



**Qualitative engagement with learners in
the engineering, advanced
manufacturing and energy sector**

For Qualifications Wales

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Executive Summary



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About the research

As part of its Sector Review of qualifications in the engineering, advanced manufacturing and energy sector, Qualifications Wales commissioned Strategic Research and Insight (SRI) to conduct qualitative research with learners across Wales.

The research explored the following key themes in relation to selected qualifications in the sector; range, nature and efficiency; assessment arrangements; the sufficiency of Welsh medium provision; the extent to which the qualifications' knowledge and skills requirements reflect current knowledge; and best practice.

Methodology and approach

SRI conducted 42 focus groups involving 362 learners who were studying for 23 different Level 1, 2, or 3 qualifications from a range of awarding bodies.¹ The focus groups were conducted in eight schools, eight Further Education (FE) colleges, and seven work-based learning settings across Wales. Of the 362 learners who participated, 86 (24%) were based full-time at secondary schools; 211 (58%) were based full-time at FE colleges; and 65 (18%) were work-based.

Qualifications Wales selected a balanced sample of settings from across Wales including a variety of Welsh medium, English medium and bilingual centres. SRI conducted three focus groups in Welsh and all others in English, in line with the participants' preferences.

Nearly all learners were male, and between three and sixteen learners took part in each focus group. SRI used two semi-structured topic guides² to gather data from participants: one for school and college-based learners, and the other for work-based learners. The key findings are outlined below in line with the themes covered by the topic guides, which were aligned with the project's aims and objectives.

Key findings

Background, motivations and future plans

The majority of college and work-based learners were only studying one learning programme. However, many of these learners were also studying maths or English qualifications, such as GCSEs or Essential Skills Wales qualifications. Most school-based learners were studying GCSEs, A levels, and/or other BTECs alongside their sector qualification.

Most learners were motivated to do their qualifications by their interest in the sector. Many were also driven by their preference for practical work; the influence of family and friends; the perceived availability of jobs and range of roles; and their earning potential in the sector.

Learners' future plans varied. Most school-based learners planned to progress to study A levels or go to college. Most Level 1 and Level 2 learners

¹ A list of the qualifications studied by the learners who participated in the research is included in Appendix 1.

² Both topic guides used in the research are included in Appendix 2.

planned to continue with their studies. Level 3 college learners hoped to find a job or apprenticeship and few anticipated doing further study. Apprentices hoped to be offered a full-time job.

Overall, learners felt that their current qualifications would help them to progress in education or work. However, a few school-based learners did not plan to continue in this area of learning. They were disappointed because their qualifications contained far less practical work than they had expected.

Information, advice and guidance

Learners received various types of information, advice and guidance, which most found useful. Most learners spoke individually with staff at schools or colleges or went to an open day there. A few did taster sessions before enrolling on their qualifications. Learners also obtained information, advice and guidance from careers advisers, former learners, friends and family, and websites. Several groups of work-based learners and a few college-based learners did not receive any information, advice and guidance before starting their qualifications. Most of these learners were unconcerned by this.

Most learners were satisfied with the content and the amount of the information, advice and guidance they received. Some would have liked to have known more about the qualifications' content and structure; workload; and employer links.

Problems arose in a few instances where learners felt that they had been misinformed by college tutors or careers advisers about progression pathways and career options. In addition, a few learners had been placed on courses that they did not originally apply for. A small number of learners told us that their schools and careers advisers encouraged university pathways over apprenticeships.

Qualification content

Qualifications usually contained a fairly equal balance of practical/workshop and theory/classroom content.

Nearly all learners enjoyed the practical side of their qualifications more than the theory. They felt that the practical elements complemented their hands-on learning style and were more relevant to their future or current job roles. However, many learners acknowledged the value of the theory content, and noted that some qualification components would not work as practical sessions.

Some learners questioned parts of their qualifications' relevance to their current or future jobs. Although this has greatly affected a few learners' enjoyment of their qualifications, for most, this was not an issue. These learners felt that covering less relevant topics had helped them to develop a broader understanding of their subject and stimulated their interest in it.

Numerous learners suggested that they, and their employers, should liaise more closely with colleges and learning providers to ensure that their qualifications were more relevant to their current and future roles. Several learners from across the qualifications we explored suggested topics that they would like to see included in their qualifications in the future.

Although most learners did not enjoy learning maths, a few welcomed the opportunity to do so. Learners highlighted the importance of ensuring that the maths they learned was relevant to their qualifications.

Delivery

Overall, most learners told us that they were broadly happy with the delivery of their qualifications. However, administration and staffing problems (along with the inaccurate information, advice and guidance discussed elsewhere) at two settings had affected learners' enjoyment of their qualifications. These issues had limited a few learners' progression options and led to some of them not completing their qualifications.

Most learners were happy with the pace of their qualifications and valued the opportunity to learn independently. Coming to college was a welcome break for some work-based learners, but an inconvenience to others. Some learners suggested that teaching staff should consider the prior knowledge and experience of learners when developing their scheme of work for the course. Several appreciated being taught by sector specialist staff and those with direct industry experience. A handful of learners who were not taught by sector specialist staff noted that this had impacted on their understanding of the subject.

Technical and specialist equipment

Equipment was usually available, accessible, of sufficient quality, and in acceptable condition. Learners in larger classes sometimes had to wait to use equipment, particularly at the start of term. To remedy this, teaching staff often rotated tasks.

Some learners expressed the importance of being able to use the same equipment in school and college as in the workplace. In some cases, the equipment at colleges was more sophisticated than in workplaces. In others, workplaces had more sophisticated equipment than colleges.

A few learners had been unable to use equipment due to it being damaged. Having some unfamiliar or damaged equipment prevented learners from getting the most out of their qualifications in a small number of cases.

Not all qualifications specified the use of some equipment, and not all teachers were trained to use certain equipment. Some learners listed items of equipment which they would like to use as part of their qualifications such as 3D printers and full Computer Aided Design packages.

Learning in Welsh

All college and work-based learners told us that they were offered the opportunity to study their qualifications in Welsh or English. School-based learners studied their qualifications in Welsh, English or bilingually depending on their school's language medium.

Around three-quarters of learners studied their qualifications in English because they did not speak Welsh. Of the remaining learners who spoke Welsh, around half chose to study their qualification in English; around a quarter studied some parts in Welsh and some parts in English; and a quarter studied all parts in Welsh. The majority of learners who studied all parts of their qualifications in Welsh were school pupils.

Most Welsh-speaking learners who studied their qualifications in English did so because they found the technical terms more difficult in Welsh, and because English was the main language in the workplace. Learners valued being taught by bilingual staff where available so that they could clarify terminology in both languages.

Several learners who studied their qualifications in Welsh had either already learned some technical terms in English or would like to do so in future. They

felt that this would help them in the workplace. Some noted that any translations need to be done carefully to ensure their accuracy.

Employer involvement

Most school and college-based learners had not engaged with employers. Those who had engaged with employers had visited workplaces; had employers visit them; had been out on work experience; or had been to careers fairs. Some school and college-based learners went on work experience during holiday periods. Larger employers were usually more heavily involved than smaller employers with their work-based learners' qualifications.

In a few cases, colleges had helped learners to find work experience. However, in two instances, learners told us that their colleges had promised to help them to develop employer links, but this support had not materialised.

Learners who had engaged with employers as part of their qualifications greatly valued these opportunities and would like to have more of them. Many of those who had not engaged with employers expressed the desire to do so in future.

Assessment

Approaches to assessment varied by qualification but most learners were assessed through a combination of theory/classroom-based work, and practical/workshop-based work.

Most learners were satisfied with how they were assessed, although we identified some isolated assessment-related issues in a very small number of groups.

Most learners found their assessments fair and manageable and expressed a strong preference for ongoing assessment over exams. They valued having enough preparation time for, and support with, their assessments. They also valued the opportunity to resubmit assessed work.

However, a few learners reported that their assessments were difficult to interpret. In a small number of cases, assessment questions were worded ambiguously or included poor quality, outdated diagrams. This made them hard to interpret. Also, a few learners felt overwhelmed by their assessment workload. This had affected their enjoyment of their qualifications.

Around three-quarters of Welsh-speaking learners were assessed in Welsh, in line with the proportion who studied their qualifications in Welsh. Of these, a few experienced difficulty with Welsh-language technical terms.

A few learners suggested that their assessments would be better if they were shorter; if learners could choose their own topics; or if they could be submitted online.
