This paper sets out a summary of the findings of the review of delivery models, activity levels and activity costs for the Heating and Ventilation frameworks.

**Background**

The review of activity costs is based on a standard methodology and modelling tools that are being applied consistently across all sectors in scope.

The approach is based on:

- Access to LSC data to inform the review
- Dialogue with the sector body on apprenticeship issues
- Interviews with effective providers (i.e. those providers with good or above average inspection grades and apprenticeship success rates) to establish activity levels
- An expert panel meeting to review data and evidence on activity levels
- Modelling of activity costs against provider data and panel advice
- Consultation with the sector on the panel advice and issues emerging
- Moderation of panel advice by an LSC project group

**LSC Data**

LSC data from 2004/05 ILR data used to inform the review were:

**Numbers in Learning**

<table>
<thead>
<tr>
<th></th>
<th>Starts (Monthly Average 2005)*</th>
<th>In Learning (July 2005)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>16 - 19</td>
<td>19+</td>
</tr>
<tr>
<td>Apprenticeship</td>
<td>64%</td>
<td>36%</td>
</tr>
<tr>
<td>Advanced</td>
<td>66%</td>
<td>34%</td>
</tr>
</tbody>
</table>

*Average taken from quarterly reports (January/April/July/October 2005)

Source: ILR 2004/2005 Period 12
Funding Rates for NVQs and Apprenticeships

Success Rates

<table>
<thead>
<tr>
<th></th>
<th>Framework</th>
<th>NVQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apprenticeship</td>
<td>38%</td>
<td>21%</td>
</tr>
<tr>
<td>Advanced</td>
<td>31%</td>
<td>15%</td>
</tr>
</tbody>
</table>

Source: ILR 2004/2005 Period 12

Average Length of Stay in Months

<table>
<thead>
<tr>
<th></th>
<th>Non completion</th>
<th>Framework</th>
<th>NVQ Only</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apprenticeship</td>
<td>12.9</td>
<td>23.3</td>
<td>26.6</td>
</tr>
<tr>
<td>Advanced</td>
<td>26.9</td>
<td>32.9</td>
<td>41.4</td>
</tr>
</tbody>
</table>

Source: ILR 2004/2005 Period 12 and LSC Data

Provider Interviews

A sample of effective providers was identified in discussion with Summit Skills.

These providers were interviewed in May 2006 through a series of visits to provider locations.

A completed survey form was shared with each provider to review and update. A summary of the activities and issues emerging was shared with the providers in the interview sample for comment and feedback.

Models of Delivery

The models of delivery identified through the sample of providers interviewed were:

- Group based underpinning knowledge and skills development with the hours in excess of the QCA recommended hours for the technical certificate
- Additional hours being used for skills development and assessment
- Centre based key skills development through group based activities
- A mix of workshop and work based assessment
- Visits to the work place for assessment and regular review
- Progression from apprenticeship to advanced apprenticeship
- A significant proportion of learners enter direct on to an advanced apprenticeship – this is the preferred model of one of the lead providers in the sector
Apprenticeship

Activity Levels

Reported activity levels were:

- Time to complete, around two years
- Group based hours of between 450 to 700 hours
- A mix of block release and day release models
- Assessment on a 1:1 basis in the work place through a series of planned visits
- Assessment as part of the workshop activity
- Regular review and learner support through additional specialist staff in many cases

Advanced Apprenticeship

Activity Levels

Reported activity levels were:

- A further 24 months for entry as progression from apprenticeship
- Further group based hours of between 400 to 700 hours
- Slightly less assessment than for the apprenticeship

Expert Panel

Summit Skills convened an expert panel with representatives from:

- Summit Skills
- Awarding body representatives
- A sample of FE College and Independent providers
- The consultant to the project

The Adult Learning Inspectorate nomination was not able to attend the meeting but sent detailed comments to be included as part of the panel discussions.
Expert Panel Meeting and Advice

The panel met on 7 June 2006 and reviewed the data and evidence from the LSC and provider surveys. The panel used this evidence to formulate advice on activity levels for effective delivery.

Progression Pathways

The panel noted that in most cases an NVQ level 2 was a pre-requisite for progression to the NVQ level 3 for the advanced framework and that this principle also applied to technical certificate training with a level 2 technical certificate to be followed by a level 3 technical certificate for the advanced framework.

The panel also noted that the key skills requirements are the same for an advanced framework and an apprenticeship framework.

The panel discussed the pathways available and being used and suggested that there are three common approaches:

<table>
<thead>
<tr>
<th>Pathway</th>
<th>Level</th>
<th>Description</th>
<th>Content</th>
<th>Activity Issues</th>
</tr>
</thead>
<tbody>
<tr>
<td>A “FMA”</td>
<td>2</td>
<td>Entry from Employed Status</td>
<td>NVQ 2 TC2 Key Skills</td>
<td>Group based sessions with some work based assessment</td>
</tr>
<tr>
<td>C “AMA”</td>
<td>3</td>
<td>Advanced after apprenticeship</td>
<td>NVQ 3 TC3 Key Skills</td>
<td>Assumption that learner has completed a level 2 programme</td>
</tr>
<tr>
<td>E “AMA” L2 + L3</td>
<td>2 &amp; 3</td>
<td>Combined apprenticeship and advanced apprenticeship</td>
<td>NVQ 2 &amp; 3 TC2 &amp; 3 Key Skills</td>
<td>Level 2 and level 3 activities combined (A &amp;C)</td>
</tr>
</tbody>
</table>

The panel reviewed the evidence from provider surveys and noted that all three providers were offering pathway A followed by pathway C.

The panel discussed pathway E and noted that many providers offered this pathway despite the risk of learners leaving the programme with no advanced apprenticeship even though they may have completed an NVQ 2 and a technical certificate at level 2.
Disciplines and Framework Routes

The panel discussed the three distinct disciplines that are included in the sector code:

- Heating and Ventilation Installation in either an Industrial or Domestic context – with optional units for specific specialisms
- Heating and Ventilation Maintenance and Rectification of Systems Components
- Refrigeration and Air Conditioning Systems – with further routes available for Installation or Service and Maintenance – and an additional mandatory requirement: Safe Handling of Refrigerants

The panel reviewed the Learning and Skills Council (LSC) data and information on the sector area and the evidence from providers and commented that it was not possible to identify areas such as numbers in learning, time to complete, success rates or activity levels for the individual disciplines.

The panel took the view that their advice should be based on activity levels for the generic sector framework and that future panel meetings may be able to provide advice in more detail on activity levels for individual disciplines and framework routes.

The panel agreed that any review at discipline or framework route level would require more detailed LSC data and information and further interviews with providers to look at activity levels for disciplines and routes.

The advice from the panel was circulated to panel members after the meeting for their further comment and approval.
Expert Panel Advice for Apprenticeship Delivery

The expert panel set out their advice as a basis for establishing the costs of a model of effective delivery. *This is not intended to be a ‘recipe’ that providers should follow.*

<table>
<thead>
<tr>
<th>Activity</th>
<th>Panel Advice 2006</th>
<th>Notes and Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planned Time to Complete</td>
<td>24 months</td>
<td>Estimated time for effective delivery based on provider interviews and LSC data</td>
</tr>
<tr>
<td>Group based knowledge and skills</td>
<td>600 hours</td>
<td>Based on a block release pattern of 12 weeks per year of 30 hours per week over 2 years so total group based hours of 720 including 30 hours induction and 90 hours key skills</td>
</tr>
<tr>
<td>Work based knowledge and skills</td>
<td>0 days</td>
<td>At least four work based visits of ½ day with 2 days of workshop based 1:1 assessment and a minimum of 1 day of 1:1 time for portfolio review and discussion with the learner</td>
</tr>
<tr>
<td>NVQ assessment and support</td>
<td>5 days</td>
<td>Lead internal verifier time per learner for joint assessor visits, portfolio sampling and moderation meetings and activities</td>
</tr>
<tr>
<td>NVQ quality assurance</td>
<td>2.0 days</td>
<td></td>
</tr>
<tr>
<td>Group based key skills</td>
<td>90 hours</td>
<td>Group based sessions as part of the block release programme of activity</td>
</tr>
<tr>
<td>Work based key skills</td>
<td>0 days</td>
<td></td>
</tr>
<tr>
<td>Regular review</td>
<td>2.0 days</td>
<td>The programme of regular review in the workplace should include at least 8 visits of ¼ day per visits for review with the learner and the employer with further time allocated for learner support and advice through visits or other provider resources</td>
</tr>
<tr>
<td>Learner support</td>
<td>2.0 day</td>
<td></td>
</tr>
<tr>
<td>Entry activities 1:1</td>
<td>1.5 days</td>
<td>An entry programme to include: an interview (1/2 day), assessment (1/2 day) and a work based induction (1/2 day) all 1:1 time with an assessor</td>
</tr>
<tr>
<td>Group based induction</td>
<td>30 hours</td>
<td>A five day induction programme at the start of the block release programme</td>
</tr>
<tr>
<td>Registration Certification</td>
<td>£ 266</td>
<td>Based on costs of NVQ, Key Skills and sector body certificate</td>
</tr>
</tbody>
</table>

**Note:** Workshop assessments take place in small groups with dedicated assessors apportioning their time across the group to complete assessment activities.
Funding Rates for NVQs and Apprenticeships

Activity Costs for Apprenticeship Delivery

The activity costs model has been set up to compare the LSC funding in 2005/06 to the reported activity levels with the following costs assumptions:

- Group based classroom activity weighted at factor C\(^1\)

- Assessor employment costs weighted at factor E\(^2\) based on independent research on salary rates and employments costs

- Registration and Certification costs of £266 based on information collected from awarding bodies

The model includes a factor for success rates and this is based on the reported 2004/05 success rates of 38% uplifted to a minimum level of 50% to reflect improvement in success rates by 2007/08.

The activity costs emerging from the review were:

![Current Funding and Activity Costs](image)

This suggests that activity costs for effective delivery are around the current funding rates based on an effective model of delivery with minimum work based assessment.

The model uses the 05/06 funding rates for the technical certificate to compare activity costs to funding rates. The LSC is reducing the funding rate for the technical certificate in order to reflect the QCA recommended guided learning hours in two phases over 2006/07 and then a further reduction in 2007/08.

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1 This is based on the LSC programme weighting factors for guided learning hours
2 A separate report on employment costs provides more details of the bands and methodology used to map sectors to employment bands
Funding Rates for NVQs and Apprenticeships

Expert Panel Advice for Advanced Apprenticeship Delivery – Progression from an Apprenticeship Programme

The expert panel set out their advice as a basis for establishing the costs of a model 'of effective delivery. This is not intended to be a 'recipe’ that providers should follow.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Panel Advice 2006</th>
<th>Notes and Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planned Time to Complete</td>
<td>24 months</td>
<td>Estimated time for effective delivery based on provider interviews and LSC data and progression from a level 2 programme</td>
</tr>
<tr>
<td>Group based knowledge and skills</td>
<td>480 hours</td>
<td>A programme of 10 weeks of block release of 30 hours per week for underpinning knowledge and skills development with a further one year workshop programme of 30 weeks of 6 hours per week for learners on the development of their portfolio of evidence for the NVQ 3.</td>
</tr>
<tr>
<td>Work based knowledge and skills</td>
<td>0 days</td>
<td>At least four work based visits of ½ day – equivalent to 2 days of 1:1 time with workshop 1:1 assessment of at least 2 days and a minimum of 1 day of 1:1 time for portfolio review and discussion with the learner</td>
</tr>
<tr>
<td>NVQ assessment and support</td>
<td>5.0 days</td>
<td>Lead internal verifier time per learner for joint assessor visits, portfolio sampling and moderation meetings and activities</td>
</tr>
<tr>
<td>NVQ quality assurance</td>
<td>2.0 days</td>
<td>Lead internal verifier time per learner for joint assessor visits, portfolio sampling and moderation meetings and activities</td>
</tr>
<tr>
<td>Group based key skills</td>
<td>0 hours</td>
<td>Learners should have completed key skills as part of their apprenticeship programme and there are no further requirements for the advanced level programme</td>
</tr>
<tr>
<td>Work based key skills</td>
<td>0 hours</td>
<td>Learners should have completed key skills as part of their apprenticeship programme and there are no further requirements for the advanced level programme</td>
</tr>
<tr>
<td>Regular review</td>
<td>2.0 days</td>
<td>The programme of regular review in the workplace should include at least 8 visits of ¼ day per visits for review with the learner and the employer with further time allocated for learner support and advice</td>
</tr>
<tr>
<td>Learner support</td>
<td>1.0 days</td>
<td>The programme of regular review in the workplace should include at least 8 visits of ¼ day per visits for review with the learner and the employer with further time allocated for learner support and advice</td>
</tr>
<tr>
<td>Entry activities 1:1</td>
<td>1.0 days</td>
<td>An further entry programme: an interview (1/4 day), assessment (1/4 day) and a work based induction (1/2 day) all 1:1 time with an assessor</td>
</tr>
<tr>
<td>Group based induction</td>
<td>0 hours</td>
<td>No further induction activity for a progression programme</td>
</tr>
<tr>
<td>Registration Certification</td>
<td>£ 266</td>
<td>Based on costs of NVQ, Key Skills and sector body certificate</td>
</tr>
</tbody>
</table>
Activity Costs for Advanced Apprenticeship Delivery

The activity costs model has been set up to compare the LSC funding in 2005/06 to the reported activity levels with the following costs assumptions:

- Group based classroom activity weighted at factor D\(^3\) to reflect the higher costs of the welding based activities in the advanced phase of the framework
- Assessor employment costs weighted at factor E\(^4\) based on independent research on salary rates and employments costs
- Registration and Certification costs of £ 266 based on information collected from awarding bodies

The model includes a factor for success rates and this is based on the reported 2004/05 success rates of 31% uplifted to a minimum level of 50% to reflect improvement in success rates by 2007/08.

The activity costs emerging from the review were:

This suggests that activity costs for effective delivery for a progression pathway are around 60% of the current rates for a direct entry to an advanced apprenticeship programme.

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3 This is based on the LSC programme weighting factors for guided learning hours
4 A separate report on employment costs provides more details of the bands and methodology used to map sectors to employment bands
Expert Panel Advice for Advanced Apprenticeship Delivery – Direct Entry

The panel discussed the approach that some providers take based on direct entry to a four year advanced apprenticeship programme.

The panel noted that the provide surveys did not include evidence and data on this model of delivery.

The panel debated the issues around a four year programme and commented that:

- Learners should ideally be enrolled on a programme that is matched to their ability and aspirations at entry

- The LSC data indicates that the average time in learning for leavers who withdraw without completing an NVQ or the framework is over 27 months

- The advanced programme includes level 2 NVQ and technical certificate as a requirement

- Learners who leave after 27 months may have completed the NVQ 2 and the technical certificate at level 2 but this 'success' would not be recognised in published success rates

The panel advised that the activity levels for a four year programme would be the same as the activity levels for the apprenticeship (pathway A) and the progression pathway for the advanced apprenticeship (pathway C)

The panel agreed to provide advice on the activity levels for pathway C based on this assumption.
The expert panel set out their advice as a basis for establishing the costs of a model of effective delivery. *This is not intended to be a ‘recipe’ that providers should follow.*

<table>
<thead>
<tr>
<th>Activity</th>
<th>Panel Advice 2006</th>
<th>Notes and Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planned Time to Complete</td>
<td>48 months</td>
<td>Estimated time for effective delivery based on a combined apprenticeship and advanced progression programme</td>
</tr>
<tr>
<td>Group based knowledge and skills</td>
<td>1080 hours</td>
<td>Combined year 1 &amp; 2 (600 hours) plus year 3 &amp; 4 (480 hours)</td>
</tr>
<tr>
<td>Work based knowledge and skills</td>
<td>0 days</td>
<td>At least eight work based visits of ½ day – equivalent to 4 days of 1:1 time with workshop 1:1 assessment of at least 4 days and a minimum of 2 days of 1:1 time for portfolio (*2) review and discussion with the learner</td>
</tr>
<tr>
<td>NVQ assessment and support</td>
<td>10 days</td>
<td>Lead internal verifier time per learner for joint assessor visits, portfolio sampling and moderation meetings and activities</td>
</tr>
<tr>
<td>Group based key skills</td>
<td>90 hours</td>
<td>Group based sessions as part of the block release programme of activity</td>
</tr>
<tr>
<td>Work based key skills</td>
<td>0 hours</td>
<td>The programme of regular review in the workplace should include at least 16 visits of ¼ day per visits for review with the learner and the employer with further time allocated for learner support and advice</td>
</tr>
<tr>
<td>Regular review</td>
<td>4.0 days</td>
<td></td>
</tr>
<tr>
<td>Learner support</td>
<td>3.0 days</td>
<td></td>
</tr>
<tr>
<td>Entry activities 1:1</td>
<td>1.5 days</td>
<td>An entry programme: an interview (1/2 day), assessment (1/2 day) and a work based induction (1/2 day) all 1:1 time with an assessor</td>
</tr>
<tr>
<td>Group based induction</td>
<td>30 hours</td>
<td>A five day induction programme at the start of the block release programme</td>
</tr>
<tr>
<td>Registration Certification</td>
<td>£ 331</td>
<td>Based on costs of NVQ, Key Skills and sector body certificate</td>
</tr>
</tbody>
</table>

**Note:** There was no provider data and evidence on the direct entry model of delivery and activity levels. Panel advice is based on a combined apprenticeship and advanced progression programme.
Activity Costs for Advanced Apprenticeship Delivery – Direct Entry

The activity costs model has been set up to compare the LSC funding in 2005/06 to the reported activity levels with the following costs assumptions:

- Group based classroom activity weighted at factor C\(^5\) to reflect the majority of the group based learning in the first three years is currently weighted at factor C with only a part of the final year at factor D
- Assessor employment costs weighted at factor E\(^6\) based on independent research on salary rates and employments costs
- Registration and Certification costs of £ 300 based on information collected from awarding bodies and including the costs of technical certificates at level 2 & level 3.

The model includes a factor for success rates and this is based on the reported 2004/05 success rates of 31% uplifted to a minimum level of 50% to reflect improvement in success rates by 2007/08.

The activity costs emerging from the review were:

This suggests that activity costs for effective delivery for a direct pathway are around 90% of the current rates for an advanced apprenticeship.

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\(^5\) This is based on the LSC programme weighting factors for guided learning hours
\(^6\) A separate report on employment costs provides more details of the bands and methodology used to map sectors to employment bands
Funding Rates for NVQs and Apprenticeships

Moderation and LSC Data Modelling

The LSC has established a moderation group with representation from the Association of Learning Providers to review panel advice and activity costs.

The advice from the Summit Skills expert panel was reviewed at the moderation meeting in August 2006. The moderation group accepted the advice on activity levels for the apprenticeship and progression apprenticeship delivery. The moderation group were concerned about the activity levels for direct entry to an advanced framework given that no providers in the sample were delivering a direct advanced apprenticeship framework.

Funding Rate Changes

The LSC is implementing changes to the funding rates based on the review and the advice on activity levels and activity costs and the decisions of the moderation group.

Apprenticeship

The activity costs model indicates a small reduction in funding for the framework based on activities for effective delivery. The activity costs have been compared to the funding rates in 2005/06. The technical certificate rate has been reduced in 2006/07 and will be reduced again in 2007/08. The impact of these changes is that the activity costs will be higher than the funding for the framework in 2007/08.

The impact of the activity costs review will be

- An increase in funding of 4.4% to the NVQ2 rate phased in over 2 years

Advanced Apprenticeship

The advanced apprenticeship will be funded as a progression with funding for the level 2 phase removed from the funding rates. This will lead to:

- A reduction in funding of 49.5% to the NVQ3 rate phased in over 2 years

Details of payments for learners in 2007/08 who are already in learning on an advanced programme in 2006/07 and have not completed a level 2 prior to starting the programme will be published by the LSC in Requirements for Funding due to be published in March 2007.