Preparing for the future:

Understanding the skills & training needs of the automotive retail sector

Repair and maintenance of light motor vehicles

IMI
THE INSTITUTE OF THE MOTOR INDUSTRY

Institute **change.**

Contents

Introduction

Purpose

Each year the Institute of the Motor Industry (IMI), as the Sector Skills Council (SSC) for the automotive retail sector, carries out a Sector Skills Assessment (SSA). The SSA, which is commissioned and funded by the UK Commission for Employment and Skills (UKCES), gives a high level overview of the skills needs of the sector.

In order to enable employers to prepare for the future, the IMI initiated and conducted an extensive programme of in-depth granular research, building on the SSA, to fully understand the extent of the skills and training needs across each of the 12 sub-sectors within its footprint. The purpose of this research is to recognise, at job role level, within each distinct sub-sector, precise skills and needs within the existing workforce.

It is vital that the IMI, as the SSC and the professional association for the automotive retail sector, understand employers' immediate and critical skills needs in order to identify and/or formulate effective solutions to address these skills needs. We need to ensure that the automotive retail sector begins to improve its overall productivity and profitability. This will ultimately help business position themselves for economic recovery, when it comes, allowing them to compete in a globally competitive market.

Methodology

To achieve our stated purpose the IMI engaged with employers, stakeholders, training providers and trade associations to ensure that the research findings were accurate, validated at each stage, robust and fit for purpose.

To accomplish this, a qualitative phase of research was carried out. This involved 170 in-depth telephone interviews, each lasting one and a half hours, with employers across each of the sub-sectors. The focus of these interviews was on skills and training needs within the business, the issues facing the employer and the future challenges they envisaged over the next 18 months – 2 years. This first qualitative element (i.e. the use of open questions to gain responses) successfully defined the broad skills needs of the sub-sector.

The second phase of the research, the quantitative phase, was designed to validate and expand on the issues raised in the first phase, by the use of a telephone survey which contained the summary findings and analysis from the first stage. The telephone interview asked respondents to confirm that the skills needs identified from the in-depth interviews were accurate, they were then asked to prioritise each of the skills and training needs identified. In total, 876 employers took part in the telephone interviews (100 from each sub-sector were targeted), to enable accurate data to be collected and robust conclusions to be drawn. This stage was complemented by a web survey, which furnished 630 additional responses, to ensure that as many employers as possible had the opportunity to respond to the questionnaires in as many different ways as possible.

The final main phase of the research involved 12 focus groups with employers to benchmark their views on skills needs against the findings from the first and second phases of the research. This enabled us to arrive at a final set of core skills needs, covering technical, management and customer service job roles.

Once all the data had been collected it was analysed by channelling the responses from the initial in-depth interviews into a much more concise number of core skills needs, using the findings from each consecutive stage of the research as the starting point for the next. By doing this, we have achieved a high level of confidence in the conclusions at which we have arrived.

For the light vehicle maintenance and repair sub-sector, the first phase of research involved in-depth interviews with 25 businesses. The nature of qualitative interviewing allows conclusions to be drawn from small samples; essentially it is answering the 'what' and the 'why' question and not quantifying the response at this stage. In the second phase of the research 155 telephone surveys were carried out along with a focus group of industry experts to assist the IMI in prioritising skills needs, adding or refining the skills needs identified through the first phase. The web survey outcomes were used to assist in decision making should there be 'borderline' critical skills needs identified or where it was difficult to distinguish which skills needs should be categorised as critical.

Background

Across the automotive retail sector as a whole, in 2008 the sector generated £146 billion or 4.7% of all UK turnover and contributed £25 billion or 2.8% of gross value added. The sales of motor vehicles sub-sector (SIC 50.10) generated the majority of turnover (70%) and contributed the most in value added terms (47%). Geographically England, as would be expected, generated the majority share in terms of both turnover and value added at 88%

In the latest IMI State of the Sector Report (July 2011), businesses report that trading conditions remain challenging, with 54% of companies experiencing lower orders/sales over the last six months and 66% showing lower profit margins.

Predictions for the next six months are similar, with 41% showing reduced orders/sales and 21% predicting higher sales.

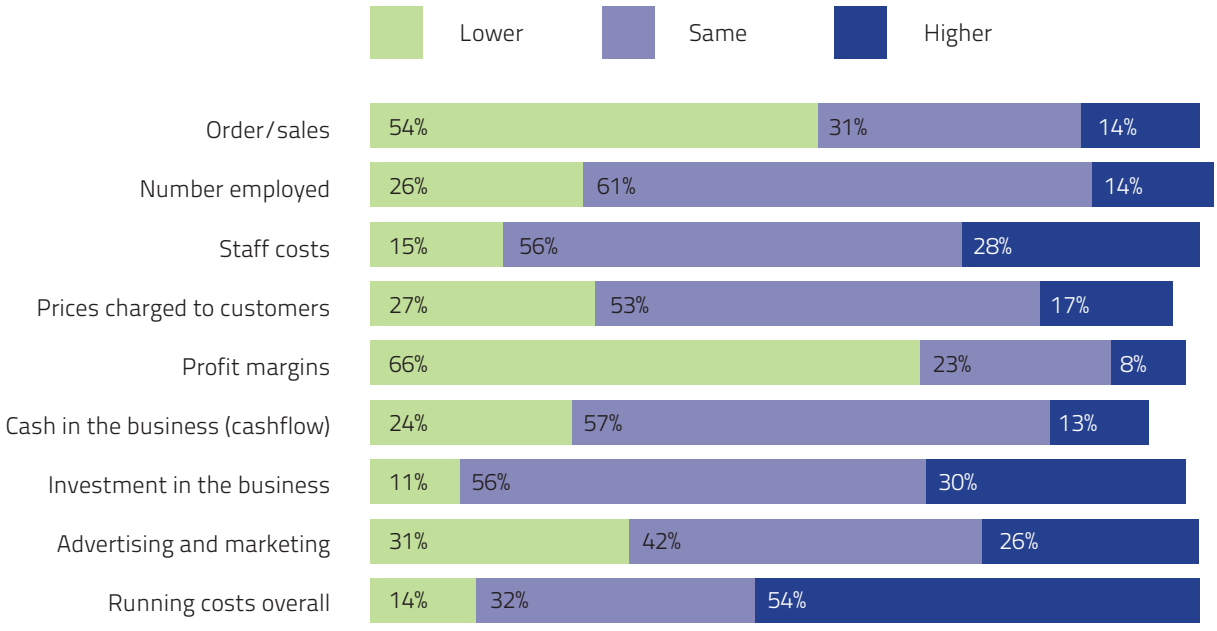


Table 1. Business performance in last 6 months, compared with previous 6 months
Source: IMI State of the Sector (July 2011)

Respondents to this research were asked which issues affected their overall business most. It was clear that three areas were critically important:

- Impact of changes in legislation, and changes in legislation forecast over the next 18 months.
- Trading conditions – the fall in sales in particular over the last two years and the sluggish revival (particularly important to this sub-sector).
- The relentless drive in technology development across all vehicle types.

Across the whole automotive retail sector, 85% of businesses are micro, employing less than 10 people. However, they employ only 38% of the total sector workforce. While 57% of all employment is concentrated in those companies that employ over 11 (this accounts for only 14% of all companies), with the remaining 5% of the workforce working for large employers who account for less that 1% of all businesses (Table 2 below). Given the make up of the sector, we are confident that our telephone research targeted the appropriate range of businesses.

	% of workforce	All UK	Difference
1-10	38%	21%	16%
11-199	57%	47%	10%
200+	5%	32%	-26%

Table 2. Employees by business size
Source: Annual Business Inquiry (2008)

Light vehicle maintenance and repair

Having experienced great difficulties in obtaining sub-sector business and workforce data in the format that the sector uses, e.g. the breakdown of vehicle maintenance and repair into auto-glazing, fast it, vehicle inspection, roadside assistance and recovery, accident repair and light and heavy vehicle, it is not possible to state reliable government data on numbers of businesses and staff. However, we know from other IMI research that the light vehicle maintenance and repair sub-sector is the largest within the automotive retail sector.

Across the vehicle repair and maintenance sub-sectors (light vehicle and heavy vehicle combined) there are approximately 38,895 businesses employing 285,059 people (See table 3 below). The number of micro businesses in these sub-sectors is 35,015 (90%), with 3,875 SMEs (10%) and only 5 large businesses[2].

The build quality of cars has significantly improved over the years and this has had a major effect on the frequency of servicing. It has also increased the need for fewer complex services. It is likely that only the increasing size of the vehicle 'parc' has saved this sub-sector from a more pronounced decline than already experienced.

The annual number of services and mechanical repairs carried out has declined by 19% from 57.9 million in 1998 to an estimated 46.7 million in 2008. This reduction has contributed to the number of service and repair workshops going down by an estimated 30% between 1998 and 2008.

	No. of businesses	% of all businesses
Micro (1-9)	35,015	90%
SME (10-249)	3,875	10%
Large (250+)	5	0.01%
TOTAL	38,895	100%

Table 3 - Breakdown of vehicle sales businesses by size
Source: IDBR 2010

There are approximately 35.3 million vehicles registered on the roads in Great Britain.

[1] The Institute of the Motor Industry: Footprint Mapping 2010
[2] Source, BMG telephone survey data 2011

Table 4 (below), shows the number of people employed across organisations and shows the breakdown between independent and franchise businesses. 70% of all businesses surveyed in the sub-sector employed between 2 and 10 people with a larger proportion (79%) of independents employing between 2 and 10 people compared to 46% of franchise companies. This compares with 67% of businesses operating independently across the automotive retail sector as a whole.

Of the total sample of businesses, 57% operated from one site. This increased to 59% for independents and decreased to 51% for franchise operators.

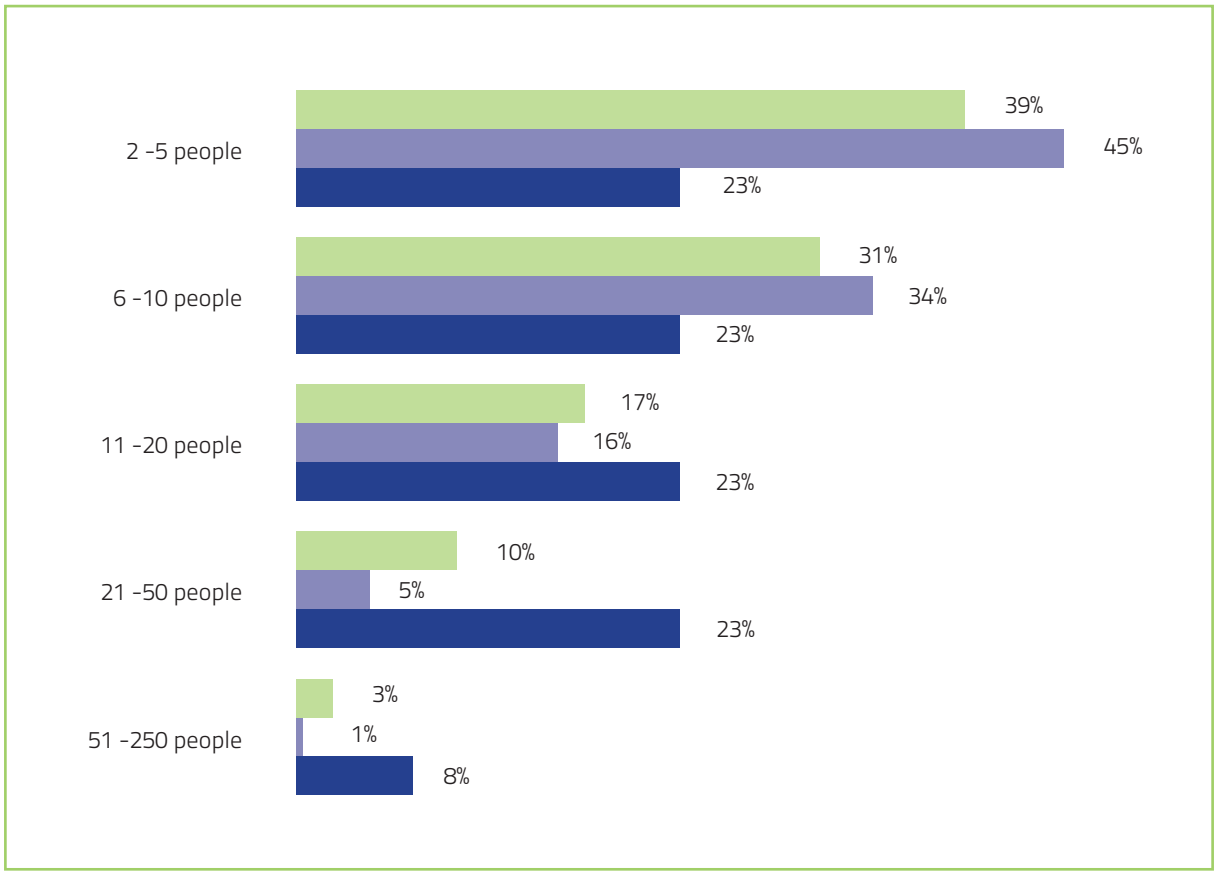


Table 4 Number of Employees at that site - light vehicle maintenance and repair sub-sector
Source IMI Quantitative Telephone Interviews 2011

Table 5 (below), shows that business plans are more prevalent within 69% of franchise organisations compared to 48% for independents (56% across the automotive retail sector as a whole). A similar breakdown applies to those organisations having a training plan with 79% of franchise organisations having a plan compared to only 48% of independent businesses (54% for the automotive retail sector as a whole).

This is reflected in the balance of organisations with a training budget with 54% of franchised business having a training budget compared to 32% of independents (39% for the automotive retail sector as a whole).

87% of franchise organisations have undertaken training in the last two years compared with 77% of independents (76% in the sector as a whole). Finally, 85% of franchise organisations plan to undertake training in the next two years compared to 59% of independents (57% in the sector as a whole).

The figures show training and business planning is more structured within larger franchised operators who may have the resource to plan ahead and schedule activity over longer time periods. It should be noted that franchised dealerships are committed to training through dealer standards. On the other hand the independents plan in a less structured way, possibly being more reactive to events and business pressures as they emerge.

It should be noted that not having a training budget or plan does not preclude training activity from taking place within the independent sector.

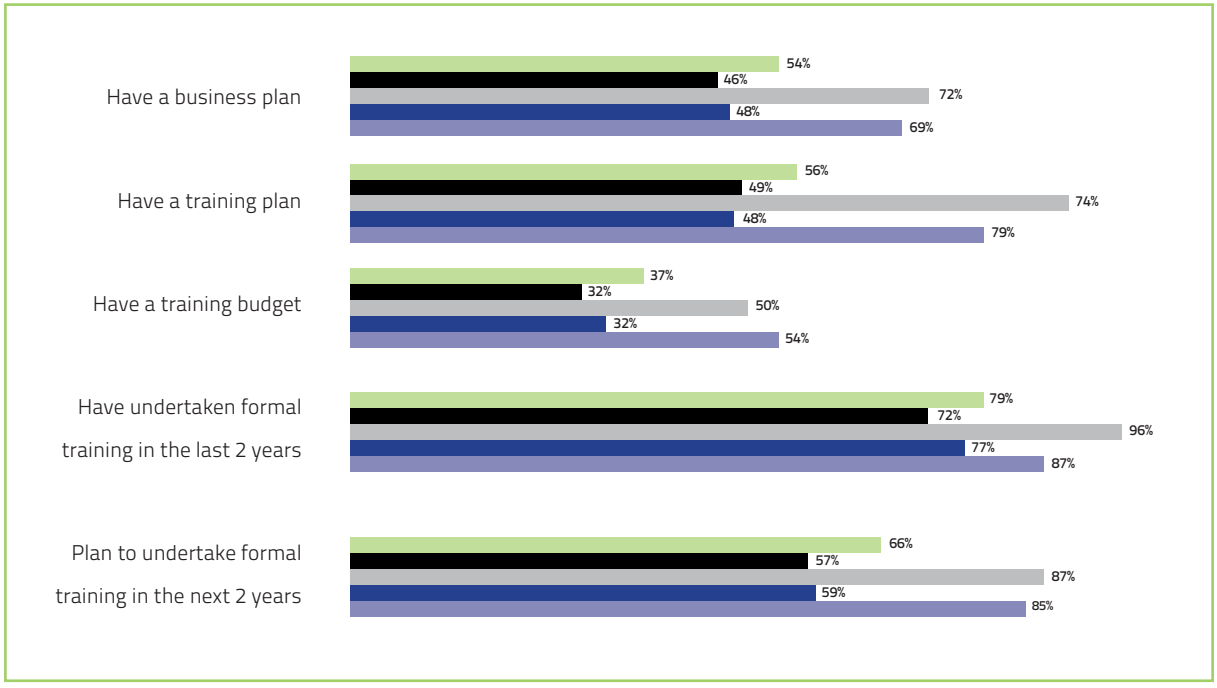


Table 5 Training Practice – light vehicle maintenance and repair sub-sector
Source IMI Quantitative Telephone Interviews 2011

Table 6 (below), shows that 46% of the sub-sector trains when it is necessary compared with 36% of franchise organisations and 49% of independents and 43% across the automotive retail sector as a whole.

A further 36% of all organisations in the sub-sector have a structured training schedule as part of their business plan (32% of independents and 49% of franchise businesses) compared with 33% across the sector as a whole). Across the sub-sector relatively few organisations train staff informally/ when they have to.

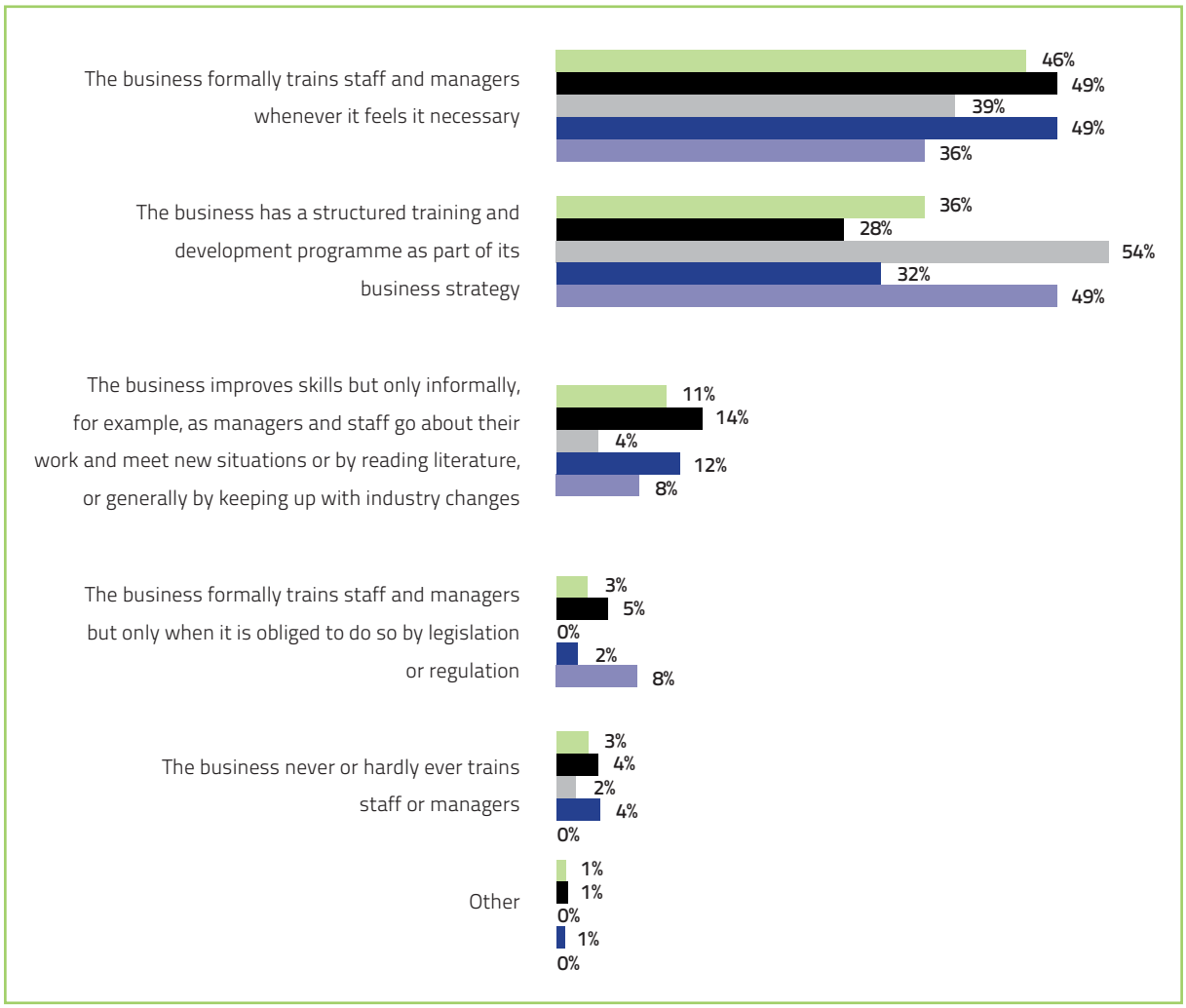


Table 6 Involvement in Training – light vehicle maintenance and repair sub-sector
Source IMI Quantitative Telephone Interviews 2011

Table 7 (below), shows that 91% of businesses interviewed give their principal reason for not training as the business being small and the staff fully skilled (91%). It should be noted that many technicians in the sector have been through some sort of apprenticeship. Other reasons include organisations only recruiting staff fully skilled (73%) and the fact that training courses are too expensive (55%). In addition, 45% of businesses in the sub-sector felt that training would not improve business performance.

When considering the reasons for not becoming involved in training there were some significant differences between the light vehicle maintenance and repair sub-sector and the sector as a whole:

- Only recruit staff who are fully trained
  73% (light vehicle)
  61% (Sector as a whole)

- Not able to spare the time
  45% (light vehicle)
  32% (Sector as a whole)

- No improvement in business performance
  45% (light vehicle)
  35% (Sector as a whole)

The figures below also show a number of employers still do not feel there are any skills gaps in their workforce (which may be correct but it may also show that employers find it difficult to identify gaps that do exist).

Table 7 Reasons for not training – light vehicle maintenance and repair sub-sector
Source IMI Quantitative Telephone Interviews 2011

Qualitative in-depth interviews

Qualitative research was carried out with 25 businesses within the light vehicle maintenance and repair sub-sector. These were through pre-arranged telephone conversations with previously identified, appropriate staff within the businesses who could comment authoritatively on relevant job roles. These interviews lasted approximately one and a half hours and were conducted by researchers from BMG Research, Birmingham.

The interviews were mostly unstructured and used open questioning (i.e. they didn't ask questions where a 'yes'/'no' answer could be given), covering a range of different types of organisation, mostly independents employing up to 50 people, but with a small number of franchise organisations contacted as well. Interviews were conducted across all nations, England, Scotland, Northern Ireland and Wales in August 2011.

The following questions were asked by the researchers, who asked to speak to employers capable of covering at least two job roles within the interview:

- What job roles exist within the business?
- What are the current skills and training needs required by (each job role)?
- Which of these skills and training needs are particularly important or critical to your business?
- What skills and training needs do you anticipate you will have in the next two years.

The focus was on identifying skills needs related to key job roles. From the responses to the open questions it was possible to identify the training and skills needs, which are listed overleaf.

Job-role specific skills needs

The following skills needs were identified across the light vehicle maintenance and repair sub-sector.

Technicians

- An understanding of electrical theory and being able to apply it
- General electrical fault finding skills/procedures – the use of voltmeters, ohmmeters, ammeters, multi-meters, oscilloscopes for diagnosis of faults
- Understanding what fault codes mean
  - Using diagnostic fault code readers/scan tools
- Understanding diagnostic methods/procedures if the use of a diagnostic scanner cannot find a fault
- Understanding scan tool live data
  – diagnosis and the analysis of the data
- Reading and interpreting wiring diagrams and electrical data – following test methods/procedures
  – live data analysis
- Electrical/electronic systems - How to work on vehicle systems without causing damage
- Engine starting, charging, battery technology, diagnosing/testing computer controlled engine cooling systems
- Understanding turbo charging/supercharging systems – their function and operation
- Test methods/procedures for diagnosing engine faults
  – fuel pressure tests
- Understanding modern diesel fuel systems - working safely – understanding high pressures in diesel systems
- Understanding emission control component operation and function
- Analysis exhaust gas readings for fault diagnosis
- Understanding how electrical and electronic systems interface with each other – fibre optics, networking, CANBUS - diagnosis and common faults
  – specific to vehicle manufacturers and models
- Braking systems – The function of ABS, regenerative braking, electronic handbrakes, brake assist, brake component technology including ceramic brakes
- Servicing / repair of braking systems including knowledge of the procedures to bleed systems
  – how to remanufacture brake pipes
- Understanding specific health and safety issues related to braking systems

- Occupant safety systems – working safely with airbags and other SRS components – safe storage methods – safe test methods – safe remove and refit methods
- Drive train/transmission knowledge – automatics
- How to make effective fault diagnosis and repairs to automatic transmissions
- Servicing of transmission components – how to refill systems – how to bleed systems effectively
- Comfort systems
- Telematics
- ICE – digital switch over
- Alternative/sustainable fuelled vehicles – hybrid / electric vehicles
- Working safely on hybrid / electric (electrically propelled) vehicles
- Understanding routine servicing methods /procedures on hybrid and electric vehicles
- Understanding the implications of an unsafe repair – understanding faults – diagnostic method and procedure to implement a safe repair
- Steering and suspension systems - using wheel alignment equipment – laser types, understanding technical data and applying it accurately
- Active suspension systems
- Electronic/electrical power assisted steering systems

Management staff

- Effectively managing the flow of work through the workshop (workshop loading)
- Effective customer liaison
- Effective delegation for managers
- Understanding and awareness of health and safety
- Effective target setting for managers
- How to deal effectively with complaints
- How to keep staff effective
- Understanding the customer viewpoint (qualifying the customer needs)
- Updating technical knowledge of managers – new updates in car technology
- Understanding and awareness of changes in legislation
- Effective team management
- Understanding finance, cost control, budgets and forecasting, PAYE, accounts and debt management
- Understanding and awareness of employment law
- How to undertake appraisals
- Effective time management for managers
- How to effectively coach team, including leadership principles
- Effective communication for managers
- Effective report writing for managers

Customer service staff

- How to effectively undertake follow up calls following servicing/sales
- Effective problem solving – dealing with customers to ensure their needs are addressed
- Effective telephone skills
- Effective sales skills for customer advisers
- Understanding and awareness of costing principles for repair
- Understanding new car technology
- Background understanding of new cars being introduced
- Effective communication for customer service advisors
- Awareness and understanding of IT in the workplace, invoicing, accounts, booking
- How to deal effectively with complaints
- Effective counter service skills for customer advisors

Skills needs across the light vehicle maintenance and repair sub-sector over the next two years

Respondents were asked to record the changes they expected to their skills and training needs over the next two years. The key areas reported included: significant move toward electronic systems, becoming far more IT based, this includes:

New electronic handbrakes making things more complex; new electronic diagnostic tools; regenerative braking on new hybrid cars and the impact this will have on brake wear and tear; and increasingly complicated fault diagnosis.

Also emergency brake assist will become more common, the hydraulics linked to ABS and traction control, cruise control braking, BUS technology, more effective steering geometry (re emissions reduced) more complicated engine management systems, supplementary restraint systems (vehicle active occupant safety systems), active pedestrian safety systems and anti-skid technology. One of the most striking features of the survey has been the references to new technology made in the in depth interviews, across all sub-sectors. It is clear that respondents are aware of a significant change in the underlying make up of vehicles, in particular the impact of advanced electronics both within the overall management and performance of the engine, and also across the brakes, gearbox, suspension and interior 'comfort management systems'. This development impacts on how the modern vehicle works, how it needs to be maintained and serviced, and how it needs to be repaired in the event of an accident. For people working within the sector this development has significant implications. For managers modern employment law is expected to change quite dramatically, especially human rights, discrimination and bribery policies. There are also likely to be changes in the way organisations communicate with customers, for example, internet, web, apps etc. There is expected to be a greater emphasis on sales across all levels and roles and a growing requirement for managers to keep up to date with human resources legislation and health and safety.

The relentless drive in technology development across all vehicle types was noted across all sub sectors, with the impact increasingly being felt within sales, technical and customer service roles within the sector. Customer handling, technical and sales related skills gaps are increasingly of concern across the sector; hence the findings of this research project will be directly relevant to the prevailing conditions impacting across businesses, by defining in 'granular' detail skills and training needs.

Quantitative telephone survey

Once the qualitative in-depth interviews had identified the skills needs of the light vehicle maintenance and repair sub-sector, the quantitative series of telephone interviews were carried out. Respondents were prompted with the skills and training needs identified in the previous stage of research and were asked to rank them in order of priority: critical need, some need or no need.

This survey quantified the initial set of responses and identified a potential set of skills and training needs that were seen as (i) critical, (ii) of some need, or (iii) of no need. This phase of the research was pivotal in identifying those skills and training needs that were in need of priority action.

In total 155 interviews were conducted with employers and business owners across the light vehicle maintenance and repair sub-sector. The majority of businesses were independent organisations employing between 2 – 50 people.

The final outcomes of this process are detailed in the Conclusions section of this report.

Focus groups and web survey

Focus group

The light vehicle maintenance and repair sub-sector focus group was held in September 2011 and comprised representatives from light vehicle maintenance and repair employers, a college and training providers. The main agenda for these group meetings was to validate, or not, the findings from the qualitative and quantitative telephone interviews. For the light vehicle maintenance and repair sub-sector, this particular focus group raised no issues with the outcomes of either sets of interviews.

Focus group attendees felt a key priority was increasing the skills of Service Advisors as well as having a focus on management training (especially for independents) and a demand for broader business improvement training. Return on investment studies were felt to be a good way to motivate the sector. Training Needs Analysis could also be used by independents to identify their own training needs and consequently to develop buy in to the solutions. In looking to the future members of the focus group felt that understanding of hybrid / electric vehicle technology would be crucial.

Web survey

The web survey was conducted across the entire automotive retail sector, with respondents identifying which sub-sector they worked in and was able to comment on. Due to some sub-sectors having a small number of respondents, the outcomes of the web survey were only factored in, if the outcomes of the qualitative and quantitative telephone interviews, along with the focus groups, did not produce an unambiguous outcome in terms of identifying the criticality of skills and training needs for the sub-sector.

Conclusions

The aim of this research was to be able to identify and prioritise the skills and training needs of the automotive retail sector at a 'granular' level, which has never been achieved before. We have been able to achieve this by looking at each individual sub-sector across the whole of the automotive sector footprint.

For the light vehicle maintenance and repair sub-sector we have achieved this aim, through a blended approach of telephone interviews, focus groups and web surveys. The methodology applied was as follows:

- Taking the skills needs identified by the in-depth telephone survey at the beginning of the research project as the basis for the analysis.
- Taking the focus group and telephone responses and comparing the skills needs identified by the group with the results from the in-depth telephone survey, to arrive at a more refined set of skills, set in a priority listing.
- Taking the website results and applying these to the outcomes of the previous stages to either confirm or change the list.

In the light vehicle maintenance and repair sub-sector there were clear and unambiguous out comes in terms of criticality for customer service advisors, however, the web survey results were used to place the fifth management staff skills need and to rank the top seven skills needs of Technicians.

Prioritised skills and training needs for the light vehicle maintenance and repair sub-sector

As a result of the three-stepped approach outlined previously , the following sets of skills and training needs were identified as critical to the light vehicle maintenance and repair sub-sector. They have been ranked in order of criticality with 1 seen as the most critical. Due to the complexity of the light vehicle maintenance and repair sub-sector, seven top skills needs are highlighted in this report.

Technicians

1. Understand how to source and analyse relevant data to inform inspection, maintenance, accurate diagnostics, and repair procedures
2. Understand how complex interrelated systems operate
3. Understand the impact, including safety, of not diagnosing and repairing systems correctly
4. Be able to correctly carry out accurate, diagnostics, maintenance and repair on braking, steering and suspension systems
5. Be able to replace braking system components, including the manufacture of brake pipes, system adjustment and bleeding
6. Be able to follow the correct procedure to check and rectify wheel alignment using wheel alignment equipment including laser type
7. Be able to safely check, disarm and arm SRS systems where repair process requires this operation (work on occupant safety systems)

Management staff

1. Understanding and awareness of health and safety
2. Effective customer liaison
3. Understanding the customer viewpoint
4. Effective delegation for managers
5. How to keep staff effective

Customer service staff

1. How to deal effectively with complaints
2. Effective problem solving – dealing with customers to ensure their needs are addressed
3. Effective telephone skills
4. Effective communication for customer service advisors
5. Effective counter service skills for customer advisors

Recommendations

The skills and training needs listed in this report are those that employers have reported as being critical for their business. Numerous reports have identified the link between training and business performance. The IMI itself has recently conducted ROI studies across a number of sectors that have identified significant increases in business performance from rolling out training and accreditation programmes. The studies show that up-skilling in the automotive retail sector delivers a conservative gross value added (GVA) of £4,000 per person per annum[3].

It seems that the commitment to train and develop staff in the light vehicle maintenance and repair sub-sector is high. 87% of franchise organisations have undertaken training in the last two years compared with 77% of independents (76% in the sector as a whole).

As noted previously, franchised dealerships are committed to train through dealer standards. Finally, 85% of franchise organisations plan to undertake training in the next two years compared to 59% of independents (57% in the sector as a whole). The value of this project is the underlying understanding and knowledge in granular detail required to direct provision across the sub-sector and all job roles. Our challenge is to use this research to ensure that training is relevant and up to date, meeting the needs of the whole sector

As the SSC, the IMI will focus on developing skill solutions across job roles, against the priority skills needs highlighted in this report.

The IMI commits to prioritising the development of solutions to meet the skills needs where employers have identified their need as being either critical or of some need. Therefore, solutions to the following skills needs will be progressively developed over the next 12 months.

[3] www.theimi.org.uk/information/roi-ata.html

For technicians in the sub-sector the following were critical skills need

- Understand how to source and analyse relevant data to inform inspection, maintenance, accurate diagnostics and repair procedures.
- Understand the impact, including safety, of not diagnosing and repairing systems correctly.

For management staff in the sub-sector the following were critical skills need

- Understanding and awareness of changes in legislation.
- Understanding and awareness of employment law.

For customer service staffs in the sub-sector the following were critical skills need

- Understanding and awareness of costing principles for repair.
- Understanding new car technology.

In the light vehicle maintenance and repair sub-sector the most common reason given for not training was that 91% of businesses felt that their organisation was quite small and managers were fully skilled for their roles. In addition, only 45% of businesses believed that training improved the performance of the business.

We commit to work with partners to

- Develop high quality, cost effective training.
- Ensure that the link between business performance and training is clear.

36% of light vehicle businesses felt that training would be available but not in their area. 55% of businesses felt that training courses were too expensive. In addition, as far as organisations developing structured training programmes as part of their business strategy are concerned, 54% of larger companies and 49% of franchises had such programmes but only 28% of SMEs and 32% of independent businesses. In the light vehicle sub-sector, 50% of larger businesses would use online training via the internet.

As the SSC we commit to

- Further develop the innovative online CPD management system for the sector.
- Create a common template for training in the sector by ensuring that all provision has clear and measurable learning outcomes that link training to increased business performance.

56% of all businesses in light vehicle maintenance and repair have a training plan (compared with 54% across the automotive retail sector as a whole). 76% of franchise organisations have a training plan and 74% of businesses with over eleven staff have a training plan. This compares to 49% of businesses with 1-10 staff having a training plan and 48% of independent businesses having a training plan.

- We will continue to work with businesses to advocate the use of training plans.

The light vehicle maintenance and repair sub-sector has a high awareness of the IMI at 79%, slightly higher than average across the sector as a whole.

- As the SSC we will continue to work to raise the awareness of the IMI in this sub-sector and the subsequent awareness of skills solutions.

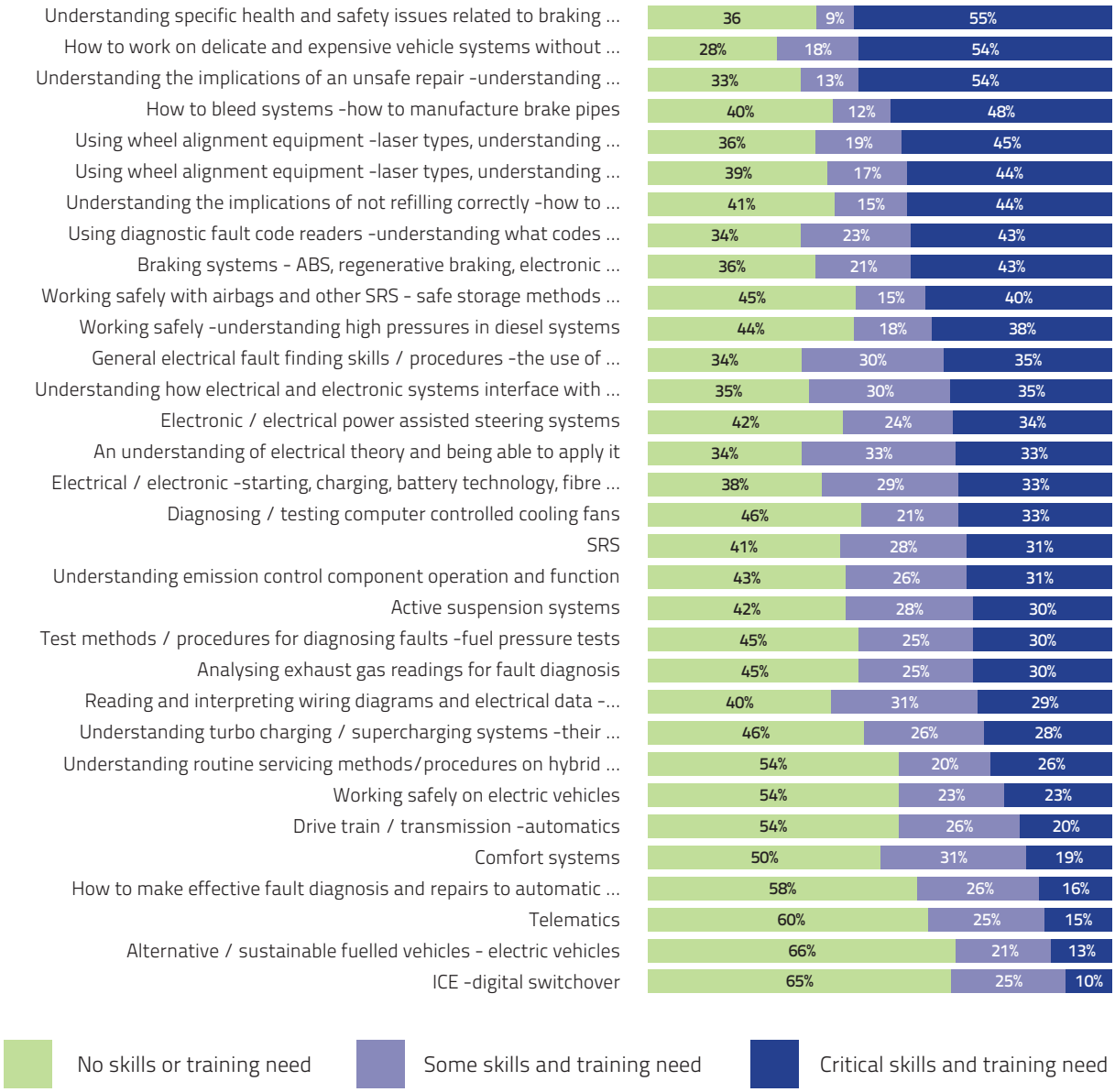
We would like to express our gratitude to the employers and stakeholders who committed time to participate in the light vehicle maintenance and repair part of this research project.

Annex 1:

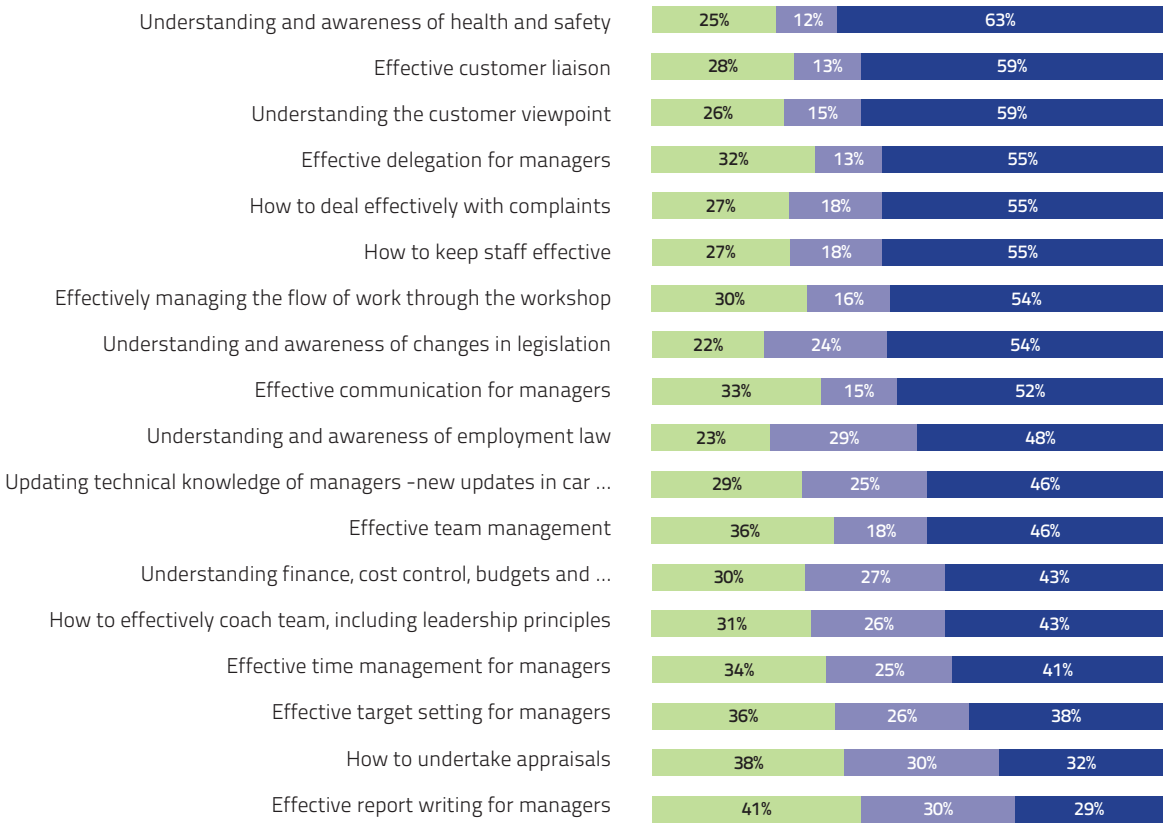
Skills and training needs by job role and priority

Given below are the detailed percentage results of the quantitative telephone survey carried out for the light vehicle maintenance and repair sub-sector.

Technicians



Management staff

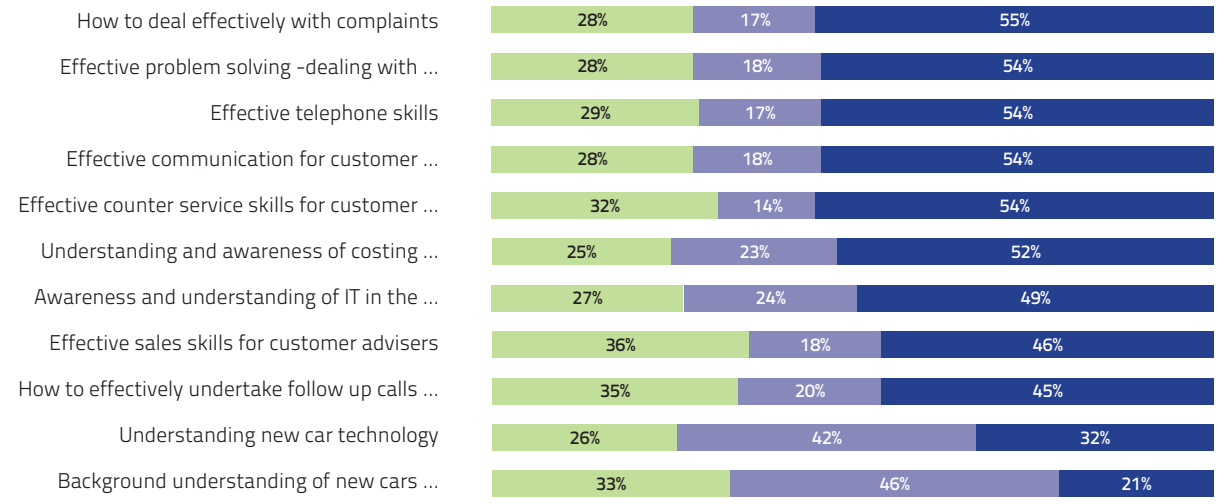


No skills or training need

Some skills and training need

Critical skills and training need

Customer service staff



Annex 2:

Focus group attendees

The focus group for light vehicle maintenance and repair met in September 2011 and comprised of representatives from the following organisations:

- Babcock
- MOTEST
- Enterprise Rent-A-Car
- Stephenson College

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