

**Report on the Accreditation of Study Programmes
at Technical Trainers College, Riyadh, Saudi Arabia
Reference Number 1192-xx-2**



1st Meeting of the ZEvA Commission, February 27, 2018

Item 4.02

Study Programme	Degree	Programme Duration	Type of Programme
Engineering Technology for Vocational Trainers	Bachelor of Engineering Technology	3 years (4 years)	Full-time
Applied Engineering	Bachelor of Applied Engineering	3 years (4 years)	Full-time

Accreditation contract signed on: March 14, 2017

Date of site visit: October 30 – November 2, 2017

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Hanover, February 03, 2018 (amended March 09, 2018)

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- Technical Trainers College, Riyadh, Engineering Technology f. Vocational Trainers,
Applied Engineering (1192-xx-2) -



***I Final** Vote of the Expert Panel and Decision of the Accreditation Commission*

1 Decision of the ZEvA Commission, 27 February, 2018

I. Final Vote of the Expert Panel and Decision of the Accreditation Commission

1. Decision of the ZEvA Commission, 27 February, 2018

The ZEvA Commission follows the experts' report and recommendations and takes note of the College's response.

The Commission decides to re-accredit the Bachelor's programme Engineering Technology for Vocational Trainers (Bachelor of Engineering Technology).

The Commission decides to accredit the Bachelor's programme Applied Engineering (Bachelor of Applied Engineering).

The accreditation of the study programmes is valid for a period of five years.

2. Summary of the Experts' Findings

The Technical Trainers College (TTC) has recently experienced a process of restructuring in regard to supervisory, managerial and programme-related aspects. The change in the provider has come with a plausible reorientation on the programme level, embedded in a more comprehensive strategic reorientation. The change in profile from the (old) programme in Engineering Technology for Vocational Trainers toward the (new) programme in Applied Engineering is convincing. The initial programme intended to educate vocational teachers for a defined range of institutions, especially Colleges of Technology. This strategic goal has been accomplished. The new programme in Applied Engineering fits the newly developed goal of combining a basic, general engineering training with a deepening of subject-specific skills. The experts acknowledge that this reorientation in profile has raised the attractiveness of studying at TTC.

The documented programme in Applied Engineering with its specializations fit the requirements and needs of the national labour market. To ensure a full implementation of all specializations, TTC should ensure that all specializations are substantially covered by qualified teaching staff.

TTC's leadership has shown a clear vision of quality in teaching and learning. This is supported by a strong general interest of the Colleges of Excellence, in developing and implementing quality assurance measures in their educational institutions. The experts appreciate that internal quality assurance is guided by documented policies and procedures.

The experts commend the TTC leadership and departments on their various initiatives to foster co-operative relationships with Saudi and foreign companies. Yet, better cooperation between the Colleges of Technology and TTC is strongly recommended, to raise the qualification level of incoming students. Both institutions should come to a reciprocal assurance of levels of acquired and respected skills.

The College has obviously taken sincere measures to improve the overall level of qualification of its faculty. As results show, there has been a considerable raise in staff qualification. The facilities (classrooms, laboratories/workshops) are adequately equipped for teaching, learning and hands-on training. The experts appreciate the further expansion of the library, including the intended cooperation with KAUST.

TTC has established a coherent structure for student support in academic and non-academic aspects. The teaching faculty has obviously established good ways of direct and informal communication and support, which is commended by the experts.

Due to the consistent use of the European Credit Transfer System, the modularized curricula and well-documented competencies, the TTC substantially supports an international (academic) career after graduation.

2.1 General Recommendations

2.1.1 General Recommendations:

- Automatic recognition of 60 CP/one year of training at the preceding College of Technology-education is a permanent element of the curriculum. Yet, a better cooperation between the Colleges of Technology and TTC is strongly recommended, to raise the qualification level of incoming students, especially in English language, but also in Mathematics, Physics and practical skills. Both institutions should come to a reciprocal assurance of levels of acquired and respected skills.
- Existing laboratory and workshop equipment, esp. in electrical labs, should be better maintained and used more extensively. Furthermore, an update in line with the latest state of the art in industry is strongly recommended.
- The leadership of TTC and its departments should take special interest in a substantial communication of quality assurance results to the student as a general body (student council) as well as individual students/classes.
- Coordinated measures should be taken to facilitate communication between academic disciplines and Departments in a more systematic way to enhance the ongoing improvement of the overall programmes as well as its specialisations. This could take place within as well as between the departments.
- TTC should take great care that students have the chance to gain practical work experiences during their Company Field Practice, i.e. avoid placements that do not allow them to gain access to the work process itself. Special attention should also be given to aligning TTC's learning outcomes with the company field practice. This could also include the possibility to develop the Bachelor's thesis in the company, cooperating with a TTC supervisor.
- TTC's homepage should be continuously updated, to provide current information for interested students on the institutional profile, departments, teaching staff or application procedures.
- In the course of the intended rebuilding and relocation of the TTC campus, the experts recommend providing sufficient dormitories and social facilities on the new premises.

2.2 Programme Related Recommendations

Applied Engineering

- Recruitment procedures shall ensure that qualified teaching staff is always at hand to cover newly introduced specializations. TTC should continue its policy to take the outcomes of quality assurance instruments as e.g. lesson observations into account for professional staff development.

1 Final Vote of the Expert Panel and Decision of the Accreditation Commission

2 Summary of the Experts' Findings

- As the intended learning outcomes of the programme in Applied Engineering are focused on employability in local/national companies, the experts recommend to set up a plan for further enhancing co-operations with future potential employers in relevant sectors of Saudi industry. To this end, the establishment of an industrial advisory board is advisable. The input of the board members should then be considered in the further development of the study programme and its specializations.

2.3 Final Vote of the Expert Panel

The expert panel recommends the re-accreditation of the Bachelor's programme *Engineering Technology for Vocational Trainers* (Bachelor of Engineering Technology) for the duration of five years.

The expert panel recommends the initial accreditation of the Bachelor's programme *Applied Engineering (Bachelor of Applied Engineering)* for the duration of five years.

II Evaluation Report of the Expert Panel

0 Introduction: Purpose, Design and Context of the Accreditation Procedure

II. Evaluation Report of the Expert Panel

Introduction: Purpose, Design and Context of the Accreditation Procedure

It is the purpose of the accreditation procedure to assess the quality of the study programmes “Engineering Technology for Vocational Trainers” (re-accreditation; initially accredited by ZEvA in 2012) and “Applied Engineering” (initial accreditation) offered by the *Technical Trainers College Riyadh*, Kingdom of Saudi Arabia, (TTC) against international standards. The assessment is based on ZEvA’s “Assessment Framework for the Evaluation of Study Programmes” as laid out in the “Manual for Evaluation and Certification of Study Programmes”. This assessment framework is based on the “European Standards and Guidelines for Quality Assurance in Higher Education (ESG)” (ENQA 2015), the “Framework for Qualifications for the European Higher Education Area” (2005) and the “ECTS Users’ Guide” (European Communities, 2015).

The evaluation of both programmes takes place in a period of general societal transition in the Kingdom of Saudi Arabia (KSA) and a period of institutional transition for the TTC. Since about 2006, Saudi Arabia’s higher education sector has been part of the governmental strategy of ‘Saudisation’ with the intention to prepare a larger number of young Saudi citizens (as compared to foreign workers) for skilled and highly skilled jobs in line with the needs of Saudi business and industry. The founding of the Technical Trainers College (TTC) in 2009 by the giz (*Deutsche Gesellschaft für Internationale Zusammenarbeit*) took place under the auspices of the Technical and Vocational Training Cooperation (TVTC) in the Ministry of Labour. TTC’s initial main purpose has been the education of (Saudi) teachers for the vocational training track in post-secondary education, which takes place in so called *Colleges of Technology* (CoT). Graduates of these colleges receive a diploma after two or three years of study, of which one year (equivalent to 60 ECTS-credits) is recognized when pursuing a Bachelor’s degree at TTC.

In July 2016, the UK-based provider *Lincoln College International* took over the management of TTC from the giz; TTC had by then come under the organisational auspices of the *Colleges of Excellence*, a network of privately owned, but publicly funded colleges, now administered by the Saudi Ministry of Education via the TVTC. This latter change matches the wide-ranging programme of reform initiated by the Saudi government, namely the encompassing *Vision 2030* as a strategic roadmap. It includes a focus on aligning higher education with the requirements of the KSA job market and industries’ needs. Furthermore, it entails not only an institutional expansion of higher education institutions, but also a modernization of curricula and teaching methods as well as closer integration of practical experience in study programmes.¹ The *National Transformation Program 2020*, as one of the detailed strategic programmes, also includes a restructuring of Ministries and an expansion of public-private-partnerships in higher education.²

¹ <http://vision2030.gov.sa/en>

² http://vision2030.gov.sa/sites/default/files/NTP_En.pdf

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0 Introduction: Purpose, Design and Context of the Accreditation Procedure

In this context, the initial purpose of TTC has been to train teachers for vocational education mainly in institutions of the TVTC network (*Colleges of Technology*), thus improving the technically oriented vocational track in the Saudi education system and thereby supporting a long-term strategy of *Saudisation*, i.e. equipping young Saudi nationals with work-related skills matching the needs of Saudi-based companies. This initial programme was first accredited by ZEvA in 2012. The accreditation was awarded for five years under a number of conditions. All conditions were acknowledged as fulfilled by ZEvA in December 2015. In 2016, TTC added three new specialisations to its Bachelor's programme in 2016: Business Administration and Management, Automotive Technology, and Industrial Mechatronics. All three were evaluated by ZEvA experts and acknowledged by the ZEvA Commission in November 2016.

More recently, the new provider, the UK-based *Lincoln College Group*, has initiated a restructuring of the TTC and its study programme(s). Perceiving a growing demand for skilled graduates with an explicit work-related approach on the Bachelors' level in different engineering-related sectors in KSA, the former teachers' training Bachelor will be terminated, the last graduates leaving TTC in 2019. Instead, a first student cohort has taken up the newly established programme in "*Applied Engineering*" in February 2017. Currently, TTC pursues a change in name, from TTC to *Applied Engineering College (AEC)*.

The purpose of this quality assurance procedure is thus to re-accredit the programme "Engineering Technology for Vocational Trainers" until its termination and to initially evaluate and accredit the programme "Applied Engineering".

This report is based on the experts' assessment of the self-report submitted by the College and on their findings during the site-visit. It will serve as a basis for ZEvA's Commission to decide on the accreditation of the College's study programmes. In the case of a positive decision by the Commission, ZEvA will award its quality seal for a limited time period, after which the College can reapply for accreditation.

The experts would like to thank the Dean and the Vice Dean of the Technical Trainers College, its staff and students as well as the representatives of Lincoln College International and TVTC/Colleges of Excellence for the friendly reception and the open and constructive atmosphere during the on-site talks in Riyadh.

1. Governance, Management and Profile of TTC

1.1 Mission and Profile of Technical Trainers College

The Technical Trainers College has a unique position in the Saudi higher education system. Its founding in 2009 by the TVTC in co-operation with the German giz was linked with a specific position and purpose, located at the interface of technical vocational education and training (TVET) on the one hand and higher education on the other.

In the Kingdom of Saudi Arabia, secondary school education ends with an awarded certificate (*Tawjihiyah*). Since the 1980s, the Saudi government has established *Colleges of Technology* (CoT) with the aim of providing the labour market with technically qualified national personnel. After finishing secondary education, students might proceed directly to a CoT. The TVTC is responsible for establishing, running, expanding and improving the – mostly two-year – diploma programmes at the Colleges of Technology. The network Colleges of Excellence (CoE) is responsible for funding and overseeing privately owned Colleges (also called ‘Colleges of Excellence’).

The TTC shifted from direct TVTC-oversight into the CoE-framework in 2014. Even more recently, jurisdictional oversight of TVTC and the CoE-network has switched from the Ministry of Labour to the Ministry of Education, thus bringing the TTC closer to other institutional tracks of higher education in Saudi Arabia.

TTC started with the enrolment of students in September 2009. With an intake of about 400, now 500 students per year the total number of students in 2016 was about 1,100. The College’s aim has been to train and educate future lecturers in different fields of engineering, equipped with the skills and abilities necessary to be effective teachers within the Kingdom’s vocational education system. The TTC has been (and still is in Riyadh) the only College in the TVTC/CoE-framework that awards a higher education degree. According to its institutional mission, the initial programme “*Engineering Technology for Vocational Trainers*” with the degree “Bachelor of Engineering Technology” included roughly a 50/50-mix of engineering-related competencies on the one hand and pedagogical vocational as well as practical and language components, on the other hand. English has always been the sole teaching language. Hence, this initial programme has a strong focus on generic skills specifically needed for post-graduate work as a vocational teacher.

With this specific institutional profile, TTC attracted a considerable number of applicants, about 1,500 for an intake cohort of about 500. Most graduated from a diploma programme at one of the numerous Colleges of Technology or comparable TVTC institutions. At the same time, nearly all of TTC graduates were then employed as vocational trainers (about 95 percent), most of them, again, in one of the *Colleges of Technology* or other TVTC institutions.

With the strategic initiative to transfer formerly state-run TVTC-Colleges into public-private-partnerships, the sponsorship has been transferred to *Lincoln College International*, an international division in KSA of the UK-based *Lincoln College Group*, in 2016. Originating from a School of Science and Art in Lincolnshire (already founded in 1886), the Group now operates

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several colleges in that British region with programmes up to Bachelor's level, is involved in cooperative further education with companies and also cross-border education. In KSA, *Lincoln College International* currently also operates a female College.

LCC's mission states: "Employer-led; producing a highly skilled and productive workforce." As TTC's provider, Lincoln College has explicitly stated its strong links with national and international industries. This includes a focus on practice-related skills including technical as well as leadership and management skills, and a high importance of retention rates of its students as well as ensuring employment prospects after graduation.

The talks during the site-visit made clear that Lincoln College has started a strategic process to transform the Technical Trainers College in different respects. First, the phasing out of the Vocational Trainers programme and the recent opening of a new study programme in Applied Engineering has been explained by a saturation of the employment market for vocational trainers/teachers in KSA and insufficient use of existing capacities for student intake. At the same time, the new programme will perpetuate the established, practice-related engineering education part on a more thorough and specialised level (*see also chapters 4.1 and 4.2 of this report*). Secondly, a closer cooperation with national as well as international companies shall raise the benefits of the new programme, i.e. by integrating certification programmes (Siemens, Cisco etc.) into the curriculum or offering them as an extracurricular option. Thirdly, on a more essential level, Lincoln Group is planning to transfer TTC into a newly structured *Applied Engineering College* (AEC). This would include the increased use of an already established cooperation with Hull University (UK) for providing customised opportunities for student and staff exchange as well as Master's and PhD programmes, thus also establishing more research opportunities for local staff. Fourthly, this development goes along with a planned rebuild and relocation of TTC's campus facilities.

1.2 Institutional Governance

Below the supervisory/funding level (Ministry of Education, TVTC, CoE; *see above*), TTC has a central and decentral managerial and academic leadership:

- i) The overarching strategic-managerial leadership is located in the Lincoln College International Board, including the General Manager of TTC.
- ii) TTC's academic executive comprises a Dean, one Vice Dean for Academic Affairs and a Vice Dean for Student Affairs. The recently hired Dean has transferred from Hull University's Faculty of Science and Engineering, where he worked as a Professor for Computer Science.
- iii) On a decentral level, TTC provides four Departments, each with a Head of Department:
 - a) Electrical Engineering
 - b) Mechanical Technology and Electronics
 - c) Information Technology
 - d) English, Education and Enterprise (EEE)

During the transformation from the initial to the new programme, the structure of the first

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three departments has basically been retained. However, due to the now lower curricular proportion of vocational pedagogy, the formerly separate Departments of Vocational Pedagogy, Business Administration, and English Language and Communication have been merged into the new EEE-Department that also includes a subsection on Mathematics/Physics.

All departments have internal units and bodies like Examination Boards, regular intra-Department meetings etc. as well as a bi-weekly Head of Departments Meeting.

iv) The central administration – mostly under the Vice Dean for Student Affairs – encompasses different units, including Students Affairs (with Human Resources, Finance and Procurement) and Information Services.

v) TTC also provides an elected Student Council with currently 22 members (elected from the eleven specialisations). It forms a five-person Administrative Committee, including a Head and Deputy Head of Students Council and three Officers. The Committee has regular meetings with the Dean or Vice Dean of TTC.

Experts' Appraisal

The experts realise that the Technical Trainers College (TTC) has recently experienced a multi-layered process of restructuring in regard to supervisory, managerial and programme-related aspects. While such a process always entails costs, it also offers opportunities for adjustments, restructuring, and strategic reorientation. Nevertheless, the basic profile of the TTC has been retained, with a strong focus on employment-related, applied engineering education for a (now even more) diverse range of engineering subfields.

Taking this into account, the change in the provider has come with a plausible reorientation on the programme level, embedded in a more comprehensive strategic reorientation. The current provider, Lincoln College International, with its strong background in vocational education and training obviously matches the needs and mission of TTC and contributes to the overall goals of enhancing practice-oriented, technical higher education in the Kingdom of Saudi Arabia in general and the strategy of TVTC/CoE in particular.

The experts appreciate the change of supervision from the Ministry of Labour to the Ministry of Education. This increases possibilities for cooperation between the Colleges of Excellence and other institutions of higher education in the Kingdom. For TTC, this might encourage collaboration in more practical terms like pooling of library resources, but also on a more strategic level, e.g. in easing the transition of TTC graduates in (university's) Master's programmes.

The governance and management structures of TTC also match the requirements for a higher education institution. The experts commend TTC on the establishment of a permanent, elected student body in response to one of the experts' recommendations from the initial accreditation report.

2. Faculty, Infrastructure, Student Support and Mobility

Both programmes at TTC share the same structural resources as well as administrative and support services. As the first enrolment in the new *Applied Engineering* programme takes place at the same time as the phasing-out of the *Vocational Trainers'* programme, there is no long-time overlap period in which resources for both programmes have to be provided.

2.1 Teaching Faculty

TTC has provided the experts with detailed and transparent information on its teaching faculty. During the on-site talks, the panel had the opportunity to talk to the Heads of all Departments and with additional members of the teaching faculty.

Achieving a satisfactory level of sufficiently (academically) qualified teaching staff has been one of the main challenges for TTC. In the initial accreditation, experts urged the College's leadership to fill vacant teaching positions with lecturers holding a doctoral degree/PhD. For meeting this request, TTC itself then stipulated that at least one-third of teaching staff should hold such a degree in each Department. While this was quite early complied with in Vocational Pedagogy and ICT, it has proven more challenging in Mechanical Technology. In 2015 ZEvA acknowledged that TTC had taken strong efforts to increase this share and that some impediments are beyond the reach of TTC leadership.

As became clear in the self-report and during the talks in 2017, TTC has now established clear standards and procedures for staff recruitment and staff development. As a minimum, lecturers should hold an academic degree at Master's level and should be able to demonstrate didactic skills and dedication to personal improvement and development. The target that at least 30 percent of the staff should hold a PhD or equivalent degree is still valid.

Strategic instruments for recruiting highly qualified lecturers include, among others, forging stronger relationships with Saudi Arabian as well as UK higher education institutions, developing a pool of associate staff (with PhD), providing incentives (signing bonus, highlighting attractive positions etc.) and developing research opportunities.

Candidates are selected via a two-step procedure. First, College of Excellence checks the credentials of applicants, which should encompass at least five years of teaching experience and five years of industrial experience. Following that, TTC sets up a committee that evaluates the CVs and references. After a successful interview and demo classes, new staff is hired for a three months' probation period.

Some departments (Information Technology, Electrical Technology & Electronics) described a substantial increase in qualified teaching staff and the will to further expand their pool of lecturers, especially in newly established specialisations. One of the former and possibly future strategies was to recruit TTC graduates after a few years of post-graduate teaching experience in CoTs and then offering them qualification schemes inside TTC, now including supporting Master or PhD qualification at the University of Hull. This in-house recruitment strategy has been quite successful, as students hold these lecturers in particularly high esteem.

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TTC also described a strategy to identify – in cooperation with the HR department – curricular areas where highly qualified lecturers can most beneficial, thus also encouraging local or international guest lecturers to provide teaching in these areas.

In addition, TTC has established a policy for the professional development of teaching staff which includes in-service trainings, funding, or attending professional programmes. This scheme also takes results of evaluation procedures (see below) into account.

Experts' Appraisal

The experts commend the self-set standard by TTC of employing only teaching staff with at least a Master's degree. In line with this standard, the College has obviously taken sincere measures to improve the overall level of qualification of its faculty. As results show, there has been a considerable raise in staff qualification since the initial accreditation.

The experts also support TTC's recruitment policy to hire teaching staff with practical professional experience to ensure a constant alignment with current developments in the different industries and related disciplines.

In regard to new specializations – especially Building Technology and Automotive Engineering – new staff for these disciplines is currently recruited. TTC and TVTC shall ensure that the recruitment procedures ensure sufficient knowledge and teaching competencies in regard to these specializations.

TTC should also continue its policy to take the outcomes of quality assurance instruments like lesson observations into account for professional staff development.

2.2 Infrastructure and Resources

The TTC has its own campus located in Riyadh. The premises encompass central administrative buildings, an auditorium, cafeterias and a mosque as well as separate buildings for each Department including classrooms, IT pools and laboratories.

During the on-site visit, the experts received a guided tour most of these facilities, including the laboratories/workshops for mechanical engineering, information technology and electricity/electronics. Some of the premises allow for a combination of practical work and teaching (i.e. providing workbenches as well as whiteboards, seating etc.). Most of the lab equipment was obtained during the initial setup of TTC and includes computers with state of the art CAD/CAM software, modern CNC machines (grinding, turning, milling), devices for different welding processes, as well as comprehensive electrical training facilities and IoT hardware/software.

During the on-site talks, students confirmed that the workshop equipment available was sufficient and especially commended TTC on the long opening hours and on providing each student with a laptop to facilitate work at home.

The campus also houses a library, mostly equipped with textbooks in multiple copies for the

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specializations offered. Access to (e-)journals is currently limited. As explained by the Head of Library, the shift of TTC from the supervision by the Ministry of Labour to the Ministry of Education will allow a closer cooperation with other (state) higher education institutions, especially the King Abdullah University of Science and Technology (KAUST) near Jeddah with its strong focus on Engineering and Economics. If established, this cooperation will soon give TTC students access to electronic resources like e-books and e-journals.

Experts' Appraisal

The classrooms are well-kept and adequately equipped for teaching and learning. The overall standard of the workshops/laboratories is on a good level. The mechanical workshops are well equipped and provide sufficient opportunities for hands-on training and experience. Yet, the equipment at hand, esp. in electrical labs, should be better maintained and used more extensively. Furthermore, an update in line with the latest state of the art in industry is strongly recommended.

The panel appreciates the further expansion of the library. The intended cooperation with KAUST which would provide access to the Saudi higher education databases and e-resources is fully supported by the experts.

During the talks, students mentioned the high costs for obtaining accommodation in Riyadh, especially when moving to the capital from elsewhere. The experts thus recommend providing sufficient dormitories and social facilities in the course of the intended rebuilding and relocation of the TTC campus. This would also facilitate the creation of a 'campus community' and support the acquisition of social and communal skills.

2.3 Student Support, Internationalization, Equal Opportunities

The TTC has established a range of services to support students in academic and organisational matters. A regularly updated student handbook, which is accessible via the homepage, lays down the rules and regulations of studying at TTC and also includes a section on students' welfare.

Most of the support services are located in the *Trainee Affairs Department*, which provides help in matters concerning learning resources as well as general counselling or career advice. A sports' hall offers basketball, table tennis and other leisure activities. The *Guidance Public and Private Cooperation Department* offers further career advice and helps students to find places for internships.

Personal counselling is also regarded as an important task of the position of *Students Counsellor and Islamic Studies*. Being responsible for religious guidance and course offerings in Islamic studies, he also offers individual support to students. In addition, the representatives of the *Students' Council* also regard themselves as facilitators between students, staff and administration.

Academic advice is provided by the departments, especially the *Heads of Department*. They

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are often first addressees for students' complaints and are in charge of pursuing further actions in response to such complaints. They also offer – in cooperation with the Dean's office – introductions for freshman students.

While internationalization is part of the mission and educational strategy of TTC, international mobility itself has a relatively low priority in the students' learning careers at the College – at least when it comes to spending study periods at a higher education institution outside KSA. However, TTC and LCI stressed the increasing diversity of teaching staff. Currently teachers of 16 different nationalities work at the College, with British, American, Saudi and German nationals having the largest share. Internationalization efforts are also closely linked to the cooperative relationships with international companies like Cisco or Siemens.

From the perspective of TTC students and graduates, mobility is considered an important aspect of TTC's education. The recognized Bachelor's degree, the engineering knowledge requested in the labour market, and the good command of English enables graduates (after an at least two-years period of work) to apply for state-funded or company-funded stipends/support for a Master's degree at an KSA-university or an university abroad.

The Bachelor's programmes at TTC are, by State regulation, only open for male Saudi nationals. Hence, incoming student mobility is restricted. As is the case in nearly all of KSA's public and private higher education institutions, co-education of men and women is not possible. LCI also acts as the provider of a Qatif Female College in Eastern Saudi Arabia.³

TTC offers support for disabled students via the above-mentioned Trainee Affairs Department. The current Examination Regulations also include a compensation scheme for students with disabilities or permanent incapability (section 3.5.9) and allow for a modification of examination modalities by the *Examination Office*.

Experts' Appraisal

TTC has established a coherent structure for student support in academic and non-academic aspects. The existing structure includes a (religious) student counsellor who takes special care of individual students' needs and demands. Via formal and informal procedures, students can address their complaints to the College's staff and leadership. In this respect, the teaching faculty has obviously established good ways of direct and informal communication and support, which is commended by the experts.

Outgoing mobility is not an intended part of the former and current Bachelor's programme and also appears rather limited – which is understandable with a view to the profile and scope of the programmes. However, due to the consistent use of the European Credit Transfer System, the modularized curricula and well-documented competencies, the TTC substantially supports an international (academic) career after graduation, as recognition of academ-

³ While public and private education in KSA keeps male and female higher education mostly separate (with the exception, e.g., of King Abdullah University for Science and Technology, KAUST), the ratio of females pursuing a higher education degree is nearly 50 percent.

https://www.daad.de/medien/der-daad/analysen-studien/datenblatt/saudi-arabien_daad_datenblatt.pdf

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ic and practical components of the study programme is made possible.

In addition, the internationalization of teaching staff (and leadership) has increased considerably over the past accreditation period and thus further provides for an intercultural learning environment. The students also appreciate this diversity – even when it comes with some drawbacks. Last but not least, the high level of attractiveness of TTC for young Saudis results in a student body made up of students from very different regions and backgrounds.

In the context of national regulations concerning co-education, TTC is set-up as an all-male College. However, the rules and regulations take other aspects of equal opportunities into account, as e.g. with regard to exams or admission procedures.

3. Quality Assurance and Transparency

3.1 Quality Assurance

In the context of the review procedure, the TTC has provided oral and written information on processes, responsibilities and results of its internal quality assurance system. It is based on a published policy and procedures for “Internal Quality Assurance”, which are in turn supplemented by a policy on “Observation of Teaching, Learning and Assessment”.

Responsibility for internal quality assurance is located with the Academic Vice Dean at central and with the Heads of Departments at decentral level. The QA policy states that

- Internal quality assurance processes are clearly defined and disseminated to all ‘curriculum teams’;
- The ‘student voice’ is taken into account, including the outcomes of the Students’ Council meetings, surveys etc.;
- “Robust assessment methods”, including formative and summative assessments of students, are ensured;
- Quality assurance reports are generated regularly.

External quality assurance is also taken into account, including international accreditation and assessment against the Saudi Skills Standards (SSS).

It became clear during the on-site talks, that two quality assurance-instruments are especially relevant: (i) Lesson observations and (ii) student surveys:

- i) Lesson observations apply to all staff, instructors and assessors working at TTC. The observation is undertaken by a team, made up by the General Manager, the Dean and Vice Deans and the respective Head of Department (all must show certain knowledge like a training in lesson observation, own teaching experience etc.). Lesson observation takes place at least once per year and last a minimum of 30 minutes each. Staff will receive advance notification and results are documented in an observation report, with a focus on strength and weaknesses. If evaluations are below certain thresholds (“requires improvement”, “inadequate”), defined steps are taken, including an improvement period, a re-assessment, meeting with Vice Dean and Head of Department, issuing a development plan as part of a ‘capability process’. The instrument of lesson observation was introduced in 2016/17 and all staff was observed in November/December 2016.
- ii) More recently, TTC’s quality management has introduced students’ class surveys. At the time of the site-visit no (analysed) results had been at hand yet, but students confirmed that all classes had been evaluated at least once. However, they hadn’t received any feedback on the results from their teachers. TTC is planning to evaluate each class/module in each semester.

As was discussed with TTC’s leadership during the site-visit, the lesson observation is regarded as a valuable tool by the teaching staff, as it provides helpful feedback. The members of the leadership and the Heads of Department also stressed the importance of this instru-

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3 Quality Assurance and Transparency

ment for further improving the quality of the programmes. The newly added class evaluations by students are also regarded as helpful and some even think about 'daily evaluations', using tools like Google Classroom.

The TTC leadership has also supplied a proposal for a Quality Assurance Cycle as part of the self-report. It includes periodic steps on a one-year-basis for each quality assurance instrument, for reviews and improvement measures.

As an additional, more informal way of for evaluating and developing the programmes/ specialisations, the EEE department holds weekly meetings of all teaching staff in order to discuss teachers' and students' experiences and quickly decide on measures in response.

Experts' Appraisal

TTC's leadership has shown a clear vision of quality in teaching and learning, including the rationales underlying the restructuring of the initial programme and the development of the programme in Applied Engineering. This is supported by a strong general interest of the Colleges of Excellence, in developing and implementing quality assurance measures in their educational institutions.

The experts appreciate that internal quality assurance is guided by documented policies and procedures and that the projected processes are apparently carried out. The proposed Quality Cycle demonstrates a high interest in a structured system of quality management. The main responsibility for quality assurance measures is located at the level of the Departments, which is plausible considering that both study programmes (old and new) encompass rather different and distinct tracks in terms of profile and content (see *chapter 4.3*).

The formal quality assurance instruments, especially the lesson observations, are obviously adequate for leadership's oversight, and give valuable feedback to the teaching staff. The experts support TTC's approach of using evaluation results primarily for enhancing teaching skills in a defined 'capability process'. The students' evaluation of classes and teaching staff recently introduced that was recently introduced will also be a valuable tool for receiving student feedback while maintaining anonymity and confidentiality. However, the experts emphasise that an "over-evaluation" and missing feedback loops can lead to "evaluation fatigue". Hence, TTC's leadership and departments should take increased efforts to communicate quality assurance results to the students as a general body (student council) as well to as individual students/classes.

Besides formalized evaluation procedures, some Departments or disciplines have established additional, informal ways of communication between students and teaching staff, but also between the members of the faculty itself. These initiatives are regarded as helpful for an ongoing reflection and improvement of study programmes and their specializations. In addition, as has become clear to the experts during the site visit, the Departments and their specializations factually are administered as more or less 'separate' programmes. However, as TTC offers one programme, the experts recommend increasing the communication between academic disciplines and Departments in a more systematic way to enhance the on-

going improvement of the overall programme as well as its specialisations. This could take place within as well as between the departments.

3.2 Transparency and Public Information

The self-report outlines the structures and curricula of both programmes and documents the policies and regulations of TTC. Central documents are the Examination Regulations (for the new programme), the policy and procedures for Teaching, Learning and Assessment (intended for teaching staff) and the Student Handbook (2016/17), aimed at stating clear rules, standards and behavioural guidelines for TTC students. The latter also includes provisions for students' welfare, students' involvement, complaints procedures, plagiarism/cheating and disciplinary regulations.

The policies regarding internal quality assurance in teaching and learning have also been documented (*see chapter 3.1*).

TTC's website, however, appears somewhat outdated regarding descriptions of organization, study programme(s), admission etc.

Experts' Appraisal

In general, TTC has taken great care to put its overall institutional policy, programme structure and examinations as well as quality assurance on a firm basis of documented policies and regulations. Some minor inaccuracies (e.g. using trimesters and not the recently introduced semesters as units) are most likely routed in the recent transition and development processes and will probably be remedied within a short time.

However, the experts recommend an update of the College's homepage, as this might be the first place for interested students to obtain information on the institutional profile, Departments, teaching staff or application procedures.

4. Assessment of the Study Programmes

While both programmes assessed in this report show significant differences regarding their profile, intended learning outcomes and employment sectors after graduation, they also share basic structural and curricular traits. Hence, both programmes will be discussed together in one chapter instead of separate chapters.

4.1 Strategic Dimensions and Intended Learning Outcomes

The initial Bachelor's programme „*Engineering Technology for Vocational Trainers*“, accredited by ZEvA in 2012, had been introduced as the sole study programme of TTC after the founding of the College in 2009. Its main purpose was the education of Saudi teachers for the Colleges of TVTC, i.e. in vocational education and training (VET). This followed the government's overall strategy of Saudisation, which included the professionalization of VET in the technical, applied sector (TVET). The managing organization, Germany's state provider of international cooperation services (giz), was supposedly chosen to adopt certain parts of Germany's successful VET-model.

When Lincoln College International took over the management of TTC, the new provider chose to modify the main purpose of the programme: instead of educating TVET-trainers, the College was now meant to provide a broader, but still market-oriented Bachelor's programme in applied engineering. The former VET-related programme will have its last graduates in 2019, while the first cohort of the *Applied Engineering* programme has already started in February 2017. TTC also pursues a change in name, from TTC to *Applied Engineering College* (AEC).

The [new] programme [in Applied Engineering] has been designed to provide a specialist vocational programme linked to professional body requirements and employer demand. It offers a strong sector related emphasis on practical skills development alongside the development of requisite knowledge and understanding. A thorough grounding in the key concepts and practical skills required within the selected sector pathways is a fundamental outcome of these programmes of study, allowing progression either into employment in Industry or further higher levels of study. [self-report, p. 32]

For the new programme in Applied Engineering, the overall intended learning outcomes have been described by TTC as follows:

Our intended student audience will

- have demonstrated knowledge and understanding in a field of study that builds upon their general secondary education, and at a level that, whilst supported by advanced textbooks, includes some aspects that will be informed by knowledge of the forefront of their field of study.
- can apply their knowledge and understanding in a manner that indicates a professional approach to their work or vocation, and have competences typically demonstrated through devising and sustaining arguments and solving problems within their field of study.
- have the ability to gather and interpret relevant data (usually within their field of study) to inform judgements that include reflection on relevant social, scientific or ethical issues.
- can communicate information, ideas, problems and solutions to both specialist and non-

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4 Assessment of the Study Programmes

specialist audiences.

- have developed those learning skills that are necessary for them to continue to undertake further study with a high degree of autonomy.

As was elaborated during the on-site talks, a change in profile and learning outcomes is considered as necessary by the current provider of TTC in order to raise the number of students, as the nominal capacity of about 1,800 students had not been successfully utilized during recent years. While the initial strategy for training vocational teachers was plausible and the employment rates of graduates were quite high (at least 80 per cent of graduates found working positions in TVTC Colleges), the rather narrow focus of the programme made is less attractive in the longer run. In addition, a certain saturation of trainer's positions in TVTC Colleges has been realized.

Graduates from the initial programme stated quite clearly during the talks that, on the one hand, they valued the pedagogical training and the competencies they acquired in the Bachelor's programme. It helped them to professionalise their teaching in TVTC Colleges. On the other hand, the extensive share of vocational pedagogy has considerably limited their employment prospects in engineering-related positions outside TVTC-institutions. In their experience, gaining access to a full engineering position was nearly impossible, but finding work as in-house trainers in engineering companies had proven to be difficult, too. Some graduates also complained that the narrow employment prospects had not been communicated transparently; they had assumed to gain access to both teaching and engineering positions upon graduation. As a consequence, both graduates and students appreciated the change in the programme's profile to a full Bachelor's degree in Applied Engineering.

During the first ZEvA review and also during the current site visit, the extent and success of practice-related aspects of the old and the new programme were of considerable importance. On a more strategic level, it has obviously been rather challenging to establish stable and sustainable relations with different, technically oriented sectors of the Kingdom's industry. In part, this can be explained by structural aspects of the Saudi industrial sector, which shows a relatively high share of foreign companies and/or foreign experts in Saudi companies. In addition, the idea of a (hands-on) internship was apparently rather unfamiliar to the target companies.

As early as 2014 (as documented in an Action Plan), TTC had taken increased measures to raise knowledge about and acceptance of internships. A first 'monitoring mission' of the Company Field Practice took place in 2013 with mixed results. Some interns were well integrated in the working processes of their companies, while other companies did not care much about student interns. Consecutive steps had then been taken by TTC, including a co-operation with Festo Didactic and the Saudi-German Chamber of Commerce, to involve German companies present in the KSA. In addition, a market analysis took place, identifying suitable companies for field practice and internships (168 were chosen; while others were blacklisted).

With the changes made to the programme, LCI also responded to the need for a shift from a vocational pedagogy-focus to a more occupational technical focus, thus even increasing the need for a strong linkage between TTC's curriculum and engagement with job trainings and

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career placement for the students. The *Applied Engineering* programme still includes a Company Field Practice (12 ECTS credits, 6 weeks). LCI is currently seeking advice from different Saudi companies and has dedicated itself to “developing a more employer-centric approach to teaching and learning” (p. 36, self-report).

While the programme in Applied Engineering is a decisive change from the Vocational Trainers’ programme, LCI and TTC stated explicitly that the new programme will provide alternative pathways to either engineering-only and one – in co-operation with Hull University – that includes stronger elements of vocational pedagogy and should enable graduates to still gain access to teaching positions in TVTC institutions, but also in other types of schools or colleges. It is also planned to offer additional training modules/tracks for graduates, imparting competencies in pedagogy for vocational training, thus offering a model of consecutive learning.

Experts’ Appraisal

The experts assert that TTC has established learning outcomes for both of its current programmes. The general change in profile from the (old) programme in Engineering Technology for Vocational Trainers toward the (new) programme in Applied Engineering was well documented in the self-report and convincingly explained during the site-visit.

The initial programme intended to educate vocational teachers for a defined range of institutions, especially Colleges of Technology. This strategic goal has been accomplished: about 90 per cent of graduates work in this field, and some were hired by TTC itself after graduation. The programme profile and the intended learning outcomes have not been changed since initial accreditation.

The new programme in Applied Engineering with its different specialisations fits the newly developed goal of combining a basic, general engineering training with a deepening of subject-specific skills. TTC retains its special position as the only College of Excellence offering a Bachelor’s degree. The experts acknowledge that this reorientation in profile has raised the attractiveness of studying at TTC. This impression was confirmed during the talks with alumni and current students of the Vocational Trainers’ programme. Both groups approved the reformed programme profile, as it is more attractive for engineering-related positions in Saudi-based companies and may also act as a step stone on the way to a Master’s degree in this field.

The previous efforts of giz and of LCI as the current provider to establish, broaden and sustain close relationships with companies is highly appreciated by the experts. As the intended learning outcomes of the programme in Applied Engineering are focused on employability in local/national companies, the experts recommend to set up a plan for further enhancing co-operations with future potential employers in relevant sectors of the Saudi industry. To this end, the establishment of an industrial advisory board is advisable. The feedback from this panel should then be considered in the further development of the study programme and its specializations.

In both programmes, the intended learning outcomes are in line with the Bachelor’s level

qualifications as stipulated in the European Qualifications Framework.

4.2 Concept and Structure of the Study Programmes

While TTC's development has seen a significant shift in the profile of the study programme(s) offered, the basic concept and curricular structure has not changed imminently. The initial programme, *Engineering Technology for Vocational Trainers*, was supported by a two-fold departmental structure. First, two departments were in charge of the transdisciplinary parts of the curriculum:

- Vocational Pedagogy
- English Language and Communication

The Vocational Disciplines/specialisations were (and still are) located in the following departments:

- Mechanical Technology
- Information and Communication Technology
- Electronics and Electrical Technology
- Business Administration

The initial programme encompassed eight vocational disciplines:

1. Electrical Machines
2. Electrical Power
3. Electronics
4. Information and Communication Technology, Application Development
5. Telecommunications
6. Networks and System Administration
7. Production Technology
8. Refrigeration and Air Conditioning

The programme was centred on Vocational Pedagogy, imparting modern training and teaching methods as well as more practical competences for the teaching profession, like planning and preparing classroom lessons. The share of Vocational Pedagogy lay at around 48 ECTS-credits (Credit Points/CP) out of a total of 180 CP in three years (plus an additional 60 CP recognized from CoT-studies; *see below*). The Vocational Disciplines, i.e. one of the chosen engineering specialisations, amounted to 77 CP. In addition, English classes made up 27 CP, Islamic Studies 4 CP and the Company Field Practice as well as the Bachelor's thesis accounted for 12 CP each. During the first years of this initial programme, there was a minor shift of CP from Vocational Pedagogy to the Vocational Discipline – but all in all, the non-engineering part makes up nearly half of the credited workload. These modules also are identical for all students of the programme.

Yet, the vocational disciplines have been quite distinct tracts, structured along a basic set of modules in Mathematics and Physics and modules covering the different fundamentals and application areas of the discipline. For example, students of the specialization Electrical

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Power had to pass, among others, two modules each in “Electrical Fundamentals”, “Digital Systems” and “Power Systems Technology”. In later trimesters, more special aspects like “Transmission and Distribution Systems” had to be studied, as well as modules centred on teaching practice and didactics, like “Design of Teaching Aids with LABVIEW”.

In 2016, TTC notified ZEvA that three new specialisations had been added to the initial programme:

1. Business Administration and Management
2. Automotive
3. Industrial Mechatronics

All three were evaluated and approved by ZEvA on the basis of a short written self-report.

As was outlined during the site visit, the specialisations were more or less handled as distinct tracks or even programmes by the departments, hence a student’s change from, i.e., the Electronics track to the Production Technology track was not intended.

Company Field Practice has always been a compulsory part for all students. Within the curriculum, this practice-oriented part is split into two modules, one in the first year, the other in the third year of TTC studies. For each module, 180 working hours are calculated, which equals about four to five weeks for each internship period (6 CP each). Each practical period has to be finished with a final written report.

From the beginning, English has been the language of choice for all courses, examinations, regulations etc. at TTC. Graduates were – and are – expected to complete the Bachelor’s programme with a competency level equalling at least level B2 of the Common European Framework of Reference for Languages. From the start, the curriculum of the Vocational Trainers programme was closely modelled for graduates of Colleges of Technology with their two-year programmes. It was therefore expected that freshmen students at TTC would possess competencies in English at least on level B1 as well as basic knowledge and skills in technical areas. Based on that, the first year of the nominally four-year Bachelor’s programme at TTC was fully credited with 60 CP thus shortening the study period at TTC to three years (nine trimesters).

However, the first years already revealed that English turned out to be a core challenge for teaching and learning at TTC. Therefore, a relatively large share of the credited workload, nearly 30 CP, was dedicated to improving language skills.

The new programme in *Applied Engineering* has retained most of the basic structural elements of the initial programme while seeing a considerable downsizing of the pedagogical elements – and thus increasing the share of workload devoted to the engineering specialisations.

Based on a restructured departmental organization – keeping the three engineering departments, while merging Vocational Pedagogy, English and Business Administration – the new programme includes the following specialisations (“Applied Pathways”):

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1. Electrical Power
2. Electronics and Control
3. Mechatronics
4. Production Technology
5. Automotive Technology
6. Technical Buildings Engineering
7. Communications & Network Engineering
8. Information Systems Engineering

Hence, while some specialisations have been skipped (e.g. Business Administration), others have just been merged into one, renamed and/or enlarged, as e.g. Technical Buildings Engineering, which will open in September 2019. As the new curricula show, English language still causes a considerable amount of the total workload (30 CP), while Vocational Pedagogy and Business Administration have been reduced to several smaller modules like “Business Studies” (4 CP) and “Train the Trainer” (6 CP). Company Field Practice still makes up for 12 CP and Mathematics, Physics and Islamic Studies retain as obligatory parts of the curriculum as well.

The curriculum is now embedded into a new organizational framework: First, the academic years is now divided into semesters instead of trimesters, which eases the examination burden, and allowing for a less hectic, prolonged starting phase in each semester. Also, it is now easier to switch between specialisations, as during the first year at TTC all students of one Department study the same curriculum and then go to choose their specialisations. This feature was equally praised by students and graduates during the on-site talks.

Another aspect that was much discussed in the self-report and during the talks is the curricular integration of applied practice. As in the initial programme, a high premium is already placed on hands-on experience in labs and workshops (*see chapter 4.3*). As described above, the Company Field Practice provides important additional workplace experience for students. Some students’ experience were positive, with a high integration into practical work or trainings, while other cited e.g. security, workplace safety or complexity as reasons that hindered direct involvement in production processes. Yet, all of them highly valued the approach itself and even requesting a prolongation of internships.

As explained by the TTC leadership, the internship has to be completed not just with a report, but a specific project given by the company has to be elaborated and the outcomes documented in the report. During the internship, TTC teaching staff also visited the companies.

In addition to the Company Field Practice, the TTC departments have set up co-operations with companies like Siemens, Cisco and Microsoft and will offer industrial certificates from, e.g. the Siemens. To train for the certificates, TTC will take measures for training of teaching staff, upgrades of labs etc.

Teaching staff and Department Heads also stressed future (mid-term) opportunities for development. These may include the introduction of further specialisations, but also providing more space in the curricula for elective modules, thus fostering an individualized learning

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experience for the students.

Admission to both the initial and the new programme follows an established procedure and is only open for male Saudi nationals. Nearly all of TTC's incoming students graduated with a diploma or comparable degree (below the Bachelor's level) from a College of Technology or comparable institutions of the TVTC network. As a rule, the specialisation chosen in the CoT is the one to continue at TTC – even though some more flexibility is now allowed. Applicants must have a certain GPA score and pass TTC's admission test in Mathematics and English language. They must not be employed in the private or public sector at the time of admission. In the next step, they have to pass an interview and are then be selected based on the results of the prior steps by a Selection Committee co-operating with the Heads of Departments.

As a general rule, one year of study from the ToC-programme is automatically recognized, thus adding 60 CP to the 180 CP studied at TTC. Accordingly, TTC's Bachelor's degrees formally encompasses 240 ECTS credits. The Examination Regulations (ch. 2.2) also stipulate that additional achievements can be recognized on top of that. Recognition of this kind is limited to a maximum of 30 CP.

During the last application cycle, TTC had about 1,500 applicants and an intake of about 500 students (in the Applied Engineering programme).

During the site-visit as well as in previous quality assurance documents, the level of knowledge and competencies prior to admission and thus the automatic recognition of 60 CP has been a matter of discussion. TTC staff and leadership pointed to an often insufficient level of preparation in regard to English language, especially in more remotely located CoTs. Based on the visit of laboratories and talks with teaching staff, the experts also got the impression, that basic manual and technical competencies, like filing or welding, have to be revised during the first year at TTC.

Experts' Appraisal

The experts conclude that the curricula and structures of both programmes are adequate to ensure that TTC's graduates achieve the intended learning outcomes and obtain a qualification at the Bachelor's level. The change in the profile and the range of post-graduation employment (and study) possibilities from Vocational Training to Applied Engineering is plausibly represented in the curricula: from the initial curriculum with its strong focus on vocational pedagogy to the new curriculum with a higher level of competencies in the engineering fields and specialisations.

Basically, the intention to offer pre-Bachelor graduates from the Colleges of Technology a consecutive programme to enhance their skills and knowledge up to a Bachelor's degree, while at the same time providing hands-on training practice as well as company field experience, is still highly valued by the experts.

The documented programme in Applied Engineering with its specializations generally seems

to fit the requirements and needs of the national labour market. However, to ensure a full implementation of all specializations, TTC should ensure that all specializations are substantially covered by qualified teaching staff (*also see chapter 2.1*).

The experts commend the TTC leadership and departments on their various initiatives to foster co-operative relationships with Saudi and foreign companies. Initiatives like certifications (Siemens, Cisco etc.) will significantly enhance the employment prospects of graduates, as was apparently the case with company internships. Coordination of the Company Field Practice has obviously improved since the first accreditation and TTC should take great care that students have the chance to gain practical work experiences during their internships. Placements that do not provide full access to the work process itself (due to safety regulations, non-disclosure rules etc.), should be avoided. Special attention should also be given to aligning TTC's learning outcomes with the company field practice. This could also include the possibility to write the Bachelor's thesis in the company, cooperating with a TTC supervisor.

The experts understand that automatic recognition of 60 CP/one year of training at the preceding College of Technology-education is a permanent embedded element of the curriculum. Yet, a better cooperation between the Colleges of Technology and TTC is strongly recommended, to raise the qualification level of incoming students, especially in English language, but also in Mathematics, Physics and practical skills. Both institutions should come to a reciprocal assurance of levels of acquired and respected skills.

4.3 Methods of Teaching and Student Assessment

The self-report and documentation as well as the on-site talks have shown that a wide spectrum of didactic methods is applied at TTC.

The module descriptions reflect a mixture of teaching methods and didactic instruments. For example, the first year basic module "Mathematics I" encompasses lectures, group work, problem solving, presentations and MATLAB. The module "Business Enterprise II" includes lectures, project/task-based learning, simulation and blended learning, among others. In more practice-oriented parts of the curricula, lecture-style presentations are often combined with hand-on exercises, lab work and projects. The labs and workshops often provide the framework for both lectures and practical learning. The students interviewed on site valued the integration of theoretical knowledge into lab-based work.

In line with the various teaching methods, a range of different assessment methods is applied. These include a written (final) examination for each module, but also written or practical assignments, presentations, oral examinations, group work or quizzes. The students confirmed that the module descriptions match the actual teaching reality. The general student workload was not regarded as overly high. The first year was regarded as the easiest, as some skills could be transferred from the College of Technology.

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Experts' Appraisal

The experts appreciate the competency-based and student-centred teaching and assessment methods at TTC. The methodical approaches are convincingly adapted according to the contents and often include valuable, practice-oriented combinations. The use of final exams and additional examination methods in each module do not increase the workload unreasonably. The results of the assessment can be accessed by students, as is regulated in the Examination Regulations.

The experts support the increased application of e-learning tools, which the Departments are currently applying to different extents

The extent of project work may be further increased to enable students to apply their knowledge and gain practical experience.

III Appendix

1 **Statement** of the Technical Trainers College, Riyadh, in Response to the Experts' Report

III. Appendix

1. Statement of the Technical Trainers College, Riyadh, in Response to the Experts' Report



13 February 2018

Dear Panel of Experts,

Thank you for the recommendations that you have given to improve our program of study, they were most useful. Please find below the measures that are adapted to meet your recommendation. Most of these measures are already in place, and we are working diligently to accommodate all your recommendations. Our measures are written in bold.

Responses to Recommendations

General Recommendations:

1. Automatic recognition of 60 CP/one year of training at the preceding College of Technology-education is a permanent element of the curriculum. Yet, a better cooperation between the Colleges of Technology and TTC is strongly recommended, to raise the qualification level of incoming students, especially in English language, but also in Mathematics, Physics and practical skills. Both institutions should come to a reciprocal assurance of levels of acquired and respected skills.

Lincoln College International is aware that the Arabic Language is used in all colleges of technology; consequently students applying to the TTC have very poor level of English Language. To that effect, TTC had organized series of tests in English and Maths for students to go through in an attempt to distinguish the ones that are competent linguistically and mathematically. TTC management will continue to discuss mechanisms to identify improved strategies, to collaborate with the colleges of technology, in terms of raising the standard of Maths and embed English teaching in their curriculum.

2. Existing laboratory and workshop equipment, esp. in electrical labs, should be better maintained and used more extensively. Furthermore, an update in line with the latest state of the art in industry is strongly recommended.

This problem was addressed in our EET Department SAR soon after the change of management back in Sept. 2016. However, the Department developed a new Improve-

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ment Plan to tackle this issue, and to ensure that every piece of equipment is being used either in classes or in projects. The extensive usage of the equipment had led us to buy more equipment to cover up for any shortage.

In order to have state of the art equipment and update the ones that we already have, we are waiting for the release of the new budget to carry on our procurements.

3. The leadership of TTC and its departments should take special interest in a substantial communication of quality assurance results to the student as a general body (student council) as well as individual students/classes.

Recently, the college has appointed a Head of Quality; working closely with the Vice Dean will be responsible for the creation of Quality Assurance mechanisms that monitor- review- communicates all aspects of quality assurance and enhancement. The results of all Quality Assurance reviews will be presented to students via the new reporting cycle. This new reporting system will include student council feedback sessions and providing the report for students to read via digital copies.

4. Coordinated measures should be taken to facilitate communication between academic disciplines and Departments in a more systematic way to enhance the ongoing improvement of the overall programmes as well as its specialisations. This could take place within as well as between the departments.

The Vice Dean and the Head of Quality have created and are implementing a Quality Review Cycle that will enable the development of Quality Enhancement activities across the college. This will include a systematic approach to monitoring and evaluating teaching and learning activities and, platforms for sharing best practice. Also, through the designated committees the information gathered during the monitoring and evaluation stages will be discussed and actions created to standardize the student learning experience. The formation of committees will enable interdisciplinary communication that will then feed into subject specialist areas. Also, as part of the curriculum review, office hours will be assigned for teachers to review and offer student/ teacher feedback on class participation and assessments during the semester program. Finally, the college will launch teacher initiated workshops (CPD) across subject areas again with a focus on sharing best practice and establishing professional communication platforms.

5. TTC should take great care that students have the chance to gain practical work experiences during their Company Field Practice, i.e. avoid placements that do not allow them to gain access to the work process itself. Special attention should also be given to aligning TTC's learning outcomes with the company field practice. This could also include the possibility to develop the Bachelor's thesis in the company, cooperat-

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ing with a TTC supervisor.

TTC has taken the issue of Company Field Practice (CFB) very seriously for which the college is in the process of constructing a new committee entitled “Industrial Advice Committee”. This committee will include members from the academic staff and members from the collaborating Industrial companies, in a step to actively involve our academic staff in the quality of training obtained. Moreover, TTC is investigating the period of training conducted and it is considering changing the existing system (Six weeks of training, twice through the program of study) to one period of training of Twelve weeks in order to insure better interaction at the company, gaining better experience and establishing better relationship with the company and that should have positive impact on graduates’ employability.

6. TTC’s homepage should be continuously updated, to provide current information for interested students on the institutional profile, departments, teaching staff or application procedures.

The college is in process of hiring an intern-marketing assistant from their current BAM cohort. He will be leading the college’s digital and social media transformation which will focus on all kinds of electronic communications including the existing website. Also, the role will involve updating critical college information e.g. teacher profiles and student experiences.

7. In the course of the intended rebuilding and relocation of the TTC campus, the experts recommend providing sufficient dormitories and social facilities on the new premises.

TTC will exhaust every effort and study every possibility to meet this recommendation.

Program Related Recommendations:

8. Recruitment procedures shall ensure that qualified teaching staff is always at hand to cover newly introduced specializations. TTC should continue its policy to take the outcomes of quality assurance instruments as e.g. lesson observations into account for professional staff development.

TTC is very keen to employ staff with high qualification and quality with an emphasis on Industrial and Academic experience. This measure is also checked by CoE (College of Excellence). TTC aims to have at least 33% of its staff are Ph.D. holders and graduated from reputable institutes. The introduction of a new Lesson Observation structure will provide the college with essential teaching and learning data and the opportunity to share best pedagogy practices. Teachers will go through 3 lessons observa-

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tions during the semester which will include a line manager, a peer within the department and then a peer from outside. The feedback from these observations shared with concerned member of staff.

9. As the intended learning outcomes of the program in Applied Engineering are focused on employability in local/national companies, the experts recommend to set up a plan for further enhancing co-operations with future potential employers in relevant sectors of Saudi industry. To this end, the establishment of an industrial advisory board is advisable. The input of the board members should then be considered in the further development of the study program and its specializations

As mentioned above an establishment of such Board (committee) is in the process of being structured in collaboration with the relevant sectors of Saudi Industry. Each Department in the College has a Subcommittee of Content Evaluation which will feed to the curriculum Development Committee. The Subcommittees will utilize the input of the Board members to further develop the study program and the corresponding learning outcomes.

Professor Kenneth A. Hawick

Dean

Technical Trainers College

Scott Upton

General Manager

Lincoln College International (LCI)