INTRODUCTION

Craftsmanship is the oxygen that fuels society

“This conference focuses on three main themes. The first theme is on flexible solutions in a changing labour market. Here, in the Netherlands, we are looking for ways to make our education system more responsive. So, we have started an experiment in which institutions from different sectors can take components from various qualifications and merge them into new vocational training programs. After all, many future professions will be the result of interaction between sectors.

The second theme of the conference, is working towards a culture of lifelong learning. Those currently in the workforce must also be prepared for a more complex future. Companies have an important role to play in this regard by fostering a culture of learning that gives people the scope to try new things. A culture that makes continuing education and retraining possible. The government can work on developing a flexible and transparent training infrastructure that enables customisation. For example, the Netherlands Centre for Innovative Craftsmanship for the Rotterdam processing industry has not only created a full-scale chemical plant; it also has a fully functioning control room, where psychologists supervise simulations of high-stress situations. During the conference we will focus extensively on such partnerships between governments, industry and education.

The third theme is on mobility and vocational education: both within Europe and beyond its borders. Studying abroad not only builds professional expertise, but it also teaches young people that the world is much larger than their own familiar environment. This is important for all people in all forms of education beyond secondary school. The secondary and vocational education sector would do well to focus on greater cooperation in broader reaches and respond to the needs of the regional labour market.”

Jet Bussemaker, Dutch minister of Education, Culture and Science

“Vocational education and training is often the Cinderella of education systems. We need to work to make it a first choice, not a second option, one that is equal in esteem to academic studies.”

Marianne Thyssen, European Commissioner for Employment, Social Affairs, Skills and Labour Mobility

“Do we agree that we have to challenge two trends: skills are vital and there is a digital transformation of our society and economy. Artificial intelligence and robots take over jobs. But what does that mean? If an industry is changing, it requires new skills.”

“And of course, that affects our education. How do people learn these days and how do teachers teach? Some futuristic people see that teachers need to play another role. The challenges are: how to react? Who does what? The main responsibility comes from the Member States and the companies. How can we connect the world of labour with the world of education? Looking forward: we need to put the instruments that we have into the Member States. Bring together brains, best practices, platforms etc. With the skills agenda we are not starting from zero. The urgency only becomes more visible.”

Detlef Eckert, Director Policy Strategy at the European Commission

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COLOPHON

Skills for a lifetime – towards a future proof VET” is a single edition of the ministry of Education, Culture and Science.

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Why should VET be included in regional and sectoral innovation partnerships with industry? The answer is threefold:
1. Companies need skilled human capital to work with innovations, especially at VET level. New technologies may be ever so clever, without people who can apply them in daily work they won’t be profitable.
2. Moreover, if VET expertise is included in the development process, researchers and applied scientists will profit from the practical experience and insights while designing new methodologies.
3. Finally, it is good to remember that most process innovations take place in SMEs, and are often initiated by VET-educated entrepreneurs and employees.

Theo Henrar, chairman of directors Tata Steel, spoke about the changing steel industry. What are his solutions?

“The steel industry has changed significantly since 1889 – the year the Eiffel Tower was built. Nowadays, three Eiffel Towers could be built with the same amount of steel as back in 1889. Such have been the developments in high-strength and lightweight steels, which allow us to build more beautiful and solid constructions. The European steel industry has changed from a volume driven industry producing commodities to a customer driven manufacturing industry - supplying the world with beautiful, energy saving buildings; safe and light-weight vehicles.

‘Technical education is crucial for the continuity of our company and industry’

The steel industry supplies for example, the automotive industry, the building industry and the packaging industry for steel carriers. The manufacturing industry in Europe employs 52 million people, from which 30 million are directly employed. The industry contributes to 15% of Europe’s GDP and is the engine room for the European economy.

The European country that has come best out of the crisis has been Germany. They have fostered the steel industry and they are technology driven. Their car industry is amongst the best in the world and not only the large companies, but also the small and medium-sized companies have invested a lot in their workforce and technological know-how. At Tata Steel Netherlands, we also believe that technical education is crucial for the continuity of our company and industry. We employ 450 researchers who are designing products for tomorrow. As a steel company, we contribute to a circular economy. Steel is fully recyclable. Our researchers do not only focus on product development, but also on renewing our processes.”
René van Schalkwijk, EUproVET representing VET suppliers: "In the Netherlands, schools and companies cooperate to define certain qualifications together so that when a student graduates, every company knows he or she has the basic qualifications that are required. With the dual system, students can show companies during an internship or apprenticeship that they really can do the things we say they can."

Ángeles Gabella Barro, Junta de Andalucía, European VET Project Coordinator: "It’s about making VET attractive and addressing young people. We need to get them into the world of work by incorporating the dual system with education on the one hand and compulsory internships on the other."

Bart Vandewaetere, Nestlé, head of European Affairs office: "Nestlé’s approach is a decentralised approach: we want to work with the different players around our 150 factories across Europe, including the local stakeholders and VET schools. This way, we make sure that we have access to the local skills base."

Workshop: Excellent students through smooth transitions in VET

SPEAKERS: PAUL OOMENS, LOUISE ELFFERS

This workshop aimed to engage teaching professionals from different countries in conversation about the educational systems in their countries. All stated that the aim of education is to bring out the best in their students and that education systems always relate to a country’s history and social context. Elffers argued that education focuses on three main aims: cognitive development; preparation processes in the labor market and socialisation. In the Netherlands, for example, early tracking/early selection has a negative effect on the cognitive development of the groups in the ‘lower’ tracks, but also the socialisation of young people in all tracks. Part of the negative effect of early tracking is offset by the fact that the Netherlands has a strong standardisation in the way education is funded, the training of teachers in the entire education system and the way in which young people are assessed at the end of training programs. During the discussion, participants indicated that they find the perfect model to carry the conversation about education in an international context.

Workshop: Links between innovations in industry and vocational education

SPEAKERS: HANS TEN BRINKE, SAGE LAL, DICK HAMMS

The question in this workshop was how to develop cooperation between actors in so-called triple helix networks/platforms of institutions from government, education and research, and the business world. In such networks the different actors start to cooperate at an early phase and go on to create an infrastructure that supports sustainable and continuous cooperation.

Key takeaways:
• Schools themselves lack the skills to link up with companies; they need to be more entrepreneurial.
• Dual systems in Luxembourg, the Netherlands, Germany and other countries are often mentioned in terms of good practices.
• It’s not about funding, it’s all about your network.
• Governments and companies need more agents of change; we need people that bring people together.
• Graduates are critical friends that should be consulted more often.

“We need to develop skilled human resources. Not just for today, but for future needs as well. We need to prepare students for life after class to meet the changing needs of businesses and industries.”
Sage Lal, North East Surrey College of Technology, UK
Economic growth and personal development can be boosted by sectoral cooperation between education, business and innovation. VET is in this context essential for innovation and economic development within the region. The practical nature of knowledge, skills and craftsmanship as learned in VET contributes to the innovation process itself. Often, VET trained employees are also expected to apply new technologies in their work. Where business, research institutions and school succeed to cooperate right from the start with research up to the production phase, improvements are significant regarding the quality of education, the employability of all workers and the changes on the regional labour market for VET graduates.

**Links between innovation, VET and industry**

How to initiate, organise and maintain an innovational partnership between VET and industry? How to involve social partners (employer and employee organisations / trade unions) effectively in this?

EU and national level should facilitate only for the focus to be on sectoral/regional level as much as possible. Schools have the ability to be the agents of change, companies should take responsibility for their shared future and cooperation is necessary for VET improvement. Funding alone is not enough, people need to be brought together, SMEs should be involved and local/regional initiatives supported.

**Facilitating excellence students and inclusion:**

Learning from Europe’s diverse educational systems

In Europe, there is a great deal of diversity in education systems, each with their own strengths and challenges. There is no such thing as a ‘perfect’ European education system that fits all Member States equally well. Taking the current state of an education system as a given, how can Member States improve their systems in such a way that it provides better chances for all of its students to realise their potential? Early tracking systems need to focus on track mobility; this can be both track permeability as cross-sectoral flexibility. All systems deal with the need for individualized ways for both the most talented as the weaker students. More generally speaking, when we speak in terms of a model with several different characteristics defining a national educational system only, it becomes possible to compare national educational systems. This model could be the basis for a common language.

**More information?** All the results of the conference will be summarised and translated into “Stepping Stones towards a future proof VET”, to be shared with a wide audience of VET stakeholders in Brussels and throughout Europe.
In Europe, there is a great deal of diversity in education systems, each with their own strengths and challenges. There is no such thing as a 'perfect' European education system that fits all Member States equally well. Yet, much can be learned from experiences and outcomes related to the wide variety of educational system designs in Europe. Capitalizing on the growing availability of international data in education, comparative research provides relevant insights into key characteristics of educational systems that enhance, or impede, educational excellence as well as equality of educational opportunities. The key question therefore is: taking the current state of an education system as a given, how can Member States improve their systems in such a way that it provides better chances for all of its students to realize their potential?

“We need ‘safety-net buffers’ for macro-economic stabilisation”

How does professor Anton Hemerijck, VU University of Amsterdam, think that a lifelong learning ensures a lifelong employability?

“In the first years of their life, children are being supported by the welfare state, by childcare, by family benefits, and by education. Then people get into work and they start supporting the welfare state and then the biggest chunk really comes at the end of the life course. We need to help people to stay in the labour market for as long as possible. When we talk about the welfare state, there are several functions that are very important. That is, the re-distribution between rich and poor and people have to pay taxes. But, really, most of what we do is social insurance. We save money by being in work to fund our children being educated and to pre-fund our pensions.

The functions of the welfare state are shifting from social insurance to capacitation. This is through human capital development, and also through regional economic development and easing labour market transitions. The social risks of the life course and the labour market have become less predictable. And when they become less predictable they become less insurable in a traditional kind of way.

We need to complement the policy function of social insurance by raising the quality of human capital stock over the life course because it has cumulative returns. We also have to ease the flow of labour market transitions in line with gendered life-course dynamics. Young people want to make a career and they have to work very hard these days to do that, but they also want to establish a family. At the same time we need to upkeep, or upgrade, universalise, what I call, ‘safety-net buffers’ for reasons of macro-economic stabilisation on the one hand. But at the other hand we also need micro levels of stabilisation of family income and if there is one lesson from the crisis it is the importance of these buffers.”

“Right now, we are confronted with technological changes, an emerging platform economy and deep social and cultural changes and cleavages in our cities. Within this very dynamic environment, we are facing the challenge of adjusting our educational routines.”

Marc van der Meer, University of Tilburg
René van Schalkwijk, EUproVET representing VET suppliers: “We have to try and do something about raising the output of education. Especially improving productivity is important. If you look at the future, it’s impossible not to be thinking about increasing the productivity of education. As a Dutch professor once said: when accelerating in education you are most productive if you can get students to learn when they’re not at school.”

Ángeles Gabella Barro, Junta de Andalucia, European VET Project Coordinator: “We need to invest in raising awareness for lifelong learning from the very beginning, starting in primary school. We need a change in attitude; everyone needs to keep updating their education. That is why in Andalucia, Spain, we invest a lot in adult education.”

Bart Vandewaetere, Nestlé, head of European Affairs office: “What we see at Nestlé is that lifelong learning is not only about training and learning, but also about empowering people. We try to find solutions bottom up, not top down. And it works. We have factories that work thirty percent more efficient thanks to our employees. They have the capacity and the learning agile, but we have to stimulate and empower them.”

PANEL DISCUSSION

Workshop: Facilitating careers through VET: Lifelong learning for lifelong employability

SPEAKERS: BEATE VAN DE HEIJDEN, GEORGE BOAG, FRANK VISSER

This workshop addressed the contribution of partnerships to sustainable employability. Stakeholders should take joint responsibility for the employability of employees throughout their working life, in a context of rapid changing job content. Topic of discussion were examples of national, regional and local cooperation initiatives to apply learning strategies to strengthen the employability of employees, both within and outside their company or sector.

Key takeaways:
• Creativity and working in teams should be more promoted in VET
• We need to bring more entrepreneurship in education to improve creativity and social intelligence
• Too few workplaces are stimulating lifelong learning
• Facilitating innovation processes demands a long term commitment from all stakeholders

Workshop: Lifelong Learning: work in progress

SPEAKERS: MARC VAN DE MEER, TUOMO ALASOINI, MARIANNE ZOETMULDER

This workshop’s focus was on good examples of programmes to stimulate lifelong learning. One state funded programme (Skills Development Scotland) and one company-funded programme (The Philips Employment Scheme and Combi Method) were presented. Mr George Boag presented the state funded programme Skills Development Scotland (SDS). The SDS aims at creating highly productive workplaces and a learning culture in SME’s that comprise 99% of all the companies in Scotland. It also facilitates synergy between government, business and education. Mr Frank Visser presented the Philips Employment Scheme (PES) and the Combi-Method. For more than 30 years, Philips makes work experience places available for long-term unemployed people. PES gives people who have been out of work some time an opportunity to gain work experience and to attend additional (vocational) training courses. The aim is to improve the PES-participants’ chances at the labour market. About 70% of the participants find a job after completing the programme. The role of the workplace supervisor is very important to help participants during the programme and to prevent them from dropping out of the course. Workshop participants agreed that in the future lifelong learning policies should focus more on SME’s and vulnerable groups. Higher educated people and larger companies need no extra support.

“We are very sceptical of transferring ready made best practices from one workplace to another. It is more important to speed up local learning processes which will lead to local best practices.”

Mr. Tuomo Alasoini, director of the Liideri - Business, Productivity and Joy at Work programme, Finland.
RESULTS

In subsequent stages of life, people bring different sets of experiences to the labour market. Private circumstances also change over lifetime, leading to different labour market orientations and perspectives. At the same time, the labour market itself is in a state of flux. How do we connect the dynamics of the labour market with career and lifetime developments? How could VET providers contribute to labour mobility in a working life, which is more dynamic and longer than it used to be? 1-VET students cannot prepare themselves for these developments as specific job positions will demand specific training.

Qualifications framework and training programmes
In short, the need for lifelong learning is already high, but will increase. What is needed in this situation? Firstly, a qualifications framework and corresponding set of training programmes is needed which facilitates every adult citizen at any skill level at any time in his/her career to keep up with developments in the labour market. The problem of low-skilled and older workers making less use of training than higher educated and younger requires focused attention. It also requires guidance and comprehensive arrangements to validate non-formal and informal learning.

Emphasis on smaller and medium-sized enterprises
Secondly, more emphasis should be put on smaller and medium-sized enterprises, and more specifically on the more vulnerable lower educated and elderly employees within those SMEs. Personal career guidance will be key to reach those groups. Education – notably VET – should also pay more attention to entrepreneurial skills, as these skills are difficult to learn or improve in a later stage of life.

Long-term commitment from stakeholders
Training infrastructures must be open and accessible to workers regardless of their employment contract. The financing of lifelong learning requires attention as well. Bringing regional stakeholders together could be a successful approach, while it is crucial to guarantee a long-term commitment from all stakeholders for such partnership.

More information? All the results of the conference will be summarised and translated into “Stepping Stones towards a future proof VET”, to be shared with a wide audience of VET stakeholders in Brussels and throughout Europe.
Studies and the experiences of parents, teachers and students reveal that international experience in vocational education generates skills and contributes to excellence, and thus to the employability of VET students in the labour market. Furthermore, the resulting transversal, “21st century” skills and often “hidden” competences will be used by students during their entire career. Internationalisation of VET can therefore contribute to its excellence. However, international mobility and exchanges are relatively limited in VET. It is time therefore to boost internationalisation in VET. This ambition can obviously benefit a lot from a European approach. The Erasmus+ programme offers already ample opportunities and can use an active approach from the side of authorities, VET providers and the world of work to create a maximum impact.

“Is the attitude and the willingness that you bring to the work place”

Vice president of HK Scan Sari Suono speaks about the changing business and work environment. Why is vocational so important and what skills are needed?

“The current business and work environment is changing quickly and we, as a company, need to do the same. If we are not employing people with new skills and adapting to new situations, then our company will not exist. This is where our interest in vocational training comes from. We need to consider the hidden competencies of employees and potential employees: what are they and how are they defined? They are not the traditional ones like what you see in the CV. It is about productivity, resilience and about being curious. So, these are the things that we accept as an employer.

What do we need as employers? It is not only the theoretical basis – because that is something that you can learn. What is important is how do you use the international skills that you have gained in the working life. In Finland, it is important to put the employers and educational institutions together, even stronger than it has been. The learning outcomes need to be visible for the employers. Companies require productivity.

How does one candidate differ from another? That is important for the potential employees. That is what I have learned after employing hundreds of people: why do I want a certain person? The employee must fit the job and the company. They must have positive energy. You can have the CV skills, the traditional skills, what can be on paper, but it is the attitude and the willingness that you bring to the work place. Potential employees need to be global and think globally. The young people we are hiring and the young people who are unemployed in Europe, they have the possibility of being global all the time. And that is not only studying in other countries, but also through e-learning.”
René van Schalkwijk, EUproVET representing VET suppliers: “How can we promote internationalisation? The goal of six per cent mobility is very low if you look at the challenges in the future. If you’re serious about the European agenda, more people will have to move to other countries. We’re relying on the EU to promote mobility for our students and we’re saying it is important, but we ourselves are not acting.”

Ángeles Gabelia Barro, Junta de Andalucia, European VET Project Coordinator: “In 2004 Andalucia began promoting mobility and internationalisation. By taking smalls steps, we now have 140 schools in our Erasmus+ VET Mobility Charter. It takes time, effort and language skills to make students aware of the opportunities.”

PANEL DISCUSSION

Bart Vandewaetere, Nestlé, head of European Affairs office: “We certainly see the benefits of labour mobility, but for us it is not an objective in itself. We need to clearly define the objective. Labour mobility does not necessarily have to involve crossing the border, it can also take place in one and the same country.”

We need to clearly define the objective’

Workshop: Mobility and Cooperation Outside Europe

Speakers: Paul Guest, Karin Luomi-Messener, Philipp Lassiger, Jurgen Riems

“This workshop focused on two elements: mobility and cooperation outside Europe for VET. Three speakers introduced this theme from different perspectives. The first speaker presented the scope and current state of the art regarding international cooperation in VET outside Europe. Recent research has focused on different elements: for example, as to why cooperation outside of VET is beneficial, what is happening, what are the obstacles and successes and what changes can be made to improve cooperation. There are four kinds of cooperation activities: policy level, targeted at individuals, operational level and VET provider level.

The second presentation provided the participants with a view from higher education. This speaker provided participants with insights that have been encountered in Higher Education. The lessons focused on three levels: student, institutional and society. At institutional level a question to ask yourself, is how does the mobility and/or cooperation fit the institutional policy/profile and how does it add to your reputation? At societal level, a cost-benefit analysis could form the basis of a decision; in higher education research showed that when 4% of international students retain in the country the program is of benefit for society.

The third presentation provided a good practice example of mobility and cooperation outside Europe. The presenter stated that: ‘it is not just about mobility there is a lot more when we talk about internationalisation in VET! it doesn’t make sense to distinguish between development cooperation and educational cooperation, it is the same subject so cooperate!’ strong VET systems in foreign countries (and help building these systems) is also in our own benefit.”

Key takeaways:
• The percentage of VET students who study abroad might be too low, especially when compared to higher education students, but it is growing.
• Erasmus+ is a big factor in stimulating more students, VET providers and companies to participate in mobility.
• It is much more difficult to send apprentices on international exchanges for small and medium-sized enterprises than it is for multinational corporations.
• There are a growing number of sustainable international partnerships established between schools (and sometimes between a school and a chambers of commerce).
RESULTS

Studies and the experiences of parents, teachers and students reveal that international experience in vocational education generates skills and contributes to excellence, and thus to the employability of VET students in the labour market. Furthermore, the resulting transversal, students will use the “21st century” skills during their entire career. Internationalisation of VET can therefore contribute to its excellence. However, international mobility and exchanges are relatively limited in VET. How can internationalisation in VET be boosted, helped by a European approach? Hidden competences need to be made visible for employers.

Mobility through cooperation inside Europe: from theory to practice

The European ambition is set by the 6% benchmark VET mobility in 2020. Yet several questions need to be answered. While doing so, it is essential to be aware of the difference between Member States. Their starting position (level of mobility), instruments and funding are all very different. This requires tailor made measures to bridge the variety of gaps towards the ambition of 6% VET mobility in 2020. There should not be too much emphasis put on quantity instead of quality, letting personal growth of students on hidden competences underexposed. Preferably, setting quantitative targets should be linked to fostering quality.

Companies should trust the students, and show this together with the schools. They can expect on their part an open and proactive attitude by the students.

Mobility outside Europe

A clear – preferably evidence based – view is needed on why (and where, how and for whom) investment is needed in international cooperation. Next question would be how to progress from ad hoc initiatives to structural and sustainable policies. Cooperation activities are clustered at four levels: policy level (e.g. policy dialogue), targeted at individuals (e.g. mobility), operational level (market research) and VET provider level (capacity building).

Success factors include embedding initiatives in a wider outreach, equal levels of commitment, commitment at strategic levels and resources. Research and good practices (from VET or HE) are needed to define the added value of international cooperation for VET.

Strong VET systems in third countries outside the EU (and help building these systems) are also in our own benefit and when 4% of the international students retain, the program is of benefit for society. Often this percentage is higher.

6% benchmark VET mobility in 2020

TAILOR MADE MEASURES

Research and good practices

‘Success factors include embedding initiatives in a wider outreach, equal levels of commitment, commitment at strategic levels and resources’
**BUZZMASTER**

**Are you a man or a woman?**

- **44%** Male
- **56%** Female

**Do you have a VET qualification or a university degree?**

- **86%** University degree
- **12%** VET qualification
- **1%** Both

**Where do you work?**

- **43%** Business
- **44%** Knowledge institution
- **12%** Government

**Where are you from?**

**What did you want to be when you were a child?**

- Guus Muijzers: A child
- Stasa Skenzic: Dentist
- Jan Jeronimus: Happy
- Theo Van Gellen: Architect
- Aisling Fleming: Air hostess
- Hannah Starwix: Circus director
- Van Der Heijden: Secretary
- Jasper Van Loo: VET researcher
- Bozidar Grigic: Cowboy
- Freddy Werra: A good person, like my parents
- Karol JakubĂś: Construction engineer
- Fiona Hardtley: Plumber
- Toon Jansen: Fire fighter
- Lawrence Mizz: Farmer
- Anneke Wosterhuis: Player for Tottenham Hotspur

**Workshop 1A Innovations**

- Graduates are critical friends that should be consulted more often.

**Workshop 1B Excellency**

- Schools themselves lack the skills to link up with companies, they need to be more entrepreneurial.

**Workshop 2A Partnerships**

- Government and companies need more agents of change, we need people that bring people together.

**Workshop 2B Lifelong learning**

- Graduates are critical friends that should be consulted more often.

**Workshop 3A Internationalisation**

- To facilitate innovation processes demands a long term commitment from all stakeholders.

**Workshop 3B Mobility outside Europe**

- Research on the VET placements is too much focused on numbers instead of quality.
We would like to thank all those involved in the organisation of the event and its participants for their contribution to improve VET-systems in the EU!

The Netherlands’ EU-Presidency Team