



Directorate of Vocational Reviews

Review Report

BAS Aircraft Maintenance Training (BAS-TC)
Muharreq
Kingdom of Bahrain

Date Reviewed: 20-22 January 2014

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The Directorate of Vocational Reviews

The Directorate of Vocational Reviews (DVR) is part of the National Authority for Qualifications and Quality Assurance of Education and Training (QQA) that was officially set up in 2008 as an independent body governed and supervised by the Council of Ministers. Established to raise standards in vocational education and training, the DVR is responsible for monitoring and reporting on the quality of vocational provision, identifying strengths and areas for improvement, establishing success measures, spreading best practice and offering policy advice to key stakeholders, including the Ministry of Labour and the Ministry of Education.

Reviews are based on the DVR's *Review Framework*, and carried out on providers' premises by teams of carefully selected and highly trained reviewers. All providers are invited to nominate a senior member of their staff to participate in the planning of the review, and to represent them during review team meetings. Reviewers examine a range of evidence before arriving at a series of judgements and awarding grades for the quality of the provision.

Review grades are awarded on a four-point scale:

Grade description	Interpretation
1: Outstanding	This describes provision or outcomes that is/are at least good in all aspects and outstanding in the majority.
2: Good	This describes provision or outcomes that is/are at least satisfactory in all aspects and good in the majority. There may be some particularly successful approaches or outcomes.
3: Satisfactory	This describes a basic level of adequacy. There are no major areas of weakness which substantially affect what learners, or significant groups of learners, achieve. There may be some features which are good.
4: Inadequate	This describes situations where major weaknesses in some areas affect the outcomes for learners and outweigh any strengths in the provision.

Introduction

Description of the provision

BAS Aircraft Maintenance Training (BAS-TC) is owned and operated by Bahrain Airport Services (BAS). The centre was established in April 2004 and is licensed by the Ministry of Labour. BAS-TC is an approved centre for the European Aviation Safety Agency (EASA part 147) to offer externally-accredited programmes on aircraft maintenance, such as EASA part-66 B1 (Mechanical) and B2 (Avionics) programmes, that require about 2400 guided learning hours to be completed over a two-year period, followed by a two-year EASA Part-66 work experience programme. In the year 2012, BAS-TC became a certified centre for Edexcel to offer Higher National Diploma (HND) in Aeronautical engineering.

During the last three years, BAS-TC enrolled a total of 1411 learners; 212 and 470 were enrolled in 2011 and 2012 respectively, and in 2013, 729 learners were enrolled. Most learners are aged 19 years and above, and are self-sponsored.

BAS-TC operates from one centre in Muharraq. The centre is run by a team comprising of a senior manager who reports directly to the BAS Chief Executive Officer, who also acts as the Accountable Manager for the BAS Aircraft Maintenance Training centre as per the EASA requirements. The centre also employs a training administration officer, a training administration assistant, and seven full time trainers. BAS Aircraft Maintenance Training also has a pool of part-time trainers who are utilised as required.

Scope of the review

This review was conducted over a three-day period, by a team of five reviewers. During the review, reviewers observed sessions, analysed data about the courses, examined learners' written and other work, studied documents and materials provided by the centre and met with staff, learners and trainers.

This report summarises reviewers' findings and their recommendations about what the provider should do to improve.

Table of review judgements awarded

Overall Effectiveness	
How effective is the provision in raising learners' achievement and meeting the full range of learners' and stakeholders' needs?	Grade: 3 Satisfactory
Learners' Achievement	
How well do learners achieve?	Grade: 3 Satisfactory
Quality of Provision	
How effective is teaching and/or training in promoting learning?	Grade: 3 Satisfactory
How well do programmes meet the needs and interests of learners and stakeholders?	Grade: 2 Good
How well are learners supported and guided to achieve better outcomes?	Grade: 3 Satisfactory
Leadership and Management	
How effective are leadership and management in raising achievement and supporting all learners?	Grade: 3 Satisfactory

Review judgements

Overall effectiveness

How effective is the provision in raising learners' achievement and meeting the range of learners' and stakeholders' needs?

Grade: 3 Satisfactory

BAS-TC's overall effectiveness is satisfactory, as are all aspects of the provision except for the quality of programmes, which is graded good. The majority of learners gain and develop suitable vocational skills in the field of aircraft maintenance and make proper progress considering their prior attainment. Almost half of learners on EASA programmes achieve their objectives. However, a few of those achieve after several attempts and learners' achievements on B1 is marginally better than B2 programme. As observed during sessions, the majority of learners are able to work independently and as part of a group. Although learners are generally attentive to their learning, they are not always self-motivated. Trainers are qualified and knowledgeable in the vocational subjects they teach. They use their professional experience in delivering their training sessions, and use a range of vocational-related examples to enrich the learning experience. Trainers generally deliver sessions that are suitably planned with effective linkage among topics and sessions. BAS Aircraft Maintenance Training's offers a range of aircraft maintenance programmes that are externally-accredited and meet the needs and aspirations of most learners and parents. Additionally, these programmes are well-structured and planned according to the accrediting bodies requirements. However, the centre does not conduct a purposeful market survey to decide on its offering, it remains largely reliant on individuals' market experience.

BAS-TC's staff and trainers provide useful support to learners during their course as stated in most of the learners' feedback. General information about rules, regulation and attendance policy are provided to learners before the start of a course. Additionally, extra revision sessions are offered to learners who need them; these are normally provided at the end of each module and before the final external examinations. Although the centre maintains records about learners' progress and achievements, feedback is only general, as learners are not informed precisely what they need to do to improve.

The centre has clear vision and mission statements and detailed departmental plans that are relevant and focused well on learners developing academic and practical skills and knowledge in the field of aircraft maintenance. Furthermore, BAS-TC's quality assurance procedures are adequate for the centre's operation. Although BAS-TC's organisational structure meets the needs of the centre, high turnover on the management and trainer staff hinders the timely implementation of its improvement actions. The centre recruits qualified

trainers with broad experience and deploys them effectively within their specialisation and the quality of their training is assured through a useful lesson observation scheme, followed by a detailed visit report that highlights critical issues. However, areas for improvement identified in those reports are not pursued effectively by the management.

BAS-TC has a satisfactory capacity to improve. The centre has managed to maintain steady enrolment for the last three years; enrolment in the year 2013 has increased to 729 from 470 in the year 2012. Almost all learners complete their modules and advance to the next level. In 2012, BAS-TC's established an affiliation with Edexcel to widen its programmes, and the centre is planning to introduce more specialised programmes in the field of aviation, such as auditing techniques, fuel tank safety and aviation security. Appropriate resources and management structures are in place to fulfil the centre's aims and deliver its programmes. Nonetheless, the turnover amongst the management team is alarmingly high. The centre maintains purposeful records about learners' achievements however, these are not monitored well by the management team. Moreover, Aircraft Maintenance Training does not systematically seek the views of stakeholders to inform its improvement plan.

Learners' achievement

How well do learners achieve?

Grade: 3 Satisfactory

Learners' achievement at BAS-TC is satisfactory overall. Assessment records and work samples of learners exhibit that the majority of them develop relevant vocational skills in aircraft maintenance and gain suitable knowledge; and make proper progress considering their prior attainment. Some learners commented that the two years of theory is crucial and beneficial for their future career.

According to the analysis of learners' performance data (LPD) provided and the centre's records, the retention rate is high for the last three years at 98%, and the overall pass rate of BAS-TC is around 56% for both EASA and HND programmes, which is acceptable for these types of programmes. Almost half of learners on the EASA programme achieve the course modules on the theoretical part; namely on the B1 and B2 programmes. However, a few of them achieve this after several attempts. Moreover, learners' performance on the B1 programme is marginally better than those on the B2 programme. Learners need to complete their practical part and theoretical modules to achieve the programme certification. However, a minority of learners do not achieve the programme objective they aim for, especially those on the B2 and the HND programmes.

Scrutinising the provided learners work exhibits that learners make satisfactory progress on the EASA and the HND programmes. Learners' achievement on the HND programme is measured through summative assessment, where on EASA the institute uses various practical assessments developed externally and sometimes in-class activities to measure the acquired skills. However, the institute does not evaluate how well learners are progressing while attending the theoretical parts of EASA modules.

From the observed sessions, scrutiny of learners' work and meeting with a group of learners, the majority of learners are able to work independently and sometimes as members in group. They are generally attentive and enjoy their learning experience at BAS-TC, but they are not always self-motivated. A few individuals, however, reflect critically on how they are progressing and what they need to do to improve. The centre has clear attendance and punctuality procedure and policy, which are rigorously enforced; learners should attend a minimum of 90% of the module duration to be eligible to sit for the final examination. According to attendance records, the attendance rate is 92% for the last three years, and the outcomes of the observed sessions confirm the attendance is generally good. Punctuality policy has been put in place recently; learners are not permitted later than 15 minutes after the start of sessions. This was confirmed through lesson observations.

The quality of provision

How effective is teaching and/or training in promoting learning?

Grade: 3 Satisfactory

Most BAS-TC trainers are knowledgeable and have relevant practical experience in the field of aircraft industry. Trainers' professional experience is reflected in their explanations and responses to learners' questions as well as in providing a range of vocational-related examples, as was noted in most of the observed sessions. However, the training methodologies used to deliver the theoretical sessions are mostly a trainer-centred approach. Learners' attentiveness and engagement are clearly seen in the observed sessions, where the majority of learners respond appropriately during the question and answer sessions. Trainers pay sufficient consideration to learners' varying needs during the majority of sessions, with useful support given to the less able ones.

The majority of sessions observed were suitably planned, with effective class management and useful linkages between the previous sessions and the newly presented topics. However, these session plans are not informed well by learners' prior attainment or the outcome of their continuous assessments. Usually sessions start on time with clear objectives that are shared with the learners and appropriate recapitulation is provided where learners

are engaged. Most sessions are supported with sufficient learning resources and material which are deployed effectively to facilitate learning; such as smart-board, relevant PowerPoint presentations, flip-charts, videos, pictures, samples of aircrafts parts and equipment. In the workshop sessions learners are provided with a suitable range of hands-on practical activities that are monitored well by the trainer.

During sessions, learners' understanding is usually assessed through a suitable range of questions and answers, and in-class practical activities. Summative assessment is conducted through final examination for most programmes. Moreover, the HND programme has a number of other summative contentious assessments such as assignments, projects and case studies. The marking for HND modules is mostly accurate and targeted only for pass criteria, and general feedback is provided to learners.

Learners' achievements records are maintained effectively for all the HND units and for the EASA practical assessments only. However, insufficient records are maintained about learners' progress during a course for the EASA theoretical part and the 'Type Rating' specialised courses.

How well do programmes meet the needs and interests of learners and stakeholders?

Grade: 2 Good

The centre operates in a niche market, offering a range of aircraft maintenance programmes. Programmes include aircraft maintenance basic licenses EASA part-66 B1 (Mechanical) and B2 (Avionics) programmes. Generally, the aforementioned courses span over a four-year period: two-year theoretical and two-year practical. These are essential for all engineers that perform maintenance on civil aircrafts. In addition, there is a selection of courses designed for already licensed engineers namely 'Type Rating courses'. Such courses enhance learners' knowledge about a specific type of aircraft which eventually leads to licensing engineers to operate on a given type of aircraft. To widen the employability of its learners, the centre also offers Edexcel HND Level 5 qualification.

The nature of aircraft industry implies that programmes are well-structured and planned according to accrediting bodies requirements. BAS-TC Programmes content and requirements are sufficient and are regularly reviewed and updated according to EASA requirements. These are based on what is detailed in their Maintenance Training Organisation Exposition 'MTOE' and the Training Procedure Manual (TPM) documents. The aforementioned documents are approved and updated according to EASA instructions.

Offered programmes adequately meet the needs and aspirations of most learners and parents. However, learners' abilities in a few cases are below the programme requirements. The centre provides an effective range of resources to help learners meet their objectives during a course. Most practical workshops are equipped suitably to deliver the main basic concepts covered in the theoretical modules of the EASA programmes. Moreover, sufficient practical activities are provided for learners through workshop sessions to enrich their learning experience. Learners are also offered useful extra-curricular activities. These are in the form of line-maintenance observations and visits by external keynote speakers from the industry. BAS-TC management does not conduct purposeful labour market research to assess the current programmes, and decide on future offerings; the centre depends entirely on individuals' market experience to inform programme offerings.

How well are learners supported and guided to achieve better outcomes?

Grade: 3 Satisfactory

BAS-TC's staff and trainers provide appropriate support to learners to overcome their learning difficulties. The majority of the interviewed learners are satisfied with the support provided to them by staff and trainers; they find them cooperative, friendly and approachable. Prior to the start of a course, learners have to sign an agreement along with suitable induction provided to them about Aircraft Maintenance Training provision, such as general information about rules, regulations and punctuality, and attendance policy. Furthermore, learners are made aware of the assessment methods used during the course. Generally, trainers are helpful in and outside the sessions; a one-hour revision class is provided to all learners at the end of each unit and specifically to low achievers. Additionally, a class advisor is assigned to each group of learners to assist them with their academic achievements. Moreover, learners who fail their first attempt on EASA external final examination are provided with extra revision sessions. Where applicable, Aircraft Maintenance Training is sufficiently flexible in the arrangement of the timing of the programme delivery to suit the learners' needs.

Although the institute keeps records about learners' progress and performance, these are not shared with the learners and only general feedback is provided to them during the course. Learners are not informed precisely what they need to do to improve further. Furthermore, learners' individual's progress reports are shared with them only after final examinations to inform them on their scored grades.

BAS-TC maintains a pleasant and inspiring learning environment, which is comfortable and suits the needs of different learners. The teaching classrooms are spacious and sufficiently equipped with training aids. Free access to Wi-Fi is provided to learners while in the centre's premises. All classrooms have comfortable furniture, are well ventilated and are have

relevant educational posters displayed. Additionally, learners have access to workshops and laboratories that are enriched by on-the-job work experience sessions located at the Bahrain International Airport premises. The library facility is appropriate and contains a range of documentation pertinent to aircraft industry and other supporting textbooks.

Detailed and updated programme outlines are available at the centre. These are shared with learners and their parents. Moreover, administrative staff provide useful advice and counselling to learners on course selection and appropriately respond to learners' enquiries. The BAS-TC's website and brochures incorporate sufficient information about programmes on offer.

Leadership and management

How effective are leadership and management in raising achievement and supporting all learners?

Grade: 3 Satisfactory

BAS-TC has clear vision and mission statements focused on learners developing academic and practical knowledge and skills on aircraft maintenance that serves the needs of Bahrain and the regional market, but these statements are not shared always with staff or learners. The centre has a detailed departmental plan, which stipulates relevant objectives, and accountability and specific timescales are identified for each objective. However, there is not a sufficient monitoring procedure to follow up on the implementation of the improvement actions. BAS-TC has a quality assurance procedure document that is fit for purpose and is updated regularly. Although, an internal audit and verification processes are conducted annually to assess examinations questions, and areas for improvement are clearly noted, the centre does not always ensure that improvement plans have been acted upon.

BAS-TC organization structure is suitable for the type of programmes on offer and the current intake size. However, the centre has a high turnover of management and trainer staff, resulting in delays in the implementation of some improvements actions. Most trainers are highly qualified with broad field experience. Once employed, trainers are suitably inducted and deployed and most are provided with a range of technical development relevant to the subject they teach. Trainers' performance is adequately monitored through a useful lesson observation scheme, which is carried out by senior staff members. A detailed report is completed for each visit with critical issues highlighted. However, areas for improvement identified as a result of these visits are not followed up by the management effectively.

Admission tests, along with personal interviews, are used to assess learners' prior attainment. However, the outcomes of these are not used effectively to admit learners to a level suitable to them, as some learners with very low abilities were admitted to the programmes. The centre's arrangements to monitor and maintain relevant records about learners' achievement are sufficient. Nevertheless, these records are not analysed neither for individual modules nor for the overall programme. Views of learners about the provision are ascertained after each module. However, the management does not ensure that the outcomes of learners' feedback are used effectively to improve its provision.

The centre provides a safe and healthy learning environment for all learners and staff and utilises an external workshop at the Bahrain airport site, which is well maintained. Nonetheless, the centre does not carry out periodic risk assessments. Although the centre has some links with internal bodies within the aviation industry, it maintains limited links with relevant local stakeholders and does not seek their views about the provision. The centre's self-valuation form (SEF) submitted for this review, is critical and provides useful information and cites a range of supporting evidence. A number of the improvement actions recommended by the review team has been identified in the submitted SEF, but most of provided grades overestimate the centre status.

The provider's key strengths

- The knowledgeable and experienced trainers who have the relevant theoretical and practical command of the modules they teach; specifically in niche areas
- The well-structured and planned programmes in accordance to the accrediting bodies' requirement
- The effective academic advice and guidance that are provided to learners during their studies
- The inspiring and healthy learning environment with a range of effective resources.

Recommendations

In order to improve, BAS-TC should:

- improve the quality of training by:
 - enhancing training strategies to better engage and motivate all learners
 - ensuring effective session planning to accommodate the varying needs of learners.
- ensuring that learners' prior attainment is assessed and analysed effectively, and that the outcome is utilised effectively in putting learners at a suitable level
- devise a system to effectively gauge market requirements and use its outcome to improve the offering
- improve leadership and management by:
 - ensuring effective monitoring of identified priorities for improvement
 - ensuring that learners' achievement are utilised to inform decision making.