



Instruments/approaches in the Netherlands

1. Gender-scans

VHTO¹ has developed a gender-scan which can be carried out within educational institutions. Aim of such scans is to identify possibilities for improvement with regards to the inflow, retention and successful outflow of female STEM-students, as well as develop advice and interventions based on the scan-outcomes. During a scan, 5 aspects of education and policy at the educational institution are analysed: Organisation – Education and Didactics – Study Guidance - Career Guidance – Networks. Questions asked during the scan can be questions like: does the institution gather quantitative data on inflow and outflow of boys and girls in STEM-subjects? Is there a staff-member who has gender-mainstreaming in their portfolio? Is gender balance taken into account in PR and media? Are girls introduced to any female STEM-rolemodels while exploring possibilities for future studies / professions? Are STEM-subjects taught in a way which shows their societal relevance? Is a mentoring-structure already in place? Does collaboration with other relevant institutions (e.g. secondary schools with VET-colleges or with STEM-businesses) already exist? VHTO would gladly translate and share this instrument with international partners, but is also experienced in setting up advice and implementing this advice in the involved educational institutions. VHTO therefore proposes setting up a pilot in 4 VET-schools (directly or indirectly) connected to the international partnership. A local project partner or a designated professional from the VET-school itself can carry out the gender-scan in the schools with help from VHTO. VHTO will also support/coach this party in setting up advice and proposing interventions, as well as support this party in implementing out these interventions. Through this pilot, the partnership can explore whether the methodology also works in other national contexts and whether any changes are needed to the successful use of the methodology in international contexts.

¹ VHTO, the Dutch national expert organisation on girls/women and science/technology, makes an effort to increase the involvement of women and girls in science, technology, engineering and mathematics (STEM). Since the early 1980s, VHTO, has been building up knowledge and experience of the participation of girls and women in the world of STEM and deploying this expertise in areas such as education.



2. **Gender-awareness training**

VHTO has developed a gender-awareness training for teachers and study councillors. The training concerns several themes within the subject of girls/women and STEM, such as theoretical background and research about the causes for women's underrepresentation in STEM, advice and hands-on exercises on how to increase the inflow of girls in STEM-studies, and exercises and advice about teaching in a gender-aware manner and by doing so, retaining the girls who choose STEM-studies (since they often drop out at high rates). This training has proved to be an eye-opener for participants in the past, and sharing it with international partners (the materials as well as 'live' demonstration of the training) has the potential for great impact.

3. **Career Events**

VHTO proposes the inclusion of Career Events at VET-schools involved in the project. During these one-day Career Events, female VET-students acquire tips and general information about possibilities for their future careers, and meet several female STEM-professionals who can be role models to them. This is meant to be an inspiring event for the female students, to show them enthusiastic STEM-professionals and possible professions, to inspire them to finish their studies and to think about their future career.

4. **Mentoring course**

At the end of such a Career Event, girls can register for a Mentoring Programme: after gaining inspiration and ideas concerning their future careers, they may want guidance and advice on how to steer for the career they want. Within the proposed follow-up Mentoring Programme, girls can be paired up with an individual female STEM-professional to mentor her towards her first job, with whom they can regularly meet / speak and acquire advice about possible first jobs and salaries, job-searching, possible challenges in the working-environment, etc. Another mentoring possibility is for the female VET-students to join a mentoring-group. These groups are intended for girls in the final 6 months of their VET-studies – during these last 6 months and their first year as a professional, the mentoring trajectory will be carried out. Here, too, female STEM-professionals will take part in the mentoring trajectory, to provide guidance to the group in career choices, the search for a first job, and to provide support in challenges faced by students' in their first job to prevent drop-out from the STEM-field. VHTO currently facilitates, monitors and evaluates such mentoring trajectories, and proposes to translate and share this methodology with project partners and their relevant stakeholders. VHTO also proposes to further develop this methodology within an international working group in the project. This further development concerns, in particular, the implementation of the methodology in study and career counselling.



5. Outreach of Vet colleges

VHTO has been carrying out 'speed dates' in secondary education for many years now, during which school girls are introduced to female STEM-professionals who show how varied, fun and socially relevant STEM jobs are. Small groups of girls get to speak to several of these professionals and, through this, are provided with role models as well as a better and broader image of working in STEM. This methodology has proved to be effective and should be shared internationally. Within the project, VHTO can share the methodology and information on how to organise such speed dates and, if possible, provide international partners 'live' examples of how to do this. VET-colleges should be the parties providing the role models, whether these are their female STEM-students or female STEM 'alumni' who have already finished their studies at these colleges and are now working in STEM.

6. National Technolgyact 2020

The Dutch Technology Pact 2020, a joint initiative of central government and labour market and education, aims to acquire more (female) students choosing to study (and work) in the field of technology. More than 60 organizations have signed the National Technolgyact 2020.

Governmental participants are the Ministries of Economic Affairs, Education, Culture and Science and Social Affairs and Employment. There is an (independent) national 'ambassador', a national special envoy and a special (female) 'ambassador' to attract more female students to technical studies and jobs. Every region has his own supercharger and implementation structure : North, East, Southeast, Southwest Wing and Northwest Wing.

There are three lines of action with the horizon of 2020:

Going for technology: more school pupils choosing to study in the field of technology (up to out of 10 in 2020)

Learning in technology: more school pupils and students with a technical qualification progressing to a job in technology (increasing from 50% to 60% in 2020)

Working in technology: retaining technology workers in the technology sector (up 25%) and finding alternative jobs in technology for people with a technology background whose jobs are under threat or who have been marginalised (up 25%)

One of the measures in the pact is to improve the number of students in technical studies.



MBO Raad² and VHTO are important partners in the Dutch Technology Pact 2020.

Moreover, MBO Raad participates in the National Technology Pact Co-ordinating Group (LRT), which coordinates, tracks and monitors the implementation of the national strategy, the objectives and the arrangements agreed in the Technology Pact.

7. Gender Think-tank

As a result of an initiative from the Dutch Government a 'think-tank Gender' has been installed to advise the Minister on efficient measures, that will increase the female participation in technical programmes. The think-tank now in its turn gave the advice to investigate and study the policy in those countries where the participation degree is far higher as potential Good Practices.

It shares experiences from over 40 schools with several instruments to attract girls.

8. INNOTECS

Innoteecs is the network of International STEM schools. MBO Raad is project partner of INNOTECS (Erasmus+ project) where International partners agreed on working together on common issues in Technical studies.

² **MBO Raad** , National Association of VET Colleges, representing more than 40 Colleges

