



IMPROVING AND PROMOTING VET

**BIBB and its Global
Network of Partners**



Federal Institute for
Vocational Education
and Training

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Bundesinstitut für Berufsbildung – BIBB
Federal Institute for Vocational Education and Training
PO Box 201264
53142 Bonn
E-Mail: vertrieb@bibb.de
Fax: (+49-228) 107 2967

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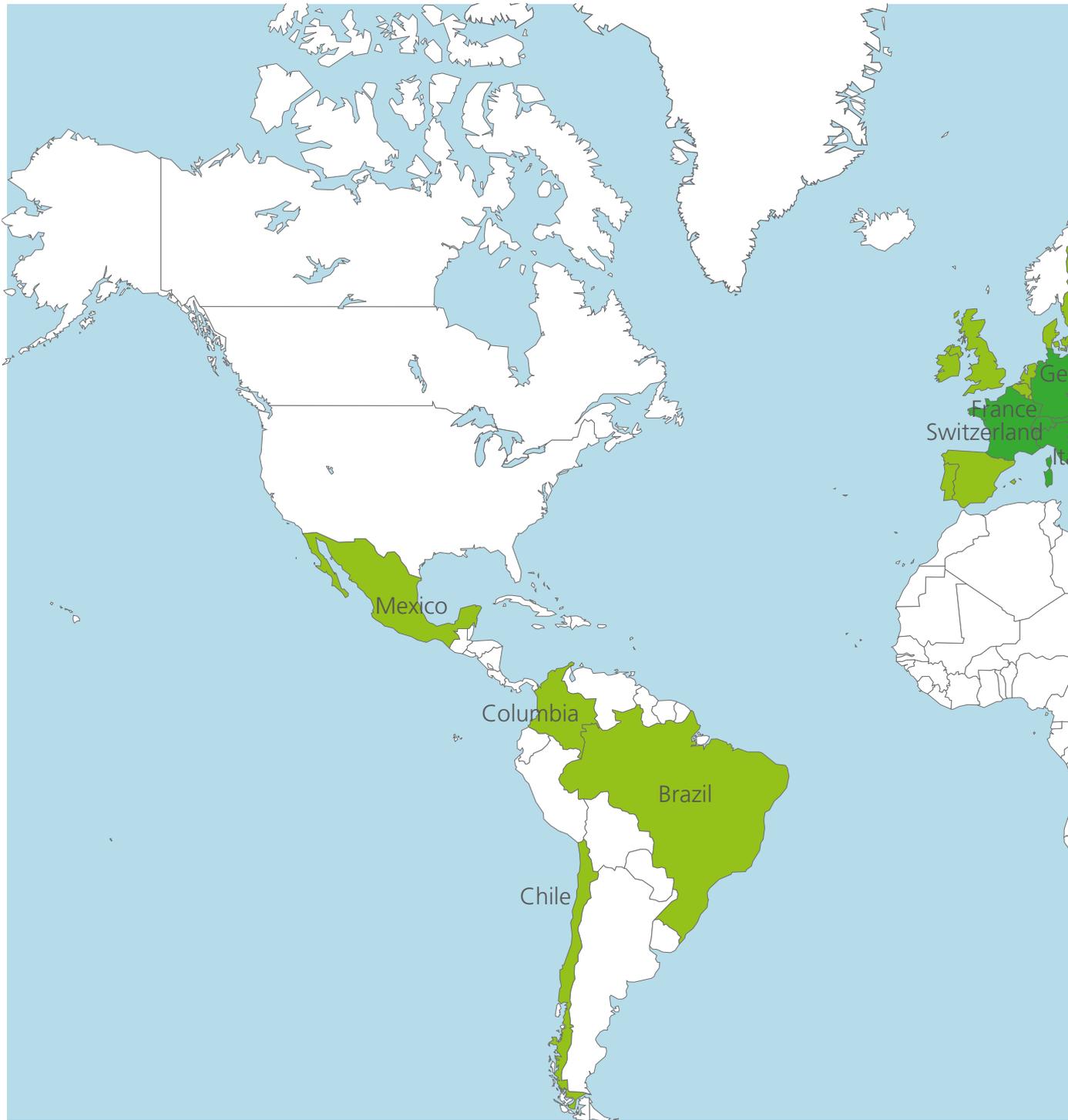
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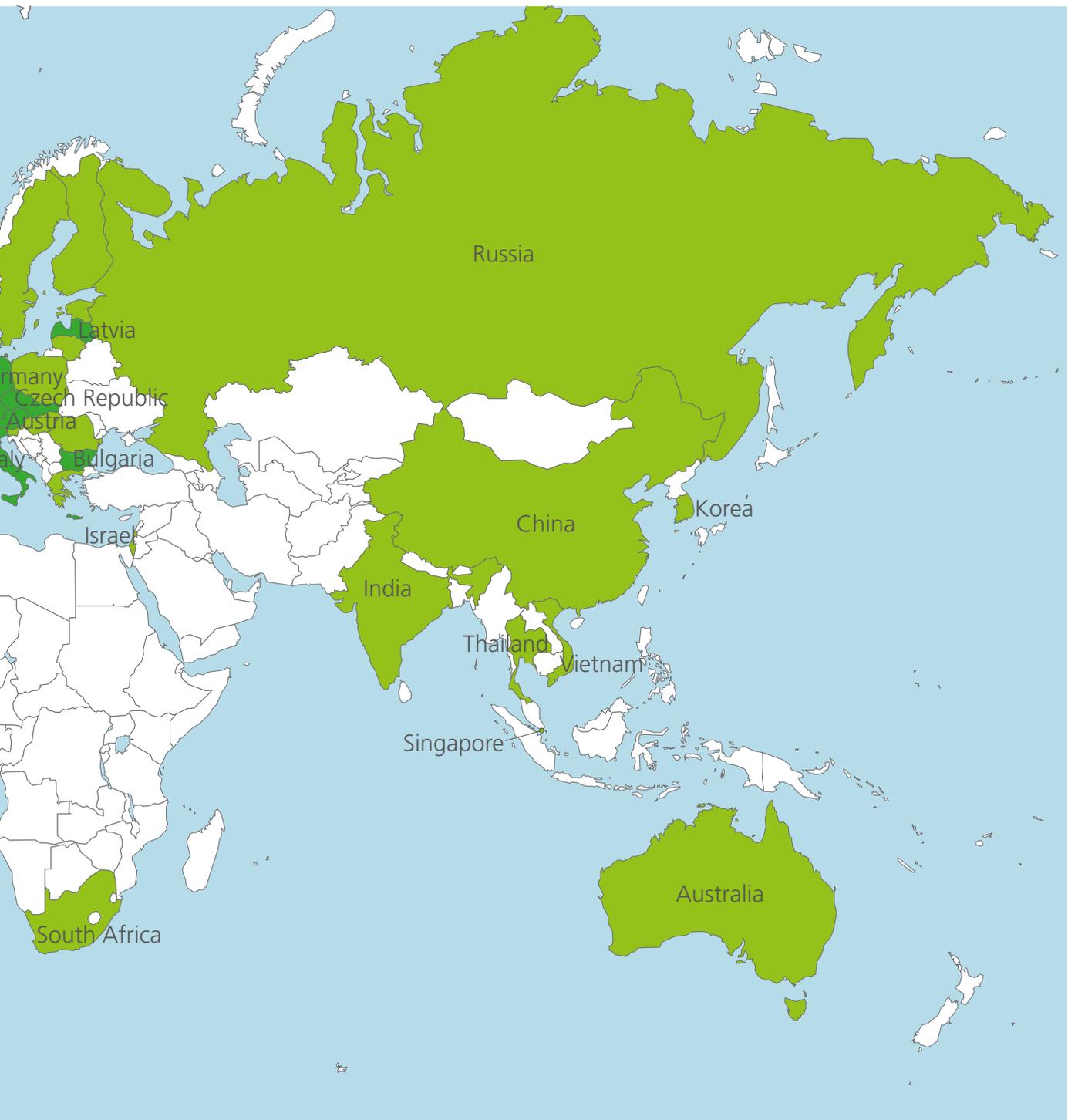




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Preface

Prof. Dr. Friedrich Hubert Esser

The Federal Institute for Vocational Education and Training (BIBB) is the German competence centre for research and development, international cooperation and consultation in vocational education and training, recognised all over the world. It leverages its strengths in these areas to cooperate with governments and institutions that want to modernise the vocational education and training systems in their countries. In doing so the BIBB integrates its positive experience with the dual system in Germany into its tightly integrated international cooperation projects.

In Germany, vocational education, like academic education, opens the way to high qualifications and is therefore of utmost importance for maintaining the supply of skilled manpower. Given the high and rising youth unemployment in many countries, more and more governments and institutions are interested in developing their vocational education and training systems further. In this process they orient themselves on the model of dual education and training.

It is therefore my great pleasure to welcome nearly thirty national and international partner organisations of the BIBB to the “First BIBB Global Partners Meeting” during WorldSkills Leipzig 2013. At WorldSkills Leipzig 2013, the best trainees and young specialists from around the world compete to become the champion. The exciting competitions make young people yearn for training – be it in traditional occupations or in new disciplines.

Since 2006, the BIBB has been sending out invitations to partners meetings, and they have meanwhile become a stable foundation for a global community of practice in vocational education and training. Previous partners meetings took place in 2006 in Bonn, in 2007 in Madrid, in 2008 in London, in 2010 in Belgrade, in 2011 in Seoul and Podgorica, as well the most recent in 2012 in Mexico City. The previous meetings concentrated on individual regions, but we are continuing the series of what is now seven partners meetings in Leipzig with a meeting that brings together all our partners and friends from around the world on the stage of WorldSkills.



The present BIBB publication on the occasion of WorldSkills Leipzig 2013 is intended not just to document that exchange among partners but to deepen it. On the one hand, it is meant to document the national responsibilities and international cooperation projects of the BIBB. On the other hand, it is a comprehensive presentation of the leading vocational education and training institutes all over the world, of their tasks and objectives, their research and development activities and their cooperation projects within international networks.

I would like to thank all our partners warmly for your cooperation and for your contributions to this documentation.

Professor Dr. Friedrich Hubert Esser
President of the Federal Institute for Vocational
Education and Training

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Germany

Bundesinstitut für Berufsbildung (BIBB)

Federal Institute for Vocational Education and Training

Mission and vision

As a recognised centre of competence for research and development of initial and continuing vocational education and training in Germany, the Federal Institute for Vocational Education and Training (BIBB) identifies future tasks facing the sector, promotes innovations in both national and international vocational education and training and develops new, practice-oriented solutions for workplace-based initial and continuing training. The mission of the BIBB is succinctly captured in its slogan “Researching – Advising – Shaping the Future”.

In the light of ongoing technological, economic and societal change, companies expect to be able to recruit highly qualified skilled workers. In Germany,

the foundations of such a skills base are provided by dual vocational education and training and continuing vocational training. BIBB’s research and development work and advisory activities assist in the process of using sustainable qualifications as a vehicle to secure people’s economic and occupational future and to maintain the comparative competitiveness of the German economy.

BIBB’s strategic goals for the period of 2012–2015 are aligned with strengthening its core competences, i.e. vocational education and training research, policy guidance and providing support for VET practices. BIBB’s mission statement serves as a foundation for its cooperation with policy makers, VET practitioners and the academic research community. It provides staff with guidance on necessary processes of change and specific implementation of projects, and contains the following assertion:

“Vocational education and training is the key to personal development and participation in society, as well as being vital in terms of securing employment and competitiveness. Our policy is that everyone should receive comprehensive and high quality vocational education and training. Our work promotes open and permeable educational pathways, lifelong learning and individual vocational development. We stimulate innovation within vocational education and training and foster the practical implementation of such innovation.”

These aims are to be achieved through statute-mandated tasks, such as processing of data on newly concluded training contracts for VET statistics, as



well as through research and development projects and academic research services.

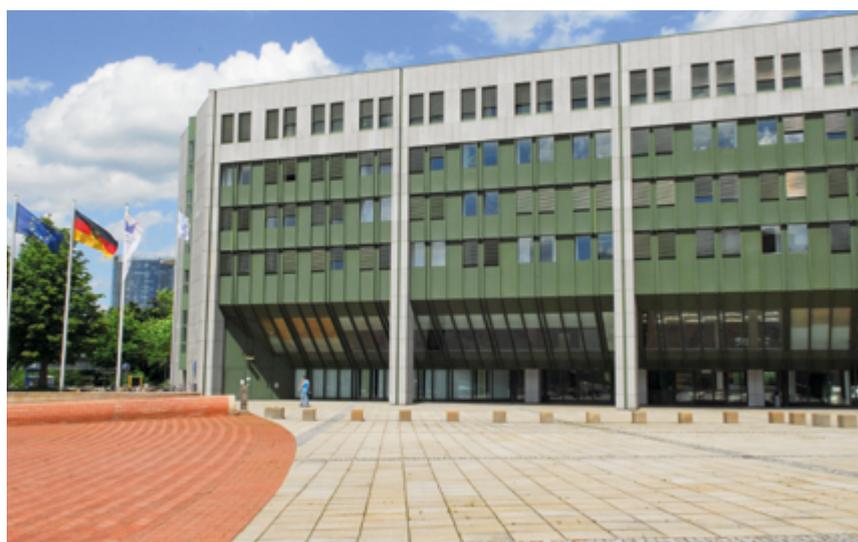
Historical development

BIBB was established by federal law in 1970, since which time it has acted as a federal government institution operating in the areas of VET policy, academic research and practice. BIBB is funded from the federal budget and is subject to the supervision of the Federal Ministry of Education and Research (BMBF). It has its offices in Bonn since 1999.

Research and development activities

Educational and labour market research enable ongoing adaptation of vocational education and training to technical, economic and social developments. Occupational information and advice provide support in the selection of initial and continuing training measures and in making the transition to the employment system. Educational and labour market research also provide an important impetus for the development of VET and labour market policy.

Labour market research observes and analyses the development of the labour market with regard to occupations, sectors of trade and industry, as well as regions and draws up short-term and long-term projections. It investigates the impacts of the labour market and social policy instruments and also analyses the experiences of other countries in this area. The purpose of VET research is to initiate, help shape and evaluate innovations in the field of vocational educa-



Federal Institute for Vocational Training and Education (BIBB)

tion and training. This includes supporting trade and industry by recognising skills requirements at an early stage, securing the quality of vocational education and training, clarifying educational economic issues regarding costs and benefits, investigating educational processes and new learning concepts. Research results are used to inform the dialogue between the state, trade and industry and the social partners. All of this enables VET research to exert a constructive influence on the further development of vocational education and training. In this regard, BIBB's Mission Statement includes the following declaration:

“Our vocational education and training research enables us to adopt an active role within the academic research system. Our research is directed towards significant issues relating to vocational education and training and contributes to theoretical development. Our research is of an interdisciplinary nature

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and is bound by academic research standards. We cooperate with institutes of higher education and research bodies, foster up and coming academic talent and enable the field of academic research to gain access to our research data.”

The Vocational Training Act (BBiG) stipulates that BIBB’s research should be carried out on the basis of an Annual Research Programme. The aim of having a medium-term Research and Development Programme is to make the work of the institute transparent. The Research and Development Programme is characterised by a continuity which arises from the statutory remit, long-term projects and the ongoing existence of certain problem areas. At the same time, the programme also sets new emphases. These are primarily associated with the following keywords: Securing the supply of skilled workers, competence orientation and competence research, implementation of the German Qualifications Framework (DQR), inclusion, internationalisation of vocational education and training.

Whereas the institute’s medium-term Research and Development Programme is aligned to VET policy goals by stipulating five main thematic focuses for a period of five years, the Annual Research Programme translates these main thematic focuses into concrete research projects.

BIBB conducts vocational education and training research for the purpose of improving structures, processes and concepts with the aim of a direct transfer to practice. This means that the requirements of VET practice and policy are linked with the requirements of research and regulatory work.

Main thematic focuses for the Annual Research Programmes from 2013 onwards

- Training market and employment system
e.g. “Development of the training market and development of transitions to training”
- Modernisation and quality assurance of vocational education and training
e.g. “Recognition of competences acquired informally and non-formally”
- Conditions and structures of lifelong learning
e.g. “Integration of learning periods into the rhythm of life”
- The diversity of vocational education and training
e.g. “Inclusion – rethinking vocational education and training for the disabled”
- Internationalisation of vocational education and training
e.g. “Competences and qualifications acquired internationally”

Over the past four years, the main areas of focus have been in the development of structural concepts in regulatory work, the analysis of skills requirements and qualifications development, lifelong learning, the development of the European Qualifications Framework and of the German Qualifications Framework and the international comparison of vocational education and training systems.

Vocational education and training occupies a special position within the educational system in Germany. The social partners represent a wide range of vest-



ed interests and are involved in the structuring and development of nationally standardised initial and advanced training occupations. Decision-making structures are institutionally established and require a reconciliation of interests between social partners.

BIBB works in accordance with the findings which emerge from qualifications development research to operate in close conjunction with the social partners on the development of new training occupations and continuing training regulations and on the modernisation of existing occupations. The foundation for the regulatory work conducted by BIBB is the Vocational Training Act. Regulatory work is statutorily stipulated and takes place under the auspices of the responsible federal ministries. This is a “unique selling point” of BIBB. Proposals made by employer organisations, trade unions, federal states, and the results of vocational education and training research are integrated into regulatory procedures.

Regulatory work encompasses all activities of the continuing development, implementation and evaluation of regulatory instruments (training regulations, framework curricula and continuing training regulations). It also covers research work to prepare or support regulatory procedures within an international context.

The BIBB board is tasked to advise the Federal Government on all fundamental issues relating to vocational education and training. The recommendations made by the board supplement and extend the general statutory conditions governing regulatory work. By dint of its status as the supreme governing

body of the Federal Institute for Vocational Education and Training, the board is often referred to as the “Parliament of Vocational Education and Training”. It has equal representation from employer and employee associations, the federal states and the Federal Government.

International cooperation activities

Pursuant to the Vocational Training Act, BIBB engages in international cooperation in vocational education and training within the scope of the Federal Government’s education policy. This remit is set out in specific terms in the BIBB Mission Statement:

“We cooperate with international partners and offer services worldwide. We advise international partners on the development and modernisation of vocational education and training. We initiate and maintain international networks. This also enables us to foster the efficiency and competitiveness of the German system of vocational education and training and contribute to the creation of the European Education Area.”

Accordingly, BIBB is active at the European and global level. BIBB supports European VET cooperation for the creation of the European Education Area at a national level and is also involved in the structuring of the necessary instruments to this end (qualifications frameworks and credit points). It works with European partner institutes and also with leading research institutes in joint research projects. Worldwide, BIBB has cooperation agreements in place with more than 30 vocational edu-

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cation and training institutes. The objects of these agreements are the regular exchange of information and cooperation in specific projects.

VET systems in many countries are under considerable pressure to reform and modernise. The German vocational education and training system offers a large number of potential tie-ins for the modernisation of VET systems in partner countries. Given the fact that national educational structures cannot be “imported” or “exported” in their entirety, the focus needs to be on developing possible solutions which are adapted to the requirements and prevailing general conditions in partner countries. These are then implemented and sustainably established by working together with national stakeholders. BIBB’s international cooperation activities are guided by the principle of stakeholder involvement.

For BIBB, international cooperation and advisory services need to be viewed as an interdepartmental task. BIBB is facing growing challenges in the field of international cooperation generated by increasing enquiries from abroad. Therefore, it draws on the expertise from the institute’s departments for its international advisory activities.

International advisory activities

In its advisory activities, BIBB demonstrates a systemic and holistic understanding of vocational education and training. It links the advice it provides to existing structures within the partner country and provides the impetus for change and development of the whole system or of individual sub-systems. In its

BIBB advises on reforming VET systems in the following areas:

- Development and modernisation of occupational, training and examination standards
- Structuring of forms of initial and continuing training: Training venue cooperation between schools, companies and other training institutes, funding of competence centres for demand-oriented vocational training
- Development of concepts for the training of VET trainers
- Development of national qualifications frameworks
- Establishment and expansion of VET research, e.g. of sets of instruments for the early recognition of skills development
- Organisational development of VET institutes, in particular national institutes of vocational education and training
 - Establishment and modernisation of VET information and knowledge management systems
 - Communication platforms relevant to vocational education and training
 - Development of teaching and learning materials and (digital) media
 - Structuring of funding models
 - Modernisation of the legal framework
 - Networking VET with principles of sustainable development

international consulting work, BIBB is able to make use of its national “unique selling point” of being able to connect research and practice in initial and continuing VET. In its capacity as a national competence



centre in vocational education and training, BIBB generates the very latest knowledge on VET development. This knowledge is then used to inform international VET advisory services and cooperation. In the light of increasing demand and limited resources, BIBB will focus its international vocational education and training cooperation on countries in which fundamental institutional conditions for the implementation or modernisation of a national VET system are in place. These conditions include the

willingness of national and German enterprises to make a contribution towards achieving a qualitative improvement in the vocational education and training system and an interest on the part of major stakeholders in conducting the relevant dialogue and exchange of professional advice. These criteria would generally be fulfilled by G20 states and by other emerging and developing countries which are important to the German government and which exhibit innovation potential (e.g. Vietnam).

Selected examples from BIBB's cooperation and advisory services practice

China: The topic of "Quality assurance in vocational education and training" represents a strategic objective within the current educational plan of the Chinese government. Although on the one hand the aim is to stimulate companies to enter into dialogue with all VET participants, Chinese vocational school pupils have largely undergone theoretical training and lack the practical experience which companies demand. Against this background, BIBB has been providing advice to its partner institute CIVTE in Beijing since 2011.

India: Within the scope of the German-Indian VET Working Group, BIBB has been engaging in close cooperation with the Indian government and with institutions and associations involved with vocational education and training since 2008. BIBB activities focus on its cooperation with the "National Skills Development Corporation (NSDC)" in Delhi and the "Central Staff Training and Research Institute" (CSTARI) in Calcutta. BIBB supports both these partners in the development of occupational, training and examination standards and in the development of standards for curricula and qualifications development research.

Columbia: Since 2011, BIBB has been advising the National Vocational Training Service SENA (Servicio Nacional de Aprendizaje) on institutional modernisation and on promoting dual training. Cooperation has also been ongoing with the Colombian Ministry of Education and Labour since October 2012. The main focus of cooperation is the establishment of a National Research Centre for Vocational Education and Training at SENA.

Vietnam: BIBB has been advising the Vietnamese National Institute for Vocational Training (NIVT), which forms part of the General Directorate for Vocational Education and Training at the Ministry of Labour, Invalids and Social Affairs (MOLISA), in the strategic realignment of the Vietnamese VET system since 2004. The main focus of advisory activities since 2010 has been VET research (optimisation of the research and development activities of the NIVT), the implementation of a sustainable monitoring system in vocational education and training and, as of 2012, the development of an Annual Report on Vocational Education and Training.



Over recent years, the main advisory focus has been on the development of standards (training and examination standards), training of trainers and fundamental advice on how to establish a demand and employment-oriented vocational education and training system that is closely integrated with trade and industry. BIBB has been able to bring particular sectoral expertise to the table in the fields of commercial occupations, in the automotive industry and in metalworking and electrical occupations.

With its unique selling point, BIBB is an attractive partner for cooperations. Networking is an important instrument to exploit synergies and to build a good starting point in terms of international competitiveness. With this in mind, robust cooperation arrangements are already in place with major German partners like the German UNESCO Commission or the German Agency for International Cooperation (GIZ). These strategic partnerships need to be expanded further. The German Chambers of Industry and Commerce Abroad (AHK) are also important partners for cooperation in partner countries. Their activities include implementing Federal Government projects in order to promote international trade.

BIBB endeavours to use the instruments and activities presented here to secure the quality of its advisory services, to systematically expand these services and thus to provide an appropriate response to the increasing challenges facing international VET cooperation.

www.bibb.de



Australia

The National Centre for Vocational Education Research Ltd. (NCVER)

Mission and vision

The National Centre for Vocational Education Research (NCVER) is an independent not for profit company responsible for collecting, managing, analysing, evaluating and communicating research and statistics about vocational education and training (VET). NCVER is owned by the state, territory and federal ministries responsible for training. It is managed by a board of nine directors that represent state, territory and federal governments, industry and unions.

NCVER's vision is to contribute to improvement in Australia's education and training system by ensuring that policy and practice are based on sound evidence. Its mission is to be Australia's leading pro-



vider of high-quality, independent information on vocational education and training to governments, the education sector, industry, and the community.

NCVER's activities encompass several areas of activity. These are:

- ▶ Research nationally into the tertiary education and training system. As part of this, NCVER manages a nationally competitive research grants programme. NCVER also conducts the analytical programme for the Longitudinal Survey of Australian Youth (LSAY).
- ▶ The collection and analyses of national VET statistics and survey data (including the Student Outcomes Survey and the Survey of Employer Use and Views).
- ▶ Through the VOCEDplus research database, collection and dissemination of research on VET and higher education from across the world.
- ▶ The dissemination of research and data analysis.
- ▶ Building and maintaining linkages with other similar international organisation to collaborate and matters of mutual interest and also to collaborate on comparative analysis.
- ▶ The undertaking of commercial consultancies.

Historical development

The NCVER (formerly the TAFE National Centre for Research and Development) was created in response to the perceived lack of a coordinated research programme focusing on technical education issues in Australia. It was established in June 1980, after the Conference of TAFE Directors and the Chairman of the Technical and Further Education

Council (TAFEC) prepared a proposal for the Australian Education Council (AEC) meeting in October 1979. At that meeting, a draft charter was accepted which made provision for the review of the Centre after three years. The Memorandum of the Articles of Association was signed by all Ministers of Education in June 1981. The Centre was created as a company registered in the state of South Australia and limited by guarantee on 2 September 1981 and started its national operations in November of that year.

The company began with a small complement of staff (eleven at the end of its first year of operation). The original focus of the research included analysing skills for occupations and to research, design, review and evaluate training curricula and programmes. The company was also directed to plan and develop learning materials and to develop and promote technological aids within vocational education. Furthermore, research into a range of topical issues was carried out. In addition to the research, NCVER was asked to develop an awareness of vocational education research nationally, and to liaise with training authorities both in Australia and overseas. NCVER was also asked to operate the National Vocational Education and Training Clearinghouse.

Since its beginning, NCVER's remit and staffing levels have expanded considerably and it now undertakes a variety of functions as was described previously. Among the most important are the contracts to collect and analyse national VET statistics (this now forms a large part of NCVER's work) and also the contract to manage the nationally competitive

research programme (known as the National Vocational Education and Training Research Programme). In addition, NCVER currently holds the contract for the analytical programme for the Longitudinal Survey of Australian Youth.

Research and development activities

NCVER undertakes a strategic programme of VET research and development. The research aims to inform VET policy and practice. NCVER's research is guided by a set of national research priorities. These research priorities are developed after extensive stakeholder consultation by NCVER and are endorsed by the Ministerial Council for Tertiary Education and Employment (MCTEE). The current priorities are for the period 2011–2013 and the five subject areas of the priorities are:

- ▶ Skills and productivity – How skills contribute to economic growth
- ▶ Structures in the tertiary education and training system – The impact of policy, funding and market structures on the system
- ▶ The contribution of education and training to social inclusion – Reducing disadvantage through education and training
- ▶ Learning and teaching – How, why and where people learn
- ▶ The place and role of VET – The role of VET in the tertiary education sector, the world of work, and more broadly the community

There are four main components to NCVER's research programme. Firstly, NCVER conducts an in-house research programme on issues that will inform VET policy and practice. NCVER also manages – as part of the National Vocational Education and Training Research and Evaluation Programme – a competitive research grants programme. This programme provides funding annually for research (on a competitive basis) that is based on the five research priorities mentioned above.

Since 2007, NCVER has undertaken the analytical programme and data reporting service for the Longitudinal Survey of Australian Youth (LSAY). LSAY is a multi-cohort survey that tracks young people (aged about 15–24) as they move from school to a variety of post-school destinations. LSAY is managed and funded by the Department of Education, Employment and Workplace Relations (DEEWR).

In addition to the programmed research activities described, NCVER also undertakes consultancy projects for Australian and international clients. Types of consultancies include skills needs of industry, training needs of diverse groups and programme evaluations. Other projects examine a range of national training policy and practice issues.

NCVER not only conducts and manages research, but also publishes and communicates the results of research and data analysis. NCVER places a large emphasis on the dissemination of research through a variety of means including reports, at-a-glances, workshops, webinars, and podcasts. For



over 30 years, NCVER has been providing information to a wide range of stakeholders within both government and non-government sectors.

Standard setting

The NCVER has a major role as the custodian of the key standards which drive the collection of training statistics in Australia. The centre has carriage of the Australian Vocational Education and Training Management Information Statistical Standard (AVETMISS) including ongoing improvements to the standard.

The standard provides a national framework for the consistent collection of Vocational Education and Training information in Australia. It specifies, in detail, the information that needs to be collected by Registered Training Organisations about training activity in Australia. The basis of the information that is collected is the student and the information is collected under three main groupings:

- ▶ Who they are – for example age, sex, indigenous information, disability information and geographic information;
- ▶ where they study – including type of training provider (for example whether it is government or private), and the location of the training delivery; and
- ▶ what they study – including course enrolment information, mode of study (for example classroom, online or workplace), how the training was funded and the result of the unit or module of study.

International cooperation activities

With an emphasis on maintaining links with international organisations, NCVER's international effort helps to ensure that Australian VET sector developments are seen in an international context and assist Australia's strategic interests. NCVER is proactive in building links with similar international organisations to foster comparative analysis and collaborate on issues of mutual interest. The centre is also a *UNESCO Centre of Excellence* and regional coordinator of the UNEVOC network in the Pacific Island region (jointly with Polytechnics International New Zealand).

Cooperation with BIBB

NCVER established a Memorandum of Understanding (MoU) with the Bundesinstitut für Berufsbildung over a decade ago based around publication sharing and information networking on topics of mutual interest, including qualifications, frameworks and apprenticeship systems. Our two libraries have cooperated from time-to-time to ensure up-to-date literature is captured in both NCVER's VOCEDplus and BiBB's Literaturdatenbank Berufliche Bildung bibliographic databases.

www.ncver.edu.au



Austria

Austrian Institute for Research on Vocational Training

Österreichisches Institut für Berufsbildungsforschung (öibf)

Mission and vision

öibf 's mission is to carry out high-quality research and development in order to support and promote activities and policies concerning vocational education and training (VET). In our work we focus particularly on innovation in education and the interrelation of education and the labour market. We are active both on the national and international level.

The commitment to academic standards of scientific research and a high degree of professionalism ensure sound results and good relations with cooperation partners, clients and contracting institutions. Our expertise and dedication has been central to the successful completion of more than 1350 pro-

jects during the last 35 years. An interdisciplinary approach to complex issues and research questions entails the integration of fragmented and isolated results from different scientific disciplines to ensure a comprehensive and multi-faceted investigation of the different aspects of VET. Apart from applied research and development, öibf also carries out basic research focusing on scientific methods.

The öibf is a non-university research institute. Our services contribute to the solution of complex scientific problems with educational multidisciplinary approaches, in the form of basic research and applied research and development. The project-related funding for the institute through services for various organisations in Austria and Europe is a fundamental requirement and a guarantee of independence.

People and work are in the centre of the institute's activities which is reflected by its work on gaining access to education, to vocational learning contexts and qualified employment. The development and placement of consolidated evidence through scientific approaches unifies the manifold ways of working of the institute. We impose high standards on our research and development services and regularly face the scrutiny of the scientific community.

In connection with the terms, structures and processes of teaching and learning across the lifespan, we focus on dialogue, networking and collaboration with institutions of science, education practitioners and policy makers. We want to generate knowledge and results for the sustainable management of indi-



vidual and societal challenges. We place a particular focus on the avoidance of exclusion and discrimination of individuals.

Historical development

The Austrian Institute for Research on Vocational Training (öibf) was founded in 1970 on the initiative of the Vocational Training Institute with the support of interest groups for employees and the Federal Ministry of Labour and Social Policy, Science and Research. It was among the first institutions of its kind in Europe and is the most traditional training research institution in Austria.

Research and development activities

One of the key benefits of öibf is the development and implementation of application-oriented projects. The newly developed innovations provide the expert public and the scientific community with new solutions and products for policy and practice. The institute deals with the numerous, peripheral and complex issues of Educational Sciences through multidisciplinary research and through active participation in national and international research networks.

The institute has expertise in the following key research areas: Professional skills development, quality and professionalism, educational choice and participation. However, innovation fields of vocational training in Austria are defined together with responsible agencies. Innovation fields are designed

Main thematic focuses for current research

Areas of special expertise include:

- ▶ Initial vocational education
- ▶ Further education and training
- ▶ Vocational guidance and counselling
- ▶ Evaluation research
- ▶ Quality assurance and development
- ▶ Observation of the labour market
- ▶ Innovation in VET and new media
- ▶ Economics of education
- ▶ Gender mainstreaming

conceptually and scientifically or evaluative. In recent years, we were particularly involved in the development of an Austrian national qualifications framework. In this regard, we worked on many dimensions, ranging from learning outcomes and quality assurance processes to valid approval procedures for different sectors of the Austrian education system.

Vocational skills development

The education systems and curricula of the Austrian dual system are based on a description of competences. This applies to job-related qualifications in vocational training, advanced vocational training and up-skilling, to the context of labour market training programmes, and also to voluntary work. Currently, a lack of competence orientation is most obvious in the realised audit practice.

In all these areas there is a need for basic scientific research, development of concrete strategies and accompanying evaluation of measures in practice to increase the competence orientation. The research activities of the institute relate equally to the definition of (professional) skills, the development of appropriate assessment procedures, as well as to the support of educational practice. Particularly in the development of job profiles, skills-based teaching and the accompanying evaluation, öibf regularly develops products for educational practice and provides policy guidance for decision makers. These experiences are also incorporated into the context of national and international professional bodies (such as the “Standing Committee on New Skills” or “ESCO Maintenance Committee”).

Lead projects in this area of research are:

- In regard to the reintegration of unemployed professionals, the mismatch between actual individual competence profiles and qualification needs represents a central barrier for placement. This has many causes: Technological change that has taken place in the period between initial vocational education and unemployment; change in the requirement profiles of comparable jobs; missing possibilities of applying generally acquired knowledge and skills, gaps in training. On behalf of the Public Employment Service Austria, and in cooperation with ibw (Institut für Bildungsforschung der Wirtschaft) and central training institutions, we develop training concepts and methods to identify the individual re-qualification requirements. We select potential participants and modular training pro-

grammes for selected professions and evaluate training methods.

- We develop manuals (guides) to support appropriate curriculum development, lesson planning and implementation, and the examination of practice. These guides range from learning outcomes-based service development in adult education to guidelines for competence-based education in vocational schools.

Quality and professionalisation

In vocational training, educational policy and in recent years in scientific discourse, the quality issue has taken a central role. Certain features of training arrangements for the development of expertise on the one hand and cognitive psychological insights on the other hand have become integral components of vocational education research.

The differentiation between input, process, output, outcome quality and results orientation/impact open new perspectives, yet also raise many questions regarding the validity, relevance, reliability and usability of procedures, methods and criteria for quality assurance.

Against the background of the differentiation of quality assurance and development and the methodological and procedural approaches which form the basis for this, the institute has developed numerous findings and products in connection to educational organisation research, paying particular attention to perspectives of learners as well as teachers as an important stakeholder quality discourse. These range



from international comparative research, through process development, qualification of teachers and reviewers or auditors, to the certification of educational facilities.

During project implementation and particularly during the development of procedures, dialogic or even participatory processes are used in order to promote the application and acceptance by the institutions and their representatives.

In this regard, two fields of action are worth mentioning:

- ▶ Since 2003, based on the project “peer review as a means of quality assurance in vocational education and training in Europe”, which was carried out together with 38 project partners from 15 European countries, the development, training, piloting and transfer of innovation in vocational training at the upper secondary level was supported. The VET sector formed the main focus here. Relevant manuals, curriculum development, peer training, competency profiles of quality managers, and more were developed.
- ▶ Procedures of external quality assurance are a relatively new feature in the Austrian education sector. The institute has contributed to the recent developments in two ways. On the one hand, in cooperation with the University of Klagenfurt, an Austrian framework model was developed (E-Cert), which provides an overview of quality assurance measures in Austrian adult education organisations and supports mutual recognition between countries as well as recognition by the federal government. Since 2001, öibf is responsible

for the “vienna-cert”. öibf cooperates on this issue with the Vienna Employment Promotion Fund (waff), which rates the quality of Vienna’s training facilities on the basis of written self-descriptions, proof evidence, and through audits.

Education choice and participation

Scientifically, three axes of explanations can be found for educational decisions and thus manifesting participation. The variants of normative decision theory (in fact, often in close connection to the rational choice theory or psychologically motivated personality models) are based on fundamental axioms (such as the rationality of the decision maker, utility calculations, etc.). Prescriptive theories attempt to derive strategies and methods that help people to make better decisions by developing certain decision models and explain the application. Descriptive decision theories empirically examine the question of how decisions are actually made. The institute works on the latter two theories intensively and develops products which serve as the basis for governance processes and for individual decisions. In addition to applied research on behalf of ministries, the Public Employment Service and the interest groups, projects are developed and implemented with funding from the research funds and European educational programmes.

The project consists of three key chains:

- ▶ The scientific evaluation of the introduction of a vocational matriculation examination (“Berufsreifeprüfung”; more recently in the context of

“Lehre” and “Matura”) and the observation of the transition into tertiary education programmes carried out by the institute since 1999.

- ▶ Networking consultancy initiatives and development of consulting products for adults with funding from the European Social Fund and the Ministry of Education since 2001.
- ▶ Since 2003, cooperation with the Chamber of Labour and the Austrian Trade Union Federation on socio-economic issues of educational decisions in Austrian education. These are complemented by continuous work and further research on school vocational orientation, analysis of segregation in access to apprenticeships, training for poverty.

this contact seminar, the participating research institutes present their research activities and discuss current issues.

Members of the öibf also took part in the Regional Workshops South East Europe in Belgrade (2010) and Podgorica (2011), which were initiated and organised by BIBB in order to build a network of researchers and practitioners in VET in this region. This network consists of several institutions from Serbia, Montenegro, Slovenia, Romania, Hungary, Germany and Austria.

www.oeibf.at

Cooperation with BIBB

The öibf and BIBB have been keeping contact for many years. In 2008, both institutions signed a cooperation agreement which aims at acting jointly in research and development in the field of vocational education, with the goal of promoting vocational training research through mutual support, cooperation and information exchange.

Several years ago, BIBB, öibf, ibw (Institut für Bildungsforschung der Wirtschaft, Wien), 3s (3s Unternehmensberatung GmbH, Wien), and EHB (Eidgenössisches Hochschulinstitut für Berufsbildung, Bern) decided to launch a contact seminar for research institutes in the field of vocational education and training for the German-speaking part of Europe. This seminar alternately takes place every two years in Germany, Austria and Switzerland. At



Brazil

National Service for Industrial Training

Serviço Nacional de Aprendizagem Industrial (SENAI)

Mission and vision

Promote vocational and technological education, innovation and transfer of industrial technologies, contribute towards increasing competitiveness in Brazilian industries.

Historical development

Established in 1942 in order to provide the secondary sector with a skilled and qualified labour-force, the National Industrial Apprenticeship Service (SENAI) is Brazil's leading supplier of vocational education and industrial technology solutions. An integral part of the industry system, structured by the National Confederation of Industry (CNI), the

entity is directly linked to the highest level of representation for the interests and demands of this sector.

Nowadays, SENAI is one of the five biggest professional education complexes in the world and the biggest in Latin America. Along its 70 years of Historical development, SENAI has trained about 55 million people. In 2012, over 3 million people have enrolled in courses offered by us throughout Brazil.

Research and development activities

Found in every state in Brazil (27 states), with 545 fixed operating units, 272 mobile units, and 208 laboratories, SENAI is well equipped to provide solutions to even the most remote corners of the nation. In 2012, over 21.000 enterprises were provided with consultation services by SENAI.

Our priority segments are:

- ▶ Technical and Vocational Training:
 - Apprenticeship
 - Technical Courses
 - Qualification Courses
 - Technical Level Courses
 - Graduate programmes
 - Post-Graduateand
- ▶ Technology and Innovation:
 - Technical Assistance
 - Technological Dissemination
 - Innovation Projects and Applied Research



SENAI sectors and operational areas: Food and beverages, industrial automation, automobile mechanics, paper and pulp, construction, leather and shoes, electric-electronics, energy, gemmology and jewellery, management, printing and newsletters, wood and furniture, environment, metal mechanics, metrology, mining, non-metal minerals, oil and gas, polymers, chemistry, refrigeration and acclimatisation, work safety, information technology, telecommunications textiles and clothing, transportation and tourism.

To expand the capacity of innovation in the industries, SENAI is implementing projects of 23 Innovation Institutes and 61 Technology Institutes.

Standard setting activities

Due to the high quality of the services provided by SENAI, its constant technological update and the projection of its services abroad, there is an ample network of partnerships. International organisations, enterprises, governmental and non-governmental organisations are part of SENAI's networking pool, in which there is an intense exchange of technology and knowledge that benefits the Brazilian industry and society.

SENAI also keeps important partnerships for studies and projects that contribute with new technologies in its education centres and allow for the dissemination of knowledge and information to its clients. In order to do so, we have agreements with universities, unions, professional associations and the major knowledge production centres nationally and internationally.

The institutional structure of technical capacity-building at SENAI has served as a model for the creation of similar institutions in different countries of Latin America and Africa, including: Angola, Cape Verde, Guinea Bissau, Mozambique, Paraguay, East Timor, Guatemala, Jamaica, Haiti, Bolivia, Dominican Republic, Colombia, Peru, Sao Tome and Principe, Zambia.

International technical cooperation has made it easier to strengthen the performance of SENAI in the national production sector in different economic scenarios. This has led to a more significant contribution to the expansion of the Brazilian industrial park, opening of the economy and the process of economic globalisation.

International cooperation activities

- ▶ Transfer of key international knowledge and technologies to the Brazilian industry, in order to strengthen institutional capacity in education, technology, innovation and management, with over 30 international partners, including renowned institutions such as MIT, Sociedade Fraunhofer and Politécnico di Milano as well as Tsinghua University.
- ▶ Outreach to Brazilian industrial companies abroad in response to demands for consulting services in education through customised projects for clients such as Vale, Petrobras, A.R.G. and Braskem.
- ▶ Technical Cooperation with developing countries, aimed at the exchange of knowledge and technologies between SESI, SENAI and IEL and governments, international agencies and congener institutions.



Cooperation with BIBB

Our cooperation and networking interest with BIBB is related to *methodologies of educational evaluation*.

www.senai.br

SENAI facts and figures 2012

- ▶ Over 3 million enrolments in vocational and technological education courses
- ▶ Over 120.000 technical advisory services as well as technological advisory and laboratorial services
- ▶ 545 fixed units
- ▶ 272 mobile units
- ▶ 208 laboratories
- ▶ 25 million employees



Bulgaria

National Agency for Vocational Education and Training (NAVET)

Nacionalna agencija za profesionalno obuchenie i obrazovanie

Mission and vision

The National Agency for Vocational Education and Training (NAVET) is a government body within the Council of Ministers of the Republic of Bulgaria. NAVET was established due to legislation on Vocational Education and Training (LVET) in 2000. It is a legal entity financed by the state budget with headquarters in Sofia. NAVET's activities, as stipulated in LVET, include the licensing of activities and coordination of institutions related to vocational education, training and guidance. It carries out its activities in accordance with the requirements of the Vocational Education and Training Act.



The management and activities of NAVET are carried out on the basis of tripartite principle, which makes it a unique institution in the country. The ministries, the organisations of employers and employees are represented with equal strength in the Managing Board of NAVET and the Expert Commissions in vocational areas. Within NAVET, there are 17 Expert Commissions – 16 in separate vocational areas and one in vocational guidance.

The activities of NAVET are organised as follows:

- ▶ Participation in the development and implementation of national policy on vocational education, training and guidance.
- ▶ Quality assurance in vocational education and training by taking into account labour market needs; and the further development of Bulgaria's economic competitiveness:
 - Updating the List of Professions for Vocational Education and Training (LPVET) in compliance with labour market needs and with the International Standard Classification of Fields of Education ISCED 2011 and the International Standard Classification of Occupations ISCO08;
 - development and updating State Vocational Standards (SVS) for acquiring qualifications in professions;
 - licensing, monitoring and follow-up control of centres for vocational training (CVT) and centres for information and vocational guidance (CIVG).
- ▶ Ensuring public access to information on vocational education, continuing vocational training and lifelong learning in Bulgaria and the EU.
- ▶ Assistance in the implementation of European instruments and international; recognition of documents for vocational education and vocational training.
- ▶ Cooperation with similar institutions and organisations from European countries and participation in international projects with the aim of studying, adapting and implementing successful European practices.

The main focus of NAVET's activities is the improvement of vocational education, training and guidance in lifelong perspective, especially:

- ▶ Assuring and maintaining quality in the vocational education and training of young people and adults by taken into account labour market needs and the further development of Bulgaria's economic competitiveness.
- ▶ Broadening the opportunities for acquiring and improving qualifications for youths and adults including through validation of vocational knowledge, skills and competences, acquired as a result of non-formal and informal learning.

Research and development activities

NAVET organises and coordinates the activities related to the development and updating of the List of Professions for Vocational Education and Training (LPVET). LPVET is a classification of professions, in which vocational education and training is carried out and is certified with a certificate for vocational qualification or certificate for vocational training. Its main aims are:



- ▶ Ensuring compliance between labour market needs and the vocational education, training and guidance system;
- ▶ harmonising vocational education with the European education system, aimed at mutual recognition of qualifications and integration of Bulgaria in the European labour market.
- ▶ planning the development of human resources in enterprises;
- ▶ staff selection and recruiting;
- ▶ training and competence assessment of the staff, and
- ▶ validation of non-formal and informal learning.

Proposals for amendments and the adding of new professions and specialties in LPVET, according to LVET, are conducted by all institutions and organisations, ministries, agencies, employers' and employees' organisations and other legal and physical entities. The proposals are discussed and approved by Expert Commissions and the Managing Board of NAVET and are fixed with an Order of the Minister of Education, Youth and Science.

NAVET organises, coordinates, and provides methodical assurance of the development and updating of the State Vocational Standards (SVS). They are developed and approved by taking into account documents of the NAVET Managing Board – framework requirements, methodological guidelines and rules for the order and conditions of SVS. Renowned specialists from various vocational areas participate in developing the SVS. Each standard is revised by two reviewers, discussed by the responsible Expert Commission, approved by the Managing Board and endorsed by the Minister of Education, Youth and Science. SVS provide useful information, related to:

- ▶ Individual career planning;
 - ▶ development of syllabus and curricula;
 - ▶ Easier access to and transparency of the electronic services offered by NAVET to citizens and businesses;
 - ▶ online information on vocational courses which are offered in the country;
 - ▶ electronic registers of the licensed services suppliers and of the certificates for vocational qualification issued by them.
- NAVET participated in the development and implementation of key strategic and programme documents related to education, employment and social inclusion. The most important are:
- ▶ Operational Programme “Human Resources Development” (2007–2013)
 - ▶ National Strategy for Continuing Vocational Training (2005–2010)
 - ▶ National Strategy for Lifelong Learning (2008–2013)
 - ▶ National Employment Strategy until 2015
 - ▶ National Employment Action Plans, elaborated annually etc.

International cooperation activities

NAVET initiates and participates in projects which focus on human resources development and are funded by EU programmes – Operational Programme “Human Resources Development”, Lifelong Learning Programme (sectorial programmes Leonardo da Vinci, Socrates, Grundtvig).

NAVET is national coordinator in the European network for exchange of experience and expertise in the field of vocational education (ReferNet), national coordinator in the European Lifelong Guidance Policy Network and national coordination point for the implementation of the Recommendation of the European Parliament and the Council on the Establishment of a European Credit System in Vocational Education and Training (ECVET).

NAVET is respected partner in the European network for quality assurance in vocational education and training and the European network for establishment and development of European credit transfer system in vocational education and training.

Cooperation with BIBB

NAVET is interested in cooperating with BIBB on the following issues:

- ▶ Structuring qualifications in units of learning outcomes, assessment of individual learning achievements, validation and certification of knowledge, skills and competences, acquired in non-formal and informal learning;
- ▶ implementation of vocational standards in the development of curricula and examination programmes;
- ▶ development of sectorial qualifications frameworks;
- ▶ mechanisms for social partners involvement in development activities in VET;
- ▶ approaches and instruments for quality assurance of VET.

www.navet.government.bg/en/



Chile

National Ministry of Education

Ministerio de Educación (MINEDUC)

Mission and vision

There is consensus that technical and vocational training is an essential foundation to support the development and competitiveness of a given country as well as to increase the employability of its workforce. Thus, their development is essential to boost competitiveness, technological innovation, employment and social and economic advancement of the people, which is a responsibility of the state and of society as a whole.

In this context, the Ministry of Education of Chile stressed the importance of creating an instance for the management and implementation of education policies in the technical area. As a result, it created the Executive Secretariat Professional Technical

Education (ESPT) in 2011. This unit set up a number of teams and tasks to define a priority agenda to strengthen Professional Technical (PT) education. We defined a set of plans and projects to respond to the main challenges of this subsystem. The main directions are to ensure minimum conditions for formation of PT students and strengthen the links between schools and companies (or productive sectors). On the other hand, the Executive Secretariat (ES) performs tasks related to the PT world. Thus, they coordinate projects and key tasks such as creating new profiles, computer issues, teacher training, and higher technical education, among others.

In addition, this ES is responsible to liaise with other ministries and public institutions regarding the training of technicians in each of the sectors. This long-term strategy has been key to the close relationship with the Ministry of Labour.

Objectives of Vocational Technical Education Department:

1. Improving the quality and relevance of technical and vocational education, particularly in the training of middle level or secondary schools.
2. To promote consistency and coordination between activities and tasks proposed by various agencies on technical education (technical secondary schools, technical colleges and companies).
3. Provide educational resources (equipment for workshops and laboratories) to technical schools.
4. Encourage links between schools and businesses.
5. Propose network support for PT education through the creation of the Business Advisory Councils.



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Central Institute for Vocational and Technical Education

6. Promote the development of sector Skills Councils to define the needs of key sectors of the country.
7. Implement an information system that enables efficient and reliable timely information for decision making.
8. Progress in the development of a qualifications framework that allows to organise technical and professional skills available in the country, based on relevant occupational fields and with a level of competence appropriate for productive development and
9. promote joint technical education at secondary and tertiary levels.

Research and development activities

To properly address the demands of the professional technical area, several studies, which focus on gathering information about the coverage, quality, employability of technical education, have been published.

International cooperation activities

We participate and cooperate with different international partners. We have been working with the Organisation of Iberoamerican States and its EuroSocial Programme. We are working with our neighbours in terms of vocational education and the creation of a Qualification Framework.

www.mineduc.cl



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Central Institute for Vocational and Technical Education

China

Central Institute for Vocational and Technical Education (CIVTE)

Mission and vision

- ▶ Conducting surveys on reform and development of vocational education; undertake research for making policies and regulations in vocational education.
- ▶ Launching pilot projects for vocational education reform, evaluate results of the projects and promote the model by summing up experience.
- ▶ Taking part in education and teaching reform in vocational education; make proposals for major setting, teaching staff construction, curriculum and teaching materials construction.
- ▶ Publicising and promoting vocational education through the periodical Chinese vocational and technical education and the website Chinese vocational and adult education.



- ▶ Organising training for teachers and managerial staff from vocational schools.
- ▶ Conducting comparative study and carry out international cooperation on vocational education.

Historical development

The Central Institute of Vocational and Technical Education (CIVTE) was established in 1990 as one of the fruits of Sino-Germany cooperation in vocational education. It is a state-level research and development institute directly under the Ministry of Education, consisting of 10 departments with 63 staff members.

Division for macro-policies study:

- ▶ Generalising typical experience of vocational education reform and development; studying general theories of vocational education.
- ▶ Studying the relation between vocational education and economic and social development; studying vocational education planning, outline and development strategies.
- ▶ Conducting research on socialist vocational education systems suited to the present conditions of China; undertaking research for drafting national macro policies for vocational education.
- ▶ Undertaking research on vocational education systems, education providing and management mechanism.
- ▶ Studying vocational education resource distribution; making proposals for improving vocational education efficiency.
- ▶ Collecting and analysing statistics of vocational education development; compiling the *Annual*

Report of Vocational Education.

- ▶ Organising and coordinating scientific research on vocational education.

Division for teaching and teaching materials study:

- ▶ Undertaking research on education and teaching reform in vocational education.
- ▶ Studying the principles, methods concerning major setting in vocational schools.
- ▶ Studying and developing teaching plans, syllabuses, media, test methods and evaluation standards.
- ▶ Studying the course system and models, conduct research on specialties teaching methods and design teaching processes.
- ▶ Organising and carrying out pilot projects for teaching reform.

Division for TVET professionals study:

- ▶ Making training and teaching plans, work out training outlines and compile training materials for teachers and trainers from vocational education schools and enterprises to accept training.
- ▶ Making training and teaching plans, work out training outlines and compile training materials for leaders from administrative departments, vocational education schools and enterprises to accept training.
- ▶ Conducting research and make proposals on job contents and qualification criteria of vocational education teaching staff.
- ▶ Organising professional training both at home and abroad for vocational education management staff.
- ▶ Developing and popularising advanced teaching models and methods.



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Central Institute for Vocational and Technical Education

Division for international cooperation and comparative study on vocational education:

- ▶ Launching and carrying out projects and activities for international cooperation on vocational education.
- ▶ Conducting comparative study on vocational education.
- ▶ Undertaking research proposing national vocational education policies.
- ▶ Offering consultation service for international cooperation and comparative study on vocational education between China and foreign countries.
- ▶ Undertaking related tasks of the UNEVOC centre.

Division of information and documents:

- ▶ Collecting and providing vocational education information both at home and abroad.
- ▶ Maintaining the library.

Editorial department:

- ▶ Editing, publishing and distributing within the field of vocational education.

Network department:

- ▶ Constructing and maintaining the website *Chinese Vocational and Adult Education* and a national information system for student management within secondary vocational education.
- ▶ Organising distance teaching and online training.

Training department:

- ▶ Organising training for leaders, management staff and teaching staff from vocational education schools, for people from enterprises, industries and other sectors.

- ▶ Carrying out training projects entrusted by departments of the Ministry of Education.

Department for teaching materials development:

- ▶ Undertaking tasks entrusted by the Department of Vocational and Adult Education concerning teaching materials development.
- ▶ Providing information and make proposals on teaching materials development.

Executive office:

- ▶ Management

International cooperation

Since its establishment, CIVTE has cooperated with Germany, Australia, America, and South Korea. Its functions include research, consultation, training, and teaching materials service. It plays an active role in research for stipulating many important decisions and policies, and it provides high quality consultation for people in the field of vocational education both at home and abroad. In future, CIVTE will make a greater contribution to the development of vocational education in China and to the cooperation and exchange between China and foreign countries.

Cooperation with BIBB

The Central Institute for Vocational and Technical Education (CIVTE) had signed a MoU with the Federal Institute for Vocational Education and Training (BIBB) in 2011.

www.civte.cn



Colombia

National Service for Vocational Education

**Servicio Nacional de
Aprendizaje (SENA)**

Mission and vision

The organisation operates in permanent partnerships with the government, business and labour. Since its creation 57 years ago, its main objective has been to contribute to the competitiveness of Colombia through the increased productivity of its businesses and regions, without forgetting social inclusion in coordination with National Government policies: Higher employment and less poverty.

For this reason, we have created the following types of programmes and projects: Social Responsibility, Corporate, Training, Innovation, Internationalisation, and Knowledge and Technology Transfer.

We strive to be recognised as a “World Class” entity that constantly innovates its teaching strategies and methodologies following the trends and technology changes that allow us to be on the cutting edge. We respond to the needs of the business sector and workers ensuring a positive impact on productivity, competitiveness, equity and development of the country.

The National Training Service, SENA, has services applicable to all sectors and seeks to create a comprehensive offering through the creation of strategic alliances with the manufacturing, public and private sector.

We are established throughout the country with an extensive infrastructure:

- 33 Regions
- 117 Training Centres
- 398 Mobile Classrooms
- 28 Tecnoparks
- 2 Tecnoacademies
- 100% coverage of free training through SENA's virtual platform

Training

The free education that is given is done through a comprehensive educational process blending theory and practice, and is aimed at the development of knowledge that enables people to obtain a certificate for performing various job skills.



We offer different training modalities, in-person and virtual:

- ▶ Degreed training: Technical and Technological.
- ▶ Continuing Training.
- ▶ Tailored training to meet the needs of the manufacturing sector.
- ▶ Specialised training aimed at meeting the needs of senior and middle management.
- ▶ Language Training: The SENA promotes bilingualism in response to globalisation and as a goal to generate greater competitiveness for business and its human capital. We offer training in English, French, Mandarin and Portuguese.

Innovation

We promote innovation policies that are in accordance with the national development plans and the technological needs of the country. We seek to promote and develop local and sector strengths for incorporation, innovation and technology transfer as pillars that support a social and economic change in the country in order to promote the different market sectors.

Competence certification

We impact and improve the qualifications of companies' human capital, hand in hand with the current norms and standards of labour competences. These actions are the result of Sector Boards which are coordinated with the strategies and policies of the government and the SENA and in accordance with the needs of the manufacturing sector to generate higher competitiveness.

Employment and entrepreneurship

The SENA contributes to the creation of more jobs, promoting one of the social responsibility projects: the Learning Contract. Furthermore, it leads labour intermediation facilitating contact between job seekers and businesses.

We find spaces for entrepreneurship where new businesses will find advisors on key aspects of developing and setting up their own initiatives, from ideation to implementation. Additionally, the SENA has the permanent support of a group of experts allowing for continuous improvement to adopt the necessary improvement actions that contribute to the strengthening of the initiative.

Social inclusion

We develop occupational training programmes that provide links or social inclusion to at-risk populations: the geographically displaced, those with physical disabilities, the indigenous, those reintegrated, mutilated soldiers, Afro-Colombians and female heads of households. These programmes allow them to enter the labour market or to be prepared to move forward with their own productive initiative.

Learning environments

Through the adoption and integration of information and communication technologies (ICT), we are able to expand coverage in the following ways:



- ▶ *Mobile Classrooms:* These are training environments that can be moved to the most remote regions of the country, providing training with instructors and qualified staff. To accomplish this, we develop partnerships with the manufacturing sector in search of specialised technologies or others that go hand in hand with the National Government's plans.
- ▶ *Virtual Libraries:* We provide access to standard international publications, including sector characterisation studies and publications produced by the SENA, as support to professional training and as help for intellectual growth of Colombians.

International cooperation activities

We help businesses compete with world standards by improving their business practices through knowledge and technology transfer. This allows them to face new economic markets making them

able to compete and transcend borders in an increasingly globalised world.

- ▶ Knowledge transfer with international experts
- ▶ Technology Transfer
- ▶ Mobility of students
- ▶ Training and improvement of trainers

We have international cooperation partnerships on all five continents. The SENA has identified the key economic sectors for the development of international cooperation (see table).

Cooperation with BIBB

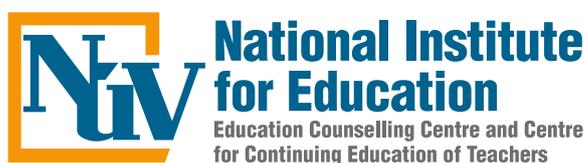
Since 2011, BIBB has been advising the National Vocational Training Service (SENA) on institutional modernisation and on promoting dual training. The main focus of this cooperation is the establishment of a National Research Centre for Vocational Education and Training at SENA.

www.sena.edu.co

Region	World-Class Sector	National Governmental Engines
ASIA-PACIFIC	Auto Parts and Vehicles Industry Palm, Oil and Vegetable Oils Software and Information Technologies BPO & O Medical Tourism Shrimp Farming Graphic Communications Industry	Infrastructure Innovation Agriculture
U.S. AND CANADA	Auto Parts and Vehicles Industry Software and Information Technology BPO & O Medical Tourism Aeronautics Nature Tourism	Hydrocarbons Innovation



Region	World-Class Sector	National Governmental Engines
EUROPE	Auto Parts and Vehicles Industry Creative Industries Medical Tourism Aeronautics Electricity, Goods and Services Chocolate and Confectionery Cosmetics and Toiletries Gastronomy Graphic Communications Industry Textiles, Apparel, Design and Fashion	Hydrocarbons Innovation Mining
SOUTH AMERICA	Auto Parts and Vehicles Industry Electricity Goods and Services Gastronomy Cattle Leather, Footwear and Leather Goods Shrimp Farming	Agriculture Hydrocarbons Mining
CENTRAL AMERICA AND THE CARIBBEAN	Gastronomy Hotel Management and Tourism Environment Bilingualism	Infrastructure Agriculture
MIDDLE EAST	Auto Parts and Vehicles Industry Software and Information Technology Textiles, Apparel, Design and Fashion IT Services Real Estate Hotel Management and Medical Tourism Home and Personal Grooming Alternative Energy Electricity Goods and Services Graphic Communications Industry	Science, Innovation and Technology
AFRICA	Auto Parts and Vehicles Industry Software and Information Technology Textiles, Apparel, Design and Fashion IT Services Real Estate Hotel Management and Medical Tourism Home and Personal Grooming Alternative Energy Electricity Goods and Services Graphic Communications Industry	Science, Innovation and Technology



Czech Republic

National Institute for Education

**Národní ústav pro vzdělávání
(NÚV)**

Mission and vision

The main mission of the National Institute for Education (NÚV) is to provide comprehensive assistance for the development of general and vocational education, to oversee content and continuity, to contribute to curriculum innovation and development and provide professional support in implementing these changes, and to develop a system of school advisory centres. All of these goals are in line with the European strategy for the development of lifelong learning.

The NÚV concerns itself with general and vocational education, including art and language education, and also with counselling and career guidance. In the area of vocational education it follows traditions of previous institutes, which were established more

than sixty years ago. The NÚV receives its funding from the state budget and is subject to the supervision of the Ministry of Education, Youth and Sports (MŠMT).

Historical development

The National Institute for Education was created by the merger of the National Institute of Technical and Vocational Education, the Research Institute of Education and the Educational and Psychological Counselling Institute in 2011.

Standard setting activities

The National Institute for Education concerns itself with initial and continuing general and vocational education, analyses the results of studies, prepares policy papers, proposes education strategies and participates in their implementation. Its activities reflect the principle of lifelong learning and oversee the implementation of related European policy instruments in the Czech Republic. It relies on continuous monitoring and analysis of the Czech system of general and vocational education and on comparisons with the evolution of education policies in other developed countries, particularly in the EU and OECD.

The institute develops general and vocational education curricula and conducts surveys and pilot studies. In the area of initial education it deals with the development of study programmes, interdisciplinary studies, key competences, and issues of evaluation and quality assurance.



National Institute for Education

Education Counselling Centre and Centre
for Continuing Education of Teachers

Because curricula are closely connected to the success of graduates in the labour market, the institute analyses the needs of the labour market and the success of graduates both in the labour market and in higher education. In the area of continuing education, the institute deals with issues of the validation of non-formal and informal learning and career guidance. The unifying theme of its activities in initial and continuing vocational education is the National Register of Vocational Qualifications.

The National Institute for Education is concerned with analytical, methodological, and advisory activities in the area of counselling in Czech schools, particularly in the area of psychological and career counselling. The goal is quality assurance and effectiveness in the provision of counselling in line with those of other EU countries. The institute coordinates cooperation with social partners in all its main areas of activity. It creates and develops instruments to support the inclusion of social partners in vocational education and training, with an emphasis on supporting partnerships between schools and employers.

Research and development activities

The Ministry of Education, Youth and Sports cooperates with the institute in projects financed by the European Social Fund and the Czech state budget which develop and test new methods, approaches and instruments in education. The following projects deal with vocational education and the validation of knowledge and skills acquired in non-formal and informal learning:

Project NSK (Phase 2 – Development and Implementation of the National Register of Vocational Qualifications)

The NSK (Národní soustava kvalifikací) is a register of vocational qualifications and contains not only the framework of levels and descriptors, but also the system of qualifications and their qualification and assessment standards. It enables identification and classification of vocational qualifications. The NSK has been under development since 2005, it has eight qualification levels that correspond to the eight levels of the European Qualifications Framework (EQF).

Vocational qualifications are drafted by employers and are based on descriptions of occupations as created in the National System of Occupations. The key factor for creating the NSK was the national objective to create an open area of lifelong learning, to facilitate validation of non-formal and informal learning and to promote permeability. The proposal and the subsequent project of NSK development were broadly discussed with all relevant stakeholders, and became the backbone of the “Strategy of Lifelong Learning of the Czech Republic”.

Project UNIV (Phases 2 and 3)

The aim of project UNIV phase 2 is to change secondary schools into centres of lifelong learning, i.e. open institutions which, apart from initial education and training, will offer various forms of further education for a variety of target audiences. Activities of the project will focus on creating the best possible conditions for this change. In all regions involved, schools providing further education will be networked or integrated into existing networks of such schools.



Staff (trainers) of the schools involved participated in a number of educational workshops aimed at developing their professional competences in selected areas (esp. in adult education, designing modular programmes, lifelong career guidance, further education marketing etc.). Each of the schools involved, in cooperation with appropriate social partners, created at least three further education programmes, at least one of which was implemented within the project.

Phase 3 has started recently with the aim of improving the retraining scheme through the support for the recognition of previous learning and the modernisation of the accreditation process. The accreditation of retraining programmes will be modernised in the course of the project, both by the creation of an electronic system for submitting requests for accreditation and by updating existing guidelines and by creating new ones.

Project KONCEPT

The project KONCEPT is intended to help people to gain enough reliable information, guidance and the possibility to choose from a wide variety of quality courses matching labour market needs. The principal objective is the systematic support of continuing education, which will replace existing uncoordinated solutions and isolated activities.

This support will deliver: Increased participation in further education, better matching of courses offered with labour market needs, improvement of standards in further educational courses, the development of an integrated information system, which will list the opportunities of further education and thus better accessibility of continuing education.

One goal is to provide the public with sufficient reliable information, advising services and a wide variety of courses, which meet the needs of the labour market.

Project NZZ – Reform of the final exams for vocational secondary education (apprenticeship exam)

The apprenticeship examinations for vocational secondary schools in the Czech Republic have been undergoing a major reform since 2005. This reform consists of the preparation of common papers for educational programmes in vocational secondary education. The papers for individual subjects are prepared centrally at NÚV in cooperation with teachers from vocational schools and experts from industry. Although the standardised examination is implemented in schools gradually and voluntarily in the pilot phase, about 70% of students in final year of study already take the standardised examinations.

Project POSPOLU

The project POSPOLU is concerned with cooperation between schools and companies in the area of vocational education. It will pilot test new methods of cooperation in various vocational study programmes with apprenticeship exams and in vocational study programmes with Maturita exams.

The goal of the project is to support cooperation between vocational schools and companies and thus to raise the quality of vocational education. After the evaluation of the cooperation and the testing of the model, legislative and other policy proposals will be made.



International cooperation activities

The institute, as the institution responsible for general and vocational education and counselling, participates in international activities and undertakes tasks as a result of its membership in European structures. It participates in European and international activities, including information gathering, analysis and exchange and in sharing of best practices. These are then used by the ministry as the foundation for strategic decision-making in the areas of education and counselling.

In this area the institute coordinates activities connected with Czech membership in networks such as CIDREE, ReferNet and TTnet. It cooperates with international institutions in the areas of counselling, guidance and education. It is the national Europass centre and coordinates activities with relevant local bodies. At national level, it supports activities initiated by the European Commission for the implementation of common European instruments in the area of education (EQF, ECVET, EQAVET). It is the National Coordination Point for the EQF and for ECVET in the Czech Republic.

The institute organises activities connected with Czech membership in the EU, maintains contact with partner institutions, facilitates information sharing, provides information on opportunities for participation in international projects and advises on EU projects, creates conditions for and actively supports the use of ESF and other EU funds in education and counselling, participates in European

bodies in the area of vocational education, e.g. the Governing Board of CEDEFOP, the Advisory Committee for Vocational Training, the Governing Board and Advisory Forum of the ETF. NÚV also participates in working groups of the European Commission, e.g. the WG on the Evaluation of Key Competences and Curriculum Development, and in the EQF Advisory Group.

Cooperation with BIBB and other partners

The National Institute for Education establishes contacts with international partners, shares information with them and participates in joint projects, for example in the LLP LdV. Among the organisations in the area of vocational education with which the institute cooperates are BIBB in Germany, the NVQ in the UK, the QQI in Ireland, the NIVE in Hungary, ŠIOV in Slovakia.

www.nuv.cz



Centre d'études
et de recherches
sur les qualifications — Céreq

France

Centre for Studies and Research on Qualifications

Centre d'Etudes et de Recherches sur les Qualifications (Céreq)

Mission and vision

Céreq is a public body under the aegis of the Ministry of National Education, and the Ministry of Work, Vocational Training and Social Dialogue. As a public centre of expertise at the service of key players in training and employment, Céreq has been involved in the production of statistics, research and the accompaniment of actions for more than 40 years. It provides advice and proposals intended to clarify choices in the area of training policy at regional, national or international level. Céreq's regional network includes fifteen regional centres based in university research units. Members of the National Centre for Scientific Research (CNRS) are also part of the

network. The associated centres and their host units carry out specific studies in the context of Céreq's fields of investigation. They also participate in collective studies corresponding to the main lines of the Centre's research and carry out missions for the different partners in the regions. Céreq in Marseille has 120 members of staff, of which some 60 are researchers. There are some further 30 researchers and PhD students in the associated regional centres. Céreq carries out statistical surveys on individuals or companies, draws on varied administrative sources to expand its databases and carries out its own qualitative and quantitative studies.

A network of competencies

In Marseille and throughout its regional network of associated centres, Céreq brings together competencies from economists, sociologists, statisticians, demographers and specialists in political science and education. The 15 regional centres are based in university research units, most of which are affiliated to the French National Centre for Scientific Research (CNRS). The associated research centres and their host laboratories conduct specific studies in the framework of Céreq's fields of investigation. They also participate in joint studies corresponding to the main lines of the Centre's research while participating in Céreq's missions for different partners in the regions.

Céreq in Marseille is organised in three different departments, each taking a different perspective on the issues that the relationship between training and employment generates.

1. *The Department for Vocational Training and Qualifications* (DFC: Département Formation et Certification) is involved in analysing lifelong vocational training systems and their development, as well as the various modes whereby acquired skills are recognised in France and other European countries.
2. *The Department on Transition to Work and Occupational Trajectories* (DEEVA: Département Entrées et Evolutions dans la Vie Active) is mainly responsible for analysing the transition-to-work paths of beginners on the labour market, depending on the level at which they left the educational system.

This department is responsible for analysing the supply of qualifications, studying the modes whereby diplomas, titles and certificates are designed, assessing vocational training courses and qualifications. Thanks to the Reflet database, it is able to map the historical development of diplomas as well as the geographical spread of the corresponding training offerings. Its approach to educational policies focuses mainly on their implementation and the observed effects at national, regional and European level. In addition, this department is responsible for observing and analysing continuing vocational training policies in France, and it contributes to policy assessment processes. It also provides the European Lifelong Learning Indicators with statistical data. The data produced and processed for this purpose, along with its French and European databases (Insee, Dares, Depp and Eurostat), originates from the following sources: The vocational training expenditure declared by companies with at least ten employees (French tax declaration form 24-83); the European five-year Continuing Vocational Training Survey (CVTS); and the European five-year Adult Education Survey (AES).

This department has developed an appropriate statistical tool for monitoring transition-to-work paths and occupational trajectories, the “Generation” surveys, which are conducted on cohorts of young people 3, 5, and 7 years after they have joined the labour market. In addition, this department contributes regularly to international comparisons on the modes of transition from school to work in various countries. It also produces analyses based on both statistical data (those obtained in the “Generation” surveys) and the results of qualitative surveys, in which the conditions of the transition to work, such as the effects of vocational training supply and labour market mechanisms in particular, are examined in detail. The main aim of this department is to describe the various contexts surrounding transition to work and to assess the role of vocational training in these contexts, which include national, regional and territorial contexts, family contexts, those generated by companies’ labour management policies and those resulting from public employment and youth training policies. As far as its objectives for the period 2008–2011 are concerned, the department is also involved in studying occupational trajectories over longer periods of time in order to determine the medium-term effects of lifelong learning and define how vocational training might contribute to making occupational paths safer.



Public information tools

BREF – A 4 page newsletter on research in the field of vocational training and employment (English and Spanish version)

Available both on paper and on the internet • free of charge

Collection NEF – Notes Emploi Formation

Specific vocational training and employment issues: Apprenticeship, school-to-work transition, vocational training, school guidance and vocational guidance, validation of experiential learning.

Available on the internet • free of charge

Collection RELIEF – Rapports et Echanges sur les liens Emploi-Formation

Reports and discussions about the link between vocational training and employment.

Available on the internet • free of charge

Formation Emploi – Revue française de sciences sociales

This quarterly review deals with the relationships between the educational system and the world of work. It provides the scientific community and stakeholders in the field of vocational training and employment with food for thought and discussion.

Available on internet on revue.org and subscription on Cairn

Available by subscription from La Documentation Française 29-31 quai Voltaire – 75344 Paris Cedex 07

3. *The Department on Work, Employment and Professionalisation* (DTEP: Travail, Emploi et Professionnalisation) is the department responsible for analysing how work is changing and how the observed changes are affecting the management of employment and the professionalisation of workers.

The aims pursued by this department are twofold: To observe how work is evolving, taking the various technological, organisational, socio-productive and human aspects into account; and to measure

the impact of the observed changes on the division of labour, the dynamics of qualifications, occupations and professions, labour management and workforce mobilization practices, and the structure and content of diplomas and qualifications. This global approach is being addressed by conducting research along the following four lines: Work analyses, considering the content of occupational activities and work situations and how the findings relate to current policies on vocational diplomas and qualifications; studies on the process of professionalisation of the working population, by eluci-

dating the links between work and vocational training at firms and organisations; analysing the modes whereby jobs are filled and companies' workforce replacement requirements are met, and the specific branches and territories involved; prospective studies on occupations and qualifications, at both qualitative and quantitative levels (the prospects for occupations and workforce renewal, respectively). To achieve these aims, the department performs qualitative studies in which jobs and the positioning of the social partners are analysed. It also manages the "Statistical Branch Portraits" (PSB) database, which includes all the available public statistics regarding the links between work and employment at production units.

International cooperation activities

European integration is creating a growing need for knowledge on training systems and labour markets in the different Member States of the European Union. Therefore, Céreq monitors vocational training policies and practice throughout Europe. Alone or in partnership with foreign institutions, it carries out comparative studies on the key themes of its work programme: Youth access to employment in the different European countries, changes in the qualifications systems, in-company continuing training activities. It participates in the EU-funded research programmes and its role also extends to expertise and consultancy missions for EU authorities. It collaborated, for example, with Brussels' Education-Training Directorate to determine "key figures on transition" or with Eurostat for the construction

of data on in-company continuing training. Céreq participated in the so-called Maastricht Consortium that prepared "Achieving the Lisbon goal: The contribution of VET" for the Ministerial meeting of December 2004.

At the same time, Céreq intervenes at the request of institutions such as the OECD or UNESCO and of its counterparts, such as BIBB in Germany, ISFOL or Almalaurea in Italy, QCA in the UK or CINOP in the Netherlands. Outside Europe, it participates in various activities of cooperation, methodological support and exchange of experiences, notably with the countries of the Mediterranean basin.

BIBB and Céreq: A long cooperation

Cooperation between BIBB and Céreq began in the early 1980s, which was a prehistoric era for Europe in education and vocational training. Their joint participation in Cedefop studies on qualification matching between countries forged further cooperation. In the early 1990s, the will to develop a cooperative network between similar institutions from Europe's main countries was already there. This meeting of about 30 institutions in July 2013 in Leipzig, shows BIBB's perseverance in gathering Europe's main research actors in education and vocational training.

Created in 1970/71, BIBB and Céreq were both relocated from their respective capitals to cities in the south or west of their countries during the early 1990s. BIBB and Céreq are public bodies which



are in charge of research. They provide expertise on different aspects of the relationship between training and employment. Both institutions play a major role in developing national diploma processes. Their participation in an expert committee, which advises the European Commission and Cedefop, reinforced the close cooperation between BIBB and Céreq.

Concrete occasions of cooperation between these two institutions were numerous and accompanied and preceded main evolutions of European politics and programmes. On several occasions, work groups on bilateral topics were launched and several staff exchanges were undertaken between BIBB and Céreq. Gradually, cooperation had been structured on joint answers to call for tenders from European institutions (Leonardo, PCRD, and Call from Cedefop).

www.cereq.fr



India

Federation of Indian Chambers of Commerce and Industry (FICCI)

Mission and vision

FICCI plays a leading role in policy debates that are at the forefront of social, economic and political change. FICCI has contributed to this historical process by encouraging debate, articulating the private sector's views and influencing policy. FICCI is active in 44 sectors of the economy. FICCI's stand on policy issues is sought out by think tanks, governments and academia. Its publications are widely read for their in-depth research and policy prescriptions. FICCI has joint business councils with 79 countries around the world.

A non-government, not-for-profit organisation, FICCI is the voice of India's business and industry. FICCI draws its membership from the corporate sec-



tor, both private and public, including SMEs and MNCs; FICCI enjoys an indirect membership of over 250,000 companies from various regional chambers of commerce.

FICCI works closely with the government on policy issues, enhancing efficiency, competitiveness and expanding business opportunities for industry through a range of specialised services and global linkages. It also provides a platform for sector specific consensus building and networking.

Historical development

Established in 1927, FICCI is the largest and oldest apex business organisation in India. Its historical development is closely interwoven with India's struggle for independence and its subsequent emergence as one of the most rapidly growing economies globally.

FICCI Skills Development Forum

FICCI recognises that Skills Development is an important imperative for achieving India's ambitious growth targets. It is committed to working with the stakeholders, especially the industry, government and academia to create sustainable and scalable skills propositions which will benefit the youth of the country from all sections of society. With this in mind, FICCI, through its Skills Development activities, is pursuing the following vision:

FICCI Vision on Skills Development:

1. FICCI acts as a “skills development aggregator” to complement the Indian Government's ambition of training 500 million people by 2022.
2. FICCI offers support and facilitation services through Policy Advocacy, Industry Intervention and International Collaboration so that the youth can acquire skills to meaningfully participate in and contribute to the economy.

The FICCI Skills Development Forum (SDF) was launched in 2008 to supplement the government initiatives with industry interventions. The forum has since starting discussed and critically examined the skill development policies in the country. Members of the forum in the leadership of the chairman have interacted with various government departments and the National Skills Development Corporation to stimulate meaningful discussions.

FICCI Skills Development Forum focus is on engaging stakeholders, aggregating initiatives, and developing capacities to promote skills for all. FICCI does this through the following:

1. Policy advocacy
2. Strengthen industry involvement
3. International partnerships

Flagship Activities

1. *Policy Advocacy:* FICCI played an active role in assisting the central and state governments in refining the policy framework that facilitates a



- conducive, collaborative and convergent skill development environment. FICCI SDF forms various task forces on need basis to supplement the work of the government and industry in the skills development space. Currently SDF is working on two major initiatives: Framework for enhancing Public Private Partnership in Skills Development and Community Colleges. FICCI has active task forces on Community Colleges, Public Private Partnerships on Skills and Women on Skills.
2. *Sector Skills Council*: Industry sectors driven skill councils for specific sector are to complement the existing vocational education system for the industry sector in meeting the entire value chain's requirements of appropriately trained manpower in quantity and quality across all levels on a sustained and evolving basis. FICCI is leading sector skills council in four sectors namely Media and Entertainment, Capital Goods, Food Processing and Agriculture (Co-Promoter).
 3. *Global Skills Summit* is FICCI's annual mega event which brings together stakeholders and all top functionaries to debate contemporary issues impacting the skills industry. Now after five editions, FICCI's Global Skills Summit (GSS) has evolved as a platform for skills dialogue, policy ideation, industry engagement and sharing of best practices from around the world. The 5th GSS was dedicated to the most important partner in the national skills mission of India – the learner. The summit examined the relevant aspects of skill building and implementation from a learner first perspective.
 4. *CEO4Skills* is a premium forum of Chief Executives, who have come together, to participate and contribute in achieving the Prime Minister's vision of Skills Development to train 500 million people by 2022. It is a platform where industry captains – from the demand and supply side, through a body like FICCI, come together to address and find solutions to propel the skills development agenda.
 5. *Skills Champion Awards* recognised those individuals who have excelled in the promotion of the cause of skills development in India. For the first time, it recognised the leaders both from business and government who are enabling the skills discussion in India.
 6. *FICCI's Skills Pledge*: Skills development, vocational education and training are often treated as the poor cousins of the academic route to making a career. This view persists despite the fact that millions of Indian workers are employed as skilled labourers around the world to give shape and form to ambitious projects in almost all key sectors of industrial growth. A change of mind set and culture is required in order to position skills amongst the young learners. This cultural change could be brought about if the educated and aware, especially the thought leaders appreciate, acknowledge and encourage young learners to undertake vocational training. To address this “aspirational mismatch” and to position skills among the masses, FICCI SDF started the Skills Pledge project to promote Skills all over India. The Skills Pledge is a simple statement of belief that vocational training is an equally acceptable and challenging career opportunity. It is

an assertion that a person with a vocational qualification is equally talented. The vision is to stir a movement which will change the skills landscape of India.

7. *Industry Roundtable:* The Industry Roundtables are a platform for the industry to interact with key policy influencing agencies like key government officials, industry associations, along with other key stakeholders like HR heads of leading companies, representatives of training institutes, faculties of key management institutes, industry associations, and skill imparting training institutes. The Industry Roundtables help connect the different stakeholders in to address problems that are mutually inclusive to the other.

International cooperation activities

Partnerships with countries across the world carry forward our initiatives in inclusive development, which encompass health, education, livelihood, governance, skill development, etc. FICCI serves as the first port of call for Indian industry and the international business community.

www.ficci.com



Israel

Zur foundation

Mission and vision

We at the Zur network believe that every Israeli student has the right to a future-building education. We work hard to advance vocational education in the Galilee and in the Negev, to create more jobs, and productivity in industry. Our work is based on the belief that creating workplaces in export-oriented industries and strengthening cooperation between the various sectors of Israeli society will contribute to the country's stability by enhancing social, economic, and political strength.

Zur's network advances technical education and develops the students' individual and social skills so that they can acquire a vocation and build a professional future. The curriculum includes both practical and theoretical studies while imparting social, cultural and environmental values. Our educational ideology is based on the development of individual abilities – fostering self-confidence, leadership skills, and citizenship. The network trains youth so



that they may have a more meaningful experience when they begin their army service. The network is primarily for students living in the Negev and the Galilee.

Historical development

Stef Wertheimer founded Zur Lavon and the Zur Lavon Training Centre, situated in Mitzpe Lavon, adjacent to Carmiel. Mr. Wertheimer's vision has always been to combine education and industry as a basis for settling and developing the Galilee. Mr. Wertheimer established a leading Israeli metal industry that provides employment for the region's residents. Forced to flee Nazi Germany at the age of 10, Stef Wertheimer has long recognised the importance of Israel for the survival of the Jewish people. Trained as a pilot in the War of Independence, he served in the Palmach as a close technical aid to Yigal Alon. Since then, he has spent his life fostering the economic independence of Israel and promoting peaceful coexistence with its neighbours. The latter goal has been pursued with initiatives aimed to encourage the financial self-reliance of the Palestinians, as well as ventures with several states in the region. Export manufacturing and education have been the vehicles to achieve these goals.

The firm he founded in 1952, ISCAR, Ltd., is today the 2nd largest manufacturer of carbide and metal cutting tools. These precision tools are used in the automotive, aerospace, and electronics industries. In 2006, the firm achieved the highest vote of confidence, when Warren Buffett purchased the majority shares.

In 1999, he worked closely with Palestinians, who wished to emulate his successful model. The Israeli and Palestinian governments approved this initiative, which would have stimulated the Palestinian economy. The idea was to create twin industrial parks – one Palestinian, the other Israeli – on either side of the border. These parks were expected, ultimately, to enjoy the benefits of a free trade zone. Due to the second Intifada, however, the project has been postponed. All of his parks are designed to promote export and to ensure a better quality of life. To encourage a new generation of entrepreneurs, they include incubator facilities, where start-up firms begin their operations. They also offer cultural facilities, schools, and aesthetic landscapes. In addition, Mr. Wertheimer has built designed communities near several of the parks.

Industry training courses

► Preparatory courses for industry:

The preparatory courses provide advanced training for experienced employees at the ISCAR factories. In these courses, they learn to operate some of the most advanced machinery in use today. For more than a decade, Zur Lavon Training Centre, in cooperation with the Ministry of Industry, Trade and Labour, has held training courses for operating computerised CNC (Computer Numerical Control) machines:

CNC course: This course trains workers for the wide range of processing professions (cutting, engraving, grinding). The course includes theoretical and applied study of manual/computerised tech-

nical drawing, mechanical measurements, materials theory, metal processing technology, machine operation, operation and programming of CNC machines. The course runs for approximately 8 months.

► **Meisters/Craftsmen:**

Training Meisters/Coaches

The school for Meisters operates in cooperation with the state of Baden-Wuerttemberg and the Kammer in Germany. The Meister is the most senior vocational classification in the applied production field and is granted exclusively by the Kammer.

The *Meisters* curriculum in Zur Lavon combines several training programmes:

- Training of coaches and mold builders
- Training of vocational teachers in metalworking
- Training of senior professionals/managers in production systems management.

► **Teacher training:**

Training teachers for industry

After several decades of decline of technical education in its high schools, Israel is now experiencing a welcome renewal of this type of education. However, the field now lacks talented teachers, both for classroom teaching and especially for OJT workshops.

Responding to this need, the Zur network has developed a training programme for technical teachers. Its teachers will find positions within its own network of schools, as well as in other institutions.

The programme is coordinated with the state of Baden-Wuerttemberg in Germany and is recognised by Israel's Ministry of Industry, Trade and Labour. The independent institution that tests candidates for degrees and confers those degrees – known as “the Kammer” in Baden-Wuerttemberg – oversees the final testing and awards those who complete the course successfully with the Meister (master craftsman) degree. Skilled vocational workers with an interest in education and with the appropriate skills are recruited to the programme. In the course, participants are retrained from the role of a professional in industry to the role of teacher and professional instructor. The programme includes theoretical and applied courses, educational theory, practical experience in schools of the Zur network, and an off-site education programme in Germany.

The training programme takes one and a half years. During the first half, lessons are 5 days a week with a partial scholarship; during the second half, the students study and work part time in schools to fulfil their fieldwork requirements.

► **Mold designer training:**

Training mold builders

Stef Wertheimer launched this experimental project that combines education with the Israeli industry. To make the vision a reality, both training courses and a factory were needed. In cooperation with the Ministry of Industry, Trade and Labour, the Zur Lavon Training Centre initiated a course within its facility that trains skilled workers in plastic injection and metal casting. At the same site, Mr. Wertheimer established a mold





factory that produces custom-made molds and at the same time develops the professional skills of both students and workers in this area. The factory workers, professional die makers, and mold builders divide their time between activities that include production, repairing molds and training and mentoring apprentices.

The courses are taught five days a week, from 8:00-16:00, for approximately 10 months (1400 hours). Graduates of the course, who are given a government vocational certificate upon completion of their studies, are employed in mold and plastics production throughout the country.

Cooperation with BIBB

The Zur Board has recently decided to promote, together with its various local projects, measures to improve the Israeli economy and society through long term planning of its vocational training structure. The German-Israeli Forum, a joint body of the Israeli ministry MOITAL and the German BMBF, has invited Zur and BIBB to cooperate in founding a national organisation, dedicated to planning long-term education and vocational training in Israel.

A joint conference with Zur and BIBB representatives at the Dead Sea in January 2013, emphasised the need to study, explore and define which of BIBB's activities are suitable for and adaptable to Israel. For the time being, it has been decided to establish an information and research centre, dedicated to long life learning and vocational training.

In addition, we are gathering participants for a round table Steering Committee, which will consist of stakeholders and other interest groups, who will team up to initiate and activate the new organisation and plan a convention designed to deal with long term education and vocational training planning.

A Zur visit to the BIBB in March 2013 included three intensive days at BIBB's headquarters in Bonn. The focal point of the visit was to study the complicated and multi-layered structure of this organisation, and to learn as much as possible about its diverse activities. The goal was to analyse the relevant parts of the German Model in order to adapt them to Israel.

During our visit we had learning appointments with professionals responsible for: Research, regulation and accreditation, implementation of projects, training personnel programmes, quality management, accessibility and more. We concluded in a brainstorming workshop together with the members of the international department at BIBB. We also visited three different training centres in the vicinity.

The concluding meetings brought up three main issues:

- ▶ Establishing an information and research centre.
- ▶ Looking for and contacting more partners for the purpose of establishing the centre.
- ▶ Defining projects which stem out from the centre's objectives. Implementing them.

www.zur.co.il/en



Italy

Institute for the Development of Vocational Training for Workers

Istituto per lo sviluppo della formazione professionale dei lavoratori (ISFOL)

Mission and vision

ISFOL, the Institute for the Development of Vocational Training for Workers, is the Italian research institute that supports training, labour and social inclusion systems and policies to improve human capital, employment and growth. It performs monitoring and evaluation, policy analysis, research, testing and documentation activities following national and European approaches and guidelines.

It provides technical and scientific support to the Ministry of Labour and Social Policy (MLPS) and the Ministry of Education (MIUR), to the state, the regions and autonomous provinces, local authorities, national institutions and social partners. It carries out assignments given to it by Parliament and by the Ministries of Labour, Education, Equal Opportunities and cooperates permanently with the EU and international bodies.

Historical development

ISFOL was established in 1973 by Decree of the President of the Republic as a public organisation for research and technical assistance in the vocational training area. Its interdisciplinary approaches and methodological and organisational instruments are similar to services provided in France, Germany, Britain and in the EU's institutions (Cedefop).

From 1972 to 1978 the institute accompanied the first stage of the decentralisation of vocational training in the regions up to legislation on the Italian vocational training framework in 1978.

In 1978 ISFOL was declared “necessary for the economic, civil, cultural and democratic development of the country” and categorised as a scientific institute for research and experimentation. In 1979 it was judged “Organisation of Significant Importance” and in 1999 was reconfirmed as a research body, with independent judgement and scientific, methodological, organisational, administrative and accounting autonomy.



Since the eighties it has provided technical, scientific and methodological assistance to the MLPS and carried out activities within the framework of ESF system actions.

In 2003 a new statute and mission was issued that strengthened its historical role in vocational education and training policies and extended it to labour market and social policies to help create employment, improve workers' skills, social inclusion and local development from both a European and international perspective.

In 2011, a renewed statute confirmed ISFOL as a national research agency with scientific autonomy, supervised by the Ministry of Labour and Social Policies (MLPS), setting out its responsibilities and reforming its organisational and functional structure.

Research and development activities

Research activities inform and help shape and implement policies by producing evidence and knowledge, defining operational and regulatory tools, supporting institutional negotiations and by implementation monitoring and analysis of results.

Its systematic cooperation with the Ministry of Labour and Social Policy, the Ministry of Education, regions, social partners, the EU and international bodies and the scientific community enables ISFOL to produce relevant knowledge for the needs of its stakeholders.

Research in economic and social areas is based on a multidisciplinary comparative approach at European and international level, with constant spotlights on the priorities of employment, skills, lifelong learning and social inclusion.

ISFOL also publishes and promotes an integrated scientific and technical documentation system available online and classified according to European cataloguing and bibliographic standards.

ISFOL develops research programmes on the following key topics:

- ▶ Monitoring of the recent reform of the Italian labour market:
At the request of the Minister of Labour and Social Policies Elsa Fornero, ISFOL is monitoring the recent reform of the labour market regarding types of contracts, dismissals, social buffers, active labour policies and lifelong learning.
- ▶ Employment, jobs and skills:
 - ISFOL has constructed one of Europe's most advanced systems for analysing and observing the dynamics of the labour market, of jobs and of skills, in line with the European priority of "new skills for new jobs".
 - It also participates in constructing the OECD Skills Strategy and is a member of the European Skills Observatory and the European Skills Network.
 - By mandate of the Ministry of Labour and Social Policies, ISFOL has scientific responsibility for the OECD survey in Italy: PIAAC "Programme for the International Assessment of Adult Competencies".

- It continuously analyses the issues of equal opportunities between men and women, active ageing and policies aimed at tackling undeclared work.

► Labour Market and Policies

ISFOL regularly monitors labour market trends, analysing:

- The profile and dynamics of the different forms of employment;
- the innovations introduced in regulations and in contracts (national and regional);
- the flows between the various forms of employment;
- the transitions between education, training and employment;
- the working profiles of specific target-populations: Women, young people, people over 50;
- the dynamics of professions and of returns to qualifications, and
- the distribution of salaries.

► Lifelong Learning

ISFOL carries out systematic analyses on the dynamics of:

- Initial training;
- apprenticeship;
- continuing training;
- professional and competency standards;
- validation of non-formal and informal learning;
- monitoring and evaluation of training interventions, which are financed through the European Social Fund.

Standard setting activities

To comply with the EQF European system, ISFOL provides technical and scientific assistance to central and regional administrations and to social partnerships which, in the Italian context, construct and implement the national skills certification system and the definition of the relative professional standards. It also participates in the national statistical system and processes original databases on employment, labour market and professions.

International cooperation activities

Thanks to its many EU and international undertakings and responsibilities, ISFOL has a strong international presence as a centre of reference and/or of national management of European Community programmes and initiatives for human resources and transparency of competences.

In particular ISFOL is:

- National Agency Lifelong Learning Programme – LEONARDO DA VINCI programme
- EUROPASS National Centre
- EUROGUIDANCE ITALY Centre
- Headquarters of National Reference Point for Italian EQF, EUROPASS and EQAVET
- Consultancy service for government institutions (MLPS and MIUR) in adopting and implementing common instruments to foster the “transparency” of titles, qualifications and competences: EQF (European Qualifications Framework), ECVET (credit system for VET), EQAVET (European



Quality Assurance), EUROPASS (European skills passport) and EUROGUIDANCE

- ▶ Support for government institutions in referencing national titles and qualifications to the eight qualification levels of the European framework (EQF)
- ▶ Advisor and partner in key EC, OECD and European Agencies' initiatives and promoter of international partnerships and networks with public institutes and agencies in UE and OECD countries, in Mediterranean area countries and in neighbouring countries of the EU.

www.isfol.it



Korea

Korean Research Institute for Vocational Education and Training (KRIVET)

Mission and vision

Since its foundation, KRIVET has been leading policy research in national human resources development and vocational education and training. To effectively respond to the challenges of the labour market, KRIVET also focuses on building an integrated system of education and welfare by providing comprehensive policy measures that combine school and the labour market.

The mission of KRIVET is to effectively perform tasks related to skills development, thereby contributing to vitalisation of vocational education and training, and to enhancement of the Korean public's vocational competencies. While fulfilling its mission, KRIVET aims to become a global skills development

policy research institute that spearheads creation of linkage between education and training with employment. Based on the four core values, namely, linkage, effectiveness, efficiency and credibility, it has set out the following three mid- to long-term development goals: A national policy research institute that provides effective policy options; a public institution that supports strengthening the Korean public's lifelong career competencies; and an organisation with a culture based on trust and mutual respect.

In order to support government administration, KRIVET operates the Centre for Meister Schools, the Centre for Career Development, the Centre for Excellence in Higher Education, and the Centre for the Evaluation of Skills Development Policy. Furthermore, KRIVET has been pioneering the new research domains including the Korean Education and Employment Panel and the Human Capital Corporate Panel.

Historical development

KRIVET was established in 1997 with the mandate of supporting national human resources development policies and the Korean public's lifelong skills development. KRIVET came about in response to the growing importance of lifelong development of vocational competencies and the increasing need for an integration of vocational education and vocational training in the knowledge-based economy. It is affiliated with the National Research Council for Economics, Humanities and Social Sciences under the Prime Minister's Office.

Research and development activities

Main fields of research at KRIVET include education/training-labour market linkage, job creation and skills development, lifelong vocational education, career development, qualification system and screening and evaluation of skills development policy, as explained further below.

► *Education/training-labour market linkages*

KRIVET supports enhancement of the Korean public's lifelong employability by connecting employment and the education and training system. To build those linkages, a smooth transition must take place from school to the world of work. KRIVET devises policy alternatives to foster enhancement of lifelong employability. In addition, KRIVET spearheads the advancement of human resources development policies to promote sustainable development of the nation. To this end, KRIVET strives to identify the policy agenda that will contribute to securing competent human resources needed to increase the competitiveness of industries, to support setting up human resources development policies, and to build the capacity of higher education, which is a prerequisite for achieving knowledge-based development.

► *Job creation and skills development*

KRIVET offers skills development policy options that enable workers to raise their employability and companies to boost their competitiveness. KRIVET develops policies that will improve the quality and quantity of jobs so as to expand the



Korean economy's growth potential and promote economic stability of Korean families. KRIVET also develops policies that contribute to the expansion of skills development opportunities for the disadvantaged groups to become more self-reliant, and to easing of labour shortages experienced by companies.

► *Lifelong vocational education*

KRIVET contributes to maximising the Korean people's lifelong employability by supporting the government in building a lifelong vocational education and training system linking work and learning, and by promoting effective human resources development policies tailored to industry needs. The related research and projects include lifelong vocational education and training policy development and support, spread of industry-academia cooperation and employment promotion, policy support for Meister high schools, restructuring of specialised high schools and support for strengthening their role in skills development.

► *Career development*

KRIVET conducts research on career development and public policy to support people in all stages of life, from those of school age to those near retirement age. The Centre for Career Development is devoted to building close networks among students, teachers, parents and corporations to ensure effective career education at school. The Centre generates, distributes and disseminates reliable career information, and runs CareerNet to meet the demand of schools

and education users. The Centre is Korea's most prominent research unit in career development, which develops career development programmes for adults and older people, and trains career education advisors.

► *Qualification system*

KRIVET leads the way in building a user-oriented qualifications system by promoting qualification policies reflecting industry and social demands, strengthening of qualifications' function to create education/training-employment connectivity, and through qualification system-related research and projects. KRIVET facilitates the establishment of an integrated system of work, education and training, and qualifications to ensure the relevance and practicality of education and training as well as qualifications. KRIVET strives to implement infrastructure for the effective management of qualification information.

► *Trend and data analysis*

KRIVET provides accurate analytical information about trends in the labour market, vocational education, vocational training, higher education, careers, and the qualification system. It also identifies and analyses the urgent issues in a timely manner. KRIVET generates highly reliable panel data in efforts to promote scientific research and analysis on school-to-work transition and human resources development incorporations.

► *Screening and evaluation of skills development policy*

The Centre for Evaluation of Skills Development Policy is responsible for the evaluation of training institutions that provide skills development training supported by the Ministry of Employment and Labour and other government ministries, and it screens skills development account training programmes. The Centre strives to become Korea's most respected and credible evaluation centre for skills development training institutions and their programmes. Moreover, KRIVET lends policy support to the government by conducting research that are related to evaluation and screening of training institutions and their programmes.

International cooperation activities

In order to meet the demand for HRD and TVET from abroad, and to play a greater role in the global era, KRIVET carries out various international projects in collaboration with international organisations including the World Bank, UNESCO, OECD and UNESCO-UNEVOC. Designated by UNESCO as a UNESCO Regional Centre of Excellence in Technical and Vocational Education and Training, KRIVET contributes to formulation and advancement of HRD and TVET policies in neighbouring developing countries mainly by sharing Korea's experiences. KRIVET regularly organises TVET workshops as part of the efforts to build the capacities of those TVET decision-makers and practitioners in the Asia Pacific region. Furthermore, KRIVET

annually co-hosts the Global HR-EAP (East-Asia Pacific) Workshop with the World Bank, providing them with a platform for discussion on pending HRD issues and policy strategies. Recently, KRIVET has become an implementation partner for UNESCO in its BEAR (Better Education for Africa's Rise) Project, which provides assistance to five Southern African countries (Botswana, DR Congo, Malawi, Namibia, and Zambia) in TVET curriculum development and implementation through carefully designed labour market research and analysis.

In order to expand the global network and facilitate mutual development, KRIVET actively seeks international partnerships and has more than 20 MoUs signed with organisations abroad. For instance, BIBB and KRIVET co-hosts an annual workshop alternately in South Korea and Germany on key TVET policy issues in order to learn from each other's experience and identify future challenges in TVET. KRIVET frequently keeps in touch with its MoU partners through exchanging research outcomes and conducting study visits on an ad hoc basis.

www.krivet.re.kr



Latvia

Ministry of Education and Science: National Centre for Education (NCE)

Valsts izglītības satura centrs

Mission and vision

The National Centre for Education (NCE) is a public administration institution directly subordinated to the Minister of Education and Science.

NCE's primary functions are:

- ▶ To develop curriculum for pre-school, basic and general secondary education and vocational education; (NCE develops subject standards and sample teaching- learning programmes);
- ▶ to provide development of national examinations in basic education, general secondary education and vocational education;
- ▶ to coordinate development of textbooks in accordance with national standards for general and vocational education;

- ▶ to coordinate support systems for learners with special needs;
- ▶ to coordinate hobby education systems and implement support activities for the development of learners' personalities and talents;
- ▶ to organise Latvian School Youth Song and Dance Celebration;
- ▶ to coordinate teacher continuing professional development activities;
- ▶ to organise state language proficiency testing.

Historical development

The National Centre for Education was established in 2009. NCE employs more than 90 specialists and implements more than 12 different projects. NCE was created in the unification process of five institutions: Centre for Curriculum Development and Examination, Special Needs Education Centre, Vocational Education Administration, State Youth Initiatives Centre and State Education Quality Centre.

Research and development activities

The priorities and goals of professional education are set considering such programmes as "Education Development Guidelines for the 2007th–2013", "Lifelong Learning Policy Guidelines for the 2007th–2013" and the education strategy "Education and Training 2020", which are in line with the Lisbon strategy objectives of education and its recommendations, thus aligning Latvian professional education with European Union guidelines.

► *Professional standards*

According to regulations of the Cabinet of Ministers and the Ministry of Education and Science, the National Centre for Education, in cooperation with the Tripartite Cooperation Sub-Council of Vocational Education and Employment, performs the following tasks:

- Organise the development and expert-examination of draft professional standards and vocational standards, inviting representatives from ministries and professional organisations; and
- provide organisational and methodological support for the development of the draft occupational standards.

► *Programmes*

Professional education programmes are developed by educational institutions in coordination with its founder. To provide development of curriculum in professional basic education, professional secondary education, professional training and professional development education in accordance with national standards, the National Centre for Education is organising the development of samples for professional education programmes and advising the development of programmes. There are several issues related to vocational education and employability:

1. Raising efficiency of vocational education financing and optimisation of school networks.
2. Enhancing the social dialogue between stakeholders; raising attractiveness of vocational education.

3. Raising attractiveness of vocational education.

This issue had been addressed in the concept “Raising attractiveness of vocational education and involvement of social partners within vocational education quality assurance” (approved by the Order of Cabinet of Ministers No 16.09.2009). In order to enhance the attractiveness of vocational education it is necessary:

- To ensure flexible offers of vocational education programmes according to short-term labour market demands;
- to structure vocational education programmes into modules;
- to introduce a credit point system;
- to adjust the professional qualification levels to the European Qualification Framework;
- to ensure the recognition of knowledge and skills acquired outside formal education and training;
- in order to ensure vocational education with the labour market demands it is very important to involve social partners and professional organisations in the development of vocational education content, the assessing of the quality of education (licensing and accreditation), as well as the granting of vocational qualifications.

Different innovative activities to modernise the vocational education system have been launched during the last years in Latvia. In order to improve efficiency of vocational education and management, the ministry has accepted the following reforms:

- The funding of education is reorganised from the principle “money follows education establishment” to the principle “money follows students”



and to promote consolidation of education establishments. By August 2010, some vocational schools were assigned under the supervision of local governments and consolidated with general education establishments. Thus, various education programmes are offered in one building. By September 2011, competence centres were established, which provide and recognise qualifications both for vocational education students and adults.

- ▶ The quality and offer of educational programmes are expected to be reinforced. The cooperation with and responsibility of local governments and employers concerning vocational education quality and availability are to be reinforced. The cost and offer of educational programmes are planned to be evaluated in order to develop a competency-based (outcome-based) educational programme system using a modular approach.

Standard setting activities

In terms of the NEC-implemented¹ ESF project “Development of sector (branch) qualification system and increasing the efficiency and quality of vocational education” will be the basis for the improvement of the vocational education system. The implementation period of the project is from the end of 2010 to 31 December 2013. The aim of the project is to improve vocational education quality and efficiency to meet the needs of economic sectors. The

project will also create a sector (branch) qualification system.

The project will support:

- ▶ The establishment of sectorial expert councils and their activities;
- ▶ research of competences and skills in economic sectors for educational policies;
- ▶ development of a sector (branch) qualification system;
- ▶ development or improvement of sector (branch) occupational standards for basic professions;
- ▶ development of the relevant professions and basic requirements for specialisation qualifications;
- ▶ introduction of a modules system for the development or improvement of vocational education programmes for acquiring a basic profession, a relevant profession or specialization including continuing vocational education programmes;
- ▶ piloting a validation and recognition system of knowledge, skills and competence acquired outside formal education.

The implementation of the ESF project “Development of a sector (branch) qualification system and increasing the efficiency and quality of vocational education” (2010–2013) is based on the results of the ESF National Programme Project “Working out of a Unified Methodology to increase the Quality of Vocational Education and Involve and Educate Social Partners” (2005–2007) which worked out 6 methodologies:

- ▶ Methodology for branch research
- ▶ Methodology for developing occupational standards

¹ Ministry of Education and Science: National Centre for Education (NCE)



- ▶ Methodology for developing vocational educational programmes
- ▶ Methodology for developing qualification exam contents
- ▶ Methodology for ensuring and evaluating the quality of vocational education institutions
- ▶ Methodology for acknowledging informal education and evaluating skills

Cooperation with BIBB

The Professional Education Administration had signed the cooperation project with the Federal Institute for Vocational Education and Training (BIBB) in 2006. NCE would like to extend the cooperation agreement with BIBB.

www.visc.gov.lv/en/



Mexico

National College of Technical Professional Education

Colegio Nacional de Educación Profesional Técnica (CONALEP)

Mission and vision

The National College of Technical Professional Education is an upper-secondary educational institution, whose objective is to participate in national development by forming the human capital required by the productive apparatus of the country. The aim is to train technical professionals in a system that provides the graduates with the capacity to work in the national and international productive sector, by means of proven competences, contributing to sustainable human development and the strengthening of the knowledge society.



Historical development

- ▶ Founded in 1979.
- ▶ Curriculum adjustments and reorganisation in 1990, 1997, 2003 and 2008 by taking into account new perspectives.
- ▶ Outreach to marginalised communities since 1995.
- ▶ Competence based education since 1995.
- ▶ From centralisation to federalisation in 1999.
- ▶ Careers continually updated.
- ▶ First experience with the dual system of technical formation in 1993. Experience renewed and widened since 2009.
- ▶ Official entity for the evaluation and certification of labour competencies since 2010.

Standard setting activities

The leading position of the National College of Technical Professional Education (CONALEP) as the principal institution at the high school level in the

Industrial Careers 2012–2013

Maintenance and installation
e.g.

- ▶ Automobile
- ▶ Industrial electromechanics
- ▶ Maintenance of motors
- ▶ Aircraft covering
- ▶ Refrigeration and air conditioning
- ▶ Alternative sources of energy

Processes of production
and chemical-biological transformation
e.g.

- ▶ Industrial chemist
- ▶ Food processing
- ▶ Metallurgy

Processes of production
and physical transformation
e.g.

- ▶ Building
- ▶ Clothing industry
- ▶ Metal mechanics
- ▶ Security and civil protection

Electricity and electronics
e.g.

- ▶ Mechatronics
- ▶ Maintenance of electronic systems
- ▶ Electricity distribution networks

Information technology
and communications
e.g.

- ▶ Informatics
- ▶ Telecommunication
- ▶ Maintenance of computing equipment

Service Careers 2012–2013

- ▶ Accounting and administration
- ▶ Tourism
- ▶ Transport
- ▶ Health
- ▶ Culture and recreation

Statistics 2012

- ▶ 46 careers for those who want to be technicians and for those who wish to get their high school diploma with a technical foundation, as well as training, technological services and the evaluation of labour competencies.
- ▶ 303,955 students.
- ▶ 16,086 teachers.
- ▶ 319,163 people trained.
- ▶ 302 campuses and 8 Centres for Technological Assistance and Services (CAST).
- ▶ Offers Services for the Evaluation of Labour Competences at 241 campuses and CAST.
- ▶ 110 mobile units to attend communities.
- ▶ 186 administrative units certified in ISO 9000.
- ▶ 309 academic programmes externally accredited and referenced, among others, to the Technical Norms of Labour Competences.

provision of the assessment and certification of labour competencies is due to the adoption of a Competence Based Education (EBC) approach in 1995, which allows students to develop and certify their knowledge.

CONALEP works closely with CONOCER, the official standard setting agency in Mexico, in technical committees, in developing its own educational competence standard, in the evaluation and certification of labour competences according to the standards set by CONOCER.

- ▶ 241 campuses accredited as evaluation centres.
- ▶ 1,385 certified assessors

International cooperation activities

CONALEP through the Research Unit and Academic Exchange is responsible for international activities, and to coordinate studies on various aspects of educational work of the college.

The international entailment is a priority for CONALEP. It establishes partnerships with educational institutions counterparts in other countries and with international organisations dedicated to technical training. Likewise, the institutions with which it has signed an agreement may provide space for specialised courses for students, professional service providers, managers and administrative staff.

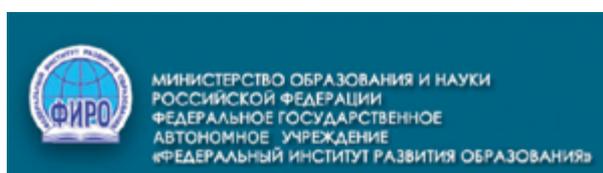
International cooperation with:

- ▶ AECID (Spain)
- ▶ BIBB (Germany)
- ▶ CINTEFOR (Uruguay)
- ▶ Ministry of Education of France
- ▶ Ministry of Education and Youth of Belize
- ▶ INTECAP (Guatemala)
- ▶ SENA (Colombia)
- ▶ SENAC (Brazil)
- ▶ SENAI (Brazil)
- ▶ JICA (Japan)
- ▶ CIDEE
- ▶ COVAO (Costa Rica)
- ▶ SENCE (Chile)

Cooperation with BIBB and other partners

- ▶ Seminars coorganised with BIBB on legislation on professional technical education in Mexico with a view to make it more flexible to better accommodate the dual system within CONALEP.
- ▶ Japan International Cooperation Agency: “Veteran Volunteer Programme 2013” consists of sending Japanese experts over the age of 40; transfer of knowledge.
- ▶ France: exchange students (Autotronics).
- ▶ Japan International Cooperation Agency: Human Resources Project Automotive industry in Aguascalientes, Guanajuato and Queretaro, in Mexico.

www.conalep.edu.mx



Russia

Federal Institute for the Development of Education (FIRO)

Mission and vision

FIRO’s mission is to implement design and research, educational and expert activities and to provide development, system integration, scientific and methodological support for the strategic directions of innovative educational policies.

The aim of FIRO’s activity is to provide effective solutions to all systemic problems in education and to enable continuity at various levels in general and professional education.

Historical development

The Federal Institute for the Development of Education (FIDE) was created by the resolution of the government of the Russian Federation of May 31, 2005 No. 347 through the reorganisation of a number of public institutions: Research Institute of Higher Ed-



education, Institute of General Education, Institute for the Development of Professional Education among others. The founder of FIRO is the Ministry of Education and Science of the Russian Federation.

Main activities

- ▶ Methodology for an education system management (management of projects)
- ▶ Methodology of educational space management such as the social network, which connects various institutes of socialisation: family, culture, religion, mass media (risk management)
- ▶ Methodology for education contents and results management by providing development of personal competence and development of a national innovative system (management of knowledge)
- ▶ Methodology for resource and technological support of education (resource management)
- ▶ developing scientific and methodical materials for governing bodies and education organisations;
- ▶ organising and carrying out examination of educational products (including electronic educational resources), intended for use in educational institutions for various education levels;
- ▶ organising and carrying out socially significant actions in education;
- ▶ publishing monographs, articles, other scientific and information materials, developing training (learning) materials;
- ▶ realising additional professional educational programmes for professional development and professional retraining;
- ▶ realising main professional educational programmes for postgraduate professional education (postgraduate study, doctoral studies).

The main activities of FIRO were developed to increase scientific and methodological efficiency by providing solutions to priority problems of educational policies and by developing strategies of socio-cultural, organisational and economic modernisation of education, etc.

FIRO solves a number of priority tasks:

- ▶ Carrying out applied and basic scientific research, experimental development in education;
- ▶ organising and carrying out examinations in the field of scientific, technical and educational activities;
- ▶ ensuring implementation of federal and sectoral target programmes in education;

FIRO's structure

FIRO's structure includes more than ten centres which conduct research in various areas of education development. The modernisation of systems of secondary, higher and additional professional education is the main activity of the Centre of professional education.

Key tasks of the Centre of professional education include:

- ▶ Development, introduction and updating of educational standards, programmes and techniques of training providing balance of competence-based approaches and fundamental nature of education;



- ▶ consulting, information, methodical support of regional systems of professional education;
- ▶ ensuring organisational and methodical interaction of employers, associations of employers and educational institutions on improving the contents and techniques of professional education and training;
- ▶ development of qualification assessment systems models and education quality assessment according to the programmes focused on the priorities of the economy sectors;
- ▶ approbation of the international interaction models for the purpose of studying and disseminating positive foreign practices of personnel preparation (including methodical support for Russian participation in World Skills Competitions);
- ▶ organisational and methodical support for youth and adults vocational guidance by taking into account the requirements of the labour market;
- ▶ development and deployment of network interaction models of organisations providing educational services.

The realisation of these tasks requires the creation of a network of social partnerships. The Center of Professional Education continuously interacts with

- ▶ Russian Union of Industrialists and Interpreters;
- ▶ National Agency of Qualifications Development;
- ▶ public organisations;
- ▶ regional executive authorities;
- ▶ educational and methodical organisations and centres;
- ▶ educational institutions of secondary professional and higher education.

The most considerable results of the activities of the Center of Professional Education are:

- ▶ National qualifications framework (project);
- ▶ lists of professional education;
- ▶ federal state educational standards for primary and secondary professional education;
- ▶ recommendations on development and realisation of professional (vocational) educational programmes;
- ▶ dictionary of professional education;
- ▶ concept of continuous maintenance of professional self-determination;
- ▶ concept of qualification assessment;
- ▶ state requirements, programmes, methodical materials for the realisation of additional professional educational programmes.

International cooperation activities

The Federal Institute for the Development of Education interacts with international partners, such as: the Council of Europe, National Board of Education of Finland, Department of Education, Employment and Workplace Relations of Australian Government.

Cooperation with BIBB

In November 2012, a memorandum of intentions on the cooperation in the sphere of professional education and professional development was signed between the Ministry of Education and Science of the Russian Federation and the Federal Ministry of Education and Research of the Federal Republic of Germany. The Russian-German working group on

professional education (RGP) was created. The main objective of RGP for 2013–2015 will be the development of regional and sectoral models of cooperation in the field of technical specialties training on the basis of the dual system and federal state educational standards of professional education.

Within RGP a cooperation agreement between BIBB and FIRO is concluded.

www.firo.ru



Singapore

Institute for Adult Learning (IAL)

Mission and vision

To fulfil its vision of building a national centre of excellence in learning, practice and research for CET, IAL set out three strategic thrusts as follows:

- ▶ Nurturing a professional and dynamic community of CET professionals
- ▶ Catalysing innovations in adult learning design, delivery, and evaluation
- ▶ Developing capability in CET research for evidence-based CET practice and policy

The mission of IAL to raise the capability of CET professionals to enhance workforce learning and performance is succinctly captured in its slogan *Inspire, Advocate and Lead Adult Learning and Professional Practice*.

Historical development

As Singapore invests substantial resources into expanding the national Continuing Education and



Training (CET) system, it became critical to set up a dedicated institute to oversee workforce development related research, lead innovation in learning design in multiple contexts, and professionalise the community of CET professionals who play critical roles in supporting the CET eco-system in Singapore. Thus, the IAL was established in August 2008.

Funded by the Singapore Workforce Development Agency, IAL works with key stakeholders including adult educators, business leaders, managers, workforce development intermediaries, and policy-makers to shape and develop the CET system.

INSPIRING professional excellence in the CET community

IAL offers a comprehensive range of training courses and professional qualifications. CET professionals can extend their career path with nationally recognised qualifications delivered by IAL's research informed trainers and educators.

Framework for training and adult education professionals

Through the precedent setting Training and Adult Education Professional Competency Model (TAEPCM), IAL seeks to strengthen the capabilities and effectiveness of CET Professionals, who are key to ensuring that our CET design and delivery continues to evolve and keep up with the rapid changes in global manpower and business needs. The model comprises four job families: Adult Education, Train-

ing Management, Human Resource Development and Workforce Development.

Network for learning and practice

IAL launched its *Adult Education Network* (AEN) in November 2009, which is a professional membership scheme for adult educators to learn through informal and formal platforms as well as to network, collaborate and share knowledge and expertise. Key initiatives for this community are the *CET Exchange* for job and business opportunities, Continuous Professional Development Programmes, IAL's CET Research Capability Workshop series and the biennial Adult Learning Symposium.

ADVOCATING new paradigms in learning

The development of expertise and experience in systematic review, research synthesis, horizon scanning and scenario building, alongside the dissemination of our research, places IAL, as an entity, in a strong position to act as an "observatory" for CET, providing CET professionals with cutting-edge information and insight. Along the way, we define standards and catalyse innovations in curriculum design, training delivery and assessment.

Sustaining capability building

IAL researches, experiments in and innovates CET design and delivery to enable the sector to adopt new approaches or improve existing ones. The suites of in-house developed training programmes are leading the sector in terms of blended learning design by leveraging on learning technology. The

programmes aim to develop a pool of future CET professionals.

Enabling innovation in CET

IAL works with businesses to adopt innovative approaches and effective solutions to their skills agenda. Through the CET Innovation Fund (launched in 2011) and the CET *Learning and Performance Transformation Projects* to be launched in 2013, IAL seeks to enhance accessibility to learning and strengthening the linkages of learning to business performance. The sectoral-specific or segment-specific work-based approach to learning innovation is expected to strengthen the relevance of CET to Singapore's economic restructuring.

Offering Business Solutions to Enhance Workforce Capabilities

IAL works with organisations to deliver training solutions that are customised to each business. Through IAL's robust research-informed and innovative approach, it provides tailor-made training designs and assessments to best fit a company's staff development and training needs.

LEADING through research to inform policy making and programme design

With our centres of core expertise and commitment to interdisciplinary research, IAL develops practical CET initiatives based on research conducted in areas of workplace learning, skills utilisation, productivity and outcome evaluation. We have carried out evaluative projects of workforce-wide skills incentive pro-

grammes and generic workplace skills frameworks and programmes to inform policy designers up to the ministry level. Other evaluation projects include programmes and system evaluation.

IAL is also responsible for translating research in areas of learning, skills and innovation into inputs that enhance learning and practice. We therefore engage stakeholders at all stages of the research process to ensure that we are able to respond to their needs and gain a clear picture of the state of the field of CET research and practice in Singapore. Our stakeholders range from policymakers and government agencies to Institutes of Higher Learning, Post-Secondary Education Institutes, professional and industry bodies, and overseas organisations with a mission similar to that of IAL.

IAL has put in place various schemes to provide opportunities for both experienced and novice researchers to participate in CET research including the Research Associate Scheme, and Practitioner researcher courses that help CET professionals investigate and reflect on their own practice and conduct research in their workplace. Over 90 CET professionals have played active parts into our research projects. Developing local research capability is a major part of the work plan. Centres of core expertise:

- ▶ Centre for Innovation and Development
- ▶ Centre for Research in Learning
- ▶ Centre for Skills, Performance and Productivity Research
- ▶ Centre for Workplace Literacy



Research publications

IAL has produced 40 publications and conference papers, including four specifically aimed at practitioners, plus outputs to the press and radio. It has published numerous papers in international journals such as the *International Journal of Lifelong Education*, *Journal for Vocational Education and Training*, and *International Journal of Training and Development*. The most recent books on our research are *Research Digest 2010–2012* and *Globalising Skills: Implications for Singapore*, with three more books and a journal with a regional focus in the pipeline for 2013–2014.

International cooperation activities

To strengthen our research profile, our researchers have participated in several regional and international conferences including the “European Association for Research in Learning & Instruction (EARLI) SIG 14 International Conference, National Vocational Education and Training Research No-Frills Conference in Australia, and the 8th Finnish International Conference on Evaluation for Practice.

IAL has extensive international links with leaders in CET-related research in universities. It has developed strong relationships with overseas and international agencies (such as OECD, UNESCO, BIBB in Germany, and KRIVET in South Korea) and partnerships with CET Centres, universities, research units and government, professional and industrial agencies in Singapore.

Cooperation with BIBB

To date, we have engaged more than 20 international Visiting Fellows and Visiting Researchers with wide-ranging expertise and experience. This includes two international expert groups convened in late 2011 on workplace learning and skills utilisation, training and education. The latter resulted in a closed-door forum for business and policy makers (held in November 2012 on the theme, Strategies for an Inclusive Society: The Roles of the Worker, the Enterprise and the State).

Renowned international researchers engaged as Visiting Fellows to participate and lead CET research in Singapore also mentored local researchers in the various studies. For example, Emeritus Professor David Ashton leads the sectoral productivity studies. Professor Philip Brown and Professor Hugh Lauder lead the skills web studies, and staff in IAL together with Dr Sue Stack from the University of Tasmania developed a website to share innovative professional learning models and tools for practitioners.

Recognising the shared objectives with BIBB, IAL signed a memorandum of understanding with BIBB in 2009 to collaborate on research in the areas of adult vocational learning and education, and establish platforms for the mutual exchange of ideas and dialogue.

www.ial.edu.sg



South Africa

Further Education and Training Institute (FETI)

Mission and vision

The FET Institute (FETI) is a development, research and teaching unit with a special focus on South African public Further Education and Training (FET) colleges, internationally known as Technical Vocational and Education Training institutions.

FETI's key focus areas are research and development and capacity building, its broad mandate being:

- ▶ A focus on FET Colleges
- ▶ Curriculum and capacity development
- ▶ Research relevant to the FET sector and its interface with Higher Education
- ▶ Advocacy/brokerage role to insert FET Colleges into broader public debates on education and training

All activities of FETI have been self-funded to date through an endowment and commissioned donor funds for research and projects in South African vocational education and training. As the first South

African university institute of its kind with a specific focus on vocational education and training, FETI has made a significant impact on South African policy development for this sector and contributed to scarce academic and commissioned research within this sector and at an international level. The mission of FETI is to be a leading resource for innovation and research related to vocational education and training within the university and beyond.

FETI is working closely with the University of the Western Cape to draw on the combined strengths of adult education, vocational education and higher education studies in ways that address critical challenges faced within South Africa's post-school education and training sector. Government policy has set targets of 4 million people enrolled in the vocational and adult education sectors, with the latter absorbing one million of these enrolments by 2030. Current enrolment figures for these sectors are less than one million. This is a significant expansion requiring a near ten-fold increase in educators across the sectors in order to achieve this scale of provision. Similarly university enrolments are set to expand to 1,6 million from the current enrolment of 900 000 by 2030. Teaching qualifications for adult education and FET College lecturers are dated and do not necessarily reflect the changing needs or expertise required in these sectors for the provision of employment and further learning opportunities to post school students.

FETI's current and future focus involve the development of postgraduate teaching programmes for FET College lecturers, research on the post-school



sector and capacity building programmes aimed at strengthening vocational education and training in South Africa and providing long term sustainability for these interventions. The following sections describe FETI's key activity areas.

Historical development

FETI has been located in the Education Department of the University of the Western Cape (UWC) since 2005. Prior to this, the unit operated as a NGO in the post-school arena since 1995, undertaking policy analysis, research and development in South Africa's evolving education and training policy environment.

Research and development activities

FETI's research and development projects include academic scholarly work on the development of a vocational pedagogy appropriate for South African vocational education and training; commissioned research in areas such as the development of indicators for the evaluation of TVET in Southern African Development Community (SADC) countries, policy and labour market research in South Africa as well as specific institutional research on systemic vocational education and training issues. An example of the latter include research on articulation between FET Colleges and other post-school institutions, namely adult education centres, statutory workplace training institutions and universities. FETI, in collaboration with other research agencies, has also produced significant research on post-school youth

that has had a direct impact on government policy. In addition, FETI staff also sit on a range of national policy and implementation task teams focused on the improvement of vocational education and training in South Africa that draw on best international practice.

FETI's future research focus from 2013 will largely focus on differentiation, access and mobility in order to ensure that vocational education and training career and learning pathways make a direct contribution to the overall skills development strategies of the South African government.

A second key focus for FETI is the development of a vocational pedagogy and relevant initial and continuing teaching qualifications for vocational education and training college lecturers. Current pedagogical qualifications for vocational teaching staff have largely been developed from formal secondary school teaching qualifications that do not include technical qualifications and work experience. FETI has registered a Postgraduate Diploma in Vocational Education and is in the process of developing a Masters degree in Vocational Education to be followed by a PhD in Vocational Education over the next five years in order to develop teaching capacities for South African vocational education and training colleges.

A third focus for FETI is to contribute to the development of a coherent vocational education and training sector through capacity building interventions. Currently, vocational colleges offer a range of programmes at the level of formal schooling quali-

fications and higher education programmes largely do not articulate with university qualifications. FETI intends to expand its existing articulation and development work to develop implementation models of career and learning pathways that interface with the workplace and further study. The emergence of a qualifications framework for trades and occupations and the interface between this framework and higher education frameworks will form a further focus for systemic work on career and learning trajectories that will involve standard setting activities.

Cooperation with BIBB and other partners

The German vocational education and training system has consistently been identified as an example of best international practice and is highly acknowledged in South Africa's vocational education and training policy and implementation strategies. The formation of the Department of Higher Education and Training from 2009 that includes adult education, vocational education and training, higher education and Sectoral Education and Training Authorities provides a broader opportunity for international collaboration that can build on previous donor interventions (e.g. GIZ/GTZ initiatives). In this regard, BIBB is in a strong position to inform the South African Department of Higher Education and Training's vision of a "single, coherent, differentiated and highly-articulated post-school education training system" (Green Paper, 2012), with a specific focus on vocational education and training.

Proposed areas of cooperation and networking to be investigated include: Systems coordination for the effective implementation and quality assurance of vocational education and training; development of relevant vocational pedagogies for South African vocational lecturers and best practice teaching qualifications; application of a "dual" training systems approach to FET College and higher education qualifications and progression pathways, as well as the development of indicators and standards to benchmark quality vocational education and training systems. This investigation will build on FETI's existing international partnerships and seek to complement these.

www.feti.ac.za



Switzerland

Swiss Federal Institute for Vocational Education and Training (SFIVET)

Eidgenössisches Hochschulinstitut für Berufsbildung

Mission and vision

The Swiss Federal Institute for Vocational Education and Training (SFIVET) is the Swiss national centre of competence for research based consulting in VET development and studies on upper-secondary level (VET) training. We offer nationwide harmonised basic and continuing training courses in three linguistic regions of Switzerland. Our services are directed at teachers and principals working at VET schools, at company instructors as well as at other VET actors. Furthermore, SFIVET is mandated by the Swiss Government to train examiners

who conduct final assessments of apprentices. We consult and support cantons, professional organisations and VET schools in developing professions and implementing reforms. In regard to academic qualification, SFIVET's Master of Science in Vocational Education and Training assures education of qualified specialists in the field. As far as R&D and evaluation is concerned, SFIVET has established three focus points, where research is conducted mainly from the perspective of education science, economics, psychology and sociology. In doing so, SFIVET contributes to transfer scientific knowledge to VET-practitioners on a day-to-day basis. We also maintain a closely-knitted network of national and international partners from the business and research community.

In addition to these up-to-date basic and continuing training programmes to VET/PET professionals and specialists, SFIVET intends to strengthen its position in the field of vocational education and training as well as its role as the Swiss governmental centre of expertise for research in this field.

Historical development

Founded in 2007 to replace the Swiss Pedagogical Institute for Vocational Education (SPIVE), which was created back in 1972, SFIVET has offices and training locations in Lausanne, Lugano, Zollikofen/Bern und Zurich. We employ over 230 highly qualified experts and more than 1000 teachers on a mandatory basis. As SFIVET fulfils a key position in the Swiss VET system, our strategic goals derive from the Swiss government. From 2013 to 2016, we will

focus on monitoring the development in the educational as well as in the economic field and on facilitating development of these markets by innovation and custom-made solutions.

Switzerland's vocational (VET) and professional educational training (PET) sector

Over two-thirds of Switzerland's young people completing compulsory education (called secondary education) enrol in upper-secondary level vocational education and training (VET). Most of these VET apprentices take part in a VET programme that combines school-based instruction at a VET school with a part-time paid apprenticeship at a host company. Each year, over 60 000 male and female apprentices obtain their Federal VET Diploma, which is a job-related qualification issued on completion of a three-year or four-year VET programme. Additionally, over 10% of these VET graduates obtain the Federal Vocational Baccalaureate (FVB). This academic qualification is issued to VET graduates who complete an optional preparatory course for the FVB examination. FVB holders are entitled to enter a tertiary-level A university of applied sciences (UAS). Nearly half of all VET graduates take a tertiary-level B path, which is referred to as professional education and training (PET). The first option open to VET graduates entering the PET sector is to enrol as a student at a professional college. The second option, which is normally chosen after a few years of professional experience, is to prepare for one of Switzerland's two national professional examinations leading to the Federal PET Diploma or

the Advanced Federal PET Diploma. Switzerland's PET sector intends to prepare individuals for management posts.

Switzerland's VET/PET sector is a successful model that offers tremendous benefits.

- ▶ The Confederation, Cantons, professional organisations and trade associations all work together to define the content of VET and PET programmes. These programmes are to match the needs of the labour market as well as the specific needs of linguistic regions and single Cantons.
- ▶ The number of apprenticeship positions is closely related to actual labour market conditions. VET graduates normally find employment shortly after graduation. Regulations on the VET and PET sectors intend to ensure the greatest possible permeability both within the VET and PET sectors as well as between the VET and PET sectors and other parts of the education system. Specific technical or general skills, knowledge and know-how gained in addition to formal education and training pathways (non-formal learning) as well as professional or non-professional experience (informal learning) are also recognised and validated when appropriate.
- ▶ Switzerland's youth unemployment rates are lower than in other European countries.
- ▶ Students who complete SFIVET's basic training programmes to obtain their initial qualification as a VET or PET professional may also take ad-



vantage of a wide range of job-specific and modular continuing training programmes and courses.

- ▶ SFIVET is able to quickly and pragmatically adapt its basic training and continuing training courses in response to economic, social, technological and pedagogical trends.

SFIVET's basic and continuing training division

Basic training activities at SFIVET focus on educating vocational trainers and teachers as well as professional college teachers and teachers responsible for preparing VET students and/or VET graduates for the Federal Vocational Baccalaureate (FVB) examination. In most cases, participants can choose full- or part-time programmes. They are responsible for providing apprenticeship training at host companies within the framework of upper-secondary level VET programmes as well as education and training at professional colleges within the framework of tertiary-level PET programmes.

Within SFIVET's unique Master of Science in Vocational Education and Training, a fully Bologna-compliant programme of study which builds upon a Bachelor's degree, students undergo intensive training to prepare for the growing challenges in the VET-sector at both national and international levels. Graduates of the MSc in VET programme are able to take on important managerial tasks and contribute to R&D in the field.

A full range of continuing training options of various forms, types and durations, SFIVET continuing training division not only offers refresher and tailor-made courses, but also advanced study programmes. In 2012, the continuing training section has educated close to 8600 examiners nationwide.

SFIVET's Center for the Development of Occupations

SFIVET's Center for the Development of Occupations assists professional organisations in the development and implementation of VET and PET programmes. It supports professional organisations in analyzing the competences needed to carry out the specific occupational/professional activities of respective professions. On this basis, we consult them in the development of appropriate VET and PET programmes. SFIVET also advises professional organisations in the process of defining training objectives, of structuring the educational contents, as well as defining its length and structure and the corresponding qualification procedures. The focus of SFIVET's work is on the specific needs of the customers as well as on the professional skills required by the labour market. SFIVET uses established multidisciplinary scientific instruments and methods from the economic, pedagogic and psychological field and develops them on a day to day basis.

Research themes

SFIVET's R&D Division focuses on three nationally coordinated research themes: Teaching and Learning in VET/PET programmes, current VET/PET context and strategic planning of the VET/PET sector.

Research theme 1 – Teaching and learning in VET/PET programmes

Within this research theme, essential characteristics of teaching and learning in vocational training are explored. We also contribute to the scientifically based optimisation of teaching and learning in the field of vocational education. Research theme 1 includes the development of teaching and learning concepts, the exploration of the specificities of cooperation between places of learning and it highlights and accompanies the validation of educational measures.

Research fields:

- ▶ Learning diagnostics, encouragement of learning
- ▶ Learning location, forms of teaching and learning
- ▶ Learning outcome (formal, non-formal, informal)
- ▶ Learning diagnostics, encouragement of learning
- ▶ Learning location, forms of teaching and learning
- ▶ Learning outcome (formal, non-formal, informal)

Research theme 2 – Current VET/PET context

Switzerland's VET/PET sector is dynamic and constantly changing. This research theme aims to examine current VET/PET issues and develop innovative solutions. Also under study are the integration of new media in vocational learning, the transformation of professions over time and the content of vocational training programmes, which must adapt to changing social requirements.

Research fields:

- ▶ Innovations within the VET/PET system
- ▶ Occupational profile
- ▶ VET/PET training plans

Research theme 3 – Strategic planning of the VET/PET sector

Within this research theme, SFIVET intends to build up knowledge that contributes to the governance of Switzerland's VET/PET sector. The production of research results is requested by political stakeholders and of particular importance to SFIVET's Master of Science in Vocational Education and Training. The research theme addresses the choice of education and training programmes by apprentices, as well as company training practices. Furthermore, it includes studies on social integration, exclusion processes and the structures and processes inherent in the VET/PET sector.

Research fields:

- ▶ Choice of education and training programme and apprenticeship market
- ▶ Integration and exclusion processes
- ▶ Institutional conditions affecting VET/PET



Research and development activities

SFIVET's R&D division is the interface between the Swiss education system and the labour market. In addition to providing basic and continuing education and training, SFIVET also carries out research and development activities in the area of upper-secondary level vocational education and training (VET) and tertiary-level professional education and training (PET). Both teaching and R&D are core competencies of SFIVET. By examining the interdependence between the Swiss education system and the Swiss labour market, SFIVET contributes profoundly to the analysis, optimisation and ongoing development of Switzerland's VET/PET sector.

Our R&D Division selects its research themes on the basis of strategic objectives, which are set forth in its research agenda. This means that the R&D Division undertakes research on professional practices within the VET/PET sector. SFIVET then shares its findings during its teaching activities in order to improve professional practices within the VET/PET sector. This knowledge transfer process ensures that the fruit of SFIVET's R&D efforts is not only beneficial to VET/PET participants (i.e. students, teachers, trainers, schools, professional organisations, policy-makers) but also to society as a whole.

Evaluation unit

The Evaluation Unit acts as the central point of contact for all evaluation services offered to third par-

ties in Switzerland. It also helps to ensure the quality of SFIVET's basic and continuing training courses by providing a consolidated assessment concept.

Knowledge transfer

The results of SFIVET's R&D activities reach VET/PET professionals in a variety of ways. First of all, SFIVET researchers also teach (e.g. MSc in VET, basic and continuing training courses for VET/PET professionals). Secondly, SFIVET students and teachers take part in research projects. Finally, research findings are disseminated within Switzerland's VET/PET sector through public relations activities and publications.

International cooperation activities

In recent years, the advantages of the Swiss vocational education system have been recognised worldwide. Month after Month, we receive delegations from countries all over the world. The Swiss model is a source of inspiration to build reform and modernise vocational systems internationally.

SFIVET takes part in several international cooperations in order to develop or improve vocational education and training. Demands of international partners cover a wide range: consultation on the introduction of a VET system or parts of it, curriculum analyses and programme development, education and training of key actors. All solutions developed respond to the economic, cultural and social framework of the respective country. To our under-



standing, it is crucial to integrate players from the economic field into the setting-up of VET systems in other countries, in particular companies from the private sector. Recent activities of SFIVET in the international field include the education of engineers in wood technology from Gabon in order to empower them to develop VET-programmes in their home country, facilitating the establishment of dual based VET-programmes in India in cooperation with local partners, amongst them the Indian company Skillsonics as well as the training of experts for curriculum development in Slovakia.

Cooperation with BIBB and other partners

SFIVET's R&D Division collaborates with international partner institutions such as EU institutions, the Federal Institute for Vocational Education and Training in Germany (BIBB) and the Conservatoire National des Arts et Métiers in France (CNAM). It also works with tertiary-level A institutions both in Switzerland and abroad.

www.ehb-schweiz.ch/en



Thailand

Office of Vocational Education Commission (OVEC)

Mission and vision

OVEC or the Office of Vocational Education Commission, the Ministry of Education of Thailand, is a leading organisation responsible for Technical and Vocational Education (TVE), regarding equity, access, quality standards and lifelong learning in order to equip individuals with occupational competencies and skills needed for labour markets and self-employment. The purpose of vocational education and training is to prepare primary and middle level technical manpower in various fields in accordance with industry demands and labour market trends. As such, it aims to develop professional knowledge to promote innovation and technology which will support overall national development. The roles and responsibilities include the development of TVE policy, plan, core curriculum, TVE staff development and competency standards, strengthening partner-



ships with industries and stakeholders for TVE; and conducting research and innovation for TVE. OVEC has engaged in strategic scoping on future reforms in the TVET sub-sectors so that it can produce capable workforce that is needed for the creation of a knowledge-based economy. The mandate is

- ▶ to provide the general public with access to technical and vocational education;
- ▶ assess the demands of the labour markets and promote self-employment in accordance with social and economic development of the country;
- ▶ to produce and develop a vocational workforce in all professional levels;
- ▶ to implement and standardise quality vocational education management and administration; and
- ▶ to promote research, innovation and technology development for a competitive market.

The missions are increasing TVET participation, social services, research innovation and entrepreneurship development and quality improvement. The important projects and activities of OVEC are based on four main targets: developing skills for employability, fostering new entrepreneurship or self-employment, serving society/local community, conducting research for new knowledge and innovation/technology and to enhance sustainable development. Sustainable development should be an integral aspect of TVET plans, projects and activities in teaching and learning processes. However, administrators and teachers need to teach TVET students knowledge and skills for life in society.

Historical development

The concept of organising vocational education started when there was an increase in craftsman work in Thailand. The very first vocational schools were established in 1910 (the Commercial Schools at Mahapreuththaram Temple and Ratburana Temple). The National Education Plan of 1932 indicated that, for the benefits of learners, vocational education had to be organised to include the agricultural, crafts work and commercial sector. As a result, the educational system of Thailand and the Department of Vocational Education were established on 19th August 1941.

Vocational education has changed continuously to respond to economic and social demands of the country. In 1971, Thonburi Technical College, Thai – German Technical College and Telecommunication College Nonthaburi, which had been under the auspices of the Department of Vocational Education, were organised into the North Campus of King Mongkuts Institute of Technology offering vocational education at degree level. In 1975, twenty-eight Vocational and Technical Colleges were promoted in the same way. This was also the case for Prathumwan Technical College that changed to Pathumwan Institute of Technology in 1998. These institutions are now under the supervision of the Office of the Higher Education Commission.

Thailand's educational reform in 1999 was the result of the Asian economic crisis and of the political reforms of October 1997 when constitution mandated educational reforms and decentralisation processes were initiated. The Administration



of Ministry of Education Regulatory Act had been promulgated on July 7, 2003 amalgamating the Ministry of Education with the Ministry of University Affairs. As Thailand is now in the reform phase, its educational systems need to be in harmony and fit with current socio-economic trends. The present labour crisis in Thailand reflects problems and gaps between education and the economic system. To deal with this important issue, the government intends to focus on vocational education and professional development. The current education policies now focus on vocational education and skill development. Thai people will graduate as quality life-long learners. The development for vocational skills is being rolled out by the Office of the Vocational Education Commission.

Thailand now attaches great importance to sustainable development. For the National Economic and Social Development Plan, the “Sufficiency Economy Philosophy” has been applied and adopted as a policy guiding principle for the country’s overall development. It underpins the Royal Thai Government’s efforts to generate stable economic growth. The *Sufficiency Economy Philosophy* emphasises sustainable development, sound macro-economic policies, and the equitable sharing of economic benefits. At the same time, it avoids excessive risk-taking, untenable inequalities in society, and the wasteful use of natural resources. It also provides a more secure approach and strengthens the fabric of Thai society, and enables the country to address the challenges of globalisation in a balanced and sustainable manner. Thailand’s sustainable development vision of being a “Green and

Happiness Society”, set as the ultimate goal under the Tenth Plan, requires the implementation of encompassing measures.

In this context, Greening TVET ought to open a window to the world and vice versa, e.g. TVET institutions need to explore and exchange information about innovative teaching and learning methods, such as programmes on renewable energy, clean water and clean technology, reorientation of TVET curricula, sustainable campus management programmes and examples of innovative approaches to integrating learning in TVET with on-the-job training and community services aimed at positive societal responses to create a sustainable future. The desirability of moving to a green TVET is in progress.

OVEC is responsible for the development and organisation of vocational education and training in Thailand’s more than 400 vocational colleges. There are currently over 1 million students enrolled in the various vocational study pathways. Eight fields of study are undertaken as majors: trade and industry, agriculture, home economics, fisheries, business and tourism, arts and crafts, textiles and commerce. The move toward lifelong learning and a learning society has been embodied in a credit transfer system to facilitate mobility between institutions; in the recognition of different types of qualifications from various institutions offering vocational training; and the evaluation of prior learning and work experience in the formal, non-formal and informal sectors. Reforms are currently being implemented to reorganise the system towards Thai Vocational Qualifications (TVQ) based on industrial practices and needs.



Thailand is currently facing challenges in two ways. Quantitatively, the ratio of the workforce structure, specifically at middle and low levels should be a strong focus and should cope with employment needs in the future. In terms of quality, there are a number of important factors which TVET must take into account for policy makers. Study of qualitative needs has shown that the Thai workforce must possess the necessary knowledge, skills, and moral and ethical principles. OVEC has realised that it must find the means to cope with these qualitative aspects.

Research and development activities

OVEC has encouraged administrators and teachers to carry out research work on new knowledge, innovation and technology in order to ensure sustainable development for “one page research” and “classroom action research”. This is to inspire TVE teachers to continue to improve their performance through data collection and usage. Students are also encouraged to work on project-based learning to create technology and innovation related to their areas of specialty. Apart from this, they are also encouraged to create new inventions for a national competition which is held every year. Some students have been very successful and participated in international competitions.

Cooperation with industries and other agencies on R&D is also strengthened, particularly regarding the new occupations required by labour markets. Furthermore, the Knowledge Management System of TVE is the best practice. Research innovation and entrepreneurship development are strengthening

staff capacity, changing paradigm, networking and partnership, enhancing knowledge management, developing linkages with industries and indigenous knowledge, organising skill development in research and entrepreneurship for TVET students.

Concerning the upcoming ASEAN community integration, Thailand needs to construct a mechanism for research channels for teachers and educators in ASEAN countries in order to provide broader communication channels for teachers, educators, and researchers in SEA. This includes cooperation in academic training, conference, seminars, or forums to create awareness of changes in education in ASEAN countries; strengthen the relationship between unions/associations/organisations in SEA. The contribution of teaching techniques and technology utilisations could enable other ASEAN countries to progress the proficiency of education management, administrations, and learning.

We collaborate on research and create short and long term exchange programmes for teachers in ASEAN countries to inspire ASEAN teachers and education experts in updating and tracking educational trends and in applying appropriate teaching techniques/approaches of neighbouring countries in SEA.

Standard setting activities

Thailand is one of the industrialised countries in the Asia-Pacific region that requires a number of skilled labourers. One of the major tasks of the current government in Thailand is to improve the vocational qualification standards for the international



and national markets. The government was highly concerned over rapid global changes, especially concerning international competitiveness. Thailand cannot rely on its natural resources and cheap labour. Nowadays high quality skilled manpower is required. In this regard, the government has a clear plan to stimulate and promote trading industries by transforming manufacturing industries into a more skills-based and knowledge-based industry. Furthermore, a policy for a creative economy will be introduced and implemented.

During the current education reform, the Ministry of Education proposed life-long learning with quality as one of its emergency plans for education. Under this plan, the qualifications of Thai workers have to be improved. The OVEC will start by standardising national vocational qualifications for Thai students to ensure efficiency, knowledge and competence of all vocational graduates. Competence-based Education and Training is thus introduced. OVEC in Thailand formulated the Thai Vocational Qualifications (TVQ). Vocational competencies are divided into five levels (MOE 2006). The TVQ places emphasis on competencies, the accreditation of prior learning and experience, the promotion of public private sector cooperation in providing additional skills training for workers in various enterprises so as to raise labour productivity to international levels, and enhancing the global competitiveness of Thailand.

On the establishment of the vocational qualification institution (Thai Vocational Qualifications Institute: TVQI), the Office of the Vocational Education Com-

mission and the Ministry of Education were responsible for the initial work.

Their work sets the benchmark for vocational qualification, which certifies graduates of all levels under the supervision of the Thai Chamber of Commerce, the Federation of Thai Industries, and the Thai Bankers' Association to supplement the operations of the Ministry of Labour (responsible for skill development for labour). This is to set the benchmark for skills and abilities needed for jobs and thereby elevates the quality of labour and satisfies the needs of both the domestic and international markets.

For capacity building, OVEC has declared 12 policies for TVET institutes:

1. Increase learners in terms of quantity.
2. Offer vocational education in secondary schools.
3. Provide RPL and Vocational Qualifications.
4. Manage learning processes: Users, fixers or repairers, and creators.
5. Improve learning-teaching and assessment processes.
6. Collaborate with industry councils and entrepreneurs.
7. Create new SME businesses.
8. Develop careers with integration of management.
9. Focus on moral principles.
10. Manage finance, personnel, and warehouse systems efficiently.
11. Inspire learners with industry visits in the first year of certificate and diploma levels.
12. Manage knowledge and skills for lifelong learning.



International cooperation activities

OVEC has collaborated with international organisations and other related institutes to perform joint research on TVET, and provided consultation to the developing countries.

OVEC works cooperatively with international organisations in exchanging experiences and best practices through regional and international seminars, workshops, meetings, and networking. The establishment of forums is aimed at exchanging ideas, creating collaboration between the educational and private sectors, with the latter setting a benchmark for vocational qualification in the manufacturing and service sectors and, as a result, elevating the quality of Thai labour to international standards as envisioned by international and private sector cooperation programmes with organisations such as UNICEF, UNESCO, JICA, SEAMEO and BIBB. Furthermore, bilateral agreements with counterparts in the UK, Germany, Australia, Denmark, Japan, Sweden and France have provided external stimuli for education reform.

In Asia and the Pacific region, learning for employability is a significant issue. Various countries within the sub-region, namely Lao PDR, Cambodia, Vietnam and Southern China work together to upgrade technical and vocational education and training, through fellowships in agricultural, industrial and service sectors, exchanges of teachers and teaching assistance in schools and colleges.

To promote increased cooperation and dialogue, the UNESCO-UNEVOC International Centre, in partnership with the Section for TVET, the Asia-Pacific Programme for Educational Innovation for Development (APEID) of the UNESCO-Bangkok Office and with the OVEC of the Ministry of Education in Thailand, organised a planning meeting of regional resource persons in the field of TVET. The meetings, which took place in Bangkok, were attended by experts from Cambodia, Lao People's Democratic Republic, Malaysia, Nepal, the Philippines, Sri Lanka, Thailand and Vietnam. Individual presentations on national challenges in the field of TVET were made by participants. These were followed by small group discussions that identified a range of common issues, concerns and challenges.

In building up capacity for sustainable development, the OVEC is looking for feasible models. As a result, projects have been created at international and institutional levels. Since 2003, OVEC receives assistance through the cooperation agreement between the Thai and Australian governments. The sustainable development programme started in 2004. The stages of the programme are as follows:

- ▶ 2004: Key OVEC Executives surveyed the feasibility of development in Illawara, Australia and discussed the contexts of both countries.
- ▶ 26–27 August, 2005: Seminar and Workshop on “Marketing and Business Development in TAFE, Australia” arranged by TVET and the Australian Embassy, conducted by TAFE experts. It was held in Bangkok for directors, deputy directors, and other key personnel.
- ▶ 31 August–14 September, 2005: Thai OVEC executive supervisor, office directors, key potential



directors worked on Thailand Australia Vocational Education Capacity Building Establishment of Multi-Campus Institutes at TAFE NSW, Australia.

German development cooperation with Thailand in the area of vocational education has demonstrated that the instruments of financial and technical cooperation can improve vocational education in terms of modernisation, quality, and relevance to company workplaces. This impact was mainly limited to the operational level of vocational schools and companies, where procedures and regulations for effective public-private cooperation could be established jointly and successfully. In regard to the TGI project, this applied to the level of management, development, and realisation of the different types of activities in training, consultancy, and industrial services. On the macro level, in the national organisation of the partners, only a minimum of structural change for steering and control, which is necessary for maintaining public-private cooperation on the micro level, has been achieved.

OVEC has held a number of formal and informal meetings and conference to integrate the strengths of each country, which could appropriately be applied to Thailand's context, and to develop policies for TVET development. There is a great need for specialists in growth sectors such as mechanical engineering and automobile manufacturing, the construction industry, metal processing and green technologies. The vocational educational and training system is to be re-aligned in order to meet the needs of domestic and foreign producers and investors, as documented in a memorandum signed by the OVEC and the foreign educational organisations in recent

years. Areas of thematic focus include consultancy regarding development of vocational training staff and the establishment of competence centres for initial and continuing education. Due to the 12 OVEC policies, educational administrations from Australia, United Kingdom, and Germany play an important role for the sustainable development of TVET. Occupational and competence standards act as a key to success. Among OVEC's current concerns and interests, there are two main aspects:

- ▶ Encouraging the participation from all the relevant resources to promote competence-based curriculum for TVET i.e. the accurate competence at the required level. Data for designing competence standards and curriculum development. Quality assurance, implementation, and review processes are incorporated into the curriculum process. The TVET competence standards will be developed and recognised as Thai Vocational Qualifications (TVQ).
- ▶ Promoting Recognition of Prior Learning in the colleges in order to increase learners in terms of quantity and give Thailand's workforce access to life-long learning opportunities.

OVEC's two main objectives will bring about higher capability in career competition at international level, a skilful workforce, and higher achievement of TVET.

This vocational education goal is in accordance with the Bonn Declaration of UNESCO-UNEVOC:

"TVET is the Master Key to alleviate poverty, promote peace, conserve the environment, improve the quality of life for all and help achieve sustainable development."



Cooperation with BIBB

The cooperation agreement between BIBB and Thailand has been established in 2005. Under this agreement, the Office of the Vocational Education Commission (OVEC) of Thailand's Ministry of Education works closely with BIBB. The BIBB's advisory services are beneficial to the expansion support of dual structures in initial and continuing vocational training. In this process, cooperation between the colleges and enterprises in the area of vocational training are increased. OVEC introduced the dual vocational training (DVT) system at several pilot colleges some years ago. Since then, it has endeavoured to spread these structures successively throughout the country. BIBB gives advice in matters regarding how Thailand's trade and industry can be incorporated into the planning, implementation and evaluation of initial and continuing vocational training. Thus, OVEC and BIBB have conducted joint workshops, meetings of experts, and seminars on subjects such as the inclusion of trade and industry in organising and designing vocational training; financing vocational training/the costs and benefits of vocational training; the development of standards; and transitions between vocational training and academic education. An experts' conference was held in Bangkok in May 2007, which was attended by directors of vocational schools from all parts of the country. The conference focused on the topics:

- ▶ Training trainers;
- ▶ development of vocational standards;
- ▶ involving trade and industry in organising and designing vocational education and training.

On 11 June 2012, a high-level delegation from the Thai government visited BIBB. The guests were briefed on the fundamentals of the dual system of vocational education and training, and on the work of BIBB. "Media use for the training of vocational training staff" was another theme on the agenda.

The government sees vocational education as a top priority and intends to reform it and upgrade its social prestige. There was great interest in the German dual system of vocational education and in cooperating closely with BIBB, particularly on the development of new training profiles in the sectors of hydraulic engineering, renewable energies and environmental technology. A high-ranking delegation visited BIBB to learn more about the dual vocational education and the establishment of inter-company initial and continuing educational centres. They were especially interested in the mechanism of internships, in the teaching materials developed by the trainers within the scope of the framework curricula, and in the methods for disseminating knowledge and skills. On the topic of management, support structures and administration led to animated discussion, the results of which will be integrated into the subsequent activities of the cooperation. The visits gave new impetus to the cooperation between the two countries in the field of vocational education. In future, Thailand and BIBB will hopefully foster further cooperation on the planning, implementation and evaluation of initial and continuing vocational training.

www.vec.go.th



Vietnam

National Institute for Vocational Training (NIVT)

Mission and vision

The globalisation, the introduction of state-of-the-art technology into the workplace and the reform of the national economy require labour forces to have well-prepared skills, knowledge and attitudes. This requires Vietnam's government to have appropriate policies, plans and strategies for TVET development. In this context, the National Institute for Vocational Training, established under the General Department for Vocational Training, is responsible to assist the government in developing strategies, policies and plans for the TVET system.

Operational principles

- ▶ Functioning as national research institute for vocational training by designing strategies, pol-

icies and plans to develop the vocational system; setting up vocational index systems; forecasting demand and supply of training and labour markets; applying research results into practice, conducting surveys and implementing development projects of vocational training.

- ▶ Doing researches on methodology of developing syllabus, curriculum and content of study; developing training methods, facilities and curriculum of vocational training.
- ▶ Setting up information systems and vocational training databases.
- ▶ Doing research on vocational management; participate in further training for teachers and staff of vocational schools.
- ▶ Doing research and develop vocational training models; design the pilot programmes and training courses.
- ▶ Cooperating with domestic and international organisations and individuals in researching vocational training.

Staff

Number of staff: 46

Number of researchers: 31

Research and development activities

- ▶ *Develop policy, legislation on vocational training:*
 - Participate in developing legislation on vocational training;
 - developing the strategy for vocational training for the period of 2011–2020;



- participate in developing policies for vocational training for rural workers;
 - participate in developing national skill standards;
 - participate in developing policies for vocational training accreditation and management;
 - participate in developing policies for vocational teachers;
 - participate in developing policies for the relationship development between vocational training institutes and enterprises;
 - participate in developing labour market development policies in the vocational training sector.
- *Develop and implement vocational training projects:*
- Participate in developing vocational training reform projects;
 - participate in developing basic and comprehensive Vietnamese education reform projects;
 - carry out projects at state and ministry level in the field of vocational training;
 - develop information technology appliance projects in vocational training;
 - develop database control projects in vocational training;
 - develop and implement vocational training pilot models for rural workers;
 - develop projects on Green TVET to meet labour demands for green jobs and green growth.
- *Organise training and further training:*
- Participate in training Master in educational management
 - train new technology for vocational teachers;
 - train pedagogical skills for vocational teachers and trainers;
 - organise training courses under vocational training pilot models for rural workers;
 - organise training courses in open-source software appliances for vocational teachers;
 - skill training responding to climate change in areas affected by climate change;
 - provide training packages for enterprises.
- *Conduct investigations and surveys:*
- Surveys on vocational learning demand of rural workers;
 - surveys on transitions from schools to workplaces;
 - carry out tracer studies for graduates.
- *Provide consultancy and science services:*
- Develop planning for vocational training institute network in provinces and localities nationwide;
 - provide consultancy on job orientations and employments for young labour;
 - organise training courses for management staffs in localities.
- *Publications:*
- Publish books, handouts and manuals on vocational training;
 - publish statistics reports on vocational training;
 - publish annual vocational training reports;
 - publish scientific journals on vocational training.



- ▶ *Implement international cooperation on vocational training:*
 - Join in scientific workshops, forums on vocational training;
 - sign partnership agreements with partners such as BIBB (Germany) or KRIVET (Korea);
 - cooperate in vocational training with international organisations such as ILO, JAVADA (Japan); KOICA (Korea)...

Implemented projects in 2011 and 2012

- ▶ Complete and submit the Vocational Training Strategy for the period 2011–2020 which was approved by Prime Minister under the Decision No. 630/QĐ-TTg dated 29/05/2012;
- ▶ participate in completing “Reform Projects” for Vocational Training;
- ▶ carry out five approved research projects at ministerial level:
 - Assess competitiveness of Vietnam’s labour;
 - forecast for development trends of Vietnam’s human resources to respond to competitiveness requirements of the labour market in context of global integration;
 - solutions for vocational training development to respond to competitiveness requirements of the labour market in context of global integration;
 - basic and comprehensive vocational education;
 - rationale and practice for the development of a national vocation qualification framework (ASEAN Community 2015).
- ▶ Complete science research on climate change.
- ▶ Research and develop a “training package” model.
- ▶ Develop information systems and databases on vocational training; National Database System on Vocational training.
- ▶ Organise pedagogical training courses for vocational teachers and trainers in Hanoi, Ho Chi Minh City, Thai Binh province, Nha trang City, Dak Nong province.
- ▶ Publish intramural magazine of NIVT with 4 topics: “Strategy and policy on Vocational Training”; “Vocational Training for Rural Workers”; “Link Vocational training and the labour market’s requirements”; “Vocational training quality assurance and management system”.
- ▶ Complete National Report on Vocational Training in Vietnam 2011 (Vietnamese and English version), edit, print and publish the report.
 - Develop three Reports for the Regional conference on TVET Quality Breakthrough co-held by BMZ (Germany) and MOLISA in October, 2012;
 - develop “TVET Reform Project”;
 - survey of vocational training needs of rural labour (63 provinces/cities);
 - survey of the transition from school to the labour market (ILO-MOLISA);
 - survey of the jobs of workers in the labour market (ILO-MOLISA);
 - survey of situation and needs of labour in enterprises (MOLISA, co-operated with DOLISA of 63 provinces/cities).



Development plan

It is proposed that the National Institute of Vocational Training will be upgraded to the Academy of Vocational Education and Training (AVET). The foundation of AVET will focus on the following:

Functions

- ▶ To conduct training activities on new technologies (including technological transfer)
- ▶ To conduct training activities for VET teachers and managers
- ▶ To carry out research in the field of VET

Tasks

- ▶ Fields of training
 - Training and upgrading of vocational teachers and managerial staffs
 - Training on new technologies
 - Training on vocational pedagogical skills
 - Providing postgraduate studies on the vocational sector
 - Training and standardising of vocational accreditators
 - Training and standardising of occupational skill assessors
 - Carrying out vocational training accreditation
- ▶ Fields of research
 - Fundamental research on VET strategies and policies
 - Fundamental research on VET programme, curricula, methodology; research on vocational training equipments, vocational training standards and skill development; research on vo-

ational training accreditation and assessment system

- Conducting pilot research and applying results on training and manufacturing; to carry out technological transfer in the field of VET
- Research on management sciences in the field VET
- Forecasting and carrying out surveys in the field of VET
- Developing statistic and information systems
- Designing, publishing and disseminating publications on VET
- Consulting and providing services on VET research and deployment
- Participating in assessing vocational programmes, projects and related research
- Cooperating with other domestic and foreign organisations and individuals to conduct VET research

Other tasks

- ▶ Piloting and transferring new VET technologies
- ▶ International cooperation in VET

Cooperation with BIBB

BIBB advises since 2004 the NIVT in connection with the strategic reorganisation of the country's vocational training system. This work includes strategy development and the provision of advisory services in connection with modernising the legal foundation for the system, developing concepts for and setting up corresponding institutions (organisational development).



CEDEFOP

European Centre for the Development
of Vocational Training

Another area of focus is the provision of advisory services in connection with the (demand-oriented) modernisation of “training occupations” (occupations which require completion of formal vocational training), particularly in the area of information and communications technology. Trade and industry’s involvement in the development of occupational, training and examination standards is particularly important in this connection. Corresponding instruments for determining training needs were jointly developed. In the area of vocational training research, BIBB advises the Institute with the aim of further optimising its research and development activities and linking them with other national and international institutions. This research provides the foundation for organising the country’s vocational education and training system.

www.tcdn.gov.vn/en



European Union

European Centre for the Development of Vocational Training (Cedefop)

Mission and vision

The European Centre for the Development of Vocational Training (Cedefop) is the European Union’s reference centre for vocational education and training. It provides evidence and analyses that underpin European vocational education and training policy.

More specifically, Cedefop:

- ▶ Supports the European Commission, Member States and social partners in developing and implementing common European tools and principles;
- ▶ identifies trends in European labour markets by forecasting skills needs and supply across the EU;
- ▶ monitors and reports on the implementation of European vocational education and training policy in EU Member States.



Cedefop not only supports EU policy-makers' decisions and reports on vocational education and training developments, it also contributes to and supports the implementation of policies in Member States. This gives it a unique position for bridging the worlds of education and employment and for providing policy advice.

Thanks to its expert networks, Cedefop is also a hub of information dissemination and of spreading good practices.

Cedefop's work is aligned to objectives of the European Union's "Europe 2020" strategy and the policy framework devised to achieve them. This includes, in particular, the flagship initiatives ("Agenda for new skills and jobs", "Youth on the move"), annual growth surveys, the "Education and training 2020" framework, the Bruges communiqué with its long-term objectives and short-term deliverables for vocational education and training, the European Commission's employment and youth employment packages and the communication "Rethinking education".

Historical development

Cedefop was founded against a backdrop of the 1968 students' revolts and subsequent economic and societal crises of the 1970s. Governments and especially the unions advocated modernisation of vocational education and training.

Though a general European legislative framework existed, it was felt that lack of transparency and comparability of qualifications hindered workers' mobility,

and that research was needed to improve vocational education and training provision. Thus, the Council of Ministers established the European Centre for the Development of Vocational Training on a proposal of the European Economic and Social Committee in 1975 (Council Regulation No 337/75). It was set up in (West) Berlin in 1977. In 1993 – after the Berlin wall fell and new Member States were about to join the European Union – the Council decided to move Cedefop to Thessaloniki, Greece, where it started work in September 1995.

Evidence and networking

Combining its research and networking capabilities, Cedefop uses its expertise to strengthen (European) cooperation on vocational education and training and increase awareness of its role and importance. Cedefop's current work focuses on the following priorities:

- ▶ *Supporting modernisation of vocational education and training systems*

Modern training systems need to be relevant to individual and labour market needs. They should consider knowledge, skills and competences acquired in different ways (for example, through work experience) and at different times, and allow people to move between jobs, sectors and countries.

Member States decide on their national training policies and Cedefop reports regularly on the changes they are making to their systems. Cedefop also works to improve vocational education and training statistics and indicators to permit comparisons across countries.

European cooperation on VET policy, led by the European Commission and Member States, with support from social partners, has agreed common objectives. Cedefop's work contributes to developing and implementing common European tools and principles (European qualifications framework – *EQF*, the European credit system for vocational education and training – *ECVET*, Europass and the European quality assurance reference framework – *EQARF*), which aim to make it easier to work and study abroad as well as move between different parts of a national education and training system (for example, between general and vocational education).

► *Careers and transitions – Continuing VET, adult and work-based learning*

Today, people are likely to change jobs more often. Cedefop is looking at how continuing training, adult and work-based learning can help people to manage their careers and job prospects better. It is examining how adult and work-based learning can help enterprises to deal with technological change, promote innovation and increase competitiveness.

New demands are also being made on vocational education and training. Trainers are crucial to meeting these demands. Cedefop is looking at their changing roles and their skill and learning needs.

► *Analysing skills and competence needs to inform VET provision*

Unemployment coexists with skill shortages when people's skills do not meet job require-

ments. Understanding and anticipating the skills required is a step to help training adapt and correspond better to labour market needs.

Cedefop's skill forecasts provide insights into the factors that influence skill supply and demand. They can help design policies to reduce skill imbalances in the EU and Member States. Cedefop is also finding out more about emerging demand for "green" skills for sustainable growth and, as the population ages, the effects of the "silver" economy on jobs in health and social care.

International cooperation activities

To ensure synergy of common efforts, Cedefop cooperates closely with European institutions, especially the Commission (DG EAC and EMPL, Eurostat) and the European Parliament, as well as the Economic and Social Committee and the Committee of the Regions. It has memoranda of cooperation with the European Training Foundation and Eurofound.

Cedefop maintains two networks spanning EU Member States:

- ReferNet, which provides information on national VET systems and policies in Member States, Iceland and Norway, and monitors developments and trends in VET policies. The network also provides analyses of how each country is progressing in its implementation of common policy objectives in Europe
- Skillsnet, which brings together highly-qualified researchers and other experts from across the



world to present and discuss outcomes and methods of research and analysis on new and changing skill needs as well as medium to long-term prospects of skills available on the labour market.

Cooperation with international organisations such as the OECD, ILO, World Bank and UNESCO has proved beneficial. Building on this cooperation, Cedefop aims to share its expertise globally, for instance in the OECD's skills strategy or the UNESCO/UNEVOC working group on sustainable development and greening skills. Cedefop has a memorandum of understanding with KRIVET, the Korean Research Institute for Vocational Education and Training. Cedefop's publications are routinely translated into several non-EU languages, either in full or in part, such as Korean or Russian.

Cooperation with BIBB

Cedefop and BIBB have a long historical development of cooperation. BIBB was founded in 1969 to improve quality of vocational education and training through research in Germany. It contributed to establishing vocational education and training research as a scientific discipline. Proximity of the two organisations in West Berlin and personal contacts at Governing Board and operational levels helped shape Cedefop's profile.

From the mid-1980s, BIBB expanded its European activities. Cooperation with Cedefop since 2002 has been shaped mostly through ReferNet. BIBB manages the German ReferNet consortium and has played an eminent role in all of this network's activities

(documentation, statistics and monitoring). Recently, cooperation has taken a new turn with the German initiative on apprenticeships, which has led to the creation of the European alliance for apprenticeships. Both BIBB and Cedefop support this initiative.

www.cedefop.europa.eu



European Union

European Training Foundation (ETF)

Mission and vision

The ETF works with countries surrounding the EU to improve their vocational education and training, because knowledge and skills are the means to a more prosperous and fuller life for all. The ETF's vision is to make vocational education and training a driver for lifelong learning and sustainable development, with a special focus on competitiveness and social cohesion.

In today's world, education and training are crucial to tackling many political, social and economic challenges. This concerns not only the EU Member States, but also the EU's neighbourhood. The overall aim is sustainable economic growth and social inclusion. By building partnerships between the EU and its neighbours, the ETF contributes to advancing this aim.

The ETF works with its partner countries to give their citizens useful skills for economic growth, employment and active citizenship, as well as knowledge and lifelong learning opportunities. In short, we help our partners to make most of their most valuable asset: Human capital.

The ETF is funded by the EU. All its work is designed to maximise the investment in education and training in partner countries, in line with the EU's external relations policies. By supporting human capital development, the ETF contributes to social and economic development, and long-term stability in EU neighbouring countries.

The ETF believes that a holistic approach to learning – one that encompasses every aspect of education and training throughout an individual's lifetime – is the best way to help transition and developing economies increase their prosperity, create sustainable growth and encourage social inclusion.

The added value of ETF interventions derives from understanding the policy environment, networks of experts, and a prompt, flexible response to requests. The ETF is a neutral and non-commercial organisation with unique expertise in developing human capital and its links to employment.

Historical development

At a Strasbourg summit on 8 and 9 December 1989, and as a result of a meeting that had taken place in Paris a couple of weeks before, European ministers asked the Council of the European Communities “to



adopt, at the beginning of 1990, the necessary decisions for the establishment of a European Training Foundation for Central and Eastern Europe”. Just one month earlier the Berlin Wall had come down. Just ten days later the Phare Programme (an EU instrument to assist the applicant countries for EU membership in Central and Eastern Europe) was adopted. Facing Historical development in the making, European politicians were riding the fast track.

The Council established the European Training Foundation in May 1990. Its founding regulation stated that it had to work on “the development of the vocational training systems of the countries of Central and Eastern Europe designated as eligible for economic aid by the Council [...]” by promoting “effective cooperation between the Community and the eligible countries in the field of vocational training”.

By that time, the political landscape in both the east and the west of what was once the Iron Curtain, had changed dramatically yet again. In Eastern Europe, the Soviet Union had collapsed, war raged in the Western Balkans, and Czechoslovakia had split into its two constituent parts. The Baltic States had regained independence and with the launch of the Tacis Programme, the scope of the ETF was broadened even before it had opened its doors. In Western Europe, the Euro was still the virtual currency known as the ECU, and the Maastricht Treaty had been adopted – the European Community was now the European Union. Austria, Finland and Sweden were candidate countries. Between east and west, the possibility of future EU membership of some of the former Central European countries began to be discussed.

By 1993, the European Training Foundation was on the list of agencies to be established outside Brussels in an exercise aimed at bringing parts of the EU civil service closer to EU citizens in the individual Member States. At the Edinburgh European Council meeting in October 1993, Turin’s dedicated efforts to develop itself as the European capital of training were rewarded with the allocation of the agency.

In the spring of 1994, the ETF’s first Governing Board was appointed and convened by Thomas O’Dwyer, Director General of DG XXII, Education and Culture of the European Commission. In May of that year, the ETF’s first director, Peter de Rooij, was appointed and in early January 1995 60 newly appointed ETF staff began work at Villa Gualino in the hills above Turin.

Activities

By broadening access to vocational education and training, and improving its quality, the ETF:

- ▶ Facilitates cooperation between education and business;
- ▶ increases the employability of individuals;
- ▶ promotes entrepreneurial learning;
- ▶ improves inclusive governance in education and training;
- ▶ opens possibilities for lifelong learning;
- ▶ builds qualification systems and frameworks;
- ▶ develops schools and teachers;
- ▶ smoothens the transition from education to work.

On a broader level, the ETF provides information and analysis on human capital development in the

partner countries through the policy reviews of the Torino Process. This is the basis for the ETF's support to partner countries as well as for its contribution to the design and delivery of EU assistance.

The ETF supports institutions in partner countries to manage human capital development themselves and encourages networking and sharing of information, experience and good practice – both between the EU and partner countries, and among partner countries.

Partner countries

In the context of the EU's external relations policies, the ETF works with the EU's neighbouring countries:

- ▶ Those countries aspiring to become EU Member States: Albania, Bosnia and Herzegovina, Croatia, Kosovo, the Former Yugoslav Republic of Macedonia, Montenegro, Serbia and Turkey, as well as Iceland.
- ▶ The Southern and Eastern Mediterranean region: Algeria, Egypt, Israel, Jordan, Lebanon, Libya, Morocco, Palestine, Russia, Syria and Tunisia.
- ▶ Eastern Europe: Armenia, Azerbaijan, Belarus, Georgia, Republic of Moldova, and Ukraine.
- ▶ Central Asia, specifically Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan, in the framework of EU development assistance.

At the request of the EU, and with the approval of the ETF Governing Board, our support may be extended to other countries.

Focus areas for the future

Qualifications and qualification systems: ETF partner countries are reforming their vocational qualifications to make them relevant and transparent. Most ETF partner countries have been working towards the development of national qualifications frameworks (NQFs). Many of them are beginning to move away from the planning and development stage towards implementation. The ETF provides policy and technical advice and builds institutional capacity to sustain reforms. Additionally, the ETF will continue to take stock of developments and progress in partner countries by compiling inventories of qualifications frameworks in cooperation with Cedefop (for EU Member States) and UNESCO (for other countries). Moreover, the ETF will explore and analyse new policy challenges that arise as countries move forward with their qualifications frameworks such as the development of qualifications based on learning outcomes and the implications for institutional capacity enhancement, ensuring the link between vocational and higher education qualifications. Furthermore, the ETF will continue to facilitate knowledge sharing in the field of qualifications by developing and expanding its international e-platform on qualifications.

Governance in education and training: The partner countries have come to realise the benefits of multilevel governance, which means involving relevant public and private actors at all levels (national, regional, local and sectoral) in determining VET policies. The ETF has developed a methodology for mapping the involvement of different actors in spe-



cific policy areas for VET. It is being implemented in the pre-accession and Mediterranean regions to take stock of stakeholder involvement, assess strengths and weaknesses and identify new ways for actors to cooperate to make policy making and delivery more effective. Priority areas include the development of better coordination and VET financing mechanisms. Particular emphasis is given to involving regional actors in VET policy development and delivery so as to make education and training a vehicle for territorial development and cohesion as well as social partners for coordination mechanisms both generally and at economic sector level.

Quality in VET: To respond effectively to changing employment and societal demands, VET policies, systems and provision must be of the highest quality. Quality management, which reinforces and sustains a culture of quality culture in VET “communities of practice”, is crucial for VET excellence. Whilst ETF partner countries strive to improve their VET systems to make them more relevant to the needs of both economies and learners, the pre-conditions for quality management are often under-developed. In its cooperation with partner countries, the ETF approaches the different aspects of quality in VET in a comprehensive manner. The “quality cycle” approach (plan, implement, evaluate, review) is simple and systematic and can be applied to all VET policy areas to address challenges and build quality management systems. The approach helps to establish a controlled and precise vocabulary for dialogue and cooperation across diverse stakeholder groups.

Learning and teaching in VET: VET systems in partner countries are still mainly school-based and rote or theoretical learning is often predominant. As a result, learning outcomes are increasingly less suitable for the realities of the world of work, which are nowadays characterised by rapid technological change and new forms of work organisation. The ETF supports partner countries to find new ways and mechanisms to modernise and optimise learning and teaching in VET. The role of contemporary VET pedagogy to enhance the learning and teaching process will be explored and utilised to promote effective approaches to the professional development of vocational teachers and in-company trainers to meet the dual competence challenge (pedagogical and technical). Particular emphasis will be given to opportunities and pathways for work-based learning, practice-oriented learning, and problem-based learning in authentic and simulated learning environments. ETF work will also build on EU approaches (i.e. the Apprenticeship Alliance, quality framework for traineeships, peer learning for teachers and trainers) as well as on partner country experiences.

Employment and employability: The employment challenge is a key policy consideration in all ETF partner countries. The ETF will continue to analyse employment trends in the partner countries in order to better understand employment challenges (overall and for specific population groups e.g. young people and women) and the role that skills development actions can play in improving employability. Emphasis will be given to identifying the demand for skills in the context of the partner countries (also considering green skills); improving the understanding of

the role of the informal sector in labour markets, in particular from a skills perspective; and analysing the transition from school to work in order to better explore the challenges that young people face in entering the labour market. Furthermore, the effectiveness of different active labour market measures will be analysed to improve skills and skills matching.

Migration and skills: Most ETF partner countries have difficult labour market conditions that have brought about significant labour emigration. Increased labour mobility across borders puts the skills issue on the international agenda, while education systems are increasingly under pressure to produce qualified human resources both for domestic and foreign labour markets. Based on the key policy framework of the EU external migration policy (Global Approach to Migration and Mobility/GAMM), the ETF will continue to explore the nexus between skills and migration and the role of training in improving the employment prospects of potential migrants and returnees. Specific emphasis will be given to actions that support ongoing EU mobility partnership and/or migration dialogues with the ETF partner countries. This includes: Advice for skills policies for legal migration and mobility and migration and development, bringing issues linked to policy support measures for migrants' skills onto the agenda including transparency; recognition and portability of skills and qualifications; job and skills-matching mechanisms; as well as validation of prior learning and reintegration of returnees.

Entrepreneurship and enterprise skills: Low job creation and high levels of unemployment as well as considerations for making economies more dynamic

and vivid have generated an increasing interest regarding entrepreneurship and enterprise skills development among policy makers in the ETF partner countries. The ETF will focus on supporting partner countries to develop the entrepreneurship potential of local communities as well as specific population groups, particularly young people and women. Special emphasis is given to the review of tried-and-tested models and modalities for building structured intelligence on small enterprise skills from EU and partner countries as a tool for ETF policy support for partner countries. Secondly, through partnership with organisations both within the EU and partner countries, the ETF will continue to pursue its good practice development work to support quality assurance and dissemination of entrepreneurship training. The ETF is inspired by policies developed within the EU while supporting the European Commission in its efforts to monitor progress of the partner countries in accommodating the human capital policy recommendations of the Small Business Act.

Innovative methodologies

The ETF is working on the development of innovative methodologies for VET policy analysis and capacity building in partner countries and within the framework of EU policy approaches, tools and instruments.

Policy analysis

The ETF has developed the Torino Process which is a participatory process leading to an evidence-based analysis of VET policies in a given country. It is carried



out in order to build consensus on the possible ways forward for VET policy and system development, considering the contributions of VET to enhanced competitiveness, sustainable and inclusive growth. This includes a review of the state of the art and vision for VET in each country and an assessment of the progress that countries are making in achieving the desired results. More specifically, the Torino Process:

- ▶ Develops a common understanding of a medium/long-term vision, priorities and strategy for VET development, exploring possible options for implementing this vision and/or making further progress;
- ▶ designs and evaluates home-grown and affordable VET policies, based on evidence or knowledge and collaboration;
- ▶ provides opportunities for capacity development and policy learning within and among partner countries and with the EU;
- ▶ empowers countries to better coordinate the contributions of donors to achieving agreed national priorities.

The Torino Process has a structured analytical framework which helps policy makers and practitioners to analyse the performance of the VET policy and system according to the following five “building blocks”:

1. Vision for VET system development.
2. External efficiency: addressing demographic, economic and labour market needs.
3. External efficiency: addressing social demands for VET and promoting social inclusion.
4. Internal quality and efficiency of initial and continuing VET delivery.

5. Governance and financing of the initial and continuing VET system and institutional capacities.

A first round of the Torino Process took place in 2010–11. This concluded at the International Conference “Evidence Matters” in May 2011 at which partner countries endorsed the process, and using the outcomes from the Process, agreed on a framework of policy priorities for the further development of their VET policies and systems. This framework was used to define ETF’s own priorities as well as to inform ETF dialogue with the countries and international partners.

Capacity building

The ETF’s mandate states that the objective of the support to partner countries is to enhance the development of human capital through a number of interrelated functions including capacity building, policy analysis, knowledge sharing and support to the EU programme and project cycle.

Inspired by the mandate, and in line with EU Development Aid approaches, the ETF has developed a concept and methodology to measure capacity development in human capital in partner countries. It is based on the definition of indicators expressed in learning outcomes which measure the level of development of the system in terms of performance in relevance, sustainability and innovation. The indicators measure capacity with regard to knowledge of specific policy topics (such as quality, teacher training, etc.), and also in terms of policy process management. The process areas refer to the policy cycle



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(coverage and management of policy cycle phases) and the policy making principles (ownership, evidence based policy making, holistic view of policies, and participation in policy making). The methodology is based on the understanding that the nature and intensity of ETF support should adjust according to the level of capacity. According to this principle, ETF support is more intensive in the early stages of capacity development and gradually reduces when countries increase their capacity and sustainability in taking care of their own development progress.

International cooperation activities

As a centre of expertise, the ETF works closely with the European Union's institutions and bodies, the European social partners as well as with the relevant institutions of EU Member states by disseminating information, encouraging networking, promoting the exchange of experience and good practice between EU Member States and partner countries. The ETF is in close contact with EU Member State institutions active in the partner countries and regions for facilitating exchange of information on actions of common interest and promote coordination. The ETF also actively cooperates in policy development with international organisations (in particular the Inter-Agency Group led by UNESCO with participation from the European Commission, ILO, OECD and the World Bank) in order to draw upon mutual experience and promote joint learning.

www.etf.europa.eu



UNESCO-UNEVOC

International Centre for Technical and Vocational Education and Training

Mission and vision

The UNESCO-UNEVOC International Centre is UNESCO's specialised centre for technical and vocational education and training (TVET). From its location in Bonn, Germany, it serves UNESCO Member States worldwide to develop and strengthen their TVET systems and to promote and support countries implement skills development programmes and policies that are relevant, lifelong and accessible to all. In line with its slogan *Promoting learning for the world of work*, the Centre contributes to increased opportunities for productive work, sustainable livelihoods, personal empowerment and socio-economic development. Its emphasis is on helping meet the needs of developing countries, countries in transition



and those in a post-conflict situation, especially for youth, girls and women, and the disadvantaged.

UNESCO-UNEVOC works as part of the United Nations' mandate to promote peace, justice, equity, poverty alleviation, and greater social cohesion. It is also a key component of UNESCO's mandate for *Education for All* and *Education for Sustainable Development*. UNESCO-UNEVOC is also part of the debate on what comes after the deadline for the Millennium Development Goals (MDGs), known as the Post-2015 Agenda, and advocates for skills for the world of work to be placed higher on the international development agenda.

The International Centre undertakes its activities through a world-wide network of UNEVOC Centres in UNESCO Member Countries. It creates synergies with UNESCO Headquarters, UNESCO Institutes, Centres and Field Offices; and works in close partnership with other international and national agencies in the field of technical and vocational education and training, with particular reference to:

- ▶ Providing leadership and acting as a catalyst and as hub of the worldwide UNEVOC Network;
- ▶ promoting knowledge sharing and acting as clearinghouse to inform the global debate on TVET;
- ▶ advocacy and assisting UNEVOC Centres in building their capacity;
- ▶ promoting international partnership in TVET through north-south-south cooperation and providing a platform for inter-agency cooperation.

The Centre's establishment underlines UNESCO's commitment to contribute to human, social and economic development through the promotion of skills for work and life. UNESCO sees the role of TVET as educating the whole person, not just the worker. It has thus adopted a holistic approach to skills development for employability and citizenship by placing emphasis on the "values, ethics and attitudes to prepare the learner for self-reliance and responsible citizenship", as stated in the *Revised Recommendation Concerning TVE*. This broad understanding of TVET stems from the proposition formulated to UNESCO in 1996 by the International Task Force on Education for the Twenty-First Century led by Jacques Delors, which states that education throughout life is built upon four pillars: *Learning to know, learning to do, learning to live together* and *learning to be*, and is based on UNESCO's overall mandate "to build peace in the minds of men and women". While *learning to do* is the pillar most directly linked to TVET, the Delors Report argues that the four pillars cannot stand alone, but are "four paths of knowledge [that] all form a whole". It is this holistic view that distinguishes the work of UNESCO in TVET from those of other organizations, as it goes beyond the demand for TVET for purely economic purposes.

Historical development

After operating as an implementation unit for international TVET projects in Berlin in the 1990s, the UNESCO-UNEVOC International Centre was established in 2000 and formally inaugurated in 2002, at a time of great promise but also many challenges to education: In 2000, the adoption of the Millennium



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Development Goals by which the international community committed to providing universal primary education by 2015, and the six 2015 Education for All (EFA) goals set at the World Education Forum in Dakar, Senegal, signalled a bold new vision for education. The creation of the UNESCO-UNEVOC International Centre sought to build on this momentum and to advocate for TVET as a crucial element of development. Fundamental to this vision was the idea that without quality TVET, the international community would be unable to tackle the global challenges it faces. Indeed, at the time, TVET was still too often regarded as a “last resort” for young people and lifelong learners.

UNESCO-UNEVOC works tirelessly to reverse this perception. Over the years, it has succeeded in placing TVET higher on the international education agenda. There is now a general consensus that a low-skilled population and mismatches between skills and the labour market translate into economic disadvantage and high unemployment, particularly among young people, which in turn can lead to political instability and have negative consequences for social cohesion. Governments worldwide are therefore turning to TVET as a strong means of empowering women and men to work in dignity, overcome poverty and participate in the development of inclusive societies.

At the recent Third International TVET Congress convened by UNESCO in Shanghai, China in May 2012, UNESCO Member Countries developed an inclusive and transformative vision of TVET that makes fresh demands on policy and accepts that there are no readymade solutions. To face the in-

UNESCO's definition of TVET

According to the 2001 UNESCO Revised Recommendation Concerning Technical and Vocational Education,

Technical and vocational education is used as a comprehensive term referring to those aspects of the educational process involving, in addition to general education, the study of technologies and related sciences, and the acquisition of practical skills, attitudes, understanding and knowledge relating to occupations in various sectors of economic and social life. Technical and vocational education is further understood to be:

- a. *and integral part of general education;*
- b. *a means of preparing for occupational fields and for effective participation in the world of work;*
- c. *an aspect of lifelong learning and a preparation for responsible citizenship;*
- d. *an instrument for promoting environmentally sound sustainable development;*
- e. *a method of facilitating poverty alleviation.*

creasing demands on TVET in the light of global challenges such as climate change, demographic challenges and youth unemployment, new TVET policies will have to transcend the traditional divide between equity versus the economy and forge stronger links with other areas of policy such as rural and industrial development, poverty reduction and youth employment.



Standard setting activities

Two normative documents provide the overall framework and guidance for UNESCO's actions in TVET. The *Convention on Technical and Vocational Education*, adopted by UNESCO Member Countries at the General Conference in 1989, and the *Recommendations Concerning Technical and Vocational Education*, developed at the Second UNESCO TVET Congress in Seoul in 1999.

A UNESCO Strategy for TVET was established during 2008–2009 in consultation with Member Countries and TVET experts from all over the world. The Strategy guides all of UNESCO's interventions in the course of the implementation period 2010–2015 towards ensuring that the learning needs of all young people and adults are met through equitable access to appropriate learning and life skills. Recognising the multiple locations of technical and vocational skills development and that the Organisation's niche lies with its cooperation with ministries of education, UNESCO concentrates primarily on secondary and postsecondary TVET, as well as on TVET in non-formal settings. Its work is divided into three core areas:

1. Provision of policy advice and providing capacity development to Member States,
2. clarifying the concept of skills development and improving the monitoring of TVET, and
3. providing information on global TVET issues and acting as laboratory of ideas.

As part of the TVET Strategy, UNESCO-UNEVOC has strengthened its role as resource and capacity de-

velopment centre to support TVET systems in the Member States by providing services in the area of upstream policy advice, capacity development, knowledge sharing and global networking – with the UNEVOC Network members, the UNEVOC Centres, at the heart of its endeavours.

Research and development activities

As part of its mandate to inform the global debate on TVET in order to promote – and help countries implement – a holistic vision of TVET, UNESCO-UNEVOC has developed an extensive array of online services and publications. Based on the needs of its Member Countries, UNESCO-UNEVOC advocates for the development and improvement of TVET systems by conducting research and activities on specific issues such as the transition of young people from school to work, skills development for employability, green skills for sustainable production and consumption, entrepreneurial skills development and other cross-cutting themes. UNESCO-UNEVOC believes that addressing today's challenges through TVET can help alleviate poverty, promote peace, conserve the environment and improve the quality of life for all.

UNESCO-UNEVOC acts as a platform through which individuals and institutions in UNESCO Member States can exchange and access information, knowledge and experience on TVET using various online services and an extensive publications programme, which are a vehicle to transport information and knowledge between UNEVOC Network members, partners and beyond.



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e-forum

UNESCO-UNEVOC's e-Forum is a virtual community of over 2800 TVET experts from more than 170 countries who share information and knowledge about different aspects of TVET via a mailing list and an online discussion board. Subscribers have the opportunity to:

- ▶ Discuss relevant issues for TVET policy-makers, researchers and practitioners;
- ▶ announce upcoming events;
- ▶ inform colleagues on publications;
- ▶ inquire for materials, or
- ▶ find partners for international cooperation in TVET research and development.

UNESCO-UNEVOC regularly hosts moderated discussions on the e-Forum on topics such as women and TVET, TVET teacher education or TVET in post-conflict and emergency situations.

Publications, research and promising practices

UNESCO-UNEVOC's publications programme aims to contribute to the international debate on skills development for the world of work. Case studies, promising practices, discussion papers and information materials seek to create a bridge between research, policy and practice and acquaint education decision- and policy-makers with innovations, good practices and developments in TVET worldwide. UNESCO-UNEVOC is currently harnessing promising practices in TVET with an aim to create a range of documents on the basis of which TVET

systems in member countries can be guided towards more quality, equity and relevance.

World TVET Database

UNESCO-UNEVOC also maintains a World TVET Database, which is UNESCO-UNEVOC's endeavour to provide concise, reliable and up-to-date information on countries' TVET systems. The country reports intend to enable persons interested or working in TVET around the world to identify trends and challenges in TVET as well as information gaps, and to encourage comparative study of different countries' TVET systems.

International cooperation activities

UNESCO-UNEVOC is dedicated to strengthening the capacities of UNESCO Member Countries. UNEVOC supports Member Countries to develop and review their skills development policies in order to guide them towards more relevance, quality, and effectiveness. UNESCO-UNEVOC advocates for a holistic approach to TVET to overcome the often fragmented nature of many national TVET strategies. It does so by harmonising interventions with key partners at the country level. Through its work in the area of capacity development and in close collaboration with its partners, UNESCO-UNEVOC supports the development of national normative frameworks and standards for TVET. Other major concerns are enhancing the image of technical and vocational education and training (TVET), increasing the attractiveness of vocational education and training,



and improving access to skills development programmes.

UNESCO-UNEVOC undertakes most of its activities through the UNEVOC Network, and acts as its hub. The Network aims to:

- ▶ Improve the delivery of skills by promoting and fostering international collaboration in TVET;
- ▶ develop the capacities of UNEVOC Network members and associated TVET practitioners by providing various forms of assistance, and
- ▶ build an enabling environment in which the international TVET community can develop and share good practices and innovations in TVET.

The UNEVOC Network links institutions working in the area of TVET all over the world and fosters interaction and learning through international – south-south and north-south-south – cooperation. It increases the visibility of member institutions and offers opportunities for partnerships with like-minded institutions. With its Network, UNESCO-UNEVOC aims to improve technical and vocational education and training by providing an environment for exchange and mutual assistance among TVET experts and institutions that are faced with similar challenges in different parts of the world.

In order to ensure that the services provided by the United Nations and other Intergovernmental Agencies are delivered in the most efficient way possible, UNESCO-UNEVOC contributes the knowledge and experience of its staff to global consultations on TVET such as the post-2015 education and development agenda, as well as to several interagency groups, namely the Interagency Group on TVET, the Inter-Agency Working Group on Entrepreneurship Education, the Inter-Agency Working Group on Greening Skills, the UN-Water Group and the Inter-Agency Task Team to support TVET in Africa.

Cooperation with BIBB

BIBB has been a member of the UNEVOC Network since 1994, and has contributed its support and expertise by providing insights into its work during many Network-related activities.

www.unevoc.unesco.org



Closing remarks

Shyamal Majumdar, Ph.D.
Head of UNESCO-UNEVOC

UNESCO-UNEVOC and BIBB: A Long-Standing Partnership

Germany, Host Country of the UNESCO-UNEVOC International Centre for Technical and Vocational Education and Training

I am honoured to have been invited to contribute a closing chapter to this publication. Indeed, as the agency for TVET in the Host Country of UNESCO-UNEVOC, the Federal Institute for Vocational Education and Training – BIBB – has been a key partner of UNESCO-UNEVOC since it was inaugurated in Bonn in 2002 and even before, when UNEVOC was a UNESCO project based in Berlin.

As the former capital of the Federal Republic of Germany, Bonn ceded the seat of the Government to

Berlin after the German Reunification. As a result, the city has reinvented itself as a truly international capital of global dialogue, cooperation and development. Many governmental and non-governmental organisations, some of the largest German companies and important Ministries have their offices in Bonn. Bonn is also home to almost twenty agencies of the United Nations, with about a thousand staff members *working towards sustainability worldwide* – true to the slogan of the UN Bonn family. UNEVOC – and as a result, UNESCO – has immensely benefited from this synergetic environment by establishing strong and productive partnerships in Bonn, and throughout Germany.

The UNESCO-UNEVOC International Centre is located in the historic “Langer Eugen” building, which housed the Members of Parliament when Bonn was the capital of the Federal Republic known as West Germany. The use of this historic building has generously been granted free of charge by the German Government, which provides rent-free premises to the UN family in Bonn and covers all operating costs. UNESCO-UNEVOC is grateful to be



offered space in this prestigious building, next to the former “Bundestag” plenary hall. These buildings that now form part of the UN Campus are a symbol of democratic development after the Second World War, not just for Germany, but for the world as a whole. We are proud to associate our work with the historical development of this location. Most of all, we are grateful to the German Government for providing the funds to establish the Centre, for the readiness to share expertise and most of all for trusting in, and fostering, the spirit of international cooperation that underlies the establishment of UNESCO-UNEVOC.

The UNEVOC Network: A community of practice with BIBB as Network partner

Locating UNESCO-UNEVOC in Germany was a natural decision, as Germany’s internationally recognised dual training system is the foundation on which the country has built its historical development of economic and industrial success. Germany is one of the leaders of TVET development, with a long-standing historical development of apprenticeship, dual training and skills development. BIBB, as the recognized body for research and development in TVET, has put its enormous experience and resources in the area of TVET at the disposal of UNESCO-UNEVOC and that of its Member Countries. BIBB joined the UNEVOC Network when it was first established in 1994 in Berlin, and has since greatly contributed to the sharing of knowledge and experience within the Network by providing insights into its work and its know-how at many Network-related activities.

The UNEVOC Network is an inclusive world-wide learning network, made up of UNEVOC Centres that are established TVET institutions in UNESCO Member States. TVET sections within education ministries, national bodies dedicated to TVET policy development, research institutions, or TVET institutions at the (post-)secondary school level make up this community of practice. This diversity ensures that all important stakeholders in the TVET community have their say in the global TVET debate. The UNEVOC Network provides the framework for collaboration and an environment for exchange and mutual assistance among TVET experts and institutions that are faced with similar challenges in different parts of the world. To cite just a few examples, BIBB was co-organiser of the UNESCO International Experts Meeting in Bonn in October 2004 on *Learning for Work, Citizenship and Sustainability*, one of the first global events that had its main focus on advocating for sustainability in TVET. This event set the scene for international cooperation in the area of Greening Skills and is one of the main priority areas for UNESCO-UNEVOC.

BIBB was also a major partner in the organisation of the annual TVET Summit at the *eLearning Africa* conference. The Summit brought together TVET policy makers, researchers and practitioners to share experiences and discuss strategies and implementation mechanisms for the integration and sustainable use of ICTs in TVET in Africa. UNEVOC Network members from Africa were the main beneficiaries of this event.

Currently, BIBB is seconding two TVET experts who will join UNESCO-UNEVOC to complement its work

and streamline activities within the UNEVOC Network.

BIBB is also an important player when it comes to implementing the UNEVOC Network's regional plan of action for 2013, which has green skills and youth unemployment as its two main themes. BIBB will specifically be instrumental in collecting evidences of good practice on youth unemployment from within the Network.

North-South-South cooperation and the value of multilateral partnership

BIBB not only generously puts its expertise and resources at the disposal of UNESCO-UNEVOC and its Network. By extending its assistance, BIBB has also contributed to an enabling environment where TVET experts from all over the world can mutually assist one another through the exchange of good practices and information via UNESCO-UNEVOC's services, notably during the TVET Summits at *eLearning Africa*, and through its online discussion forum. Today, the heaviest users and contributors of UNESCO-UNEVOC's online services are in middle-income and developing countries, and the spirit of North-South-South cooperation can be felt every day when we open our inboxes and read everyone's contributions on the forum.

BIBB has long recognised "the opportunities that international cooperation can provide for continuous improvement of TVET in Germany". This statement is inscribed in the partnership agree-

ment between BIBB and UNESCO-UNEVOC and is an essential aspect of our joint work. This willingness to always keep learning from others indicates that building successful TVET systems is never an accomplished task. It is a process that constantly needs to adapt to the rapidly changing demands and realities of learners, the workplace, society and the environment. It also implies that, in a globalised world, countries are never alone in providing their people with the skills they need to fulfil their potential. Increasingly, every country needs to rely on international partnership in order to support the workforce it needs to grow in the global economy.

This is why UNESCO-UNEVOC acts as an "honest broker" between Member Countries by facilitating and encouraging interaction and the exchange of expertise, and by addressing the need to tackle common challenges through its activities, its online services and publications. This way, UNESCO-UNEVOC is providing a platform for collaboration between interested parties where good ideas can be tested, verified and contextualised, and where learning always goes two ways. Unlike donor-recipient relationships it offers peer consultation, networking and learning from each other among industrialised, developing and least-developed countries. Not least, UNESCO-UNEVOC can help donor countries enhance the effectiveness and relevance of their international and bilateral development policies and programmes by facilitating and complementing the cooperation among interested institutions and agencies, with an aim to reduce fragmentation, which is a major obstacle to the successful implementation and delivery of skills policies



and programmes in many countries. Together, let us catalyse our efforts and work to achieve a more prosperous future for all.

Chusjundar

Contact Information

Country	Organisation	Address	Phone/Fax	Website/E-Mail
Australia	The National Centre for Vocational Education Research (NCVER)	Level 11 33 King William Street Adelaide SA 5000 Australia	Tel: + 61 (0) 882308400 Fax: + 61 (0) 882123436	www.ncver.edu.au ncver@ncver.edu.au
Austria	Austrian Institute for Education (öibf)	Margaretenstr. 166/ 2nd Floor A-1050 Vienna Austria	Tel: + 43 (0) 13103334 Fax: + 43 (0) 13197772	www.oeibf.at oeibf@oeibf.at
Brazil	National Service for Industrial Training (SENAI)	SBN – Quadra 01 – BlocoC-Ed. – Roberto Simonsen–5° andar Brasília – DF Brazil	Tel: +55 (0) 613317 9010	www.senai.br dguninter-diret@cni.org.br
Bulgaria	National Agency for Vocational Education and Training (NAVET)	125 Tzarigradsko schosse Blvd, block 5, fl.5, 1113 Sofia Bulgaria	Tel: + 359 (0) 2 971 2070 Fax: + 359 88 819 9173	www.navet.government.bg/ en/nappo.bg/en napoo@navet.government.bg
Chile	National Ministry of Education (MINEDUC)	Av. Libertador Bernardo O'Higgins 1371 Región Metropolitana Santiago de Chile Chile	Tel: + 562 406 7342 Fax: + 56 2 696 7411	www.mineduc.cl educaciontp@mineduc.cl
China	Central Institute for Vocational and Technical Education (CIVTE)	16th floor Fusheng Building No.4 Huixindongjie Chaoyang District Beijing, 100029 P.R.China	Tel: + 8610 58556720 Fax: + 8610 58556720	www.civte.edu.cn yufengliu_0408@126.com www.civte.edu.cn yufengliu_0408@126.com



Country	Organisation	Address	Phone/Fax	Website/E-Mail
Columbia	National Service for Vocational Education (SENA)	Calle 57 No. 8-69 Torre Central Piso 4 Bogota Colombia	Tel: + 57 (1) 546 1500	www.sena.edu.co ezambrano@sena.edu.co
Czech Republic	National Institute for Education (NÚV)	Weilova 1271/6 10200 Prague Czech Republic	Tel: + 420 (0) 274022 461 Fax: + 420 (0) 274 863380	www.nuov.cz milada.stalker@nuv.cz
France	Center for Studies and Research on Qualifications (CEREQ)	10 place de la Joliette 13567 Marseille France	Tel: +33 (0) 491132828 Fax: +33 (0) 491132880	www.cereq.fr chaix@cereq.fr haas@cereq.fr
Germany	Federal Institute for Vocational Education and Training (BIBB)	Robert-Schuman-Platz 3 53175 Bonn Germany	Tel: + 49 (0) 228 107 0 Fax: + 49 (0) 228 1072971	www.bibb.de international@bibb.de
India	Federation of Indian Chambers of Commerce and Industry (FICCI)	Tansen Marg New Delhi 110001 India	Tel: + 91 (0) 9810 99 4682 Fax: + 91 (0) 1123320714/ 23721504	www.ficci.com ficci@ficci.com
Israel	Zur Foundation	Lavon Industrial Park, 20118 Lavon Israel	Tel: + 972 4 958 2760 Fax: + 972 4 958 2768	www.zur.co.il/en liat@zur.co.il
Italy	Institute for the Development of Vocational Training for Workers (ISFOL)	Corso d'Italia 33 00198 Rome Italy	Tel: + 39 (0) 068544 7836 Fax: + 39 (0) 068544 7581	www.isfol.it a.bulgarelli@isfol.it

Country	Organisation	Address	Phone/Fax	Website/E-Mail
Korea	Korean Research Institute for Vocational Education and Training (KRIVET)	Samseong-ro 147-gil 46 Gangnam-gu Seoul Korea135-949	Tel: + 82 2 3485 5212 Fax: + 82 2 3485 5048	http://eng.krivet.re.kr pionny@krivet.re.kr
Latvia	Ministry of Education and Science National Centre for Education (NCE)	Valnu iela 2 Riga LV-1050 Latvia	Tel: + 371 67226209 Fax: + 371 67223905	http://visc.gov.lv/en visc@visc.gov.lv
Mexico	National College of Technical Professional Education (CONALEP)	Calle 16 de Septiembre 147 Norte Colonia Lázaro Cárdenas/ Municipio de Metepec/ Estado de México, C.P.52148 México	Tel: + 5272227 10800 Ext. -2101,-2124	www.conalep.edu.mx dgeneral@conalep.edu.mx portal@conalep.edu.mx
Russia	Federal Institute for the Development of Education (FIRO)	Tshenjakhovskovo St 9, Building 1 125319, Moscow Russia	Tel.: + 7 499152 7341	www.firo.ru info@firo.ru
Singapore	Institute for Adult Learning (IAL)	1 Kay Siang Road Tower Block Level 6 Singapore 248922	Tel: + 65 (0) 657 90300 Fax: + 65 (0) 657 90350	www.ial.edu.sg info@ial.edu.sg
South Africa	Further Education and Training Institute (FETI)	FET Institute PO Box 659 Rondebusch 7701 Republic of South Africa	Tel: + 27 (0) 21959 2911	www.feti.ac.za info@uwc.ac.za
Switzerland	Swiss Federal Institute for Vocational Education and Training (SVIVET)	Kirchlindachstrasse 79 CH-3052 Zollikofen Switzerland	Tel: +41 (0) 31 9 10 3700 Fax: +41 (0) 31 910 3701	www.ehb-schweiz.ch



Country	Organisation	Address	Phone/Fax	Website/E-Mail
Thailand	Office of the Vocational Education Commission (OVEC)	Rajadamnoen-Nok Avenue, Bangkok 10300, Thailand	Tel: + 66 (2) 281 5555 ext. 1391 Fax: + 66 (2) 280 4487	www.vec.go.th piaggie@yahoo.com chaipreuk@yahoo.com
Vietnam	National Institute Of Vocational Training (NIVT)	32B Nguyen Binh Kiem Ha Noi Vietnam	Tel: + 844 397 40357 Fax: + 844 397 40357	www.tcdn.gov.vn/en lienhe@tcdn.gov.vn
EU	European Centre for the Development of Vocational Training (CEDEFOP)	PO Box 22427 Finikas Thessaloniki GR-55102 Greece	Tel: + 30 (0) 231 0490111 Fax: + 30 (0) 231 0490049	www.cedefop.europa.eu/EN/ public-relations@cedefop.europa.eu
EU	European Training Foundation (ETF)	Villa Gualino Viale Settimio Severo 65 I-10133 Torino Italy	Tel: + 39 011630 2248 Fax: + 39 011630 2200	www.etf.europa.eu info@etf.europa.eu
UN	Bonn International Centre for Technical and Vocational Education and Training (UNEVOC)	Hermann-Ehlers-Str.10 D-53113 Bonn Germany	Tel: + 49 (0) 228 8150100 Fax: + 49 (0) 228 8150199	www.unevoc.unesco.org unevoc@unesco.org

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**Bundesinstitut
für Berufsbildung – BIBB**

**Federal Institute for
Vocational Education
and Training
53142 Bonn**

Tel.: (02 28) 1 07-0

Fax: (02 28) 1 07 29 76 / 77

Internet: www.bibb.de

E-Mail: international@bibb.de

In order to strengthen the existing partnerships of the Federal Institute for Vocational Education and Training (BIBB) and to establish new cooperation projects, the BIBB has created its regional partners meetings. These are a forum for discussing issues of mutual interest which have been topical for some years, intensifying existing relationships and initiating joint projects.

The present BIBB publication evolved on the occasion of the First BIBB Global Partners Meeting at the WorldSkills Leipzig 2013. It documents and details the approach of IMPROVING AND PROMOTING VET through cooperation and exchange of examples of good practice between national and international VET institutions.

On the one hand, this publication documents the national responsibilities and international cooperation projects of the BIBB. On the other hand, it is a comprehensive presentation of the leading vocational education and training institutes all over the world, of their tasks and objectives, their research and development activities and their cooperation projects within international networks.