

*Skills for Science
Based Industries*

Qualifications Insight 2010

Foreword

Qualifications Insight is the first of a series of annual reports from Cogent, based on the feedback from employers and providers on the content and design of qualifications, apprenticeship frameworks and national occupational standards used by the science-based industries.

In the recently published strategy document Skills for Sustainable Growth (from the Department of Business Innovation and Skills), the Government has emphasised the role of Sector Skills Councils as a means for employers to lead and influence change in the skills environment.

Qualifications Insight, gives employers and providers the opportunity to be part of the process of development and updating of Qualifications, National Occupational Standards and Apprenticeship Frameworks.

The report is split into two sections, employers' insight and providers' insight, with both sections reporting back on views from across the sector, looking at content, usage, gaps, non-accredited provision and areas of interaction with Cogent.

Cogent and its partners in the National Skills Academies for the Nuclear and the Process Industries are already incorporating this valuable feedback to ensure our qualifications, standards and apprenticeship frameworks are fit for purpose for the sector.

I would like to thank all those employers and providers who participated in the survey and hope that you will be encouraged to help us with future development by spending 30 minutes taking part in next year's Qualifications Insight survey in March/April.



A handwritten signature in black ink, appearing to read 'James Murdock'.

James Murdock
Education and Qualifications Director



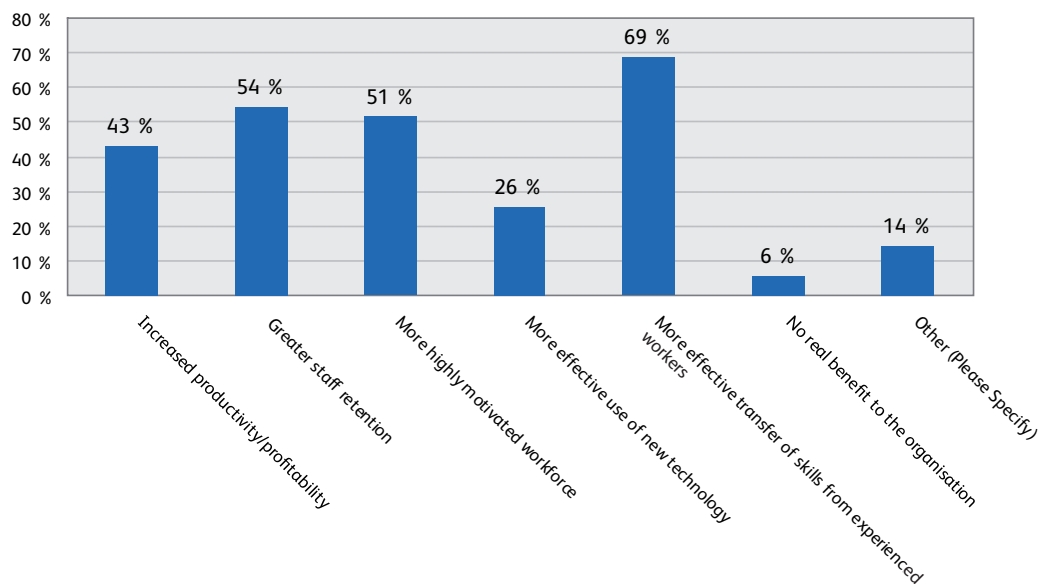
Section A: Employers' Insight

1.0 Apprenticeships

63% of employers reported employing apprentices, while a smaller proportion of employers (8%) reported that they have not yet employed apprentices, but would like to in the future. Of those employers that do not employ apprentices the main reasons reported were; a general lack of recruitment or training taking place with the company or at their site; and that apprenticeship frameworks do not deliver the skills required by employees.

Employers reported a number of benefits of employing apprentices. The main benefits were; the effective transfer of skills from experienced workers to new workers; greater staff retention; a more highly motivated workforce; and increased productivity and profitability.

Figure 1: Benefits of Employing Apprentices



The majority of employers (80%) were satisfied or very satisfied with the content of the apprenticeship frameworks they use. 77% of employers were satisfied or very satisfied with the quality of local Apprenticeship provision, and 73% of employers were satisfied or very satisfied with the geographical location of Apprenticeship provision.

Employers were asked to report on whether there are any gaps in the apprenticeship frameworks they use. 80% of employers reported no gaps in apprenticeship frameworks, and of the 20% of employers that did report gaps in apprenticeship frameworks, the main reason was that current frameworks are not specific enough to their industry/company.

The need for adult and higher level apprenticeships was also investigated. 67% of employers reported that they may have a need for Adult Apprenticeships in the future, while 55% of employers reported that they may have a need for Higher Level Apprenticeships in the future.



Section A: Employers' Insight (continued)

2.0 Vocational Qualifications

The majority of employers (63 %) use vocational qualifications to develop their staff, while a smaller proportion of employers use vocational qualifications for staff development or recruitment processes (16 %); or as part of an apprenticeship (13 %). Of those employers that do not use vocational qualifications (8 %), the main reasons reported were; a general lack of recruitment or training taking place within the company or site; poor quality provision available; and qualifications do not deliver the skills employees are required to possess.

Employers from each of the Cogent sectors were asked if their employees undertake Scottish/National Vocational Qualifications (S/NVQs) and/or knowledge-based qualifications.

The responses across the sector are as follows:

Chemicals Industry:

- 89 % of employers reported that their employees undertake S/NVQs
- 56 % of employers reported that their employees undertake knowledge-based qualifications

Pharmaceuticals Industry:

- 100 % of employers reported that their employees undertake S/NVQs
- 0 % of employers reported that their employees undertake knowledge-based qualifications

Nuclear Industry:

- 86 % of employers reported that their employees undertake S/NVQs
- 26 % of employers reported that their employees undertake knowledge-based qualifications

Petroleum Industry:

- 100 % of employers reported that their employees undertake S/NVQs
- 0 % of employers reported that their employees undertake knowledge-based qualifications

Polymers Industry:

- 88 % of employers reported that their employees undertake S/NVQs
- 25 % of employers reported that their employees undertake knowledge-based qualifications

Employers reported that the main benefits of vocational qualifications for the development of their employees were; more effective transfer of skills from experienced workers to new workers; a more highly motivated workforce; and increased productivity and profitability.

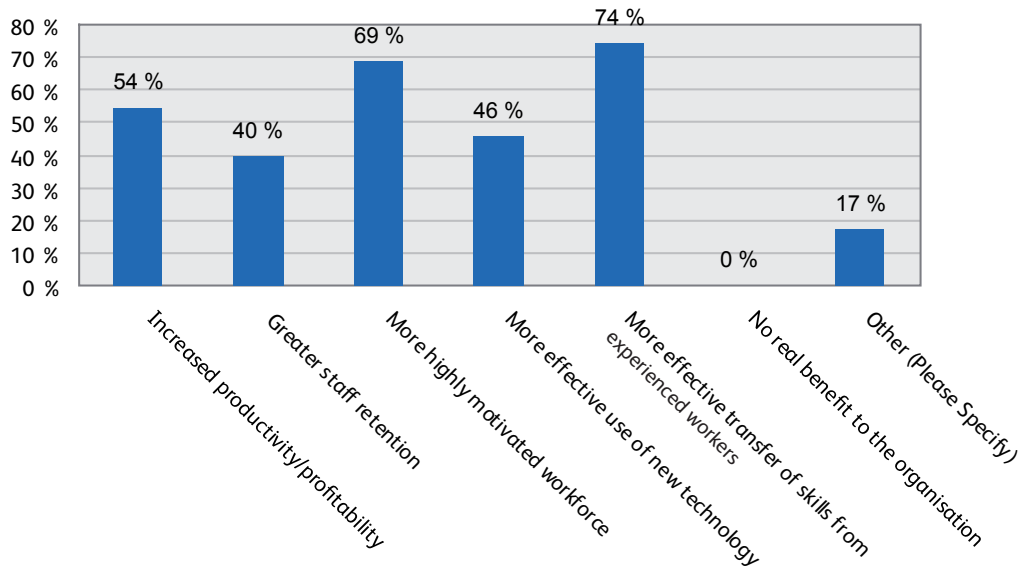
The majority of employers (79 %) were satisfied or very satisfied with the content of the qualifications they use. Similarly, 71 % of employers were satisfied or very satisfied with the quality of local qualifications provision, and 65 % of employers were satisfied or very satisfied with the geographical location of qualifications provision.

A large proportion of employers (87 %) reported no gaps in vocational qualifications provision. Of the small proportion that did report gaps, the main reasons included; current qualifications are not specific enough for their industry or company; new job roles and ways of working have been developed; and new technology and the application of new technology does not lend itself to the current qualifications.



Section A: Employers' Insight (continued)

Figure 2: Benefits of Using Vocational Qualifications



3.0 National Occupational Standards

19% of employers reported using National Occupational Standards (NOS) to support their internal training and development, with 8% of employers using NOS to help with job descriptions, appraisals, performance management etc. 49% of employers reported that they do not use NOS, but have heard of them and 5% of employers reported that they do not use NOS and have not heard of them.

Of those employers that do not use NOS, the main reasons reported were; a lack of awareness about NOS and how the standards can be used; and employers already having existing systems in place that meet their needs.

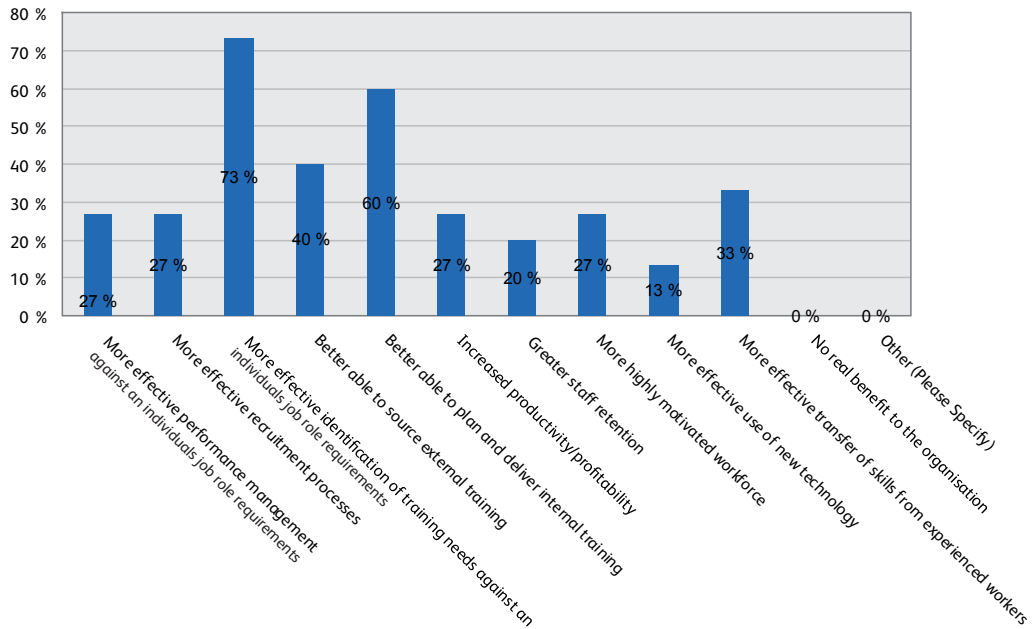
Employers reported that the main benefits of using NOS were; more effective identification of training needs against an individual's job role requirements; as well as better able to plan and deliver internal training to meet the organisation's need; and better able to source external training to meet the organisation's needs.

Employers were asked to comment on the content of NOS. 67% of employers agreed/strongly agreed with the statement "The National Occupational Standards need additional units to be developed to cover new job functions", with 47% of employers agreeing/strongly agreeing with the statement "The National Occupational Standards I use need reviewing".



Section A: Employers' Insight (continued)

Figure 3: Benefits of Using National Occupational Standards



The majority of employers (83%) reported that there are no roles or areas of work that are not covered by NOS. Of those that did report gaps, the main reason for this was that NOS are not specific enough for their industry or company.

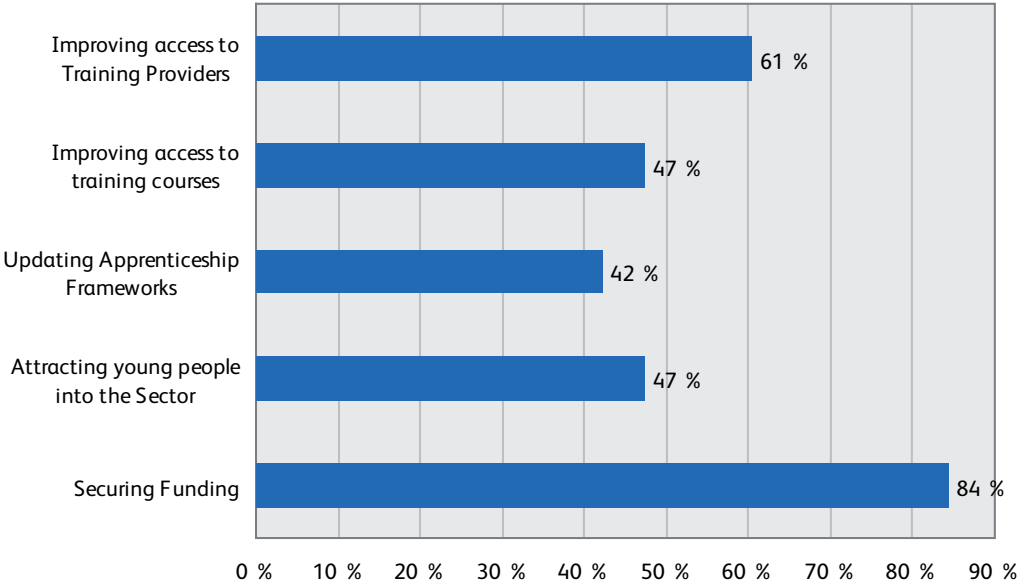


Section A: Employers' Insight (continued)

4.0 How can Cogent Help you?

Employers were asked to state how Cogent can help them. The top five answers are as follows:

Figure 4: How can Cogent help you?



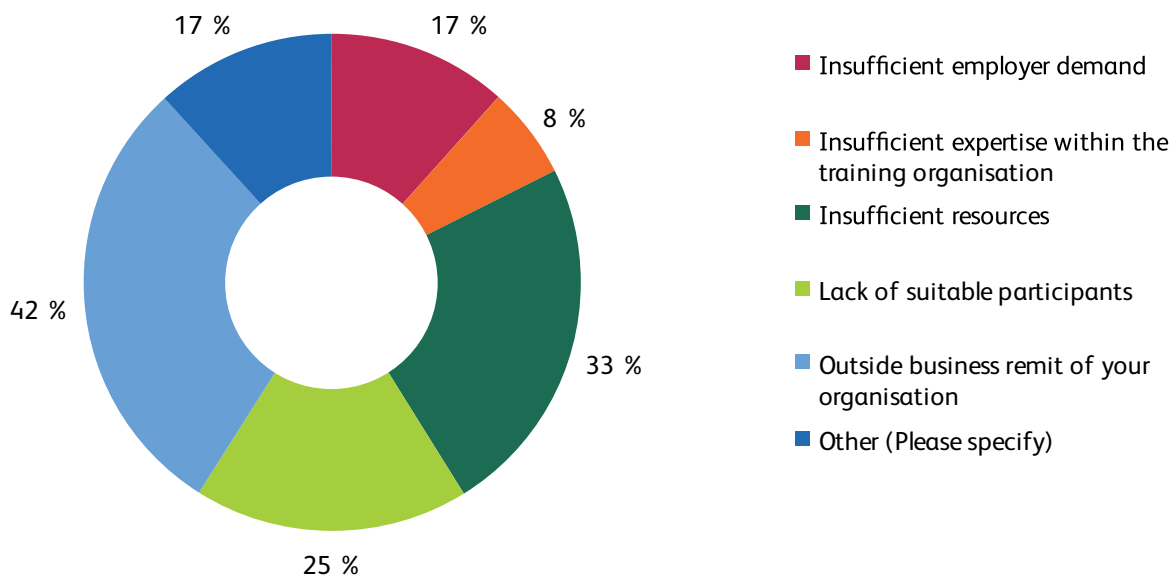
Section B: Training Providers' Insight

1.0 Apprenticeships

67% of training providers offer apprenticeship frameworks, while 3% of providers have offered apprenticeships in the past but do not currently do so. 15% of training providers reported that they have not offered apprenticeship frameworks in the past, but would like to in the future, whilst 15% of training providers have never offered apprenticeship frameworks and have no plans to in the future.

The main factors influencing providers decision not to offer apprenticeships include; they are outside the business remit of the organization; there are insufficient resources; and there is a lack of suitable participants.

Figure 5: Factors Influencing Training Providers decisions not to offer Apprenticeships



The apprenticeship frameworks offered by training providers for each of the industries are:

Chemicals Industry:

- Advanced Apprenticeship for Laboratory Technicians in Manufacturing, Processes and Education
- Advanced Apprenticeship in Process Technology
- Apprenticeship in Process Technology

Pharmaceuticals Industry:

- Advanced Apprenticeship for Laboratory Technicians in Manufacturing, Processes and Education
- Advanced Apprenticeship in Process Technology

Nuclear Industry:

- Advanced Apprenticeship for Laboratory Technicians in Manufacturing, Processes and Education
- Apprenticeship for Laboratory Technicians in Manufacturing, Processes and Education

Petroleum Industry:

- Advanced Apprenticeship for Laboratory Technicians in Manufacturing, Processes and Education
- Advanced Apprenticeship in Process Technology
- Apprenticeship in Process Technology



Section B: Training Providers' Insight (continued)

Polymer Industry:

- Apprenticeship in Polymer Processing/Signmaking
- Advanced Apprenticeship for Laboratory Technicians in Manufacturing, Processes and Education
- Advanced Apprenticeship in Polymer Processing and Related Operations

Signmaking Industry:

- Apprenticeship in Polymer Processing/Signmaking
- Advanced Apprenticeship in Signmaking

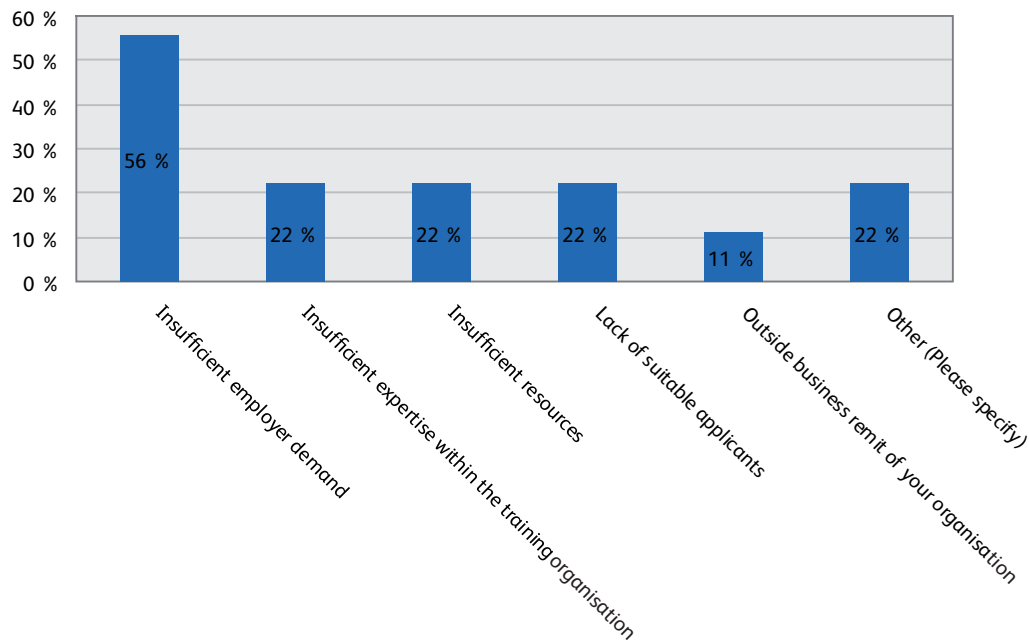
Oil and Gas Industry:

- Advanced Modern Apprenticeship in Oil and Gas Extraction

2.0 Vocational Qualifications

The majority of training providers (76%) offer vocational qualifications which Cogent is responsible for developing and maintaining. Of those that do not offer vocational qualifications (24%), the main reason given was insufficient employer demand.

Figure 6: Factors Influencing the decision not to offer Vocational Qualifications



Section B: Training Providers' Insight (continued)

Training providers were asked if they offer Scottish/National Vocational Qualifications (S/NVQs) and/or knowledge-based qualifications relevant to the Cogent footprint. The responses by industry are as follows:

Chemicals Industry:

- 81 % of training providers offer S/NVQs
- 19 % of training providers offer Knowledge-based Qualifications

The most popular qualifications offered are:

- S/NVQ in Laboratory and Associated Technical Activities (Level 2 and 3)
- S/NVQ in Chemical, Pharmaceutical and Petro-Chemical Operations (Level 3)
- City & Guilds Certificate in Process Technology (Level 2 and 3)
- PAAVQSET Certificate in Laboratory Technical Skills (Level 3)
- SQA Higher National Certificate in Chemical Engineering

Pharmaceuticals Industry:

- 78 % of training providers offer S/NVQs
- 11 % of training providers offer Knowledge-based Qualifications

The most popular qualifications offered are:

- S/NVQ in Chemical, Pharmaceutical and Petro-Chemical Operations (Level 2 and 3)
- S/NVQ in Laboratory and Associated Technical Activities (Level 3)
- Edexcel BTEC First Diploma in Engineering (Level 2)
- City and Guilds Certificate in Process Technology (Level 2 and 3)

Nuclear Industry:

- 50 % of training providers offer S/NVQs
- 0 % of training providers offer Knowledge-based Qualifications

The most popular qualifications offered are:

- S/NVQ in Chemical, Pharmaceutical and Petro-Chemical Operations (Level 2 and 3)
- NVQ in Nuclear Decommissioning (Level 3)

Petroleum Industry:

- 67 % of training providers offer S/NVQs
- 50 % of training providers offer Knowledge-based Qualifications

The most popular qualifications offered are:

- S/NVQ in Chemical, Pharmaceutical and Petro-Chemical Operations (Level 2 and 3)
- S/NVQ in Bulk Liquid Warehousing (Level 2)
- S/NVQ in Process Engineering Maintenance (Level 3)
- Edexcel BTEC First Diploma in Engineering (Level 2)
- City and Guilds Certificate in Process Technology (Level 2 and 3)
- Edexcel BTEC National Certificate/Diploma in Engineering (Level 3)
- Edexcel BTEC National Certificate/Diploma in Operations and Maintenance Engineering



Section B: Training Providers' Insight (continued)

Polymer Industry:

- 100 % of training providers offer S/NVQs
- 33 % of training providers offer Knowledge-based Qualifications

The most popular qualifications offered are:

- S/NVQ in Polymer Processing and Related Operations (Level 1, 2 and 3)
- Edexcel BTEC National Certificate/Diploma in Polymer Processing and Materials Technology
- Edexcel BTEC National Certificate/Diploma in Manufacturing Engineering
- Edexcel BTEC National Certificate/Diploma in Operations and Maintenance Engineering

Signmaking Industry:

- 67 % of training providers offer S/NVQs
- 0 % of training providers offer Knowledge-based Qualifications

The most popular qualifications offered are:

- S/NVQ in Signmaking (Level 2 and 3)

Oil and Gas Industry:

- 88 % of training providers offer S/NVQs
- 38 % of training providers offer Knowledge-based Qualifications

The most popular qualifications offered are:

- S/NVQ in Process Engineering Maintenance (Level 2 and 3)
- S/NVQ in Processing Operations: Hydrocarbons (Level 3)
- SQA NC in Multidisciplinary Engineering
- SQA Higher National Certificate in Engineering: Electrical and Mechanical
- SQA Higher National Certificate in Process Control
- SQA Higher National Certificate in Process Operations

Training providers reported that the main benefits of vocational qualifications for employers are; more effective transfer of skills from experienced workers to new workers; a more highly motivated workforce; and increased productivity and profitability.

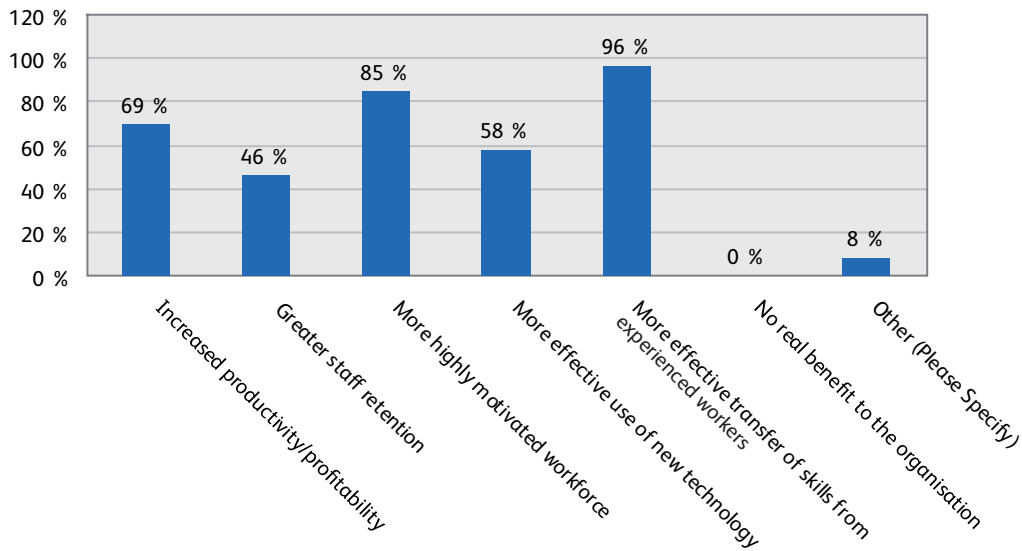
The majority of training providers (64 %) agreed or strongly agreed with the statement “Need to review or amend vocational qualifications”.

83 % of training providers stated that there are no gaps in provision where additional vocational qualifications would be beneficial. Of those providers that did highlight gaps, their main reasons were; lack of qualified personnel at the appropriate level; current qualifications are not specific enough to the industry; and new technology and application of technology.



Section B: Training Providers' Insight (continued)

Figure 7: Benefits of Vocational Qualifications for Employers, as reported by Training Providers



3.0 Non-Accredited Training Provision

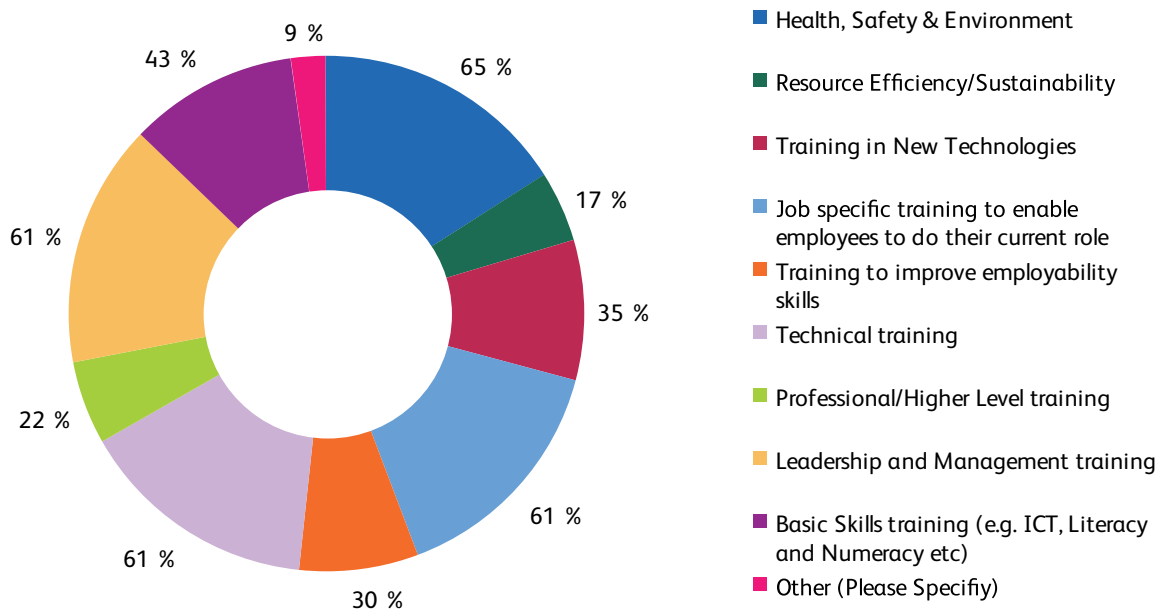
The majority of training providers (76 %) offer vocational qualifications which Cogent is responsible for developing and maintaining. Of those that do not offer vocational qualifications (24 %), the main reason given was insufficient employer demand.

1. 59 % of training providers offer non-accredited training provision relevant to Cogent industries. The top-5 areas of non-accredited training currently offered by training providers are:
2. Health, Safety and Environment
3. Job specific training to enable employees to do their current role
4. Technical Training
5. Leadership and Management Training
6. Basic Skills Training



Section B: Training Providers' Insight (continued)

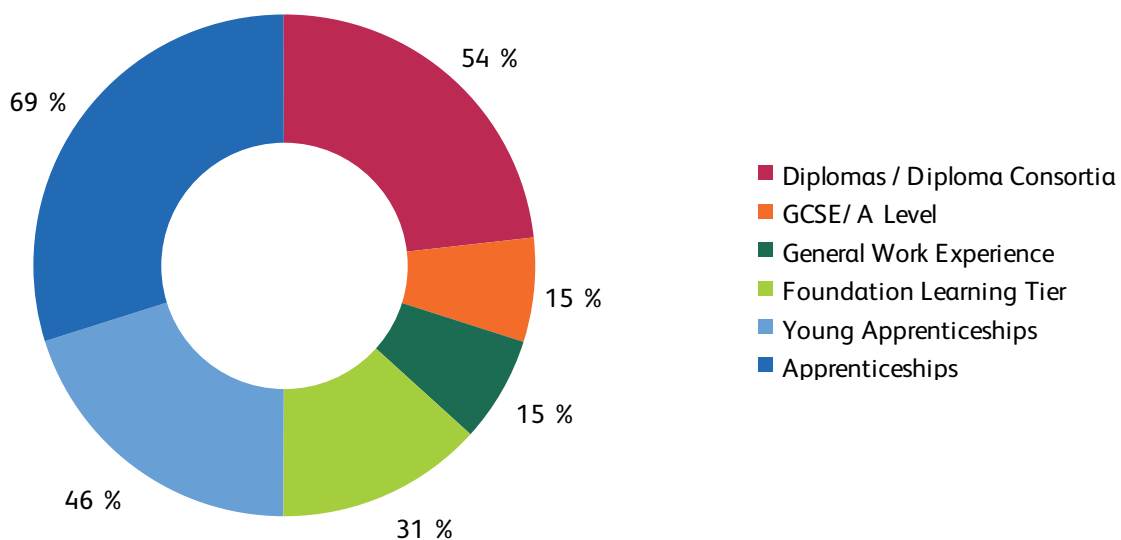
Figure 8: Non-Accredited Training Provision offered by Training Providers



4.0 14 to 19 Curriculum

46% of training providers are currently involved with 14 – 19 curriculum, particularly Apprenticeships; Diplomas; and Young Apprenticeships.

Figure 9: Involvement in 14 to 19 Curriculum



Section B: Training Providers' Insight (continued)

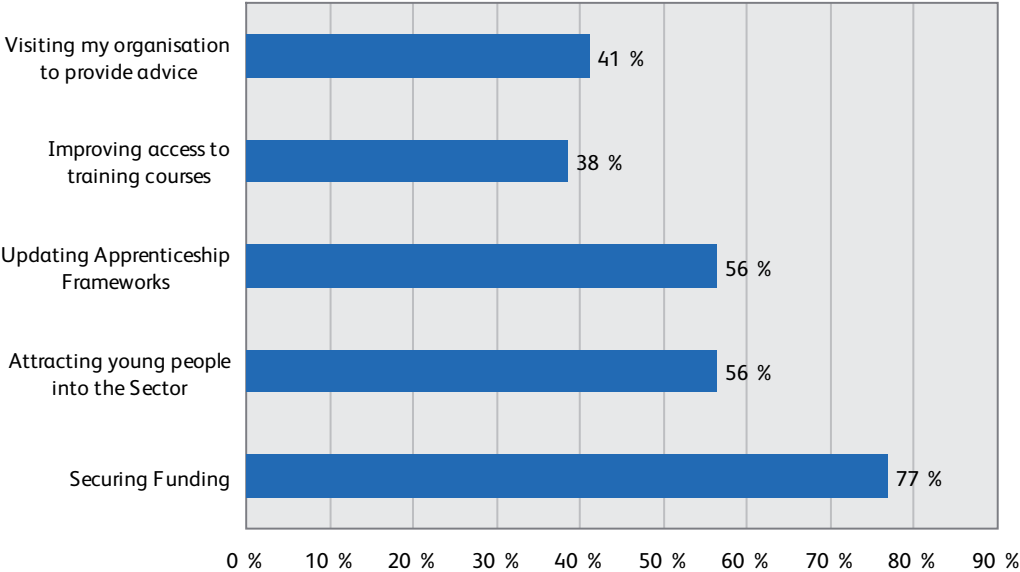
5.0 Foundation Degrees

13% of training providers are currently offering Foundation Degree provision relevant to the Cogent sectors.

6.0 How can Cogent help?

Training providers were asked to state how Cogent can help them. The top five answers are as follows:

Figure 10: How can Cogent help you?



Section C: Outcomes and Recommendations

Cogent will use employer and provider feedback to make changes and to redevelop the qualifications, apprenticeships and national occupational standards. Where there is a specific gap or need identified Cogent, in partnership with the National Skills Academies, will endeavour to investigate this further in 2011 by contacting those employers and training providers that took part in the survey. This is a 2-way process, and employers and training providers are invited to contact us with any specific requirements regarding qualifications, apprenticeships and National Occupational Standards.

Cogent will also use the information to influence government, funding bodies, awarding bodies, training providers, National Skills Academies and other stakeholders to ensure the right skills provision exists in the right locations.

Looking ahead, and due to the success of the 2010 Qualifications Insight, Cogent aims to deliver a similar online survey in Spring 2011. Questionnaire development will commence in December 2010, and should you wish to influence the question development please contact julie.plumbley@kogent-ssc.com



Section D: Survey Methodology and Respondent Profile

4.0 Methodology

This report is based on a survey called the Qualifications Insight. Qualifications Insight is an online survey and is aimed at employers and training providers within the Cogent industries. It gathers feedback on the key qualifications, apprenticeships and standards which Cogent is responsible for developing and maintaining.

Employers and training providers were invited to take part in the survey during May and June 2010.

4.1 Piloting Exercise

The 2010 Qualifications Insight survey was the first of its kind, and was piloted during May/June 2010. The 2010 survey will undergo a thorough evaluation to ensure the 2011 survey continues to successfully gather robust Labour Market Intelligence on qualifications, apprenticeships and standards.

4.1 The Survey Sample

A database of employers and training providers were invited to take part in the Qualifications Insight survey. The database was developed following research across the science-based industries, carried out by an organisation called Opening Doors.

a) Employers

Two hundred and fifty eight employers across the Cogent sector were invited to complete the online survey. Thirty eight employers completed the survey yielding a 15% response rate. A further thirteen employers started the survey but did not complete it. It is worth noting that there were no quotas set during the research phase of the project although the sample was monitored on a weekly basis.

The majority of employers that completed the survey were based in the North West (22%) and North East (19%). The largest proportion of employers were from the Chemicals (26%) and Polymers (24%) industries. 18% of employers who completed the survey stated that they are within the 'Other' sector category.¹

58% of employers that responded reported having 51 to 250 employees at their site, with the majority of employers (61%) having more than 250 employees employed across the company as a whole.

¹Other' sectors included: Cosmetics; Pharmaceuticals, Nuclear & Petro-Chemicals; Manufacturing; Storage; Film Manufacture (Chemicals & Polymers); Bio fuel/Animal Feed; Transport Logistics



Section D: Survey Methodology and Respondent Profile (continued)

Figure 11: Distribution of Respondents (Employers) across the UK

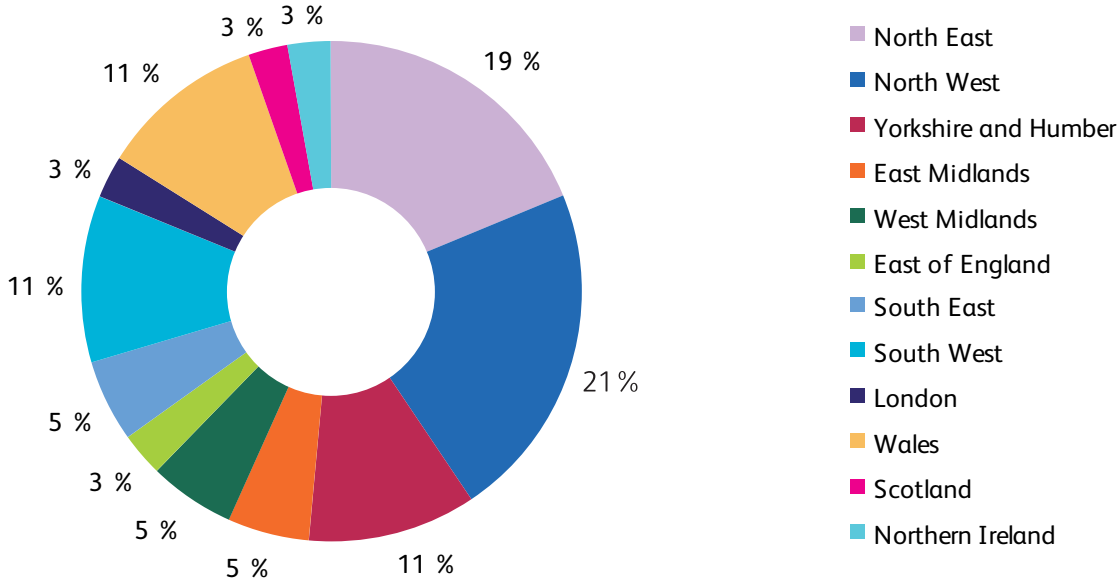
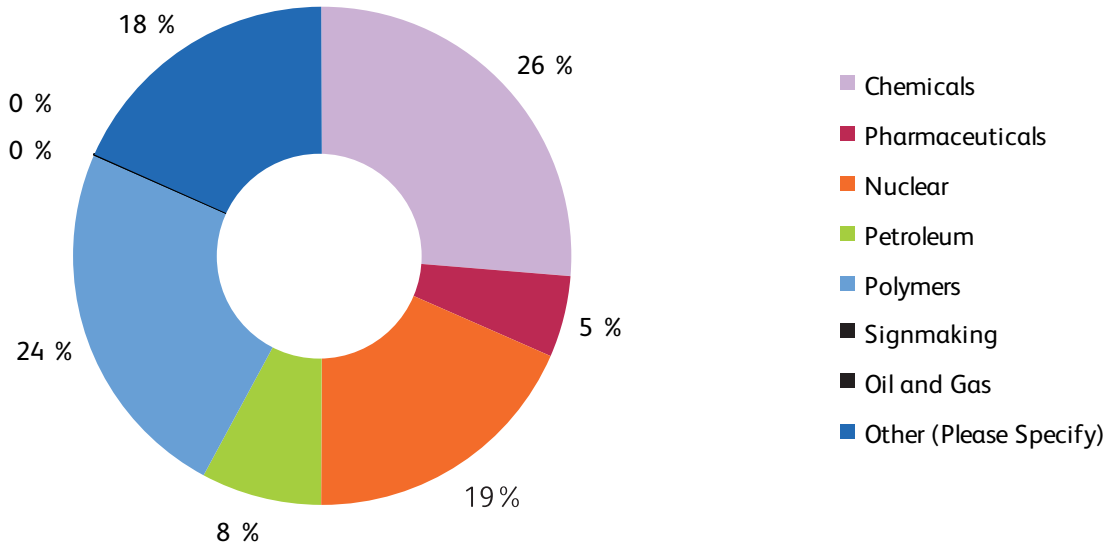
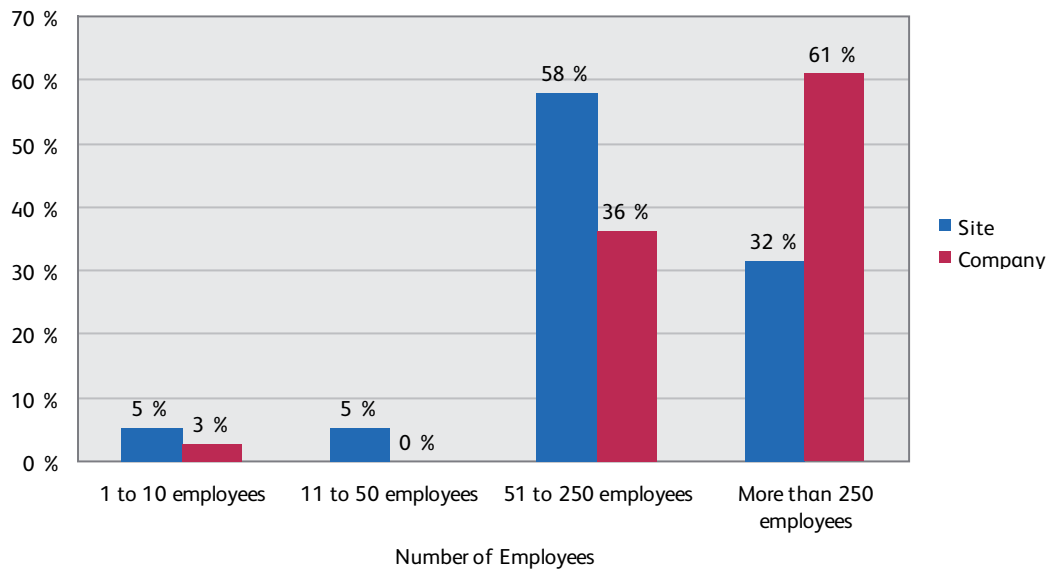


Figure 12: Distribution of Respondents (Employers) by Sector



Section D: Survey Methodology and Respondent Profile (continued)

Figure 13: Number of Employees reported by Site and Company

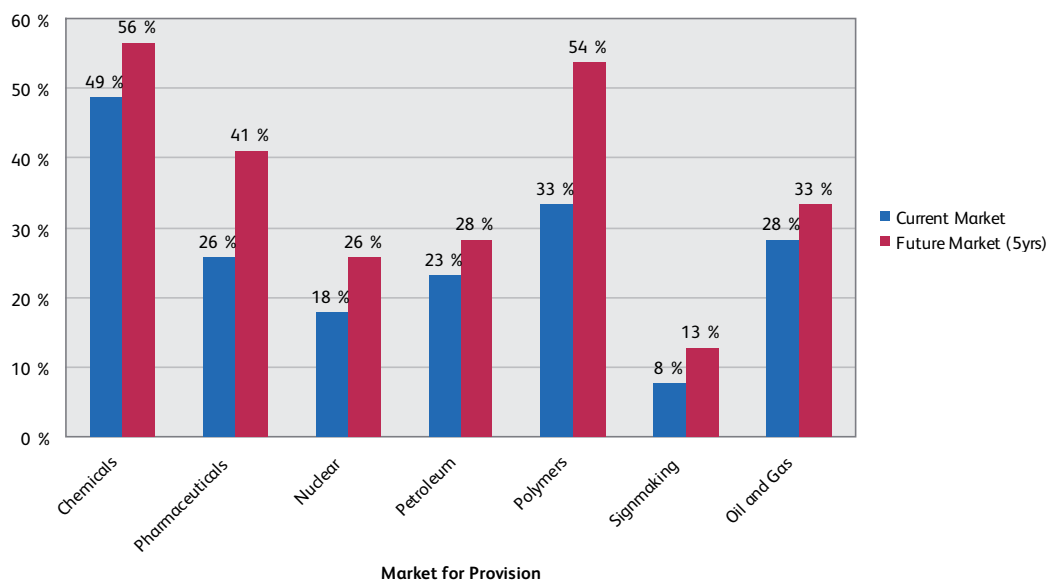


b) Training Providers

One hundred and sixty eight training providers were invited to complete the online survey. Thirty nine providers completed the survey yielding a 23% response rate. A further twenty three providers started the survey but did not complete it.

Training providers stated that their current main market for provision is the Chemicals (49%) and Polymers (33%) industries. Training providers also stated a significant increase in their provision across the science-based industries in the next 5 years, particularly in Polymers (21% increase) and Pharmaceuticals (15% increase).

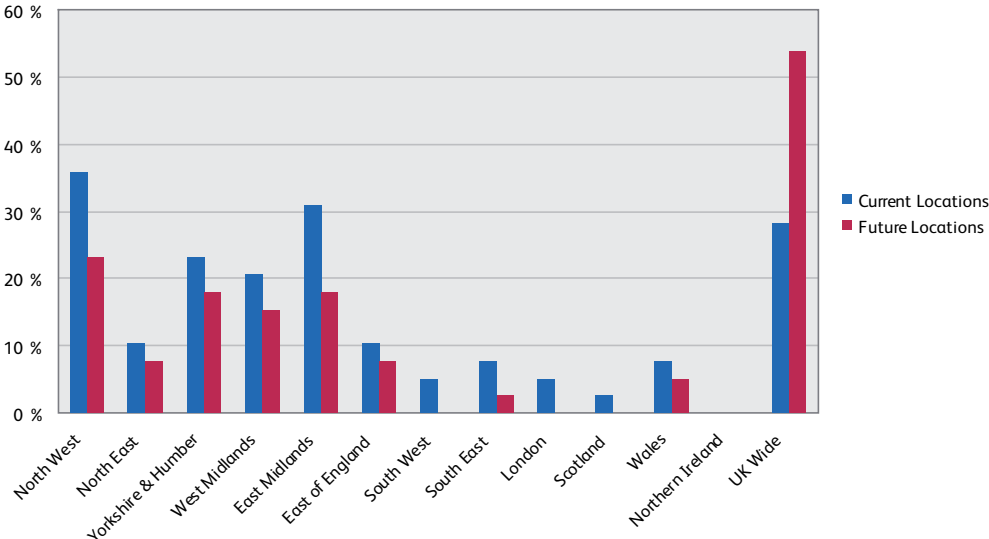
Figure 14: Current and Future Market Provision



Section D: Survey Methodology and Respondent Profile (continued)

The main locations that currently serve as the main market for provision are the North West (36%) and the East Midlands (31%). Training providers reported (54%) that in 5 years time there will be less focus on regional provision and more focus on delivering provision on a UK wide basis.

Figure 15: Geographical Location of Provision





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