



**Evaluation
Summary**

Renewable Energy Technologies

A Gender Perspective

Evaluation Summary – Step 2 – Preliminary Results

RENEWABLE ENERGY TECHNOLOGIES

Background:

The Department of Higher Education and Training (DHET) has introduced the subject Renewable Energy Technologies (RET) in the National Certificate (Vocational) NC(V) Electrical Infrastructure Construction programme. The new subject is one of the latest additions to the vocational specialisation options offered in Technical and Vocational Education and Training (TVET) colleges and has been developed for students who want to learn more about renewable energy generation and the technologies related herewith as well as energy and resource efficiency.

Under the auspices of the DHET and supported by the German Ministry of Economic Cooperation and Development (BMZ) and the Department of Science and Technology (DST), the Skills for Green Jobs (S4GJ) programme drove the process of developing this new subject, the training material, student textbooks and lecturer guides and trained TVET college lecturers on the subject matter content on new didactical training equipment as part of their continuous professional development so that they can teach the subject in a practical and progressive manner.

Gender Mainstreaming Approach:

The S4GJ programme pays special attention to the cross-cutting theme of gender. It started with raising awareness for training and employment in the green economy by means of gender sensitive educational material. The focus is on sparking an interest in young people and contributing to equal access to training possibilities to enable young men and especially women to enter into a career path in the Green Economy.

The programme is further spearheading the development of gender sensitive learning material for the RET subject, therefore trying to minimise gender blindness and increasing gender awareness in partnering institutions by integrating inclusive language.

Through a comprehensive M&E approach of the programme, regular evaluations are conducted on specific perceptions of training interventions. The evaluations results are also analysed disaggregated by gender and recommendations for gender mainstreaming are formulated.

Implementation of the Renewable Energy Technologies Subject from a gender perspective:

The implementation of the RET Subject shall serve as an example to showcase the programme's efforts in the area of gender mainstreaming.

The newly developed students books for RET students advocate gender equality by using gender sensitive learning material and an inclusive language. The student book further contains a chapter on occupational health and safety including a chapter on HIV/AIDS in the workplace.

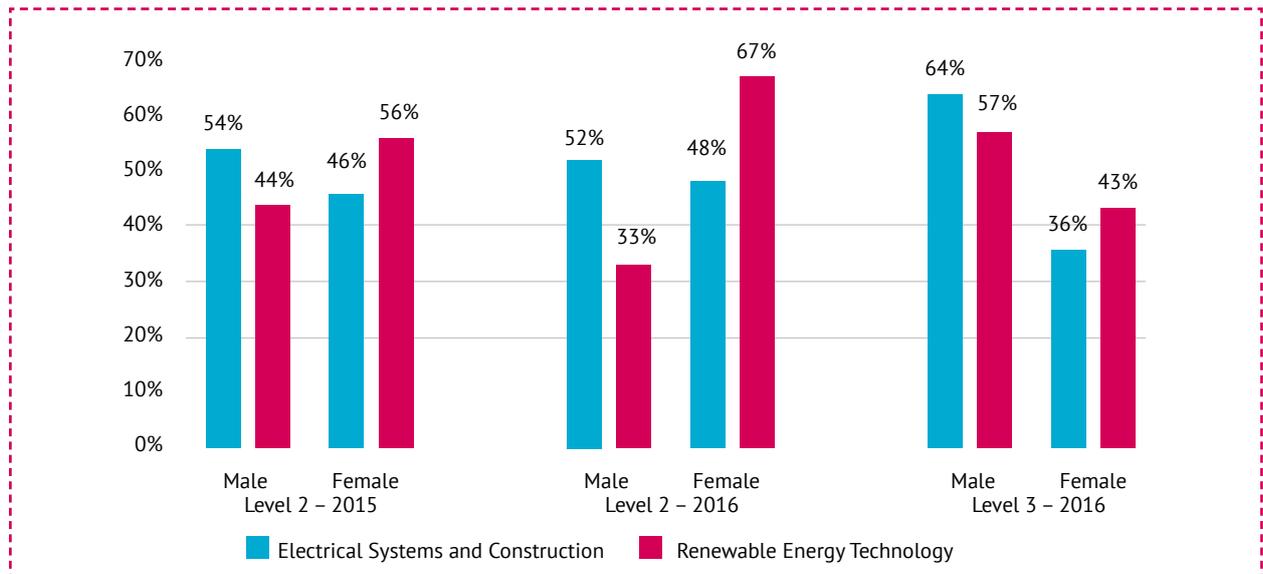
The implementation of the subject started with 6 public TVET Colleges in 2015 with a total number of approximately 300 students. The RET subject achieved a gender ratio of 57% male and 43% female students across all implementing colleges.

At this point (02/2016) in time it is only possible to have a closer look into one specific college since the data from the other colleges is not available yet.

The results from the one college (we shall call it College 1) shows a bigger percentage of women enrolled in the RET subject compared to the other possible elective subject 'Electrical Systems and Construction'. This holds true for the 2015 as well as the 2016 enrolment figures at College 1 (see Table 1).

1 The Department of Education introduced the National Certificate Vocational at public Further Education and Training (FET) Colleges in 2007. The NC(V) offers programmes of study in a variety of vocational field. The programmes are intended to directly respond to the priority skills demands of the South African economy. The National Certificate Vocational is offered at Levels 2, 3 and 4 of the National Qualifications Framework (NQF). The qualification is designed to provide both theory and practical experience in a particular vocational field. The practical component of the study is offered in a simulated workplace environment. Students have the opportunity to experience work situations during the period of study. A learner will qualify for a National Certificate Vocational after completion of all the levels. In order to obtain a National Certificate Vocational a student is required to take a total of 7 subjects. These include 3 fundamental subjects and 4 vocational/compulsory subjects.

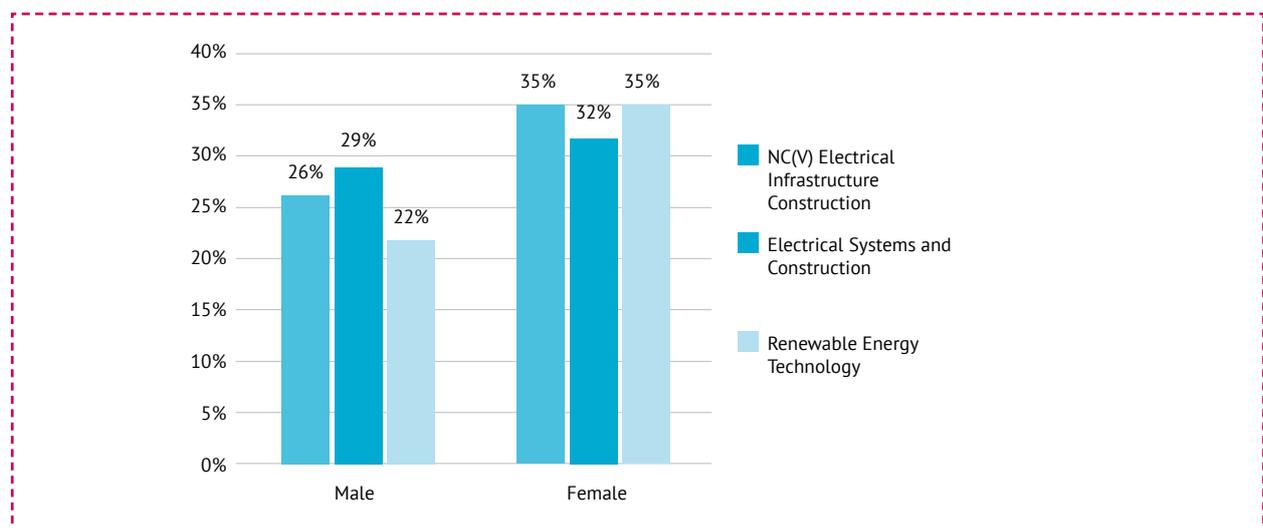
→ **Table 1: Comparison of gender ratio in the elective subjects of the NC(V) Electrical Construction Infrastructure Programme at College 1**



Looking into the data set in more detail, but always being mindful about the obvious limitations of it being only from one college, one can formulate some assumptions which have to be verified at a later stage.

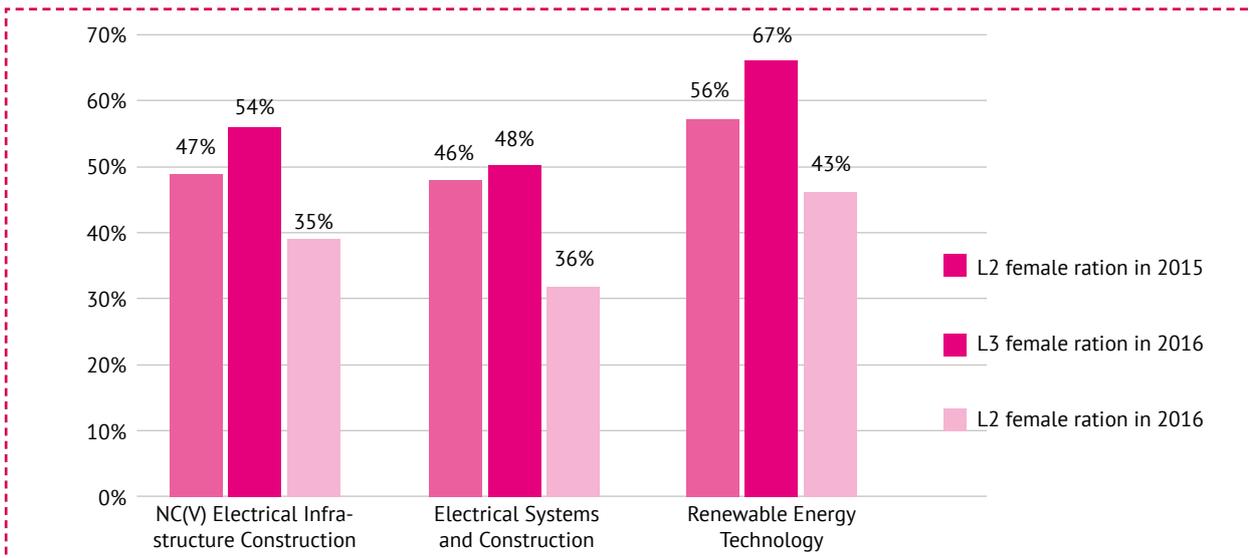
The NC(V) Programme ‘Electrical Infrastructure Construction’ at College 1 shows a progression rate of students from Level 2 to Level 3 which is currently at 30%. From 285 students enrolled into the programme in 2015, 87 remained in 2016. The progression rates for female students are slightly higher than for male students in the entire programme as well as in the two elective subjects.

→ **Table 2: Progression rates per programme/subject**



For College 1 it can further be said that a higher percentage of female students enrolled for the RET subject (56%) than for the Electrical Infrastructure Construction subject (46%) in 2015 and even though with decreasing numbers also in 2016 with 43% female students for the RET subject compared to 36% for the Electrical Infrastructure Construction subject. The percentage of female RET students is in both years also higher than for the percentage of female students for the overall NC(V) programme. Please see Table 3 for more details.

→ **Table 3: Percentage of female students per programme/subject and year**



The process evaluation of the RET subject implementation to assess quality of teaching and learning from the students' perspective which was conducted in September 2015 did not show significant differences in perceptions of male and female students. The proportion of female students who had finished either Grade 11 or Grade 12 is higher than for the male students and there is far less female students who enrolled in the NC(V) programme after finishing Grade 9 or 10 compared to the male students. This information should be cross-tabulated with the exam results from 2015 once available to further refine entry requirements for the programme and subject.

Summary of preliminary results from College 1:

1. RET subject Level 2 and Level 3 shows a higher percentage of female students compared to the other possible elective subject 'Electrical Systems and Construction' for 2015 and 2106
2. RET subject Level 2 and Level 3 shows a higher percentage of female students than the overall NC(V) programme 'Electrical Infrastructure Construction' for 2015 and 2016
3. A higher percentage of female students progress to Level 3 of the RET subject than male students

Limitations of the data presented here:

The data presented here is merely a first trend from one college. It is therefore not appropriate to assume any causality to the programme intervention or assume any statistical significance from the data presented here.

Next steps:

- Quantitative data from the other implementing colleges has to be collected and analysed
- Qualitative data has to be collected especially from female students to elicit information about the reasons for enrolment, reasons for progression in the programme
- Qualitative data has to be collected from the colleges to gain insight in the college enrolment/registration procedure. Important questions here are if colleges themselves try to fulfil a specific gender quota and if colleges try to specifically attract women for technical qualifications in the green economy
- The quantitative data should further be compared to enrolment figures from other NC(V) programmes

A more conclusive report on the implementation of the RET subject from a gender perspective will follow in due course.

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