



Ready for Work?

The work readiness of entrants to the UK Construction sector who have work-related qualifications

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1. Executive Summary

Employers consider that the extent to which young people are adequately prepared for work is dependent not just on skills and knowledge attained through qualifications, but also upon the so-called 'softer' skills - such as communications and team working.

Employees rated the effectiveness of their qualifications higher than employers but, taken together, the results from employers and employees confirm both previous research and anecdotal findings suggesting that Apprenticeships are more highly regarded from the work-readiness point of view than any other relevant form of qualification.

➤ Employer perspectives

Employers surveyed for this research expressed doubts in relation to the overall effectiveness of qualifications to provide the necessary employability skills that they are seeking from young people joining their workforce.

Of the three main qualification types considered – Apprenticeships, S/NVQs and degrees, employers have more confidence in the capacity of Apprenticeships and S/NVQs (rated at 7 out of 10) to effectively prepare young people for work, compared with degrees (rated at 5.5 out of 10). Across all qualification types, employers are the most concerned about their capacity to provide learners with core employability skills – notably commercial awareness, time-keeping, IT, problem solving, literacy and numeracy, and customer handling skills.

S/NVQs and Apprenticeships in particular are reported to be considered by employers and stakeholders to be too short to deliver all of the necessary practical and academic skills, while degree programmes are considered to predominantly offer academic content at the expense of work experience. Employers state that degree courses should include a greater proportion of practical, on-site training.

Limited work experience offered within qualifications may be one reason why practical skills were identified as a gap of particular concern to the employer. Whilst Apprenticeships are rated the highest for the delivery of relevant content and technical skills, their lowest score (around 6.8 out of ten) concerns the delivery of practical skills.

The majority (80%) of the employers surveyed for this research reported that they had found it necessary to provide additional training to young people who had joined them with one of the three types of qualification. An increase in the delivery of practical skills within qualifications was the

most-cited requirement to improve work readiness, and employers are keen that this should not be limited to technical job specific skills and skills but also offer scope to acquire the vital 'softer' skills.

Employers stated that closer collaboration between industry and training providers is vital in order to ensure that content and delivery of qualifications closely matches employer needs and delivers the work readiness skills and knowledge they are seeking. However this should be considered in the context that training providers frequently are compelled to operate within the confines of the qualification framework as established by Awarding Organisations.

➤ **Employee perspectives**

Employees reported a greater sense of satisfaction with their qualifications' capacity to prepare them for work (at an average score of 8 out of 10) compared with employers. Mirroring the employer perspective, employees rate Apprenticeships the highest in relation to equipping them with work-ready skills, followed by S/NVQs and finally relevant degrees.

However in spite of a higher degree of confidence in their qualifications, employees acknowledge that there are a number of technical, job-specific skills gaps and deficiencies of practical skills and experience, in addition to the softer skills and what was termed a 'more appropriate work-ethic'.

➤ **Uses and impact of NOS**

Only 18 out of 300 employer respondents (6%) were able to say how they currently make use of NOS. Among these employers the most common uses are for qualifications design, assessing training needs, designing training programmes, and job specifications.

Whilst it is clear that awareness of NOS is limited among the employers surveyed, it should be noted that NOS have a significant impact on the construction sector through their use in a variety of qualifications, and that therefore usage of NOS – indirectly – is higher than these findings indicate.

2. Introduction

In April 2011 ConstructionSkills commissioned Pye Tait Consulting to carry out research to examine the extent to which construction qualifications equip young people for the world of work. Specifically, the work was to assess the hypothesis that employers believe that construction qualifications do not equip young people for employment. The basis for the hypothesis resting on both previous (ConstructionSkills) survey research and extensive anecdotal data.

The focus of the research was to indicate the extent to which these views, if indeed held, are founded on a genuine lack of readiness or upon misconceptions about the education and training available to, and for, the construction sector.

Study was specifically directed towards:

- National Vocational Qualifications and their Scottish equivalents (S/NVQs)
- Construction-related Apprenticeships
- Construction-related Degrees

'On the job' training or training undertaken by non-accredited training providers was not included, for the reason that neither is governed by the same structures as accredited learning and training.

Vocationally Related Qualifications (VRQs) were also excluded as being perceived by the industry as being more vocational and less specifically related to job roles and therefore differing substantially from qualifications that are based around the practical application of skills in a work-based environment.

The project also provided an opportunity to gather information on National Occupational Standards (NOS): specifically on awareness of them, who is using them, and what they are using them for, and to record feedback from users of NOS.

2.1 Employer Choice

For the past thirty years, UK qualifications and, by implication, the training which underpins them, have been developed and reviewed in extremely close collaboration and consultation with relevant employers. Given the amount of time and effort devoted by all stakeholders to ensure that this is achieved, it is perhaps surprising that research (across many sectors of the UK economy) continues to find a reasonably significant proportion of employers who regard their newly-qualified employees as unsuited, in some degree, for the world of work¹.

The overarching aim of ConstructionSkills is to ensure the construction industry is equipped with the right people, with the right skills and competences, in the right place and at the right time. Underpinning this aim is a focus on the “employer voice” as a means of capturing employers’ needs in the workplace and translating these needs into appropriate training provision.

The UK Commission’s 2010 report *What’s the Deal*² concluded that the skills system does not give employers an adequate, clear voice in developing training and qualifications – which is why they are often said to be frustrated – and that employers should not merely be *consulted*. To make the system truly demand-led, the report goes on to say, it should be one that responds to employers as customers (‘employer choice’ rather than ‘employer voice’). Employers can influence the system through the choices they make about purchasing training, skills development or employment services. Providing customers of the skills system with the information they need to make better informed decisions, should – or so it is argued – empower them to further shape the system.

Prospects for the construction industry over the next three years remain difficult. No significant growth is expected except in very specific circumstances (mainly associated with London and certain key civil engineering projects); it is predicted that, even by 2015, output will still not have regained pre-recession levels. Latest forecasts from the Construction Products Association (CPA) predict a decline in output for 2011 of 0.5%. The forecast for 2012 stands at a pessimistic 2.8% decline³.

A number of external factors are expected to drive change in the industry over the coming years, in particular, legislative change relating to the Low and Zero Carbon agenda. These drivers are currently offset by uncertainty and caution within the industry following the recent recession and forced contraction in employment, meaning that many employers, particularly SMEs, are focussing on short term survival⁴.

The revival of the construction industry is vital for the future prosperity of the UK, particularly in view of the fact that construction is one of the most effective ways of stimulating activity across the

¹ Recent research carried out on behalf of the Association of Learning Providers into skills needs in Advanced Manufacturing as well as recent research by Pye Tait on behalf of ConstructionSkills into future skills needs and Skills Provision for the Construction sector in Wales substantiate these findings.

² UK Commission: *What’s the Deal? The Employer Voice in the Employment and Skills System* (August 2010)

³ *Ibid*

⁴ ConstructionSkills (2010) *Understanding Future Change in Construction*. Pye Tait

economy as a whole. Construction also has one of the lowest import-ratios of any economic sector, so any stimulus-spending tends to stay within the national economy and operate through the prevailing multiplier to drive growth in other sectors. Historically the construction industry has therefore been one of the best sectors for creating employment opportunities. Construction has the additional benefit to the economy of being an investment sector (as opposed to a consumption-driven one) in a wide variety of ways - including new buildings, infrastructure and facilities, thereby underpinning significant long-term economic and social benefits⁵.

When the sector emerges from the recession there are likely to be severe skill shortages due to a lack of investment in training and development. Although most organisations acknowledge that addressing the skills and training needs of their employees is of great importance, the impact of the recession has necessarily cast skills development to the bottom of the agenda for the vast majority of employers. Commercial drivers are likely to have the greatest impact on up-skilling, as many organisations will typically only invest in training where there is an opportunity in the marketplace that can be realised.

As the Sector Skills Council for the construction sector, ConstructionSkills covers a wide range of activities across the planning, design, construction and maintenance of the built environment. Its footprint covers the whole industry, across the UK.

Concentrating specifically on Apprenticeships, S/NVQs and Degrees gained by young people aged between 16 and 24 over the past two years, the objectives of this research were to:

1. Identify and quantify the extent to which employers in the construction industry believe qualifications prepare young people for work within the sector;
2. Determine the factors that influence employers perceptions towards these qualifications;
3. Asses the knowledge that employers have about the provision that is on offer;
4. Determine the extent to which employees use the training they have received through these qualifications when they commence work on completion of their studies;
5. Identify training which employers believe does and does not prepare young people for work;
6. Assess the extent to which training is used once a young person enters the world of work – and whether this differs according to occupation;
7. Identify any skills gaps that young people have when leaving training and beginning

⁵ LEK: Construction in the UK Economy, The Benefits of Investment , Commissioned by the UK Contractors Group, (2009)

employment in the construction industry;

8. Determine whether there are any differences in views regarding training relating to specific occupations;
9. Identify employers awareness of NOS;
10. Determine uses and impact of NOS within the industry;
11. Make recommendations regarding a bespoke Construction Skills impact assessment framework.

2.1 Research methodology

The study of work-readiness was based on the following fieldwork:

1. A telephone survey of 300 construction employers across the four home nations. Respondents were filtered during the approach process to ensure that they had employed at least one young person between the ages of 16 and 24, within the last 24 months, with an S/NVQ, an apprenticeship or a degree in a construction subject;
2. A telephone survey of 100 construction employees. Employees were eligible to take part in the research if they had gained an NVQ/SVQ, apprenticeship or a degree qualification within the last 24 months in a construction subject;
3. Telephone interviews with members of ConstructionSkills NOS Working Groups;
4. Telephone interviews with ConstructionSkills Training Developers.

Survey of employers

The telephone survey of employers was carried out between May and June 2011 to acquire both qualitative and quantitative data relating to:

- Labour Market Information
- Views on strengths of current training provision with regard to Apprenticeships, S/NVQs and Degrees
- Views on weaknesses and deficiencies of current training provision with regard to Apprenticeships, S/NVQs and Degrees
- Employer awareness and uses of NOS

The survey was targeted to achieve 300 completions from employers across all four home nations. The sample frame for employers was set to cover businesses across the whole of the ConstructionSkills footprint.

Contact data were sourced from a reputable data supplier to provide employer contact information pre-filtered according to the SIC code and geographical location of each organisation.

Survey of employees

Running concurrently with the survey of construction industry employers, Pye Tait Consulting conducted a telephone survey of 100 construction industry employees. As stated earlier, target respondents for the survey were young people aged between 16 and 24 years old, who had successfully completed an S/NVQ, Apprenticeship or Degree qualification in a construction subject area within the last 24 months.

Contact details for all respondents were provided by ConstructionSkills on the basis that they had achieved a construction qualification by S/NVQ, Apprenticeship or Degree route.

3. Research Findings

3.1 Employability and Work-Readiness

The focus of this research is primarily the key qualifications for the construction industry and how employers see them in terms of delivering what they regard as being "work-ready" people.

However, whether a person is properly prepared for the world of work is not perceived by employers purely in terms of their qualifications but as being the result of a complex mix of hard and soft skills more widely known under the title of "employability skills".

As well as the skills and knowledge pertaining to specific job-roles - delivered mainly through the qualification process - these include, but are not limited to:

- the work ethic
- time keeping
- integrity
- self-management
- team working
- problem solving
- communications skills (oral and verbal)
- customer handling skills
- numeracy
- literacy
- IT skills, and so on.

A great deal of work has gone into employability as an issue over the past ten years, culminating in 2009 with the UKCES' detailed report on employability⁶ and a number of studies and reports by such organisations as NIACE, AssetSkills, Cardonald College, Scottish Qualifications Authority⁷ and others.

⁶ UKCES; *The Employability Challenge*; 2009

At that time a wide variation was noted in the attributes, characteristics and skills listed under the heading of employability skills by different authorities. The 2009 UKCES Report lists twenty different definitions in its Appendices, for example.

NIACE⁸ simplified the listings by ranking the top four skills that went towards rendering a young person "employable" as follows:

1. Timekeeping
2. Literacy
3. Numeracy
4. Enthusiasm / commitment

Communications skills and presentability were also listed as being part of the foundation for "sustainable employment".

UKCES published a further report in 2010 that built on their earlier one. It looked at incentivising the development of employment skills in a range of settings – further education, higher education, 14-19 and provision to support people from welfare into work – UK wide⁹. Their report affirmed the framework set out in 2009 which brought together the mapping work of definitions into a foundation of skills: Self-management, Thinking and solving problems, Working together and communicating, and Understanding the business. These are said to be supported by three fundamental skills of using numbers effectively, using language effectively (speaking and listening as well as writing) and using IT effectively. These link fairly conclusively to the initial list summarised above.

But, while there is a reasonable degree of consensus about the basic "skills" that make a person ready for the world of work, those skills are merely the roots of the "work-ready" tree of skills. Different skills, at different levels of attainment, are expected by employers from different levels of recruits. Expectations of graduate-level entrants are best illustrated by the listing produced by the CBI in 2008¹⁰:

- Foreign language skills
- Business customer awareness
- Self management

⁷ www.sqa.org.uk/sqa/36304.html

⁸ NIACE *Briefing Sheet 88*; March 2009

⁹ UKCES; *Incentivising Improvement*; 2010

¹⁰ CBI *Employment Trends Survey 2008*

- Relevant work experience
- Knowledge about a chosen career
- Literacy
- Numeracy
- Problem solving
- Positive attitude to work
- Teamworking
- Use of IT

And Construction Skills own 2009 report¹¹ said that the top four "missing skills" in applicants for jobs were:

- Poor attitude
- Relevant work experience
- Relevant qualifications/cards
- Basic literacy/numeracy

It is still, therefore, difficult to state definitively and unambiguously what "being prepared for employment" means. It appears to differ not only between levels of recruits and type of occupation, but in terms of whether one is referring to personal attributes (such as the work-ethic/positive attitude to work) or to skills that are capable of being learned and practised (such as literacy, numeracy and language skills).

So, while this study focussed on employer attitudes to three types of qualification, it necessarily also found evidence of employer dissatisfaction where attitudes, behaviours and characteristics are concerned.

3.2 Survey Respondents

The analysis which follows integrates the results of both quantitative surveys - for employers and employees in the Construction sector. All respondents were asked to comment based on their experience of apprenticeship, S/NVQ and degree qualifications in construction subjects.

¹¹ ConstructionSkills; *Skills and Training in the Construction Sector*; 2009

3.2.1 Employers

The employer survey questionnaire consisted of 27 questions, mainly of the single and multiple response type together with additional qualitative questions intended to engage employers and gain further detail on the reasons why they gave particular responses

Data were also gathered on:-

- ❖ Size of employer (based on staff numbers)
- ❖ Industry sub sector (within ConstructionSkills sector footprint)
- ❖ Type of qualification held by employees recruited

The UK construction sector consists mainly of small businesses or sole traders (92% by type of company). The make-up of the sector in 2010 was as follows:¹²

Table 1: UK Construction Industry by size of company

Size of Company (employees)	Number of Construction businesses in the UK	% of sector
0 - 9	366,960	92.7
10 - 249	28,485	7.2
250+	495	0.1

Source: ONS, 2010

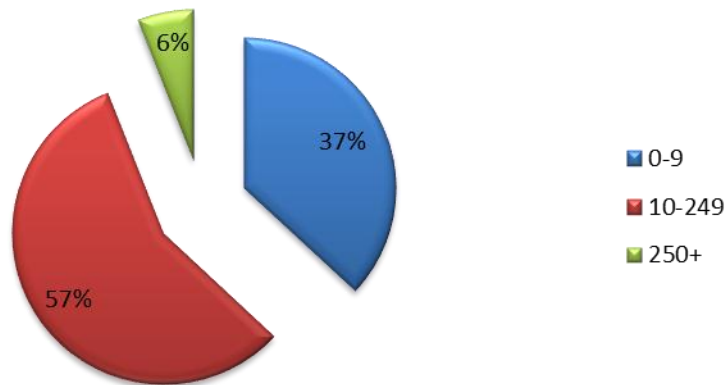
The survey - as with all such voluntary surveys - under-represents the smallest construction companies and over-represents the largest¹³. However, it should be remembered that the largest companies employ around 80% of the construction sector's people. Their views are, therefore, of a proportionate weight.

The 300 companies surveyed had recruited 1,858 new employees falling into the categories relevant to this study (an average of just over 6 recruited in the past two years per sampled employer).

¹² Office for National Statistics, *UK Business Activity. Size and Location - 2010*

¹³ This is because the staff of larger employers tend to be more specialised and, therefore, have more time to respond to surveys, whereas owner/managers and staff of smaller businesses tend to be multi-specialist and to have a much lower capacity for devoting time to telephone questionnaires.

Figure 1: Employer organisations surveyed by size



Base 300

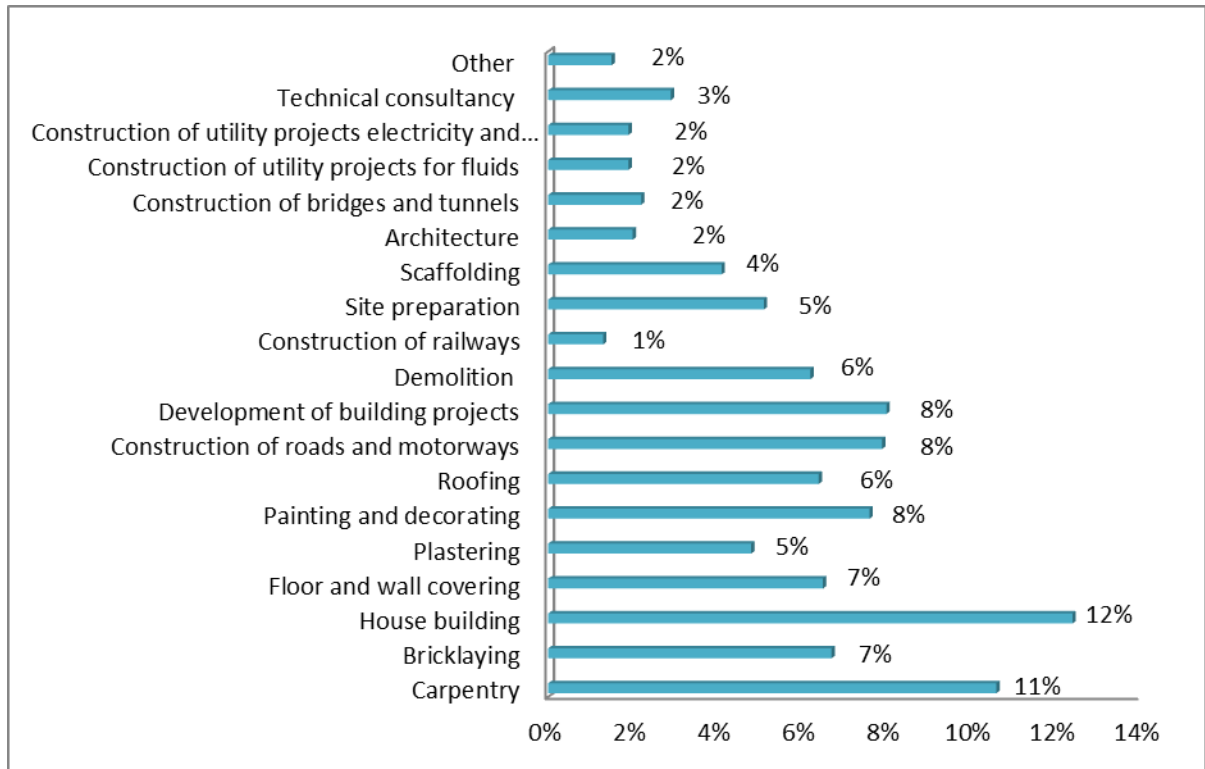
Our report also takes into account the sub-division of such a large sector into recognised sub-sectors using the following five 2-digit Standard Industrial Classification (SIC) codes.

Table 2 Employer responses to the survey by SIC grouping

SIC Code	Construction Sub-sector	Responses (%)
41	Construction of Buildings	44.50%
42	Civil Engineering	5.00%
43	Specialised Construction Activities	39.50%
71	Architectural and engineering activities; technical testing and analysis	1.70%
74	Other professional, scientific and technical activities	9.70%

Employers who took part in the survey reported being involved in a wide variety of construction activities as shown in the chart below.

Figure 2: Employer business areas



Base 300

Some 57% of employer-respondents had employed apprentices in the last 24 months. This is reflective of the fact that within the UK Construction sector the proportion of the workforce holding Trade Apprenticeships qualifications is more than double that of other industries - some 12% of the construction workforce¹⁴.

Multiple Qualifications

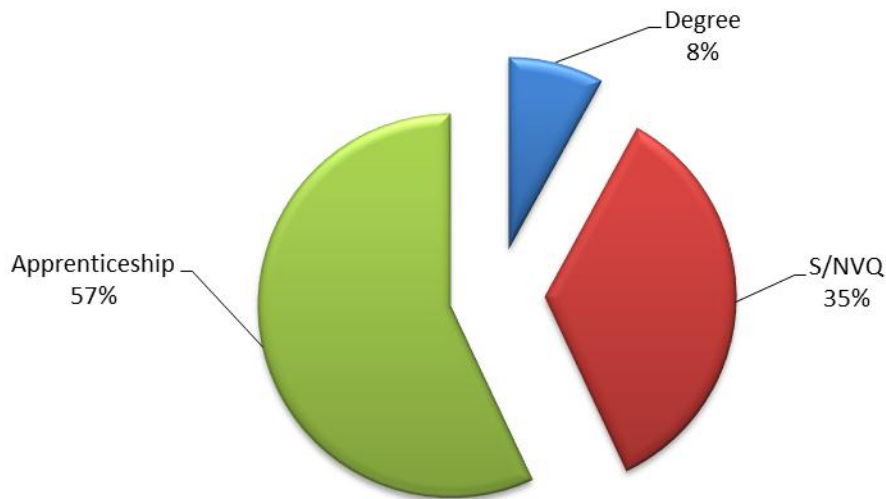
NVQs and SVQs form part of Construction Apprenticeships, alongside Key Skills and generally a Technical Certificate. It is possible therefore that a respondent with an S/NVQ may be working toward an apprenticeship and equally that a respondent with an Apprenticeship will also hold an S/NVQ qualification.

Similarly, it could be then an employee with a degree qualification has progressed from an Apprenticeship and therefore may hold all three qualifications.

¹⁴ ConstructionSkills, Sector Qualification Strategy (2008)

For the purposes of this research we asked respondents to respond from the point of view of a single type of qualification.

Figure 3 Employers by the qualification-type of their recruits



Base 300

3.2.2 Employees

The survey was designed to identify patterns of employee experience within individual qualifications and across qualification types as well as to allow for comparison against employer perceptions and experiences.

In addition to perceptual responses, data were gathered on:

- ❖ Qualification type
- ❖ Occupational area of employee
- ❖ Industry sub-sector

Figure 4: Employees by qualification type



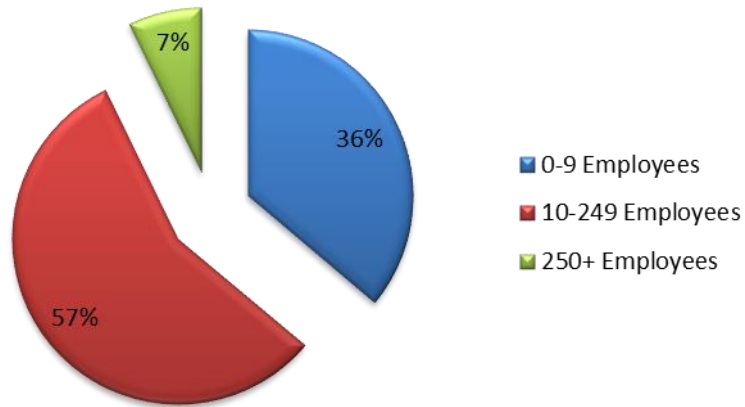
Base 100

Eighty six percent of employee respondents work for organisations that have their headquarters in England; 7% in Scotland; 5% in Wales and 2% in Northern Ireland¹⁵.

Over 90% of the employee respondents work for SMEs and 55% in the fundamental trades of painting & decorating, floor & wall covering; plastering; joinery; and bricklaying.

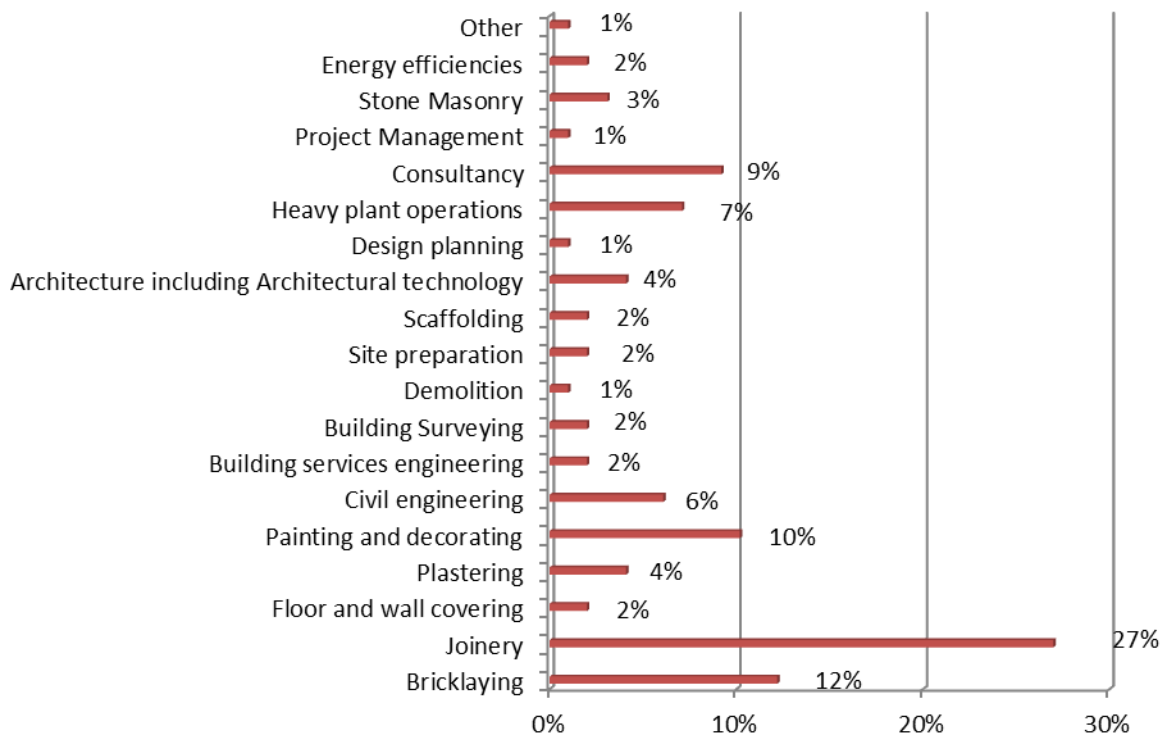
¹⁵ The tight constraints of the target population – that respondents to our surveys must have completed one of the three qualifications in the last two years and be aged between 16 and 24 – mean it has not been possible to ensure a representative nation spread. We made contact with employers and employees across each of the four home nations, and worked from a sample frame of contacts representative of a broad range of SIC codes across all nations, however, the issues with contact with relevant respondents in what are very difficult times for the construction industry has had the result that that the sample is indicative rather than representative of the employer/employee populations at large.

Figure 5 Employees surveyed by business size



Base 100

Figure 6 : Occupation of Employees (All)



Base 100

The most common foundation qualification for employees in the sector is a set of GCSEs.

Some 77% of apprentices and 81% of those undertaking S/NVQs entered those qualifications already holding GCSE qualifications. Where degree entrants are concerned, the most commonly mentioned entry qualifications were GCSEs and A Levels (a combined 80%) with some 21% entering their degree course on the basis of either HNC/D or Foundation Degrees (see note to Table).

Table 3: Previous qualifications held by young people with each type of qualification

Previous qualifications held			
	Apprenticeship	S/NVQ	Degree
Skills for Life	-	-	-
Key Skills/Essential Skills Wales	8%	7%	-
BTEC	5%	2%	-
Access Course	-	-	5%
HNC/D	-	-	14%
GCSE or Scottish Standards	77%	81%	50%
AS Levels	5%	-	6%
A Levels	2%	-	30%
Foundation degree	2%	5%	7%
Other	1%	5%	-

Note: Survey respondents with degree qualifications are more likely to have gained more than one type of previous qualification; hence the sum of all responses is greater than 100.

3.3 Qualification Effectiveness

The Employer Perspective

Employers were asked to rate how well each of the three qualifications prepare young people for the world of work by scoring them out of ten (where 10 was very effective and 1 was not at all effective).

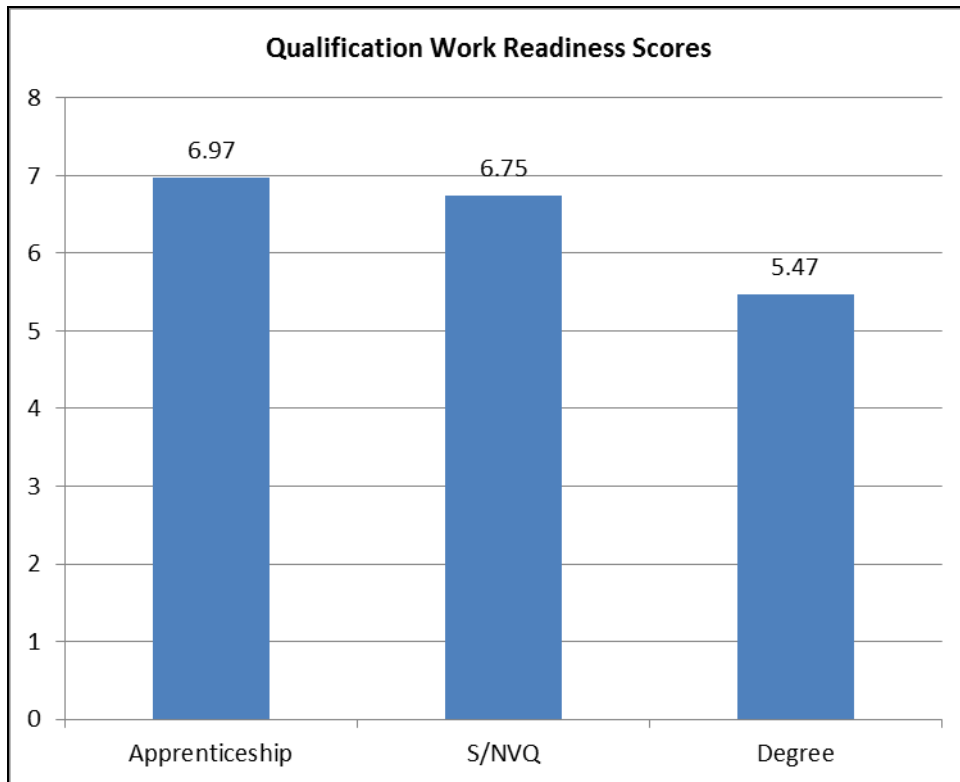
On average, employers rate both Apprenticeship and S/NVQ as roughly 7 in terms of their effectiveness at delivering work-ready young people. Degree qualifications are given an average score of 5.5. Employers, therefore, appear to be reasonably happy with the work-readiness of those with Apprenticeships and S/NVQs but less content with that of degree-holders.

Where Apprenticeships are concerned only 31% of employers scored their work-readiness at less than 7, and even then, the most common score was six out of ten.

The equivalent figures for S/NVQs were 38% of employers giving them a score lower than the average - the most common score being 5.

In the case of degree holders, employers are clearly more anxious about their work-readiness. The average for all employers who had taken on degree holders was 5.47 with the most common score being 5, but 50% of employers scored degree-holder work-readiness at an average of just 3.2.

Figure 7 : Employer views on Work-readiness and Qualifications



Base 300

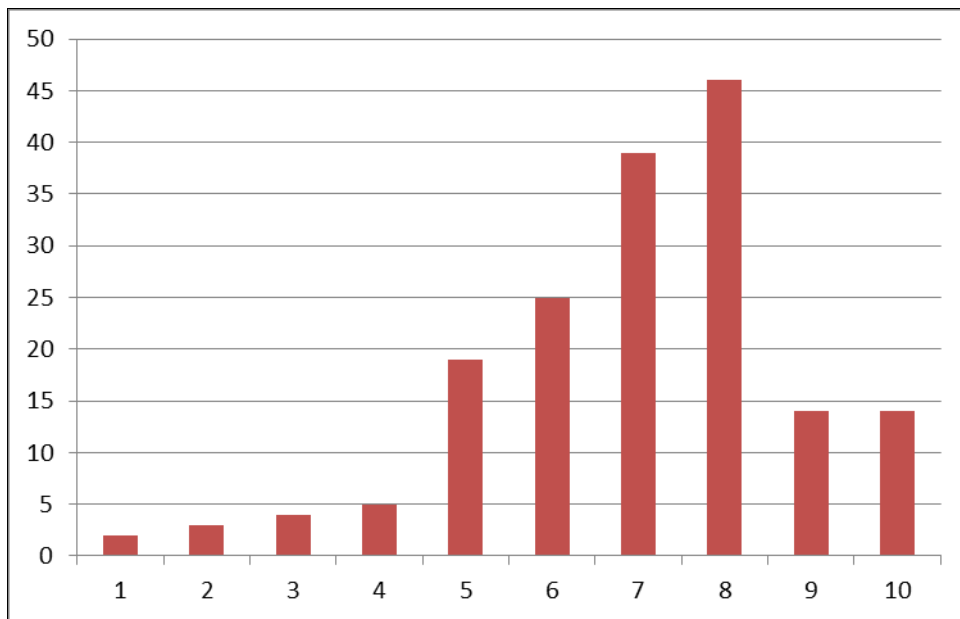
Table 4: Detailed ratings of effectiveness of qualifications

Qualification type	Median	Mode
Apprenticeship	6.97	8
S/NVQ	6.75	8
Degree	5.47	5

The frequency charts that follow illustrate the overall satisfaction by employers with apprentices,

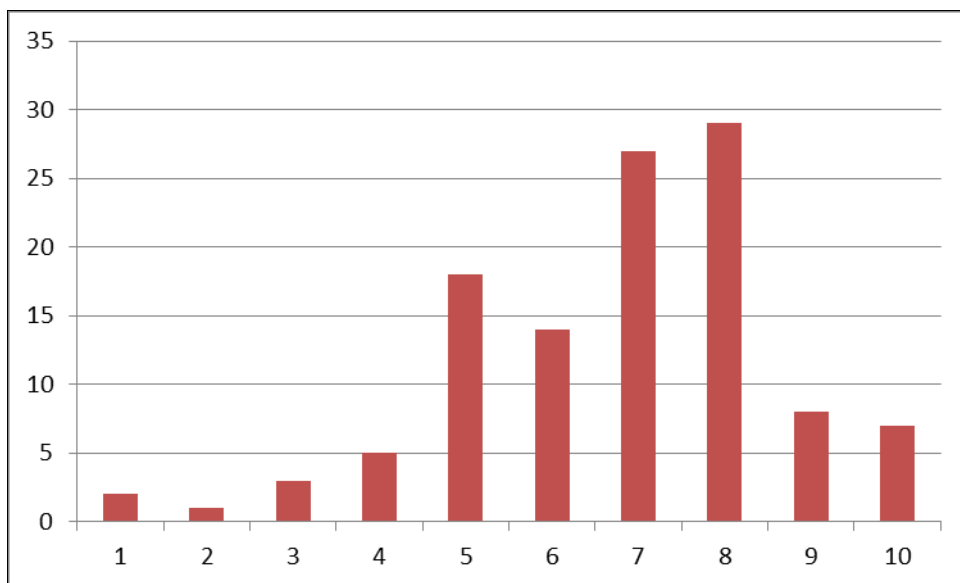
the slightly lower pattern of satisfaction with S/NVQs, and the relatively high levels of dissatisfaction with construction-related degrees. In reading these graphs of the frequency of responses the reader should pay greater attention to their shape than to the actual numbers of respondents.

Figure 8 Employer Rating of Apprenticeships (frequency)



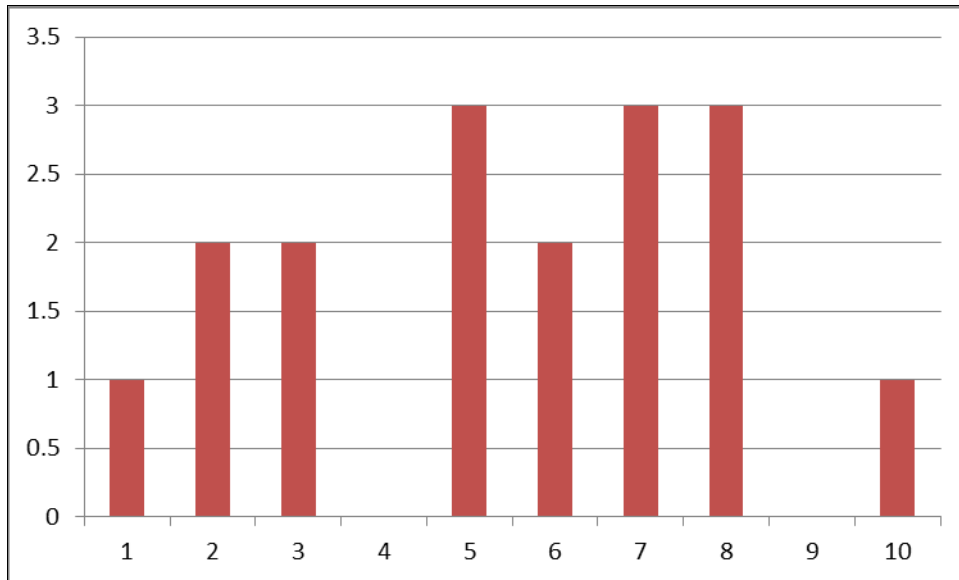
Base 300

Figure 9 Employer rating of S/NVQs (frequency)



Base 300

Figure 10 Employer rating of Degrees (frequency)



Base 300

The Employee Perspective

Respondents to the employee survey were asked to give a score out 10 (where 1 was not at all well and 10 was very well) for how adequately they felt prepared for the workplace by the training they received through their qualification.

Taken across the board, employees rated their work-readiness at an average score of 8; in other words they were better satisfied with the effectiveness of their qualifications than employers. While it is not unusual for employees to have a more optimistic view of their abilities than their employers, in the case of this survey, it is the relationship between the different types of qualification that is most important.

- Where work-readiness is concerned employees match the order of importance already seen in the results from employers: Apprenticeships being highest followed by S/NVQs and finally relevant degrees.
- Those who had undertaken an Apprenticeship gave an average score for work-readiness of 8.69 (the most common score from apprentices was 10).
- The average score given by those with S/NVQs was 7.92 (the most common score being 8) while graduates scored their own work-readiness considerably higher than their employers

(at an average of 7.7).

Taken together, the results from employers and employees confirm both previous research and anecdotal findings suggesting that Apprenticeships are more highly regarded from the work-readiness point of view than any other relevant form of qualification.

3.4 Skills for Employment

The objective of qualifications - particularly vocationally-oriented ones - is to deliver the skills and knowledge required in a given occupation or industry. We asked employers, therefore, to consider a list of relevant skills and to give each skill a score from 1 to 10 on two related dimensions for the qualifications of which they had experience: the perceived effectiveness of a given qualification in delivering those skills, and their use in normal work.

The use of scoring systems in quantitative surveys is particularly valuable in providing a high degree of discrimination to the results. As compared to (say) a four point qualitative scale (for example, from very good to very poor) a quantitative scoring system permits much more accurate discrimination between results.

The results do, however, require some care in the analysis and interpretation. The most important issue being whether any given average score is good enough for the analyst to conclude that no action is necessary. For example, is an average score of 7 acceptable and sufficient?

The answer is, of course, a relatively subjective one but the reader should bear this issue in mind when examining the scored results in this document.

Employers' perceptions of the effectiveness of qualifications in delivering specific skills are presented in three frequency charts below together with their equivalent score for the extent to which the same skills are used in the workplace.

The scores for effectiveness and for "use in the workplace" are not directly comparable in statistical terms but the average scores do give an indication of skills that a qualification is considered by employers to be most effective at delivering, and the skills perceived as being most used in the workplace by holders of that qualification.

Where Apprenticeships and S/NVQs are concerned the match is very close. That is, skills perceived as being delivered effectively by a qualification are also perceived as being important in the workplace. Examples would include health & safety and job-specific skills. At the other end of the scale Apprenticeships are regarded as not being terribly effective at delivering estimating and costing skills but employers rate the extent to which they are used at a similarly low level.

Having said this it is vital that readers note that the interpretation of the phrase "used in the workplace" is crucial when assessing these results (as well as similar results for other types of qualification). It may be that respondents were responding as to the CURRENT extent to which the skills are used rather than the extent to which they, as employers, would WISH the skill to be used¹⁶.

The effectiveness of Apprenticeships in delivering skills that have been identified in this study as being of particular value in work-readiness is also questionable. Employers gave low average scores for such skills as commercial skills, problem solving and customer handling. Similar - although slightly lower - scores were given to S/NVQ qualifications.

"In my opinion no 16 year old should undertake an NVQ. They should have 12 months in college full time to get a better taste of the construction industry and trade and to get all the paperwork and legislation type knowledge such as Health and Safety under their belts before they start properly learning the practical skills they will need."

Construction industry employer

Only in the case of degrees is there an apparent mismatch between perceptions of the effectiveness of the qualifications and their use in the work place. Degrees are perceived as being relatively poor in delivering certain skills compared to the employers' rating of their use in the workplace; specifically such skills as:

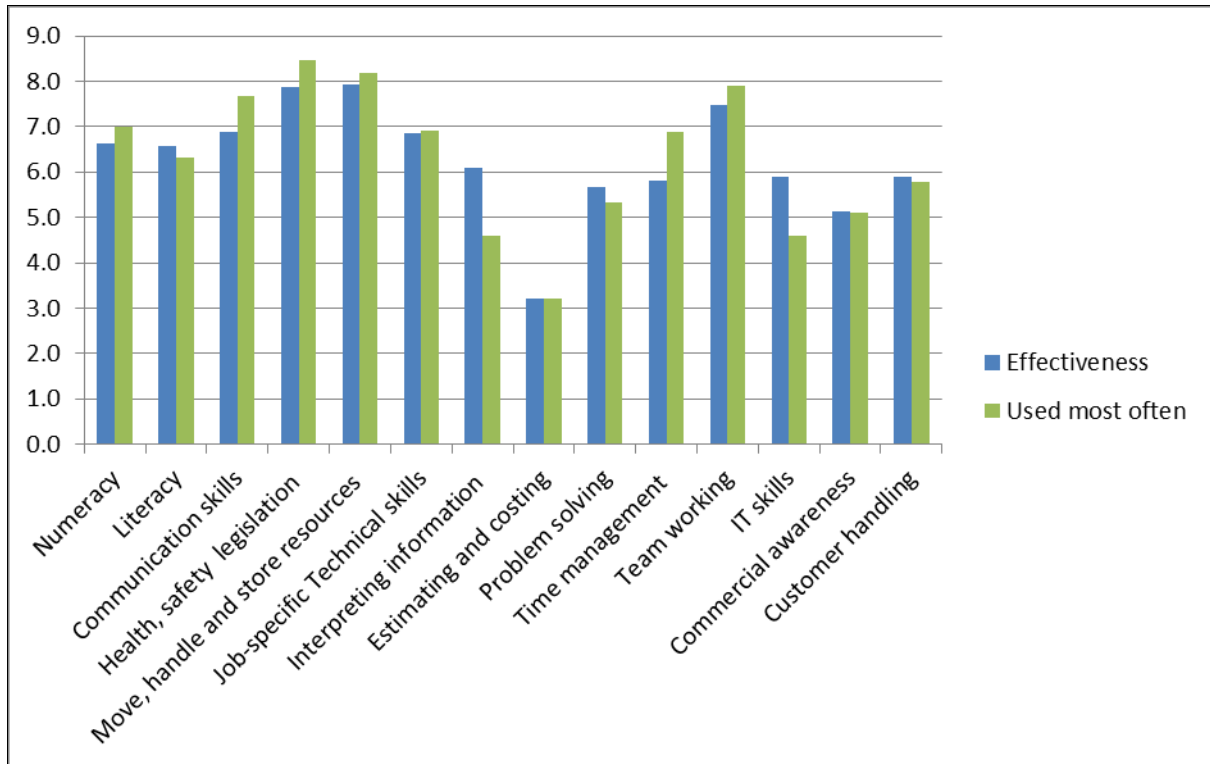
- Health & safety
- Communication skills
- Problem solving
- Commercial awareness, etc

Degrees are however rated poorly for the same sorts of work-readiness skills as Apprenticeships and S/NVQs - viz: commercial skills, problem solving and customer handling.

¹⁶ The exact phrasing of the question was - "Focusing on [qualification type] I am going to read you a list of skills - please tell me on a scale of 1 - 10 which skills are used most in the workplace (by holders of this type of qualification)"

Figure 11 Apprenticeships' Effectiveness/Use

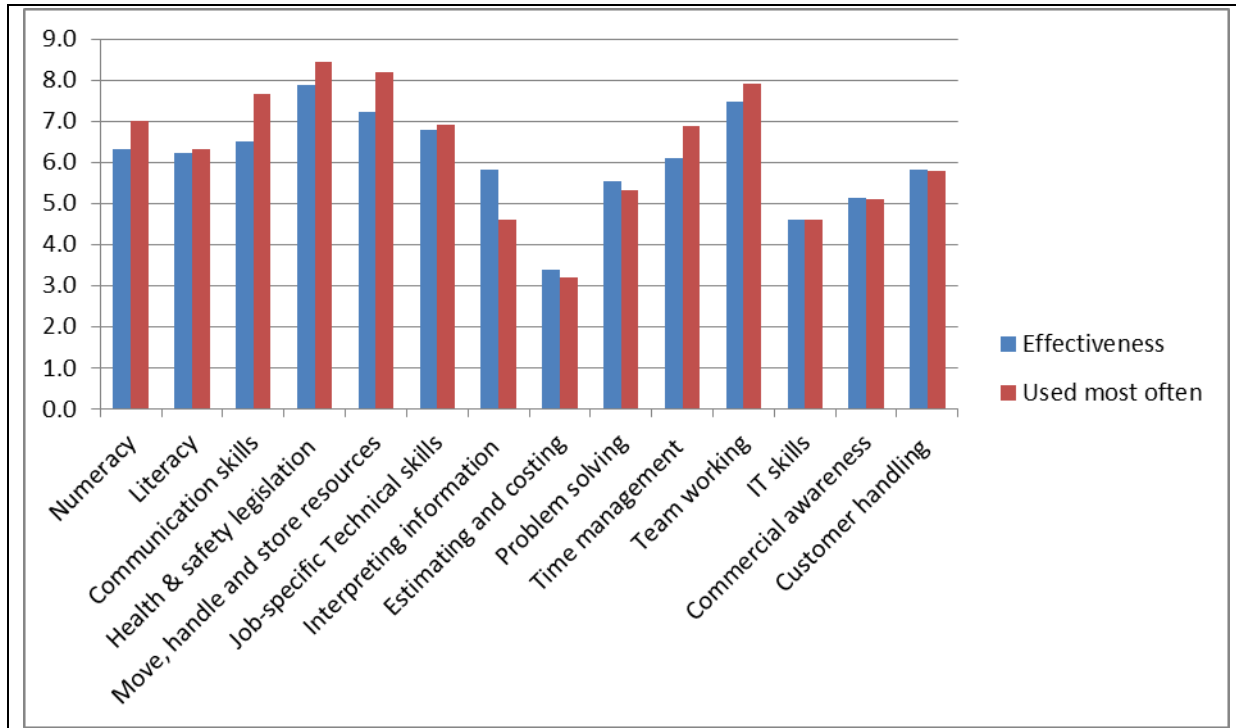
The effectiveness of Apprenticeships at delivering skills versus their use in work



Base 300

Figure 12 S/NVQs Effectiveness/Use

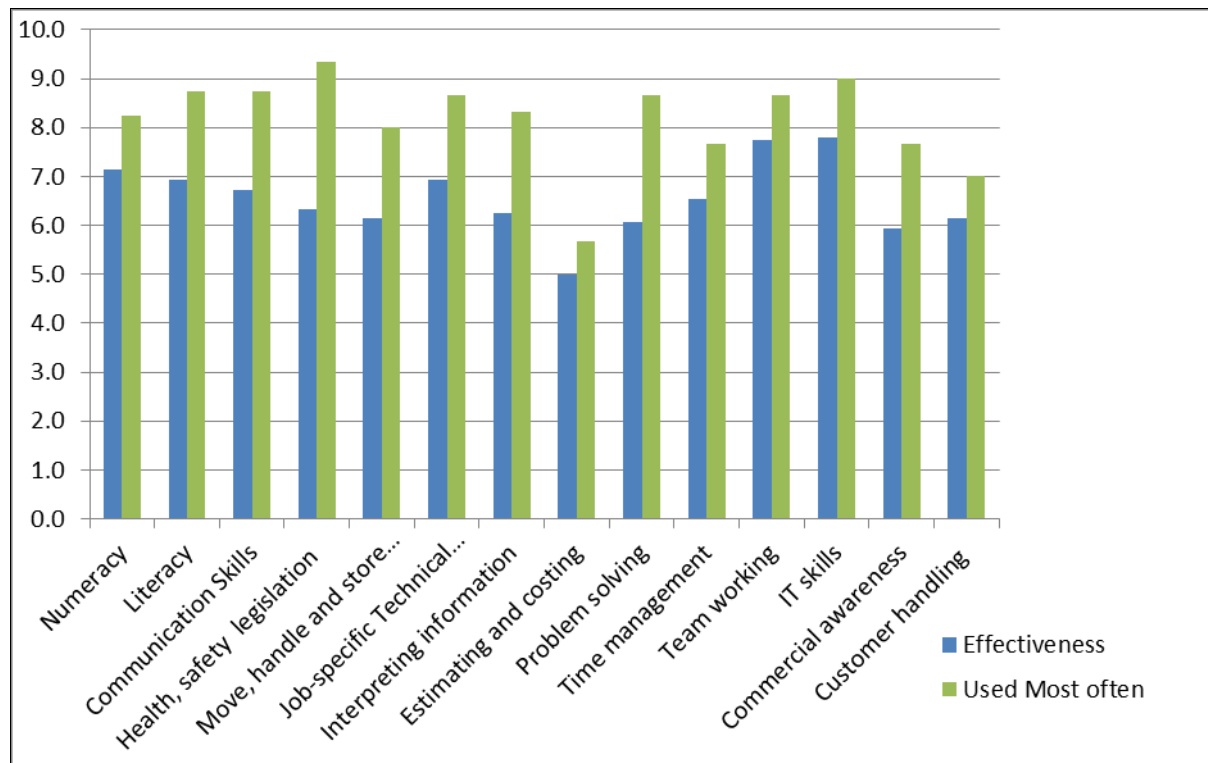
The effectiveness of S/NVQs at delivering skills versus their use in work



Base 300

Figure 13 Degrees' Effectiveness/Use

The effectiveness of Degrees at delivering skills versus their use in work



Base 300

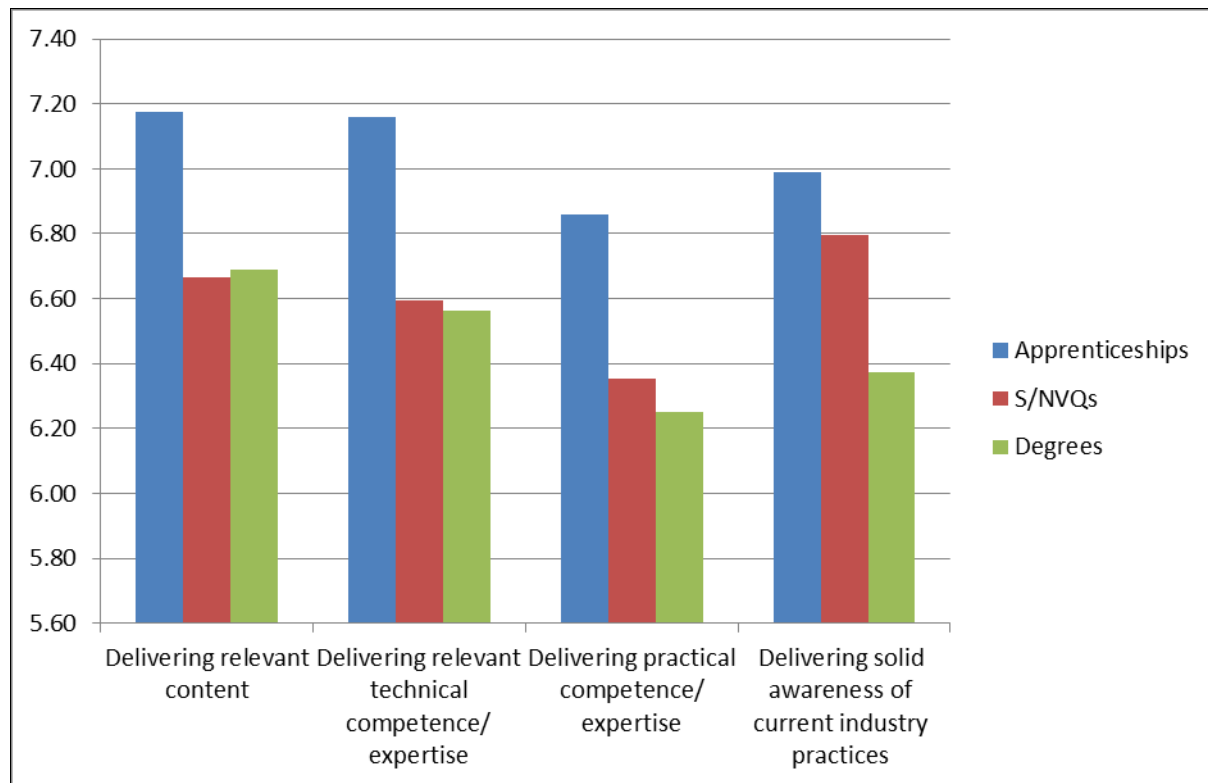
Taken as a whole, Apprenticeships are regarded as being much more effective at delivering work-ready people than either S/NVQs or Degrees (see Figure 14).

“Apprenticeships are extremely worthwhile and (employer is) more than willing to invest in them”

Employer

Apprenticeships score highly for the delivery of relevant content and technical skills. Their lowest score (around 6.8 out of ten) concerns the delivery of practical skills. S/NVQs and degrees are not so highly regarded by employers on almost any aspect of delivery.

Figure 14 Employers' perceptions of qualification effectiveness of delivery of content



Base 300

3.5 Inadequacies and deficiencies within qualifications

3.5.1 Employee Views

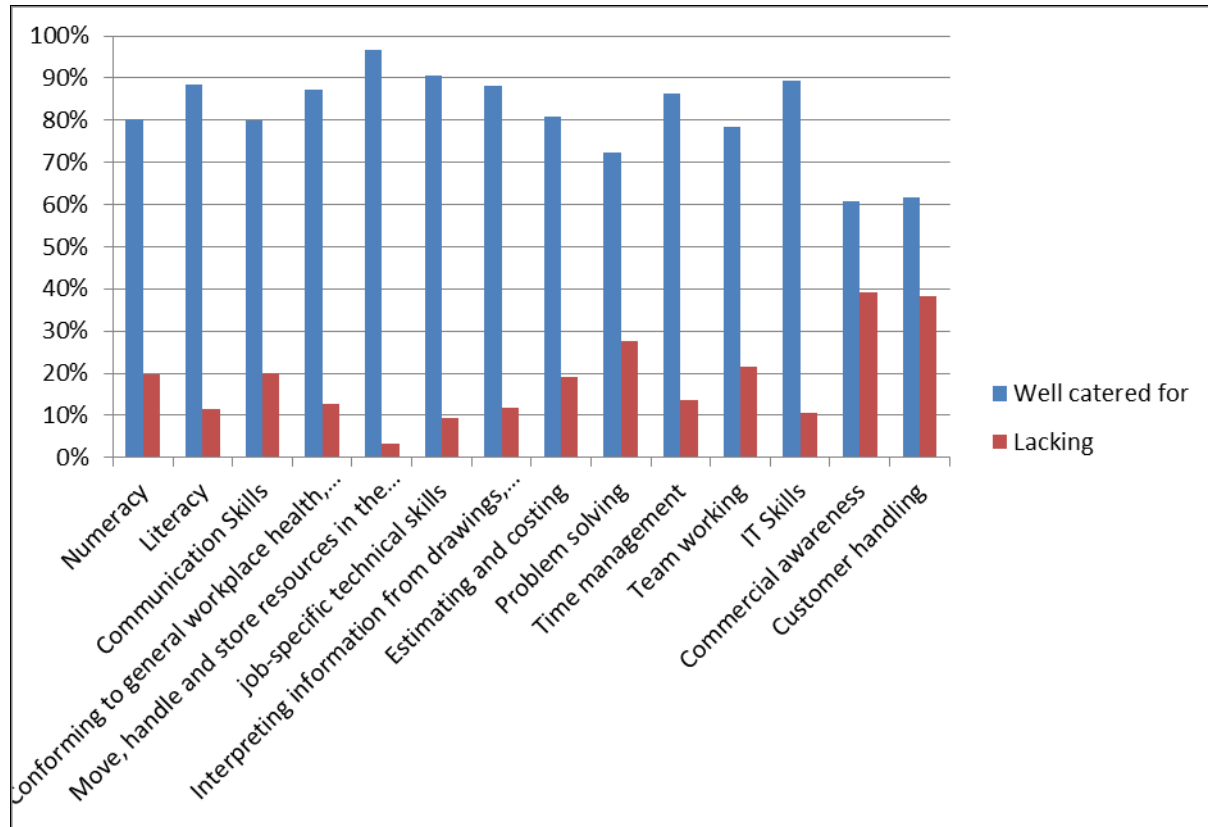
On the whole, employees were pretty satisfied with the way their qualifications prepared them for work - giving an overall average score of eight out of ten. Those who had undertaken Apprenticeships were most satisfied (score of 8.7), with an average score of 7.9 being given by those with S/NVQs and one of 7.7 by those with degrees.

However, around a third of employees (35%) said part of their qualification was inadequate or that specific skills were missing from their training.

In terms of precise skills, the most commonly mentioned skills in which employees felt their training was inadequate were: commercial awareness, customer handling, and problem solving (these, therefore, closely matching employers' views).

Figure 15 Employees and Skills

The extent to which employees felt their qualifications prepared them for work.

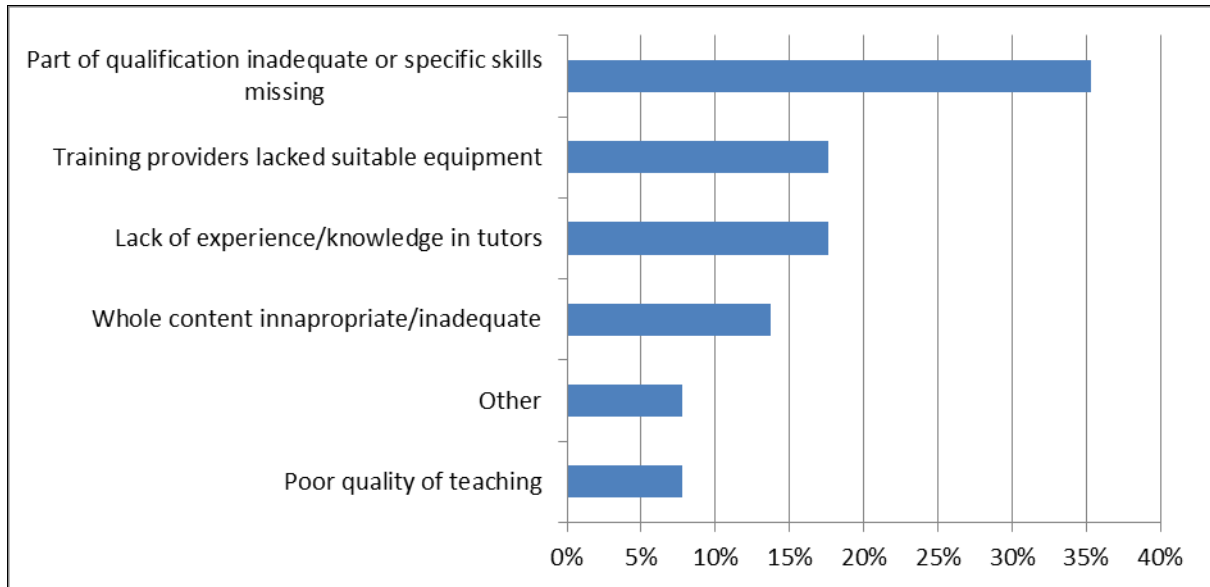


Base 100

Where the employees felt that their qualifications lacked certain required elements, the most commonly cited one was in specific job-related skills with a lack of suitable equipment and lack of knowledge in the tutors also being cited.

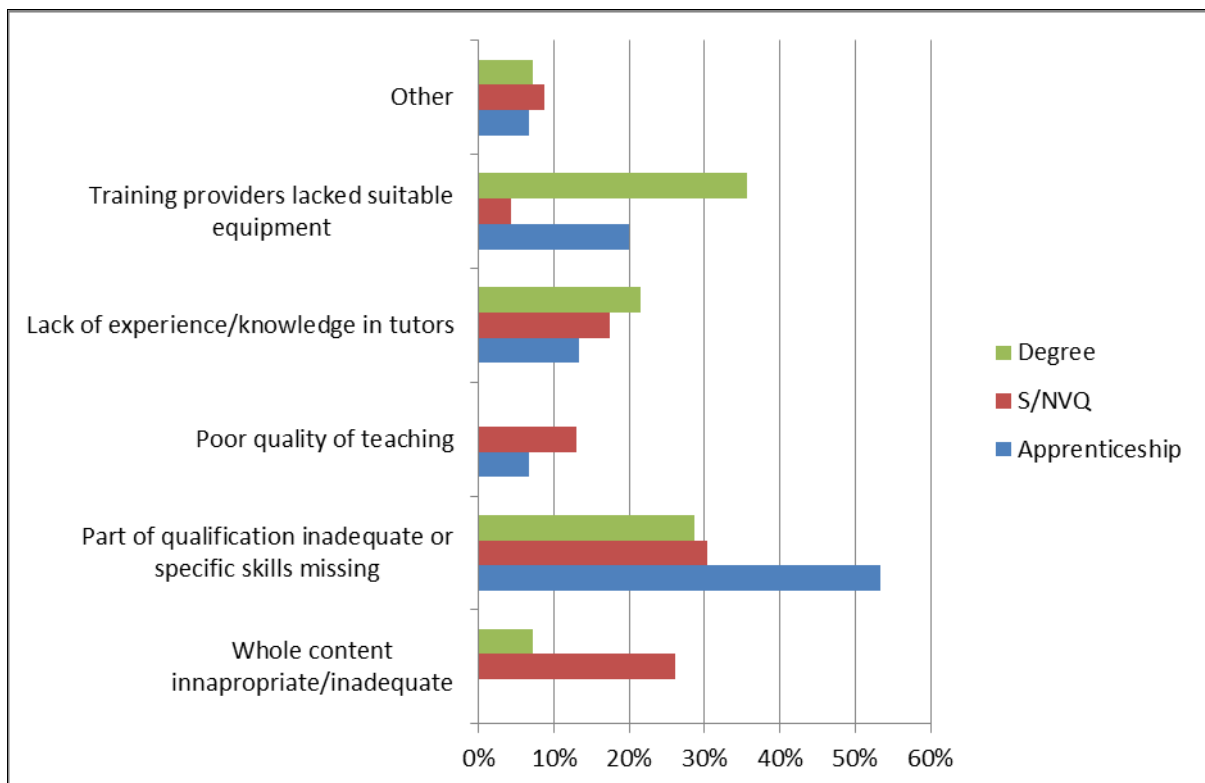
Over half of ex-apprentices who expressed dissatisfaction did so on the basis of specific skills being missing from the qualification whereas degree holders tended to criticise, in addition to missing skills, the lack of equipment and the lack of experience of tutors.

Figure 16 Reasons for deficiencies (All responses)



Base 100

Figure 17 Reasons for deficiencies by type of qualification



Base 100

3.5.2 Employer Views

When asked to rate the success of each type of qualification at equipping young people with work ready skills, employers rated Apprenticeships at 6.97, S/NVQs at 6.75, and Degrees at 5.47 (all out of a maximum score of ten).

The value-judgement that needs to be made by the construction sector is whether scores of just under 7 for two of the qualification types and a score of just over 5 for the other is acceptable.

While a lack of workplace experience and a lack of job-related skills were the two most important deficiencies expressed by employers about those with degrees, those with S/NVQs were regarded by employers as mainly lacking specific skills.

Employers are more satisfied with Apprenticeships and therefore identified deficiencies to lesser orders of importance.

Within industry sub-sectors the ratings for types of qualifications generally matched the overall average with the predictable exception of classification 74 (NB no results are possible for classification 71 due to the very low numbers of respondents in this category). However the low scores for degrees in both classifications 42 and 43 may be particularly worthy of note.

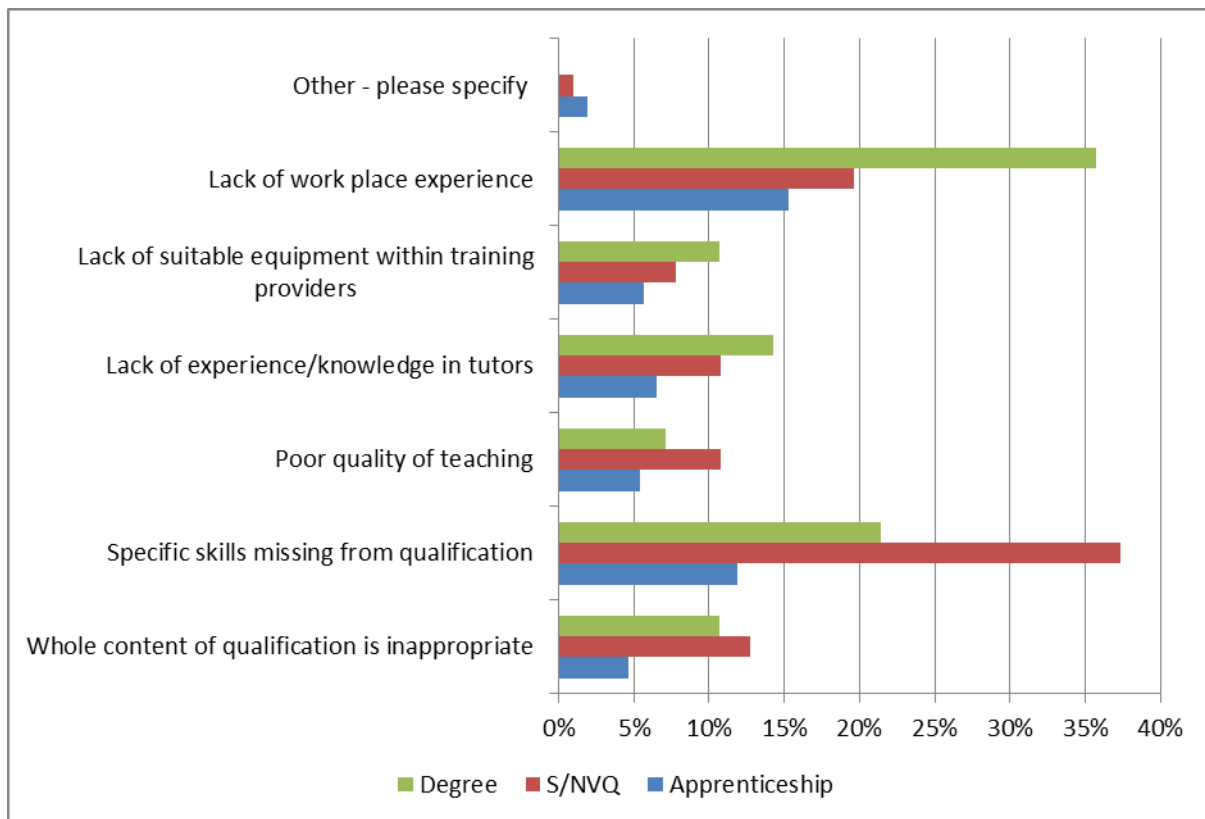
Table 5 Ratings of qualifications by sub-sector

	Construction of Buildings 41	Civil Engineering 42	Specialised Construction Activities 43	Architectural and engineering activities; technical testing and analysis 71	Other professional, scientific and technical activities 74
Apprenticeship	6.80	7.17	6.91	n/a	8.08
S/NVQ	6.71	7.67	6.70	n/a	6.93
Degree	5.33	4.67	4.00	n/a	8.00

Base 300

In terms of specific deficiencies degrees were criticised for a relative lack of work-experience and for what employers regard as specific skills missing from the qualifications. This latter point was very evident also in the responses from those having employed people with S/NVQs (and, to a lesser extent Apprenticeships).

Figure 18 Employers' Views on Missing Skills by Qualification



Base 300

Where employer respondents believe that “other important aspects of the work” are currently missing from qualifications they were probed for further detail. The most common responses within this area included:

- ✓ Delivering numeracy and literacy
- ✓ Delivering good organisational and time management skills
- ✓ Delivering communication skills
- ✓ Delivering a realistic knowledge of the industry

All of the above were responses considered sufficiently important by employers to be written into the "other" element of the question. They relate entirely to employability skills as discussed at the beginning of this report.

Table 6 - Construction of Buildings - 41 - Elements Lacking in qualifications

	Apprenticeship	S/NVQ	Degree
Whole content of qualification is inappropriate	9.00%	13.00%	8.30%
Specific skills missing from qualification	23.90%	41.30%	25.00%
Poor quality of teaching	10.40%	6.50%	16.70%
Lack of experience/knowledge in tutors	14.90%	13.00%	16.70%
Lack of suitable equipment within training providers	13.40%	6.50%	8.30%
Lack of work place experience	25.40%	17.40%	25.00%
Other - please specify	3.00%	2.20%	-

Base 300

Table 7 - Specialised Construction Activities - 43 - Elements Lacking in qualifications

	Apprenticeship	S/NVQ	Degree
Whole content of qualification is inappropriate	9.80%	7.50%	14.30%
Specific skills missing from qualification	21.60%	35.00%	28.60%
Poor quality of teaching	11.80%	15.00%	-
Lack of experience/knowledge in tutors	5.90%	7.50%	14.30%
Lack of suitable equipment within training providers	11.80%	10.00%	14.30%
Lack of work place experience	35.30%	25.00%	28.60%
Other - please specify	3.90%	-	-

Base 300

Within sub-sectors the criticisms of lack of work experience and missing skills are very evident, as, comparatively speaking, are the comments on tutors' capability and quality of teaching.

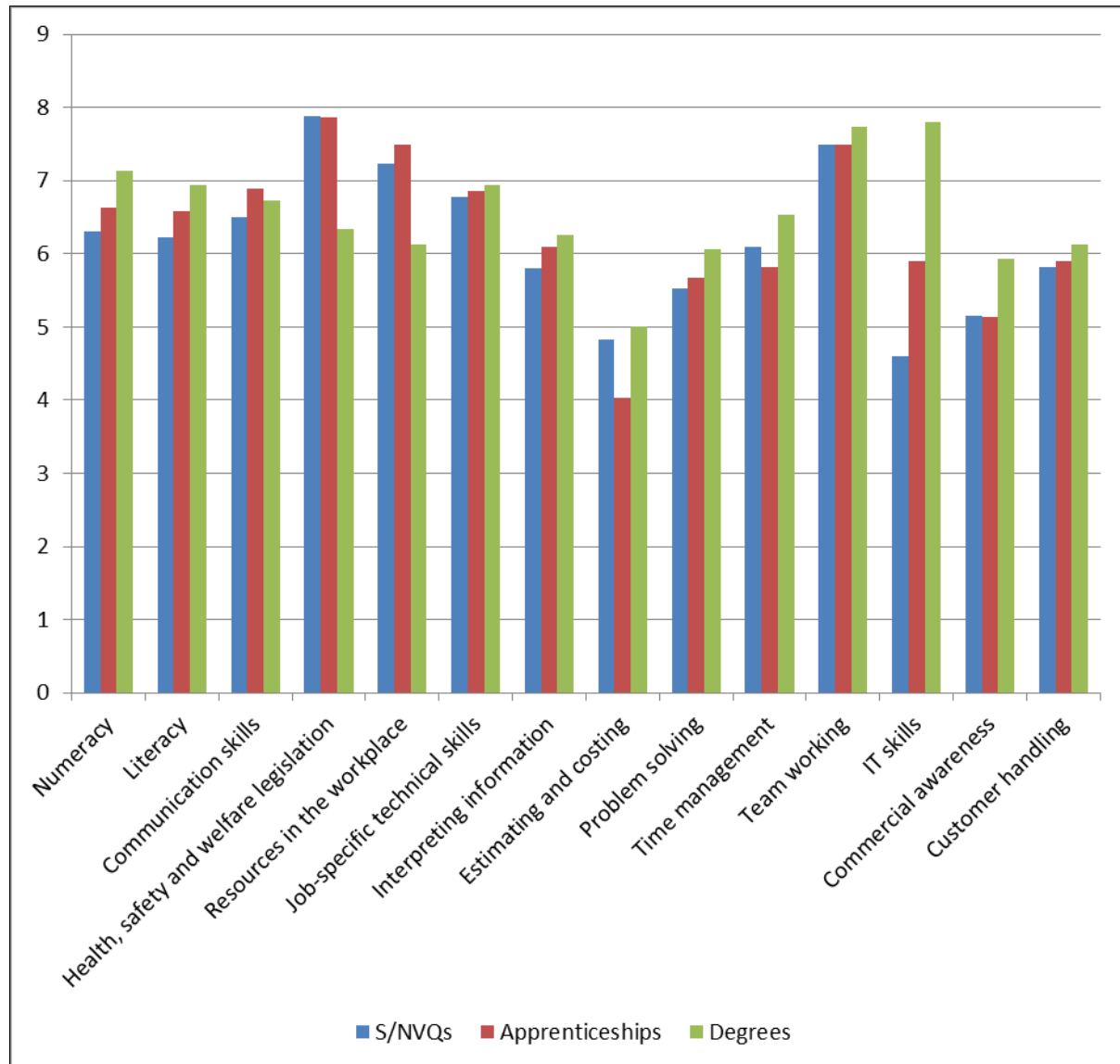
“New starters should be prepared to learn from other more experienced colleagues who have some practice under their belts, I certainly don't think they should be expected to learn everything from an Apprenticeship.”

Construction industry employer

Employer respondents were asked to rate each qualification type on a scale of 1 to 10 (with 1 not at all effective and 10 very effective) as to how effectively they delivered specific skills.

Estimating and costing, commercial awareness and customer handling were consistently rated lower across all three types of qualification than other types of skills. On the other hand, employers rate all three quite highly on team working and all, except degrees, on health and safety.

Figure 19 Effectiveness of qualifications at delivery of specific skills



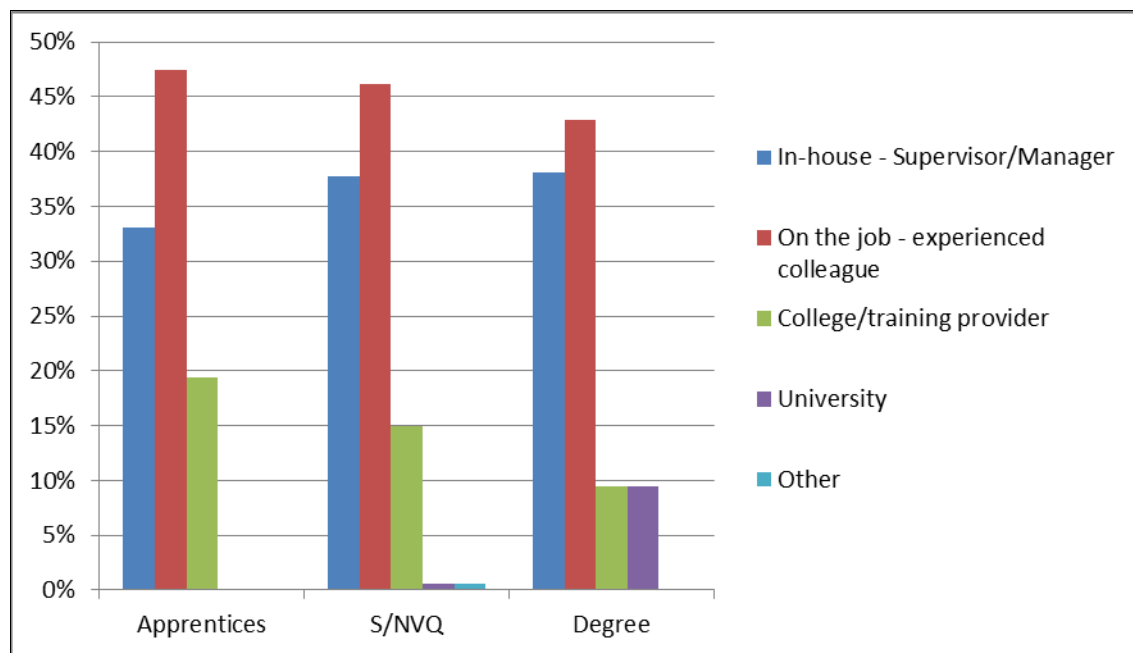
Base 300

“We really had to start more or less from scratch and teach everything because the employee we hired had very little practical knowledge, for example he had not used a hammer properly before. There were all sorts of health and safety risks to allowing him to carry on without further training.”

Construction industry employer

Employers tend to use the same sorts of solutions to remedy deficiencies in qualifications almost regardless of the qualification concerned. As illustrated below 80%-90% of employers remedy the missing elements in-house.

Figure 20 Remediating Skills Deficiencies



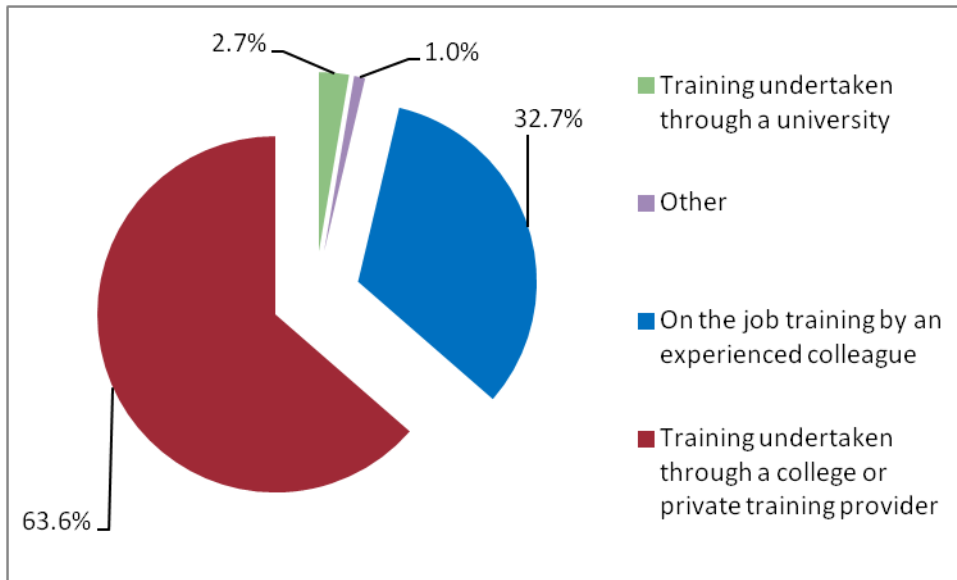
Base 300

3.6 Additional skills delivered and gained in the workplace

Where important skills had not been delivered by a qualification most employees (96%) had had the deficiency remedied through in house training either by a supervisor or manager, or by an experienced work-colleague.

Of those who reported that they had gained additional skills by this method, 20% stated that these were **job specific skills** and 18% claimed that they had gained skills in **estimating and costing** in this way.

Figure 21: Additional employer training identified by employees



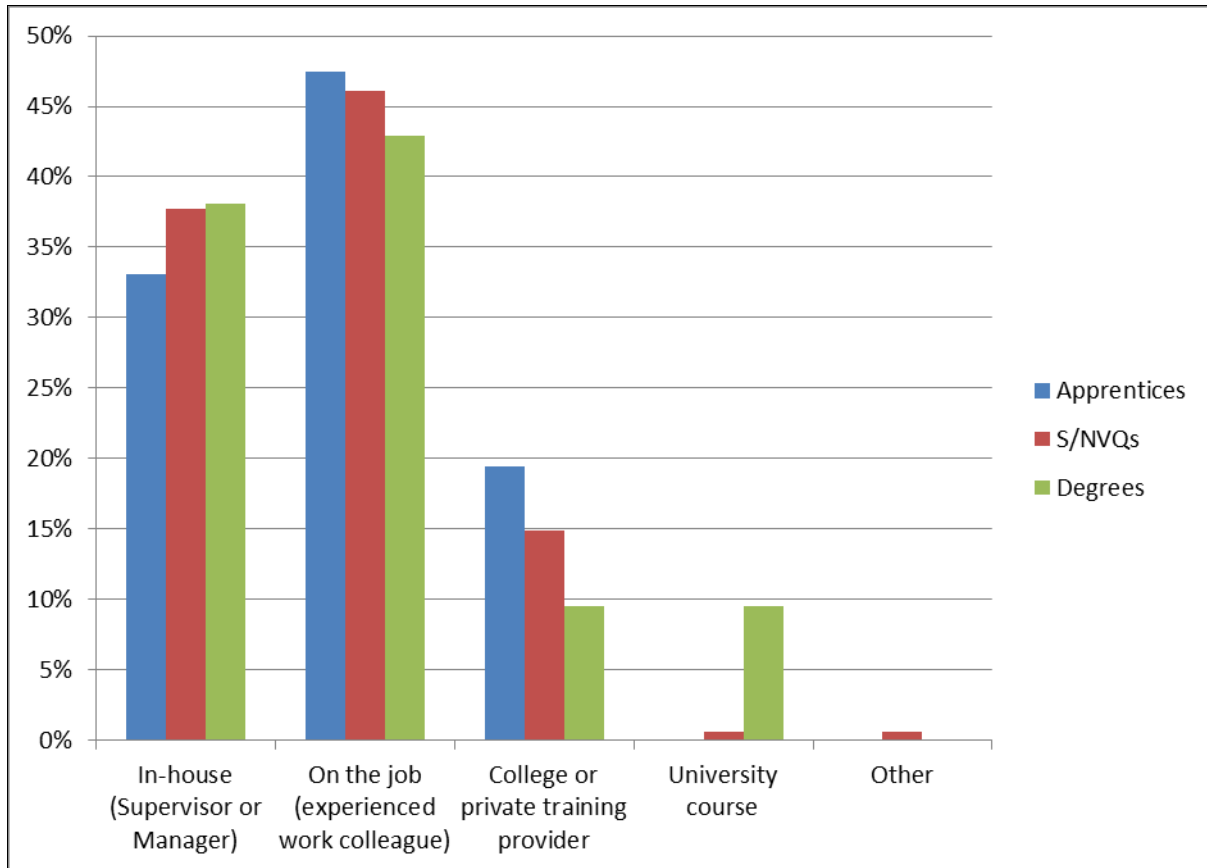
Base 98

Table 8 Skills Developed after Qualifying

(employee listings - ranked in order of frequency of mention)

Job-specific technical skills	12.80%
Estimating and costing	11.30%
IT skills	9.80%
Literacy	8.30%
Commercial awareness	8.30%
Communication Skills	7.50%
Customer handling	7.50%
Interpreting information	6.80%
Team working	6.80%
Time management	5.30%
Problem solving	4.50%
Resources in the workplace	3.80%
Numeracy	3.00%
Health & safety	2.30%
Other	2.30%

Figure 22 Sources of upgrade training (Employers)



Base 300

The majority (80%) of the employers surveyed for this research reported that they had found it necessary to provide additional training to young people who had joined them with one of the three types of qualification.

Construction employers have found it necessary to give young people what they consider to be an advanced level of training in both technical job related skills and more general industry and workplace skills.

Although employers acknowledged through literal responses that addressing skills and training needs of their employees is of great importance, the impact of the recession means that investment in skills development is likely to remain a low priority for the vast majority of employers in the short-term.

Employees were asked to rate their level of satisfaction with the support they received from their employer (where 1 was not at all satisfied and 10 very satisfied).

On average employees rated the level of employer support they received as 8. Some 32% of respondents rated their level of satisfaction with employer support as a 10, whilst a further 33% rated it at 7 or below.

3.7 Employer and employee suggestions for improvements to skills delivery in qualifications

Employer and employee respondents to our telephone surveys were asked to provide a literal response to the question, **“What could be improved about Apprenticeships, S/NVQs and degrees to make them better at equipping young people aged 16 to 24 with work-ready skills for the construction sector?”**

Employees who responded to this question on possible areas of improvement overwhelmingly called for a greater element of practical teaching in the workplace to be included in each of the qualification types. Among the most common responses was that practical experience should not just be geared toward delivering technical job specific skills and skills relating to legislative requirements but also softer skills such as communication, commercial awareness and team working.

In the view of both sets of respondents, an increase in the delivery of practical skills within qualifications was the most-cited requirement to improve work readiness.

“More varied use of tools” (S/NVQ student)

“Not just technical, but people skills and what to expect in the commercial world” (Apprentice)

“CSCS touchscreen tests are good for preparing for a test – not for life on site” (Employer)

“Recruits need to have experience of a working day before they come into the industry” (Employer)

“If no practical experience is gained then the qualification is useless” (Employer)

“Site experience – problem solving should be introduced to the course” (Graduate)

“Colleges should mimic a working day” (Employer)

Not all respondents stated what they considered the optimal length of time to be in relation to the proportion of work experience and classroom based training; some suggestions included:

“Six-month block learning on-site” (Employer)

“One day a week (on-site) would not be enough – should be in blocks of one week” (Employer)

“One year on a construction site needs to be included in courses” (Employer)

Employers reported that more effective communication is necessary between employers and training providers in order to ensure that, as far as possible, there is a greater level of awareness by training providers of industry requirements. It must be remembered though that training providers often have to operate within the fairly strict confines of the qualification framework as established by the awarding bodies.

However, the answers - from employers and employees alike - convey a level of consensus about the need for currency in techniques and skills as well as about the need for more practically-oriented skills to be taught. Employers have a perception that tutors and teachers in educational institutions and training providers have little hands-on experience of the construction industry, and that their experience is outdated. Many employers criticised the equipment at colleges and training providers as being "old-fashioned" and outmoded.

Employers who had taken on young people with S/NVQs and Apprenticeships in the last two years called for an increased level of workplace assessment of learners and a greater amount of training to give learners a better awareness of the industry.

Those who had employed degree graduates within the last 24 months were in agreement that a greater proportion of practical on-site training is necessary to give learners a grounding in what it is like to work on a construction site, especially in the case where their job roles will include supervisory, operational or man-management elements.

S/NVQs and Apprenticeships in particular are reported to be considered by employers and stakeholders to be too short to deliver all of the necessary practical and academic skills.

However there was not a consensus among employers as to exactly how long they should be; the following quotes indicate some different expectations:

“A five-year Apprenticeship would be best”

“(Apprenticeships) should start with two years at college before starting the Apprenticeship”

“Apprenticeships need to go back to the days of City and Guilds when they used to be a five-year course”

Another overarching theme, also apparent in the in-depth conversations with NOS Working Group Members and ConstructionSkills Training Developers, was the concept that the Construction industry should unite to attract higher level entrants, in terms of skills and knowledge. It appears to be widely felt that Construction roles are not perceived to be aspirational careers and in many instances are considered as a choice of last resort for learners who are not thought to have the capacity in terms of intelligence or academic ability to pursue other career areas.

Some deficiencies in core skills were identified in relation to Apprenticeships and S/NVQs; respondents are seeking greater depth in the teaching of literacy, numeracy and IT to ensure young people are more effectively prepared for the workplace.

4. National Occupational Standards (NOS)

4.1 The world of NOS

National Occupational Standards (NOS) are statements of competence describing the skills, knowledge and understanding required of a particular job role. They are standards of performance that are, in essence, benchmarks of best practice. When performing within an occupation, a function or a sector, NOS set out what standards of performance are to be achieved in order for an individual to be recognised as competent.

The standards-based approach to competence originated in the development of NVQs/SVQs in the mid to late 1980s. The industry-specific standards that formed the basis of those qualifications became known as National Occupational Standards and subsequently NOS were recognised as an important product in their own right. NOS suites are made up of a number of units and these are currently available for view in the NOS Database which replaced the previous UK Standards Directory website in April 2011.

UKCES' NOS Quality Criteria¹⁷, published in March 2010, adopts a “whole system approach to NOS” – which aims to make available NOS that meet the needs of sectors and are used effectively as well as developed in a consistent manner.

The criteria set out what standard setting organisations must do and consider when:

1. Researching and analysing the sector and occupational needs;
2. Carrying out functional analysis
3. Identifying NOS that already exist and functions that are common;
4. Specifying NOS and their components;
5. Seeking approval for the NOS
6. Maintaining the relevance and currency of the NOS;
7. Planning the implementation and promoting the NOS and finally;
8. Evaluating the uses, value and impact of the NOS.

Sector Skills Councils (SSCs) and Standard Setting Organisations (SSOs) currently hold responsibility for working with employers to define, set and regularly review and, as appropriate, refresh NOS.

4.2 The development and maintenance of NOS in the Construction Sector

NOS form the basis of the Recommended Qualification Structures (RQS) for the construction sector

¹⁷ UKCES & Alliance of SSCs (March 2010), NOS Quality Criteria with explanatory notes

and are developed and agreed by occupational representatives from industry. The NOS that support the construction industry are developed and maintained by CITB-ConstructionSkills for craft occupations in partnership with the Construction Industry Council (CIC) who are responsible for the Technical, Supervisory and Management occupations.

ConstructionSkills seeks to improve its links to European countries to underpin development processes for NOS and sits on a group comprising twelve European countries that meets to discuss best practice and international benchmarking.

National Working Group (NWG) members come from a variety of industry backgrounds including, for example:

- Trade Unions
- Industry Federations
- Training Providers
- Employer Organisations
- Practitioners

Working Groups meet on average two or three times over the development process of a suite of NOS. ConstructionSkills Training Developers produce NOS using information and insight gained from the NWG before submitting the NOS to the regulators for approval. Once approved, the NOS are uploaded to the NOS Database¹⁸.

Case study: National Federation of Roofing Contractors

Organisation size	The National Federation of Roofing Contractors Limited (NFRC) is the UK’s largest roofing trade association representing over 60% of the roofing industry by value with over one thousand trade and associate members
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➤ **Summary**

The remit of the National Federation of Roofing Contractors covers all roofing types and disciplines. Close co-operation is maintained with the Government, British Standards Institution, ConstructionSkills, national heritage organisations, together with all major associations representing the various aspects (both flat, pitched and industrial) of the roofing industry.

The Federation represent a great number of contractors in the roofing industry across all disciplines from repair and maintenance of simple structures such as industrial sheds to roofing construction of large sporting stadiums and international airports. The scope of the federation incorporates all

¹⁸ . www.ukstandards.org.uk

business sizes.

They also maintain strong links with colleges and training providers and therefore consider themselves to be well aware of issues relating to training and assessment, in particular in relation to vocational training and assessment.

➤ **Awareness of National Occupational Standards**

The National Federation of Roofing Contractors enjoys a strong relationship with ConstructionSkills with regard to the development and oversight of the National Occupational Standards relating to the roofing sub sector. The Federation consider themselves to be well represented on ConstructionSkills National Working Groups and report that they chair most of the groups.

➤ **Feedback on the Development process of National Occupational Standards**

Because of their strong industry and training links, the Federation are often called upon to represent the views of the roofing industry with regard to the current system of developing National Occupational Standards.

The link between developing and approving standards and the transition to qualifications appears to have become disjointed and difficult to follow where once the progression was seamless.

The primary reason that the Federation becomes involved in developing or amending National Occupational Standards, either Recommended Qualification Structures or single standards, is to ensure that qualifications are amended according to industry requirements.

The Federation report that once qualifications progress from the Standard Setting Body to the Awarding Body there is a lack of information passed on to the industry with the result that the industry is expected to investigate without support and determine who to lobby in the event that changes to qualifications are required.

The Federation report they were recently involved in the redevelopment of National Occupational Standards for Heritage Skills and also a unit for installing solar collectors on roofs. The process through the standards team was smooth however for a considerable period of time they were unable to track down the whereabouts of either the National Occupational Standards or the unit within the qualification development and approval system.

➤ **Conclusion**

The Federation has identified a lack of clarity in the process of tracking the development of National Occupational Standards through to the development of a qualification.

➤ **Recommendation**

There is a need to increase the amount of information available to employers and their representative bodies during the National Occupational Standards development process.

➤ **Overview**

The Federation consider National Occupational Standards to be fit for purpose and enjoy a strong collaborative relationship with ConstructionSkills standards team however, they cite a lack of clarity between the development of National Occupational Standards and resultant changes to qualifications as a cause for concern.

4.3 Awareness of NOS among construction industry employers

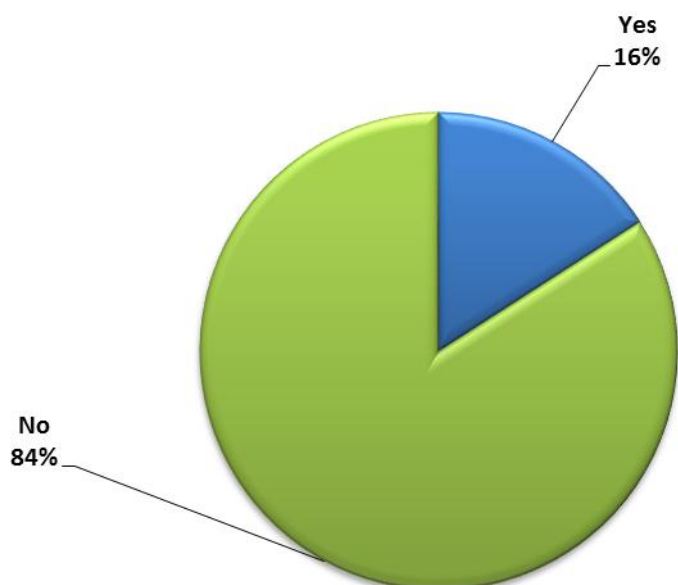
Previous research carried out by Pye Tait Consulting on behalf of the UK Commission for Employment and Skills in 2010 consisted of two broad aims¹⁹:

1. To review processes used by SSCs and SSOs regarding the development of NOS, covering stages 1 to 3 of the “whole system approach to NOS” as set out within the NOS Quality Criteria (March 2010),
2. To conduct a comprehensive review of uses, impacts and benefits attributable to NOS in terms of the needs of sectors and the UK economy.

The findings of the research indicated that awareness of NOS is generally low among employers and also among some professional bodies and trade associations across all industry sectors.

Figure 23: Proportion of employer respondents aware of NOS

¹⁹ UKCES (March 2010), NOS Evaluation Framework, Pye Tait



Base: 290

Respondents to the current work-readiness research confirmed that awareness of NOS within the construction industry remains limited especially in the building and specialised activities sub-sectors.

There is however a question mark over the extent to which employers make use of NOS without necessarily being aware that they are doing so. Many employers are unaware that most qualifications are based on NOS, or that their training is underpinned by NOS.

From in-depth interviews with ConstructionSkills Training Developers it has emerged that this lack of awareness among employers may in part be due to the way in which the UK qualification framework has developed and the fact that *qualifications* and *NOS* – although in practical terms very closely linked – are, in marketing terms, two separate and differently-perceived products.

Table 9 Awareness of NOS by sub-sector

	41	42	43	71	74
Yes	10.90%	35.70%	16.50%	-	28.60%
No	89.10%	64.30%	83.50%	100.00%	71.40%

Base 290

4.4 Uses of NOS in the Construction industry

In light of the small proportion of the employers sampled who are aware of NOS, we are not able to

reach robust conclusions about employer awareness of different uses of NOS across the construction sector.

There are however, wide ranging impacts of using National Occupational Standards. For example, NOS have been used by ConstructionSkills to underpin the development not just of qualifications, but of the Construction Skills Certification Scheme (CSCS), a competence-based programme for workforce development and regulation which was originally launched by ConstructionSkills to increase quality of work and reduce the number of accidents occurring within the construction environment.

There is a range of cards available, according to level and type of occupation as well as those for new entrants into the sector, or those in the process of qualifying. Achievement of S/NVQs is generally required for most cards along with successful completion of a specific Health and Safety test (all underpinned by the relevant NOS). The scheme has grown to over 1.5 million individuals now holding a CSCS card, and evidence of holding a card is becoming a standard requirement before commencement of any work²⁰.

²⁰<http://www.cscs.uk.com/>

Case study: Uses and Impact of NOS - BAM NUTTALL

Organisation size	Circa 3000 employees
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➤ **Summary**

BAM Nuttall has a companywide competency framework which identifies competencies for all occupations within the company from Senior Management to Site Operative and Trainee level.

BAM Nuttall has developed an in-house supervisor training programme. The programme involves one day of training each month for a period of fifteen months. The majority of the learning outcomes for the course are mapped against both Occupation Work Supervisor and Construction Site Supervisor suites.

Individual units have been developed directly from standards from other suites too, including Planning and Cost Control from Construction Contracting Suite. For supervisor level and above, competencies have been produced to reflect BAM Nuttall culture and values along with skills and knowledge requirements for all supervisory and management level occupations.

➤ **Developing a Training Programme**

The Supervisor Training Programme has been credit rated and levelled on to the Scottish Credit and Qualifications Framework (SCQF). BAM Nuttall joined SCQF because they wanted the course to have a structured and targeted outcome. Pre-course reading materials were already in existence for some of the units and there was some informal end testing in place; the SCQF credit rating formalised the process and has standardised pre-course reading, workshop delivery and testing across all 14 units.

The key objectives of the training programme are to improve Supervisors’ performance in health and safety, productivity and also to raise their environmental and commercial awareness. By changing the emphasis from attendance to achievement, training will now be more focussed on helping employees develop these industry-relevant skills, while the programme can also be adapted and modified to reflect the changing needs of the business.

The course will be delivered in its new format from September 2011 and will be subject to ongoing evaluation.

➤ **NOS Saves the Day**

On a large London construction project that BAM Nuttall is working on, the Principal Contactor stopped work on their section. BAM Nuttall Formworkers were erecting a falsework system which the Principal Contractor believed should be carried out by Scaffolders not Formworkers for Health and safety reasons, they questioned the suitability and competency of a Formworker to carry out work of this kind.

BAM Nuttall directed the Principal Contractor to the National Occupational Standards for both Formwork and Scaffolding (Access and Rigging). The erection of Propriety Systems (Falsework) is

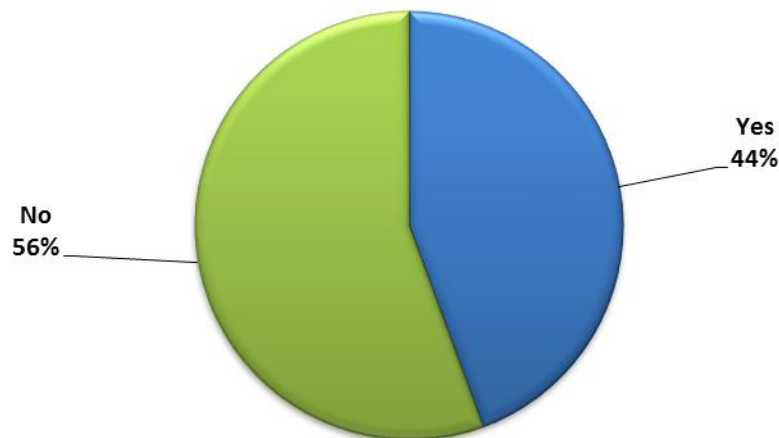
clearly identified in the standards for Formworking and has no mention in scaffolding. BAM Nuttall’s operatives were all qualified to at least Level 2 in formwork which proved their competence and the work was allowed to go ahead. Ultimately the Principal Contractor had no option but to accept the NOS as an industry agreed standard for the competence requirement of Formworkers.

➤ **Additional Uses of NOS**

BAM Nuttall reference NOS for all learning outcomes whenever they produce a course module for any of their trade occupations. They also make use of NOS for recruitment purposes as a source of terminology and technical requirements when putting together job descriptions.

NOS are used for Plant Maintenance competence assessments, all maintenance staff are regularly assessed using NOS as guidance for performance requirement. Additionally, all Blasting Supervisors are regularly assessed against NOS to satisfy ongoing competency requirements in the quarrying sector.

Figure 24 Proportion of employer respondents aware that NOS are used to underpin qualifications



Base 63

Of those respondents who were aware of the existence of NOS, 44% knew that NOS can be used to develop qualifications.

Consultation with NOS Working Group members has identified a schism between those members who believe it is imperative that employers are aware of NOS and of the uses and impacts, and those who are of the opposite view that as long as the end-products and services are fit for purpose and the NOS underpinning them are robust and up-to-date for the sector, then it is not necessary for employers to have knowledge of the existence of the standards themselves. This finding ties in almost completely with findings of other reports on employers' awareness of NOS²¹.

Those who advocate greater awareness of NOS among the construction industry's employer population believe that increased knowledge of NOS will:

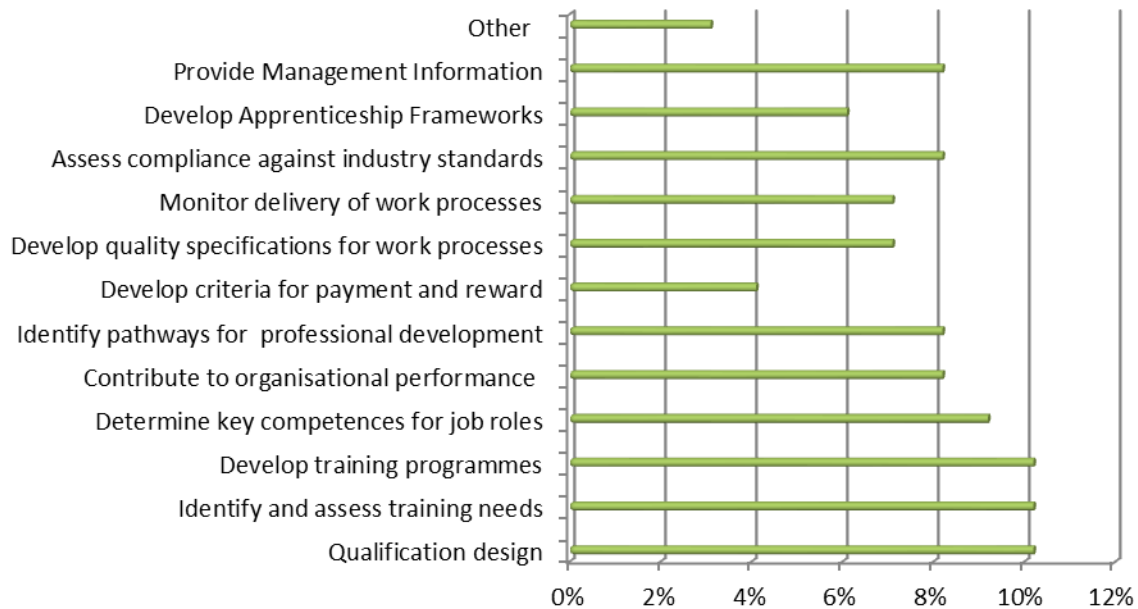
- enable employers to save money by improving work processes
- allow employers to identify skills gaps so that they know exactly where the gaps are
- make employers less reliant on training providers to tell them the training required
- create better quality-assurance processes
- develop in-house assessment and staff appraisal processes
- save time and money in the recruitment and retention of staff
- standardise operational processes and procedures

The opposing view is that specific products can be developed from NOS by industry bodies such as ConstructionSkills that will deliver all of these results to employers in ways that will not require them, as individual companies, to invent and design separate approaches, procedures and mechanisms.

Only 18 out of 300 employer respondents (6%) were able to say how they currently make use of NOS. Among these employers the most common uses are for qualifications design, assessing training needs, designing training programmes, and job specifications - although several other uses were mentioned.

²¹ UKCES (2010), NOS Evaluation Framework, Pye Tait Consulting

Figure 25 Current uses of NOS among construction employers



Base 98

While it seems superficially clear that limited awareness of NOS underpins low usage, low usage may also be due to the perceived complexity of NOS and the need, before employers can make use of them, for a fairly high degree of internal competence in understanding the standards and in being able to design and construct tools that make use of them.

Findings from this research corroborate earlier findings from research carried out by Pye Tait Consulting in 2010 on behalf of the UK Commission for Employment and Skills which identified that the number of uses can be grouped into four main categories²²:

1. Recruitment and performance management
2. Qualifications and training
3. Careers and professional development
4. Organisational process improvement

Generally speaking, Construction Working Group members and Training Developers agree that employers do not recognise NOS as a brand, however in some cases recipients/users of products or services developed wholly or partly through NOS may well be unaware that they are using NOS.

²² UKCES (2010), NOS Evaluation Framework, Pye Tait Consulting

Although 84% of employer respondents to our survey reported having no prior knowledge of NOS and of those less than half (44%) were aware that NOS can be used to develop qualifications, 10% of respondents who were aware of NOS claim to be using them to develop training programmes.

Interviews with members of ConstructionSkills NOS Working Groups and with Training Developers indicate that the use of NOS-derived products and services such as competence frameworks and training programmes is more widely embedded compared with uses of NOS as standalone products. Employers are particularly looking for tools that will help them with business development, health & safety, and recruitment & development as well as cost saving measures.

5. Conclusions & Recommendations

Overall work-readiness is a complex subject and one that has much exercised Governments, agencies, and education and training organisations (particularly since the turn of the century).

What the term work-readiness means - and it is often called "employability" - is now widely understood to consist of educational attainment in subjects directly relevant to the work to be undertaken together with a wide range of other skills and attributes some of which cannot be "taught" or even assessed in the traditional sense.

These include:

- the work ethic
- time keeping
- integrity
- self-management
- team working
- problem solving
- communications skills (oral and verbal)
- customer handling skills
- numeracy
- literacy
- IT skills

In addition, a number of authorities have identified such factors as flexibility and adaptability; Initiative and pro-activity; and a positive attitude to ongoing personal development, as being extremely important.

When considering the conclusions to the current research it is, therefore, necessary to bear in mind the fact that not all elements of "work-readiness" are susceptible to purely educational solutions via the qualifications studied by recruits. Rather they may require either additional training, adaptations to the structure and mode of the pedagogical process, or even fundamental changes to the approach of schools and teachers throughout the entire secondary period.

To an extent, the issue of work readiness can be divided into two intellectually distinct elements²³: the process of teaching the knowledge and skills required for the job-role, and the need to ensure

²³ Which, while being capable of intellectual distinction, may not be capable of effective separation in practice.

that the recruit possesses or develops the appropriate personal attitudes, characteristics and expectations to suit them for the world of work.

Indeed, this theoretical distinction which is so difficult to make in the real world, might go some way to explaining the apparent discrepancy between the employers' view of qualifications, as demonstrated in this report, and their views on recruits as provided in additional comments, concerning such things as attitude, literacy, numeracy, etc.

It could be, therefore, that "work-readiness" for the construction sector, is more an issue of what might be termed the softer employability skills, than about qualifications per se.

It then follows that, should it be determined that key "work-readiness" issues be addressed, it may be necessary to do so through additional "employability" competences or qualifications as well as or instead of changes to the Apprenticeships, S/NVQs and Degrees that have formed the prime focus of study. This might be achieved by requiring

- experiential action-learning where possible;
- additional work experience;
- or possibly by constructing new "competences" as additional elements of these qualifications.

Our specific conclusions are summarised under each of the broad project objectives as follows:

EMPLOYERS

Do the specified qualifications adequately prepare young people for work in the construction sector?

The fundamental answer to this question has to be in the negative.

While employers generally rate Apprenticeship and S/NVQ as roughly 7 (out of 10) in terms of their effectiveness at delivering work-ready young people, there is cause, from the other data gathered from this research (especially the qualitative responses) to conclude that employers have doubts about the overall effectiveness of the qualifications where employability skills are concerned.

There are clearly questions as to the efficacy of the content of even Apprenticeships and S/NVQs and on the amount of work-experience required by both, but there is a greater degree of concern about a wide range of employability skills such as time keeping, customer handling skills, and commercial awareness.

Where degree qualifications are concerned the anxieties of employers are more pronounced (based on an average effectiveness score of just 5.5).

Employees rated the effectiveness of their qualifications higher than employers but, taken together, the results from employers and employees confirm both previous research and anecdotal findings suggesting that Apprenticeships are more highly regarded from the work-readiness point of view than any other relevant form of qualification.

Whether the ratings and the specific deficiencies are acceptable is a matter for the industry to consider.

According to employers, what training does and does not prepare young people for work?

Employers have very refined views as to which skills different types of qualification are most effective in delivering. Both Apprenticeships and S/NVQs received high marks for practical skills with other non-job-specific skills being rated lower. These include the following all of which are frequently mentioned as deficiencies in the qualitative responses to this research:

- Commercial skills
- IT skills
- Problem solving skills
- Estimating and costing
- Interpreting information
- Literacy
- Numeracy
- Customer handling

Where degree-holders are concerned the responses to the survey were less clear cut. To the initial question on how well degrees prepare their recruits, employers gave all skills a high score with the exception of estimating and costing and customer handling. However, both earlier and later responses to the survey seem to show much less confidence among employers as to the effectiveness of degrees in preparing their graduate entrants for work.

Again, taken as a whole, Apprenticeships are regarded as being much more effective at delivering work-ready people than either S/NVQs or Degrees (see Figure 14).

Apprenticeships score highly for the delivery of relevant content and technical skills. Their lowest score (around 6.8 out of ten) concerns the delivery of practical skills. S/NVQs and degrees are not so highly regarded by employers on almost any aspect of delivery.

In contrast, degree programmes are historically considered to contain a greater element of academic learning. Previous research carried out by Pye Tait in 2011 for the Scottish Qualifications Authority (SQA), for example, revealed that learners in Scotland studying toward Higher National and Degree level qualifications within construction subjects were finding it increasingly hard to gain practical workplace experience as a result of the recession. Many employers reported that they were no longer able to offer practical experience work placements to students because of a severe downturn in the levels of work available²⁴.

²⁴ Scottish Qualifications Authority, (2011) Research into work based learning, Pye Tait Consulting

S/NVQs and Apprenticeships in particular are reported to be considered by employers and stakeholders to be too short to deliver all of the necessary practical and academic skills. This is in part attributed to the belief that school leavers are thought to be not equipped by state education to progress to post 16 education without additional training in areas including basic literacy and numeracy and skills. It is noteworthy that literacy and numeracy skills were not regarded as deficient within quantitative responses to our employer survey, however within the literal responses employers lodged concerns about delivery of basic literacy and numeracy skills in schools to pre 16 learners.

The responses to the research indicate that the content and structure of qualifications, in particular Apprenticeships and S/NVQs, is often blamed for issues such as skills gaps which may lie more at the door of the delivery of the qualification.

What factors influence employers' perceptions of these qualifications and what knowledge do employers have about the provision on offer?

It is a commonly held perception among construction employers that school leavers are not equipped with the necessary basic skills to enter the world of work²⁵. Literal responses from this work readiness research combined with previous and other current research by Pye Tait across a variety of sectors, reiterates that many employers believe modern qualifications are not as robust as previous versions²⁶.

Pye Tait research on behalf of the Skills Funding Agency carried out in 2011 which was an evaluation of the interim definitions of level 2 and level 3 QCF qualifications, revealed some consensus among a number of employers and learning providers: that providers are under financial pressure to achieve completions and that NVQ and apprenticeship qualifications in particular are too short to give learners a well rounded education making them competent in their chosen occupational area.

Are there any differences in views regarding training relating to specific occupations?

Sub-sectors of the construction industry generally conform to the overall views as illustrated in this report with the exception of the scientific and technical sub-sector which tends to have a higher regard for the work-readiness and skills of degree-holders than other sub-sectors.

²⁵ This has been confirmed as a commonly held perception by NWG members and CSkills Training Developers

²⁶ Other Pye Tait recent research includes work for the Skills Funding Agency and for UKCES

To what extent are employers aware of NOS?

Just 16% of the employers had heard of NOS prior to being contacted for this research, and this state of affairs was corroborated by NOS Working Group members and ConstructionSkills Training Developers.

A fundamental question, though, is whether employers actually need to know about NOS in order to gain the benefits that are ascribed to them. In the sense that NOS represent an ingredient in a number of possible dishes of which employers can avail themselves it would be arguable that they need only to be given access to the tools and that NOS can remain hidden.

What are the uses and impact of NOS within the industry?

NOS have a significant impact on the Construction sector through their use in a variety of qualifications.

In terms of other types of use, the evidence of this research is that those employers who make use of NOS feel that doing so resulted in positive impacts.

Limited evidence points to the sheer range of potential ways in which NOS can be used forms a barrier of complexity for employers. Pre-packaging of specific tools (making use of NOS) may be a more effective way of encouraging their use. A tool or framework to measure the impact and uses of NOS by employers was recommended to UKCES for use by all SSCs in the recent Pye Tait Consulting evaluation report (March 2011). A bespoke version for ConstructionSkills has been included in Appendix 2.

Employees

To what extent do employees use the training they have received through these qualifications?

This research has shown that employees are aware of the extent to which they use skills learned during the acquisition of qualifications and that they are also aware of the deficiencies in the qualifications (eg estimating skills, commercial awareness, etc).

As can be seen by the results, employees may have a more optimistic view of the value of their qualifications than their employers but they nevertheless possess a reliable and fairly accurate view

of the qualifications' strengths and weaknesses. Where they perhaps do not have the full picture concerns skills and aptitudes - mainly of the employability type - that employers rate highly but that were not always part of their training.

What skills gaps do young people have when leaving training?

Employers and employees agree that all qualifications have gaps with respect to specific job-related skills and especially to the capability of their tutors and (for degree holders) the nature of the technical equipment available to them during training.

They also agree on the need for more commercial awareness, customer handling skills, IT skills (for degree holders), problem solving skills and numeracy and literacy skills.

Employers also point to what they see as the need for a more appropriate work-ethic among other softer characteristics.

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Appendix 1: Employability Skills²⁷

CBI Communication & Literacy; Application of Numeracy; Application of IT

Asset Skills Communications; Use Numbers; Manage Information; Be Responsible

Leitch 2006 Communication; Literacy; Numeracy;

FutureSkills Scotland 2005 Client Communications Skills; Literacy; Numeracy;

DfES 2002 Communication; Numeracy; IT;

DfES 2003 Literacy; Numeracy; Basic ICT Skills

DfEE QCA 1999 Communications; Application of Numbers; IT

Deloitte 2008 Effective Communication; Personal presentation skills; Punctuality and attendance; Dependability

IoD 2007 Basic Oral Communication Skills; Basic Literacy Skills; Numeracy Skills; Reliability; Honesty; Integrity; Punctuality

C&L 1998) Communication; IT

E&Y 1998 Communicating; Sharing & Leveraging Knowledge

21st C Learning (US) Communications & Collaboration; Media Literacy; Information Literacy

Canada 2000+ Communications; Use Numbers; Manage Information; Be Responsible

Canada (ref ACER 2001) Communication Skills; Use Numbers; Understand & Solve Problems using Maths; Use Technology; Manage Information; Responsibility Skills

UK NCVQ (ref ACER 2001) Communication; Numeracy; Application of Numbers; IT

Australia, Mayer (ref ACER 2001) Communicating Ideas & Info; Using Mathematical Ideas & Technologies; Using Technology/Collecting Analysis

US Scans (ref ACER 2001) Systems/Info/Technology

Hawkins 1999 Oral Communication; Numeracy;IT/Computer Literacy

Dearing HE 1997 Communications; Numeracy; IT;

²⁷ derived from UKCES *The Employability Challenge*, 2009

Career One Stop (no date) Communication; Listening & Speaking; Reading; Writing; Mathematics; Working with Science; Tools, & Technology; Basic Computer Skills; Dependability; Reliability

Additional Skills

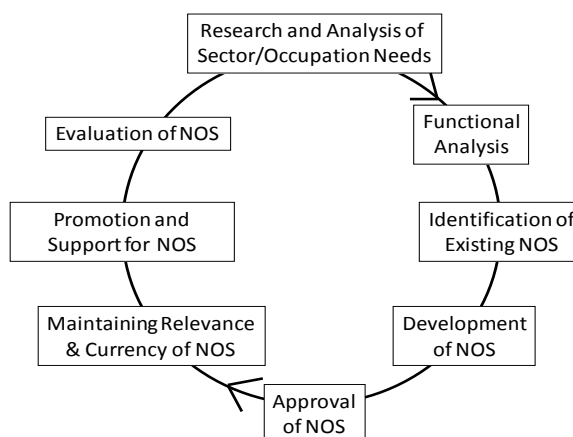
- Positive Attitude;
- Self-Management;
- Problem Solving;
- Team Working;
- Business/Customer Awareness;
- Be Adaptable;
- Learn Continuously;
- Work Safely;
- Customer Care;
- Participate in Projects/Tasks;
- Learning.

Appendix 2: Impact Assessment Framework for measuring impact and uses of NOS

Development Note

A requirement from the UK Commission for Employment and Skills (UKCES) that Sector Skills Councils (SSCs) gather information on the National Occupational Standards (NOS) in their sector stated SSCs should investigate: who is using the NOS, and what they are using them for; record feedback from users of NOS and measure the impact of NOS on skills development and business outcomes in their sector footprint.

The **National Occupational Standards (NOS) Quality Criteria** produced in March 2010 take a whole system approach as outlined below, in order to help ensure that the right NOS meet the needs of sectors, are used effectively, and developed in a consistent manner. The final stage of this process requires robust and regular evaluation of NOS.



A Whole-System Approach to NOS

In October 2010 the UK Commission for Employment and Skills (UKCES) commissioned Pye Tait Consulting to carry out an evaluation of National Occupational Standards (NOS) with a dual purpose of a) evaluating the effectiveness of NOS in responding to the needs of employers and making links between the world of work and the world of learning, and b) developing an evaluation framework for use by Sector Skills Councils (SSCs) and Standards Setting Organisations (SSOs) to gather and assess, on an on-going basis, the uses, benefits and impacts of NOS across sectors and UK nations.

The development process consisted ,in brief, of:

- **Primary research** incorporating over 750 interviews with a wide range of stakeholders, spanning all sector footprints across the four home nations, and including SSCs and SSOs, Awarding Organisations, Trade Unions, Trade Associations, Professional and Public Bodies, training providers and National Skills Academies, and employers,
- **Secondary research** comprising a detailed literature review to set the context for the work and provide insight into current approaches to development, as well as the uses and impact of NOS already recorded.

The Impact Assessment Frameworks that Pye Tait has developed for ConstructionSkills build upon the evaluation framework developed for the UK Commission which they have recommended for use across the whole SSC network.

The Frameworks contain recommendations in relation to suggested methods and outcomes which are informed by the findings of Pye Tait’s research into work readiness and also other, relevant project work carried out by Pye Tait. Other projects include extensive desk research carried out to identify employer needs and the suitability of existing NOS to develop a draft functional map, as well as studies concentrating on construction industry related skills and qualifications.

Within the frameworks there are recommendations based upon skills suggested by ConstructionSkills; however supplementary skills along with additional and amended meaningful indicators, measures appropriate and specific to the construction sector should also be considered.

A bespoke framework for ConstructionSkills is attached.



ConstructionSkills NOS Impact Assessment Framework

ConstructionSkills NOS Impact Assessment Framework

Purpose of the ConstructionSkills NOS Impact Assessment Framework

The impact assessment frameworks should be used to:

- Gather data for analysis in relation to the depth of uses of NOS and breadth of market penetration
- Evaluate the effectiveness of the NOS in addressing the identified needs of the sector/occupation
- Measure impact of NOS on skills development and business outcomes
- Identify changes and developments that can be made for continuous improvement, for example the development of strategies to promote NOS, design of NOS-based products and services and/or ways in which the development process for NOS could be enhanced

The process of the NOS skills impact assessment should be used to generate **consistent, comparable and robust data**. The process should take place on an annual basis with a recommended sample size of 10% of the sector footprint to enable on-going use of the information to underpin changes and improvements in relation to the development, promotion and use of NOS.

ConstructionSkills NOS Impact Assessment Framework

Guidance on using the Impact Assessment framework

Two core frameworks have been developed to enable a two-stage approach to evaluation. It is intended that ConstructionSkills will adapt and build upon these to develop processes for gathering feedback on NOS and NOS-based products and services. A further framework has been developed as a means of collating key data for measuring impact and changes over time. Presented within the first framework are the questions we believe to be **core** in establishing the depth and breadth of NOS implementation and, in the second framework, core suggested measures and indicators.

Framework	Guidance
<p>1. Depth and Breadth of NOS Implementation</p> <p><i>Identifying the range of uses of NOS in a particular sector overall</i></p>	<ul style="list-style-type: none"> ❖ This first stage is to generate headline data to indicate the extent and purpose of NOS usage ❖ This information should guide the development of impact and outcome indicators to be tested with the second framework ❖ Reference to NOS should be relevant to their practical application in the construction sector. It may be necessary to refer to relevant NOS based products/services or key competences as opposed to the NOS themselves to ensure employers understand the purpose of the evaluation
<p>2. Impact of NOS</p> <p><i>Specific, measurable indicators quantifying the benefits and impacts of using NOS</i></p>	<ul style="list-style-type: none"> ❖ Meaningful indicators should be specific and measurable, to assess either direct or indirect impact through the use of NOS ❖ They must be accompanied by clearly defined measures, set to quantify the benefits of using NOS and the impact on costs for end users (e.g. knowledge gained and how this was utilised, whether this be individual skills acquired or changes to organisation practices) ❖ Priority areas should be used to inform the indicators, which should fit within the headings of ‘Business Outcomes’ and ‘Skills Development’ ❖ Indicators should be used to monitor changes and impact on a longitudinal basis

ConstructionSkills NOS Impact Assessment Framework

ConstructionSkills NOS Impact Assessment Framework 1 - Depth and breadth of Implementation

Objective	Core Evaluation Questions	Data
Evaluate the depth of use of NOS	<ol style="list-style-type: none"> 1. What % of organisations in your sector are using NOS? 2. What % of organisations in your sector are using NOS-based products and services? 3. How has the awareness of NOS in your sector changed? 4. What % of organisations in your sector are using NOS-derived products and services? 	Feedback should span: <ul style="list-style-type: none"> - All sub-sectors within the sector footprint - Small, medium and large organisations - England, Scotland, Northern Ireland and Wales
Evaluate the breadth of market penetration	<ol style="list-style-type: none"> 1. Which employees are using NOS (job roles)? 2. What % of employees within the organisations are using NOS? 3. For what purpose(s) are NOS being used? 	<ul style="list-style-type: none"> - As above <p><i>Monitor whether data shows an increase, decrease or no changes in depth and breadth of penetration</i></p>

ConstructionSkills NOS Impact Assessment Framework

	5. What %of NOS owned are used by other sectors/what % of units imported? (<i>identify most widely used NOS</i>)	
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ConstructionSkills NOS Impact Assessment Framework 2 - Impact Assessment

Theme and <u>suggested</u> indicators	Use(s) of NOS	<u>Suggested</u> measures
BUSINESS OUTCOMES		
<i>Improvements to recruitment and selection processes</i>	<i>To design or update Job Descriptions</i> <i>To develop or update selection procedures</i> <i>To design or update an interview process</i>	<i>Reduction in monies spent during the recruitment process</i> <i>Reduction in time taken to fill posts</i>
<i>Improvements to Training Needs Analyses (TNA)</i>	<i>To design or update a TNA</i> <i>To identify training needs</i>	<i>Reduction in time spent delivering internal training</i> <i>Reduction in monies spent on training</i>

ConstructionSkills NOS Impact Assessment Framework

Theme and <u>suggested</u> indicators	Use(s) of NOS	<u>Suggested</u> measures
BUSINESS OUTCOMES		
<i>Increased productivity</i>	<i>To introduce new working practices and processes</i> <i>To refine existing working practices and processes</i>	<i>Reduction in employee time taken to carry out core tasks</i>
<i>Improvements to Quality Assurance</i>	<i>To develop or update Quality Assurance procedures</i>	<i>Introduction of Quality Assurance audit procedures</i> <i>Training in Quality Assurance processes provided within the organisation</i>
<i>Improvements to training programmes</i>	<i>To identify training needs</i> <i>To identify CPD requirements</i>	<i>Cost effective training that delivers a measurable return on investment</i>
<i>Improvements to performance management processes</i>	<i>To identify organisation-specific competences</i> <i>To identify core competences for individuals</i> <i>To identify pathways for career and professional development</i>	<i>Development and use of competence framework</i>

ConstructionSkills NOS Impact Assessment Framework

Theme and <u>suggested</u> indicators	Use(s) of NOS	<u>Suggested</u> measures
SKILLS DEVELOPMENT OUTCOMES		
<i>Enhanced skills of the workforce through take up of qualifications</i>	<i>To develop qualifications</i>	<i>Number of qualifications achieved within organisation and whether this increases over time</i> <i>Level of qualifications achieved within organisation and whether this increases over time</i>
<i>Clearly defined succession planning</i>	<i>To identify skills gaps</i> <i>To identify training needs</i>	<i>Introduction of training schemes intended to support succession plans</i>
<i>Increased knowledge of how to work productively in the workplace</i>	<i>To develop sequence workflow planning procedures</i>	<i>Maintain work sequence records detailing usage of time and resources</i>

ConstructionSkills NOS Impact Assessment Framework

Theme and <u>suggested</u> indicators	Use(s) of NOS	<u>Suggested</u> measures
SKILLS DEVELOPMENT OUTCOMES		
<i>Increased understanding of health, safety and welfare requirements</i>	<i>To develop training outlining procedures for complying to health, safety and welfare legislation that applies in the work area</i>	<i>Number of training schemes which have been introduced intended to support health, safety and welfare legislation</i>
<i>Increased ability to communicate with others</i>	<i>To develop training outlining methods of communication used in the workplace, outlining the information needs of the customer, line manager, own occupation and allied trades</i>	<i>Introduction of workflow logs and whether these show increased levels of efficiency in the workplace</i>
<i>Increased knowledge of how to move handle and store resources in the workplace</i>	<i>To develop training outlining procedures and workplace resources for operating lifting equipment and</i>	<i>Introduction of training intended to increase awareness and number of trainees inducted</i>
<i>Increased levels of competency in literacy</i>	<i>To develop training relating to practical work-related and site specific activities</i>	<i>Assessment through practical application of skills Feedback from employers</i>
<i>Increased levels of competence in numeracy</i>	<i>To develop training relating to practical work-related and site specific activities</i>	<i>Assessment through practical application of skills Feedback from employers</i>

ConstructionSkills NOS Impact Assessment Framework

Theme and <u>suggested</u> indicators	Use(s) of NOS	<u>Suggested</u> measures
SKILLS DEVELOPMENT OUTCOMES		
<i>Increased ability to interpret information from drawings, specifications, and manufacturers' instructions</i>	<i>To outline training to illustrate methods of interpreting information and applying the information</i>	<i>Assessment through practical application and questioning based activities</i> <i>Feedback from employers</i>
<i>Increased skills of estimating and costing</i>	<i>To develop practical based training</i>	<i>Number of training schemes which have been developed to deliver estimating and costing skills</i>
<i>Improved time management and workload planning skills</i>	<i>To develop induction training outlining expectations and requirements</i>	<i>Assessment through practical application of skills</i> <i>Delivery of induction outlines</i>
<i>Improved IT capability of individuals</i>	<i>To develop training</i>	<i>Assessment through ongoing practical application of skills</i> <i>Number of training schemes which have been developed to enhance and improve IT capability</i>