

PHASE II: AUTO CHAMBER RESEARCH

TITLE: The capacities of technical schools and TVET colleges to meet the training needs of the automotive industry

Purpose

The goal of this study was to assess the capability of Technical Schools and Technical Vocational Education and Training (TVET) Colleges and their ability to meet skills requirements of the OEMs.

Research methodology

The research process comprised two main elements:

- A literature review to highlight findings that have been made in respect of the relationship of vocational education and training to automotive industry/employment.
- Qualitative research in a sample of technical high schools and TVET colleges, in provinces with an automotive industry presence. Focus groups were conducted with homogenous (rather than mixed) groups from the identified three sectors: technical high schools, public TVET colleges and OEM companies. A multi-stage approach was undertaken in this study. In the first stage a reference group was convened consisting of representatives from Ford Motor Company, VW, Mercedes and Further Education and Training Institute (FETI) in order to discuss and sharpen the research questionnaire. The research was piloted in the Eastern Cape and then rolled out to Gauteng and KZN.

Key findings

Teaching capability

Public Technical High Schools and TVET Colleges generally are confronted by the challenge of an aging cohort of lecturers with insufficient qualifications and recent work experience to teach students for effective employment in the automotive industry.

Learning capability

Both TVET Colleges and Technical High Schools reported on students struggling with fundamental subjects of Mathematics and English with low throughput rates, whereas competence in these fundamental subjects is a prerequisite for employability within the automotive sector.

Moreover, the tight scheduling of curriculum at these institutions does not provide sufficient time within the academic year for exposure to workplace learning. It was

however noted that colleges and technical high schools do have approximately 3 months of the year where teaching does not take place which could be used for workplace exposure.

Infrastructure capability

TVET Colleges and Technical High Schools lack sufficient training infrastructure and equipment to adapt to the needs of an automotive industry that requires continuous changes in technology. Private technical high schools, particularly in KwaZulu Natal appear to have sufficient infrastructure and equipment for the needs of the automotive industry, but the mode of training is primarily focused on the delivery of NATED theoretical training. Of concern is the fact that industry reported on donations of equipment to public TVET colleges and Technical High Schools that have been stolen or not properly maintained. This has led to a breakdown in trust, which may negatively impact on the willingness of automotive companies to provide equipment donations in future.

Decision making capability

The capability of Technical High Schools and TVET Colleges to organise their own resources to maximise teaching requires a broader understanding of the context within which Technical High Schools and public TVET colleges operate. Both operate within a strict regulatory environment that does not allow much leeway for autonomous decision-making by these institutions. Curricula is prescribed by the Department of Basic Education (DBE) and Department of Higher Education and Training (DHET) as well as numbers of enrolments with prescribed entrance requirements. Private technical high schools are not as strictly regulated and therefore are able to be more responsive to industry needs.

Leadership capability

The recent recapitalisation of public TVET colleges has been primarily aimed at infrastructure rather than human resources. Within this context, management and leadership are required to maximise their resources. A key problem identified was the changing of leadership and management at public institutions, as agreements made between institutions and automotive manufacturing companies appeared to depend on management at the time. Changes in management and leadership appear to have affected college/school and industry partnerships. Whereas the DHET and DBE have set performance management targets for their respective public institutions, partnerships with industry for student workplace experience and lecturer exposure to industry do not form part of these agreements.

Resource capability

Well-resourced colleges and technical high schools appear to have much stronger linkages with the automotive manufacturing industry than historically disadvantaged institutions. While a need for bridging programmes and additional foundational learning has been identified by public technical high school and TVET Colleges, these institutions do not receive systemic funding for these activities and are therefore unable to respond adequately to these needs.

Partnerships

Engagement with the community and broader stakeholders appears to be adhoc and dependent on leadership of the institutions. In some cases, industry worked directly with lecturers to identify potential students, whereas at the upper end of the scale, successful collaboration with the automotive industry requires full commitment from both leadership and management as in the case of the North West College partnership with an automotive manufacturing company.

Communication capability

The alignment of Technical High Schools and TVET Colleges to industry expectations appears to be characterised by a lack of communication between public institutions and industry. This can be seen through technical high schools and TVET Colleges requests for assistance from industry in the form of equipment and exposure to the workplace, whereas industry has indicated that its own attempts to work with public institutions have not been generally successful. Private technical high schools have more frequent engagement with industry. In KwaZulu Natal and the Eastern Cape, industry engagement with public technical high schools and TVET Colleges appears to have been compromised by previous engagements that have not resulted in lasting partnerships, with industry reluctant to re-engage with institutions that have not met their expectations. Industry has raised serious concerns with the quality of learners emanating from these institutions, but there is little evidence of close working relationships between industry and public institutions on issues such as curricula and workplace exposure to improve gaps in teaching.

Policy implications

The DBE and DHET have both raised the need for closer collaboration between technical high schools and TVET Colleges in areas of curriculum and shared resources, but to date there appears to be minimal evidence of any engagement. There are currently three curriculum interventions for the successful training of automotive manufacturing artisans namely: Technical High Schools offering CAPS 2 education with low levels of practical and workplace training; TVET Colleges offering NATED and NCV curricula that do not easily address automotive manufacturing company needs, and in-house company training of apprentices to become artisans. Private technical high schools generally NATED theoretical programmes. In all of

these curricula interventions, there are key gaps and a need for closer communication to address issues affecting graduate employment within the automotive industry. Differentiation of technical high schools and TVET Colleges has been raised within policy but there has been little movement on differentiation of public institutions to address training needs of particular industries, such as the automotive manufacturing industry.

Recommendations

The following were the recommendations to the merSETA Auto Chamber, industry stakeholders and education and training providers to identify potential solutions that better align education and training provision to the needs of the OEM industry.

- The establishment of a stakeholder forum including representatives from the DBE and DHET may provide an opportunity to identify new forms of collaboration that better align education and training provision to the automotive manufacturing industry's training needs. It is recommended that the merSETA Auto Chamber could perhaps approach both the Department of Basic Education and the Department of Higher Education and Training to discuss the possibility of a pilot process to better align education and training provision between Technical High Schools and TVET Colleges. This may be more feasible when the NATED review process being conducted by the Quality Council for Trades & Occupations (QCTO) is finalized.
- The possibility of establishing a pilot for the differentiation of Technical High Schools and TVET Colleges should be explored, whereby industry selected public institutions are identified and resourced to develop a strong focus on education and training for the automotive manufacturing industry. As this industry features strongly within South Africa HRD strategy and National Development Plan, motivation for a possible differentiated model of provision may be possible.
- Existing best practice identified in this research from both public and private education and training providers needs to be circulated to training providers as a means of improving education and training delivery.