Framework 15, the Health Education England guide to action. London: HEE

Health Education England (2016) *Health Education England North West London Nursing and Midwifery Education and Workforce Development Strategy*. UK: London.

Health Education England (2017) *Talent for Care and Widening Participation* <https://www.hee.nhs.uk/talentforcare/wideningparticipation> [Accessed 2 February 2017].

Kessler I., Heron, P., Dopson, S., Magee, H., Swain, D., Askham, J. (2010) *The Nature and Consequences of Support Workers in a Hospital Setting*. London: National Institute for Health Research.

Learning and Work Institute (2016) 'How can ESOL Learners Progress to Functional Skills?'. <http://www.learningandwork.org.uk/2013/11/20/how-can-esol-learners-progress-functional-skills/> [Accessed 10 November 2016].

Learning and Work Institute (2017) 'Longitudinal Study of the Impact of Basic Skills Improvements in the UK Armed Forces'. <http://www.learningandwork.org.uk.gridhosted.co.uk/wp-content/uploads/2017/01/Armed-Forces-Basic-Skills-Longitudinal-Study-Briefing-Papers.pdf> [Accessed 10 April 2017].

Lillis, F., (2015) *Crossing the Bridge, Progress Report on the Skills for Health Bridging Programme*. London: Skills for Health.

Małgorzata, K, Field, S., Windisch, H. (2016) *Building Skills for All: A Review Of England Policy Insights From The Survey Of Adult Skills*. Paris: OECD Skills Studies

Manthorpe, J., Martineau, S. (2008) *Support workers: their role and tasks. A scoping review*. London: King's College London. Social Care Workforce Research Unit

Marangozov, R., Williams M., Bevan S. (2016) *Beyond Brexit: Assessing key risks to the nursing workforce in England*. UK: Institute for Employment Studies Paper.

Moore, P.M., Rivera Mercado, S., Grez Artigues, M., Lawrie, T.A. (2013) *Communication skills training for healthcare professionals working with people who have cancer*. US: The Cochrane Library.

NHS Healthy London Partnership (2017) 'Capital Nurse Programme' <https://www.healthylondon.org/workforce/capital-nurse>. [Accessed 20 February 2017].

Nursing and Midwifery Council (2010a) *Standards for pre-registration nursing education*. UK: Nursing and Midwifery Council.

Nursing and Midwifery Council (2010b) *Standards for pre-registration midwifery education*. UK: Nursing and Midwifery Council.

Nursing and Midwifery Council (2017a) 'New standards for the future nurse' <https://www.nmc.org.uk/education/programme-of-change-for-education/> [Accessed 20 January 2017].

Nursing and Midwifery Council (2017b) 'International English Language Testing' <https://www.nmc.org.uk/registration/joining-the-register/trained-outside-the-eueea/ielts/> [Accessed April 19 2017].

OECD (2013) *First Results from the Survey of Adult Skills, Skills Outlook 2013*. Paris: OECD Publishing.

Ofqual ((2015) *Improving Functional Skills Qualifications, Ofqual/15/5588*. London: Ofqual.

Ofqual (2013) *Perceptions of A Level, GCSE and other Qualifications – Wave II, Employers and Higher Education Institutions, Ofqual/13/5278*. London: Ofqual

OFSTED (2016) 'Ofsted Annual Report 2015/16' <https://www.gov.uk/government/collections/ofsted-annual-report-201516> [Accessed 12 January 2017].

Scarpetta, S., Sonnet A., Manfredi T., (2010) "Rising Youth Unemployment During The Crisis: How to Prevent Negative Long-term Consequences on a Generation?", *OECD Social, Employment and Migration Working Papers, No. 106*. Paris: OECD Publishing.

Skills for Health (2011) *Establishing a Literacy and Numeracy Baseline in the Health Sector Final Report*. UK: London

Skills for Health (2016) *Evaluation reports from Skills for Health Bridging Programme webinar series, 2014-16* (unpublished).

Skills for Health (2017) *Skills for Health Bridging Programme (England)* <http://www.skillsforhealth.org.uk/standards/item/229-skills-for-health-bridging-programme> [Accessed 1 February 2017]

Somerville, M. (2015) *Desk research to obtain a current profile of entry requirements used by Higher Education Institutions providing NHS funded Nursing programmes in England*. UK: Institute of Vocational Learning and Workforce Research, Bucks New University.

The Education and Training Foundation (2014) *Effective Practices in Post-16 Vocational Maths, Final Report*. UK: London

The Education and Training Foundation (2015) *Making maths and English work for all: The review of what employers and learners need from the maths and English qualifications taken by young people and adults*. UK: London.

The Education and Training Foundation (2016) *Functional Skills Reform: Findings from the Employer Survey*. UK: London.



The Education and Training Foundation (2017) 'Maths and English Functional Skills Reform Programme'. <http://www.et-foundation.co.uk/research/maths-and-english-functional-skills-reform-programme/> [Accessed 11 April 2017].

The McKinnon Partnership (2008) *Pilot Project to Contextualise the C&G 9297 Level 2 Award for the Health Sector. Evaluation Report*. London: Skills for Health.

UK Government (2017) 'Further education and skills – Apprenticeships'. <https://www.gov.uk/topic/further-education-skills/apprenticeships> [Accessed 10 April 2017].

UK Government Agencies ((2017) 'Further education and skills: Apprenticeships' <https://www.gov.uk/topic/further-education-skills/apprenticeships> [Accessed 10 April 2017].

Vignoles, A., De Coulon A., Marcenaro-Gutierrez, O. (2010) "The Value of Basic Skills in the British Labour Market". *Oxford Economic Papers*. UK: Oxford



 **Skills for Health**
Head Office
4th Floor
1 Temple Way
Bristol
BS2 0BY

 0117 922 1155
 office@skillsforhealth.org.uk
 skillsforhealth.org.uk