

Youth policy

Given the ever-increasing level of electronics and technology in commercial vehicles, transport engineers of tomorrow need the best possible training. John Challen investigates developments with apprentice schemes

Back to school

While apprentices are typically picked up from the age of 16, S&B's Jon Winter is looking to get potential candidates involved even earlier. "Our work starts in the schools," he says, revealing that an existing system has helped achieve interaction with younger pupils.

"Netcam was originally developed to help carry out workplace assessments for the apprentices' qualifications by using remote access," he says. "When a job came in and the workplace assessor wasn't around, it enabled us to have two-way communication and watch them doing the job."

Following a trial at a school in July this year, S&B is looking to take it into more schools. The benefits? "It will allow the pupils to see what the training environment is really like for an apprentice," he claims.

Winter says an additional benefit is the ability to move the cameras into a garage and talk to technicians about their experiences, and the choices they made.

Winter believes there are specific advantages for commercial vehicle operators. "An apprentice can look at a garage and then a truck workshop; they may be undecided about which route to take," he says.

As the UK's economy struggles with the effects of the recession, and the country's job market remains depressed, it is not surprising that many school-leavers are turning to apprenticeships. Giving value both as a source of income, as well as a step on the career ladder, these schemes have enjoyed a resurgence in recent years, with more and more operators and manufacturers getting involved.

The vast majority of courses are over-subscribed – thousands of applicants chasing a handful of positions being further proof of their worth. In the road transport sector, there are plenty of schemes available, with nearly every major vehicle manufacturer, as well as plenty of suppliers, running three-, four- and even five-year programmes. A sensible mix of theory and practice, delivered at an achievable rate, ensures that, when qualified, the successful students are well prepared.

To be up to speed for the workplace, apprentices must be quick to embrace the latest technologies and engineering methods used, and courses are tailored to accommodate that need. While their exposure to advanced technologies might be limited, course directors argue that apprenticeships do, at least, give trainees a taste of what to expect in a real-life commercial vehicle workshop, after qualifying.

As CEO of S&B Automotive Academy, Jon Winter handles the apprentice training for a number of clients, including truck manufacturer MAN, as well as major operators such as TNT and Stagecoach. He believes that much of the motivation of today's apprentices comes from the emergence of the aforementioned advanced technologies. "When faced with a new technology, a motivated person will, with the right tools, adopt and absorb it," he says.

Winter adds that, while the detail of engineering has changed, many of the principles remain, citing computerised ignition systems superseding point

ignition as an example. "The programmes we run have evolved, because engines used to need major overhauls. Now, as a result of the electronics involved, this requirement is obsolete," he points out.

Not that this means MY2010 apprentices have an easier ride: "It used to be about teaching how to scrape bearings off the crankshaft and de-coking an engine," he recalls. "Tasks such as stripping an engine down have gone, but have been replaced by maintaining and monitoring electronics systems."

Stars in the making

One of the biggest apprentice investments in the industry has come from Mercedes-Benz, which introduced its own programme in 1996. The company runs a commercial vehicle apprentice scheme, with an average of 50 places a year. The course is predominantly technology-based, but Mercedes-Benz offers a parts programme as well. This arrangement allows dealers to recruit technical apprentices for the workshop and parts apprentices for the parts department.

As Tony Hetherington, Mercedes-Benz's technical training director, explains, the path of his company's scheme has not always run smooth. Like S&B's Winter, he has witnessed a number of changes over the past 15 years. Previously relying on external training companies, everything has now been brought in-house and today apprentices are trained in a state-of-the-art academy that features six vehicle bays, each of which is equipped with its own Star diagnostics kit.

For Hetherington, maximum exposure is key to both the development and interest of apprentices: "The maximum group size is 12 and we have put the resources in place to ensure small classes, where others typically have 18, some even 24," he explains. The thinking behind the Mercedes-Benz approach is that, when there are 12 learners in a workshop with three vehicles, there is effectively an apprentice on each corner. Hetherington says this



Beyond apprenticeships

With legislation and standards constantly changing, so must the apprenticeship scheme. Tony Hetherington has recently recruited a new member of staff to help out. "We've just appointed a course developer, whose role is twofold," he says. "We need to move the programme forward considerably to fit Framework 5 and the QCF qualifications. But the other challenge is to continually update the content of the programme, in light of technology on the vehicles."

Hetherington understands why awarding bodies cannot continually update the course, and hence how the national curriculum becomes out of date, but believes this is to the advantage of truck manufacturers. "We are able to update the curriculum with details, such as the latest fuel injection system on an Actros or the latest brake system on an Atego. As well as using it in our own scheme, we can then feed that back into the national curriculum."

One of the schemes Hetherington is keen to see included is irtec. "We have tried to facilitate irtec, but never managed to include it in the programme," admits the Mercedes-Benz man, adding that it is very much back on the agenda for 2011. "We hope to integrate irtec into this year's apprentice technician starters, at a service maintenance level, so that they will meet the national qualifications as well as our own Mercedes Benz competence standards."



setup allows them to have their own workplace, and maximise knowledge intake and experience.

The apprentices also have access to a range of vehicles, from Vito, through Axor to Actros. "The Star diagnostics unit allows the students to get all the workshop information and diagnostics tools they would get in the workplace," he explains.

The Mercedes-Benz scheme is formed of 20 one-week blocks, but extra work is doled out through e-learning and other small projects. "We like to challenge them by giving them situations to consider," Hetherington states. "They also have the opportunity to find out more about new technologies, but only at a superficial level, because they are still apprentices and they need to get the basics first and foremost."

Alternative powered commercial vehicles also come under the new technologies that the Mercedes man talks about: "In the case of the Canter hybrid that operates in London, we train the relevant dealers in hybrid technology, but we give our apprentices a small amount of information too. The amount of information reflects their responsibility within the company, and it makes the apprentices more mature."

Meanwhile, apprentices sign up for a four-year programme with S&B. "The scheme covers three years with us and then a one-year products programme," furthers Winter. "We put them through the irtec licence and then some of them are selected in the fifth year to undertake a management course as well."

Within MAN and Stagecoach, S&B works with apprentice coordinators, and the training organisation's assessors go out to individual dealerships and garages. "We work closely with dedicated apprentice people, to the point of making the programme bespoke to the company," says Winter. "We run the side of the qualification required by government, but we also do all the work towards building qualifications for individual apprentices."

Small-scale apprenticeships

Keri Ashton is human resources manager, resourcing and development, at Fraikin, which provides fleet management, contract hire and rental and leasing schemes, with optional R&M packages. In 2007, this company established a central management system for its apprentices – getting away from its previous locally managed workshops around the country.

"The learners were due to go to their local college, but one of the problems was with attendance, which made the systems not very well subscribed," recalls Ashton. "They were also working on out-of-date equipment and there was a poor reporting mechanism with the training company."

Now, on the current scheme, Fraikin apprentices undertake four two-week blocks every year for three years at City of Bristol College. "Every block is a week of theory and a week of technical," she says, stating that there are around 25 to 30 apprentices currently on the scheme. "They start week one, year



one, with basic health and safety, and have theory-based test and practical assessments throughout the year." Students gather a portfolio of work from the workplace, which counts towards the final qualification, an NVQ level 3 in heavy vehicle maintenance and repair and a technical certificate.

Like the Mercedes scheme, Fraikin's apprentices have workshop access to vehicles from 3.5 tonne vans to double-deck tractor and trailer units. Ashton says the only difference is that the vehicles are sourced from more than one manufacturer, allowing trainees to become familiar with a range of systems, not just concentrating on one company or vehicle. "They get the opportunity to be exposed to a lot of product," she points out.

Ashton maintains that apprentices can expect to work with all sorts of mechanical and electrical items during their time at Bristol, as well as the diagnostic tools. "The first year is all about foundation skills, before they move on to vehicle technology." By the second block, apprentices are responsible for 60,000 mile services and, in block three, they are removing and replacing front and rear disc brakes. "In their final block of training, they get to deal with injector units and other technical components. As they get more advanced, so do the tasks they undertake. We've never had anyone fail, but some of them take a bit longer to complete their NVQ portfolios," she admits.

Choosing an apprentice

What about selecting the right people? Since demand for apprenticeships massively outweighs supply, selecting the right ones is difficult. Having been there many times, Winter has some words of advice: "The person you employ needs a minimum of Grade C GCSEs, because employers are looking for thinkers and there is a lot more electronic

problem-solving today. Diagnostic tools do help, but technicians' responsibilities are much greater than they were 30 years ago."

As an example, Winter points to the vehicle body industry, which uses a lot more chemistry nowadays, in terms of composite materials and processes. "As many parts on vehicles are glued together, you have to know about chemicals; the quality [of apprentice] has to be better, because of this increased technology spectrum."

One of the other challenges is trying to hang on to apprentices when they have completed their courses. "Within MAN, there are a number of initiatives that take them beyond 20 years old," explains Winter. "MAN sees the value in keeping hold of them and is committed to apprentices, because of the aging workforce," he adds. "They would rather replenish their workforce with their own apprentices than get someone that has been on a Volvo apprenticeship, for example."

"Apprenticeships are a big part of our future," continues, Hetherington, revealing that the company's schemes have an 80% success rate. "We monitor those apprentices that still remain within the company after 10 years, and the average is around 50%"

TNT is the same, according to the S&B man. "It wants its new seedlings to be TNT people, and works to grow them from the beginning, and to live their brand." Winter also observes that those in large companies have the biggest opportunities to progress. "MAN is unique, with its mandatory minimum three-year courses,

because, from the first year, they have the opportunity to go on product courses at its Swindon headquarters," he explains.

Hetherington, who has been on the books at Mercedes-Benz for nearly 20 years, also realises the importance of 'branding' the apprentices and, in his experience, that pays dividends. "Getting the brand knowledge into them is very important. We guarantee the whole programme ourselves and it is residential at Milton Keynes. That means we have a captive audience and we can dictate, to an extent, what they do and where they go. It is that level of pastoral care that is needed and, I think, appreciated by the students.

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