A first step towards bridging the Knowledge and Skills Gap in developing countries

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The development of a self-assessment tool for member organisations of DECP to scan current conditions for workplace learning and support skills development

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Executive Summary

This report has been drawn up following a project on skills development in developing countries between the Dutch Employers Cooperation Programme (DECP) and a project team of Maastricht University (UM). DECP is a public-private partnership established by the Dutch Ministry of Foreign Affairs and Dutch employer organisations that aims to strengthen the position of employer organisations in developing countries. DECP tries to do this by transferring knowledge and experience and by cooperating on a national and international level with various stakeholders (e.g. governments). Recently, DECP has added a new theme to their portfolio: skills development in their partner countries.

To support DECP in this new challenge, the UM project team developed a self-assessment tool to scan current conditions for workplace learning to support skills development within organisations. To develop this self-assessment tool, academic literature has been consulted. Based on previous research, the self-assessment tool focuses on three different dimensions. The first dimension focuses on a knowledge and skills gap between vocational education and organisations. The second dimension focuses on strategic HRD conditions to support workplace learning within organisations and learning climate. The last dimension focuses on general organisational information. In addition to the literature search, interviews have been conducted to gain more contextual insights into the field of skills development in partner countries. More precisely, interviews have been conducted with different experts, like DECP's country managers, and representatives of trade unions and similar organisations. With this self-assessment tool, DECP provides a new service to the employer's organisations in their partner countries to close the knowledge and skills gap. In turn, the employer's organisations can help local organisations to use the self-assessment tool and to support them in changing their HRD practices. A manual of the self-assessment tool will be provided as well as recommendations to facilitate future usage of the self-assessment tool.

With this project, a first step has been taken into the field of skills development in DECP's partner countries. Due to this initial exploration of skills development and workplace learning, this project fits perfectly into DECP's current and future portfolio.

List of Abbreviations

BMO	Business Member Organisation
CNV	The National Federation of Christian Trade Unions in the Netherlands
CEDEFOP	European Centre for the Development of Vocational Training
DECP	Dutch Employers' Cooperation Programme
ETF	European Training Foundation
FNV	The Netherlands Trade Union Confederation
GDP	Gross Domestic Product
GNP	Gross National Product
HR	Human Resource
HRD	Human Resource Development
ILO	International Labour Office
ITCILO	International Training Centre of ILO
NHO	Confederation of Norwegian Enterprise
SHRD	Strategic Human Resource Development
R&D	Research and Development
UM	Maastricht University

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1. Introduction

DECP is a public-private partnership established by Dutch employers' organisations and the Dutch Ministry of Foreign Affairs in 2005. The aim of DECP is to strengthen the position of employer organisations (= business member organisations, BMOs) in partner countries. Furthermore, DECP aims to close the existing knowledge and skills gaps between organisations and vocational education in partner countries to create a better economic situation. These partner countries are developing countries such as Vietnam, Malawi, and Peru, in which DECP cooperates with several BMOs. More specifically, DECP recognised that the vocational education system in partner countries is a main contributor to the knowledge and skills gap that member organisations (=local companies and members of BMOs) face. They noticed that vocational education systems do not meet the demands of the employers and therefore graduates and new employees lack substantial knowledge and skills when entering the labour market. Consequently, DECP has set up a project together with Maastricht University (UM) to focus on skills development and bridging the knowledge and skills gap in partner countries.

DECP is not the only organisation to acknowledge this problem. It has been well established that learning is one of the keys to competitiveness and growth of countries, regions, and firms (Pietrobelli and Rabellotti, 2011). Learning processes in developing countries differ from those in developed countries. More precisely, the main science and technology organisations analysed in developed country contexts, such as universities, research and development (R&D) laboratories, and research institutes, may not exist in some developing countries or may be inadequate. Linkages among them and with local organisations may be non-existent or very weak (Pietrobelli and Rabellotti, 2011). Bridging the gap between educational institutes and organisations is still in its infancy in developing countries. They experience challenges unique from developed countries, where this gap is less visible and learning and education have received more attention.

Many developing countries have expressed interest to implement organisational learning and employee workplace learning (Grönlund and Islam, 2010). However, they face obstacles in terms of infrastructure, resources, information access (Raab, Ellis, and Abdon, 2002), personal characteristics of employees and population, support from institutions (Brinkerhoff, 2006), technology and connectivity, instructors' design, technology confidence

(Hussein, Aditiawarman, and Mohamed, 2007), and culture and policy (Shraim and Khlaif, 2010).

Despite these challenges, opportunities still exist to improve the effectiveness and success of employee workplace learning in developing countries (Alavi and Leidner, 2001; Gupta and Bostrom, 2005; Olfman et al., 2006; Santhanam et al., 2008). For example, the international high-tech company Bosch Security Systems introduced workplace learning and training within their companies situated in Africa (see textbox). They train their employees so that their skills and capabilities match the requirements of the company and can therefore add value. In general, it can be observed that more technical organisations positively contribute to the vocational education level of technicians in developing countries, such as CSi Industries.

Skills Development Accelerated by High-Tech Companies

Employers do invest in skills development. Not only in industrialized countries but in emerging countries as well. This investment never is a goal as such but it supports the acceptation, implementation, and application of high-tech equipment and processes. Bosch Security Systems, part of the Bosch group, is one of these high-tech companies who invests in training facilities in Africa. Modern equipped training centres are located in Morocco, Nigeria, Kenya, Egypt, and South Africa. Bosch Security Systems employs local people who are trained to be product specialists and trainers themselves. In their turn, they train system users as operators and maintenance engineers to make sure that Bosch equipment performs at a maximal level. Once high-tech companies have training facilities in full operation, they often develop cooperation with local and regional schools for vocational education and training. This cooperation avoids high-tech issues to live an isolated life and it guarantees the introduction of advanced technologies in the field of public education and lifelong learning. This way, high-tech companies contribute to skills development in emerging countries. Mr. Paul Vermeij is Vice President (VP) Human Resources Region Africa for Bosch and located in South Africa:
"It is true that we need to invest in vocational training and education in Africa. The local school systems generally don't meet our needs. This is fully understandable because, being a high-tech company, we introduce new technologies. However, once our training facilities are operational and our trainers are experienced, we always look for possibilities to cooperate with local schools for vocational education and training. After all, training is not our core activity. Secondly, by working together we share responsibilities in the field of preparing youngsters for their professional future. In the end, we benefit as well. At this very moment, we have cooperation agreements in Morocco and we are looking for the same structures in Nigeria and South Africa".
(Van Erp, 2017*)*

Organisations are continuously exposed to environmental pressures to adapt to new conditions in a quick and efficient manner. This implies that employees need to obtain new competences to meet the demands inherent to these changing conditions. In these circumstances, the capacity of the organisation to stimulate employee learning is particularly important for its survival (Carmeli, Tishler, & Edmondson, 2012; Kyndt, Dochy, & Nijs, 2009). Furthermore, an environment that supports learning is one of the key factors determining employees' readiness to participate in organisational change (Choi & Ruona, 2011; Van Dam, Oreg, & Schyns, 2008). Given the strategic importance of workplace learning, organisations should prioritise the professional development of their workforce through shaping and promoting a learning- supportive climate and HRD initiatives (Shipton, Dawson, West, & Patterson, 2002).

Jos van Erp (special advisor at DECP and responsible for the project on skills development in partner countries) consulted DECP's country managers and representatives of BMOs in the partner countries to map the current situation regarding their educational landscape. He created a mind map to visualise the focus and final goals of the skills development project (figure 1).
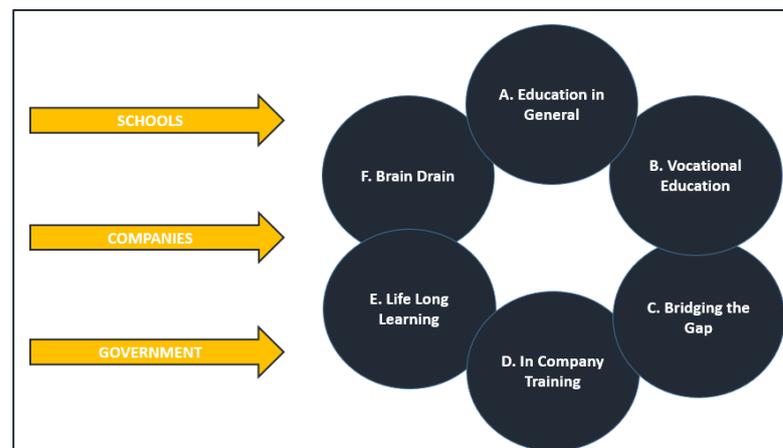
Figure 1: Mind map concerning the educational landscape in partner countries (Van Erp, 2017)

The long-term goal of DECP is to establish well-functioning cooperation between government, organisations (in figure 1 referred to as companies), and schools in partner countries (in figure 1 referred to as target countries) to tackle the challenges of the knowledge and skills gap. As illustrated in figure 1, the main influencers of the knowledge

and skills gap in partner countries are: general education, vocational education, in-company-training, lifelong learning, and brain drain (circles A-F).

Being aware of the complexity of the situation, DECP decided to start a cooperation with Maastricht University (UM) to get academic support in the first phase of their project on skills development. A team of five consultants from the Management of Learning programme was created to assist DECP during the period of April to June 2017. The UM project team consisted of C. Wijckmans, J.A. van den Elsen, J. Zeilinger, R. de Graaf, and W. Nuis.

Insights into Skills Development in DECP Partner Countries[1]

The respondents believe that the mismatch in knowledge and skills is caused by the poor quality of (vocational) education in their country.
- *Based on questionnaire-*

Human Resources is valued within organisations, but they could do more to improve learning within the organisation.
- *Based on questionnaire-*

''People either go to university or do not go to school at all, which causes a large gap in vocational educated employees.''
- Country manager Vietnam-

''Governments often do not have the means to change labour conditions in partner countries.''
- Representative of NHO-

A knowledge and skills gap between vocational education and organisations is existent on the continents Asia, South-America, and Africa.
- *Interviews with 3 country managers-*

Employees usually learn by doing or learn from other employees.
- *Based on questionnaire-*

"To make changes in skills development a total commitment of BMOs and member organisations is essential… The low productivity of member organisations is a result of the knowledge and skills gap… A lot of highly educated people are available on the job market but too less people with vocational education."
- Jorge Illingworth, ITCILO

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[1] We would like to highlight that informed consent from the interviewees is needed before publishing the report.

2. Framework of the Project
A first step towards bridging the knowledge and skills gap in developing countries

We, the UM project team, created a framework to show how we will support DECP in their first project phase on skills development (figure 2). Therefore, we first will explain how our defined project scope fits the mind map and long-term goal of DECP (figure 2, green check marks). Second, we will explain the framework of the project in detail (figure 3).
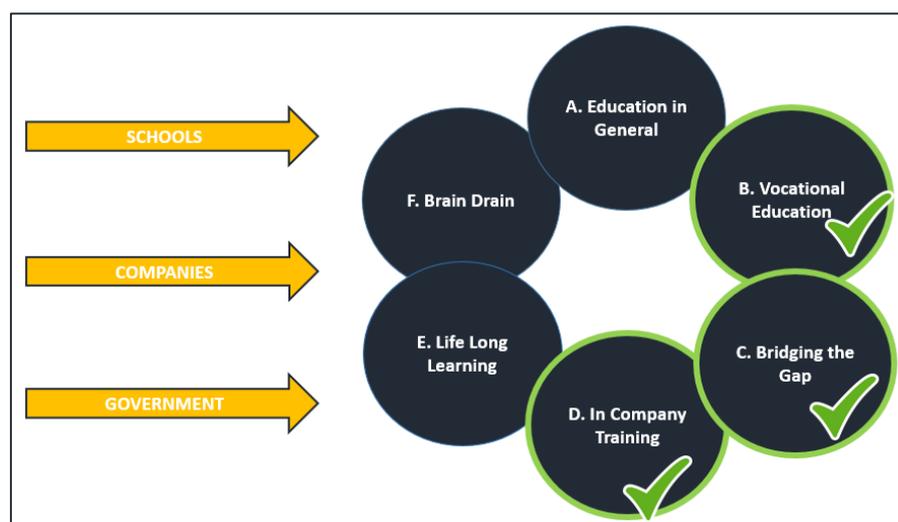
Figure 2: Focus of project in mind map concerning the educational landscape in partner countries (adapted from van Erp, 2017)

Reasons for the project scope

Addressing general education, brain drain, and lifelong learning in partner countries asks for strong cooperation between all stakeholders (e.g. employer organisations, government, and educational institutions), which is only possible in the long-term. Establishing relations, discussing complex issues, and making agreements needs time. However, we wanted to supply DECP with a solution that can make a difference in the short-term. Thus, we decided to concentrate on factors B to D (i.e. vocational education, bridging the gap, in-company-training) and to provide DECP with a solution that supports their business member organisations (BMOs) and member organisations (factors highlighted green check marks). After conducting literature research, we decided to approach the knowledge and skills gap

from the side of organisations through a self-assessment tool. Interviews with employer organisations in the Netherlands and BMOs in partner countries confirmed our decision. Focusing on companies and HR practices as a first step is advantageous, because companies can operate independently from other parties (e.g. schools and governments) and can therefore act more quickly to decrease the knowledge and skills gap of their employees. However, we are aware that not only organisations are responsible for bridging the knowledge and skills gap; other parties should contribute to a solution as well. Therefore, we introduce vocational education as one trigger of the knowledge and skills gap in partner countries and give recommendations on how to involve the education system and governments of partner countries in the skills development process.

Framework of the project

In figure 3 we illustrate the framework we developed to show how our project fits to DECP's long-term project on skills development. On the bottom of the figure the cause of the knowledge and skills gap is shown. Vocational education in partner countries does not teach students the knowledge and skills that are demanded by employers. Hence, individuals entering the labour market do not possess knowledge and skills that organisations look for, which leads to a knowledge and skills gap.
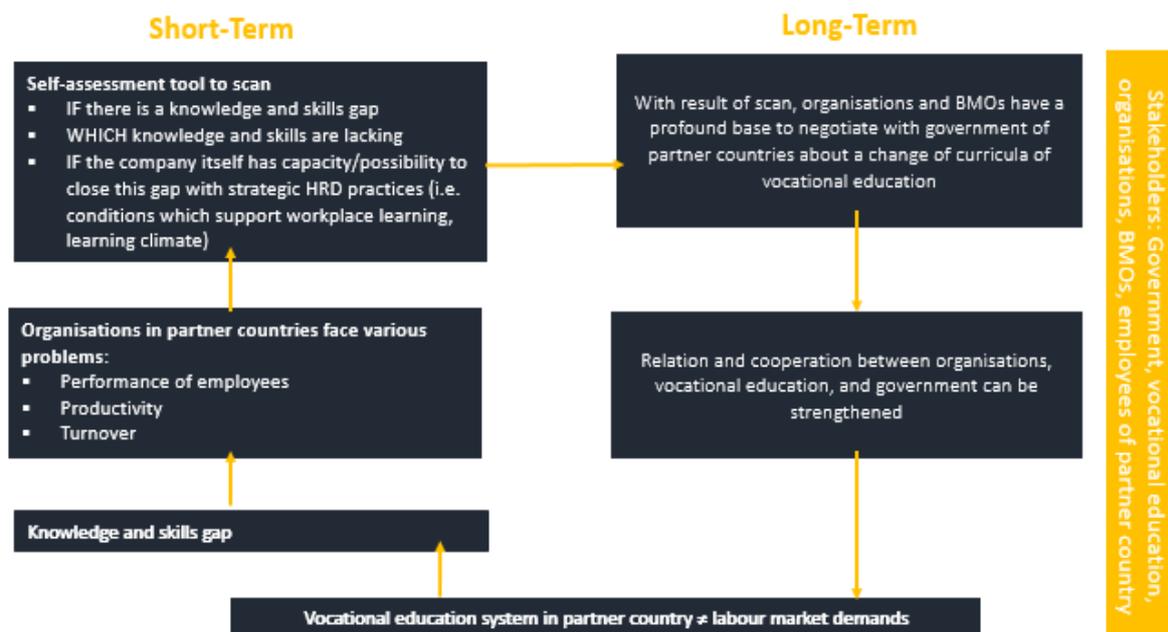

Figure 3: Framework of the project

A lack of knowledge and skills is not only a problem for individuals, but also for organisations and entire industries. Furthermore, it is not always a lack of knowledge that is the problem. Several studies and interviews[2] with NHO and ILO representatives (e.g. Baqadir, Patrick, & Burns, 2011; Durden & Yang, 2006; representative of NHO, 2017, representative of ILO, 2017) have shown that individuals in developing countries prefer to pursue an academic over a vocational career path. Academic education is associated with higher status and higher salary and therefore more valued than vocational education in developing countries. It is problematic for organisations, because on the one hand under-qualified employees are not able to perform on the required level, and on the other hand overqualified employees tend to be less loyal to employers as they constantly search for new positions that better fit their qualifications and salary expectations. This leads to high turnover rates, because underperforming employees are more likely get fired and overqualified employees are more likely to resign themselves. Thus, organisations underperform and their productivity decreases (ETF, CEDEFOP, & ILO, 2017).

As a starting point of DECP's project on skills development, a logical first step for us was to develop a self-assessment tool for organisations which can be used immediately, and therefore make a difference in the short term. With this self-assessment tool, DECP can provide a useful service to its BMOs. The BMOs in turn will consult member organisations throughout the interpretation and implementation process. The developed self-assessment tool scans (1) if there is a knowledge and skills gap, (2) which knowledge and skills are lacking, and (3) if the member organisations have the possibility to close this gap through strategic human resource development (SHRD) practices.

The results of the self-assessment tool are the starting point for effective actions in the short- and long-term. In the short-term, the results support member organisations in closing the knowledge and skills gap by providing information about the current conditions for workplace learning in their organisation. This will create awareness in member organisation on how to adapt or change their HRD practices (e.g. by providing a common space for employees to stimulate information/knowledge exchange, teamwork, etc.). The

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questions in the self-assessment tool can illustrate which HRD practices support workplace learning.

In the long-term, member organisations, BMOs in partner countries, and DECP have a solid base to negotiate with the respective governments about changes in vocational education systems. In the end, this will lead to strong cooperation between all stakeholders involved (i.e. governments, vocational education, BMOs, member organisations, employees of member organisations). Additionally, it can lead to a change in vocational education, in order to close the knowledge and skills gap.

3. Dimensions of the Self-Assessment Tool

3.1 The Relation between Vocational Education and Knowledge and Skills Gap

Vocational education is part of the overall education process and therefore a universal human right according to Article 26 of the Universal Declaration of Human Rights (UNESCO, 2001). It is defined by UNESCO (2001, p. 7) 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'. It can be used to prepare people for effective participation in the labour market and to alleviate poverty (UNESCO, 2001). The link between investments in (vocational) education and increased economic growth and development has been established in many developing and semi-developed countries, for example Nigeria (Ekpo & Okon, 2014), Pakistan (Afzal et al., 2010) and Botswana (Mupimpila & Narayana, 2009). Vocational education can therefore be seen as an important contributor to a country's economic development.

Despite this important role, there have been shifts in the amount of attention that has been paid to vocational education in the development discourse. For example, Benavot (1983) predicted that secondary level vocational education will gradually become less important in modern states as the importance of postsecondary education will increase.

However, in recent years there has been a renewed focus on vocational education, and international development agencies once again acknowledge that vocational skills development must be revived in developing countries to prepare young people for the labour market and to encourage economic growth (World Bank, 2011). One example of such an initiative is the skills development project undertaken by the World Bank in Rwanda, which focusses on increasing the quality of and access to vocational education (World Bank, 2016). Rwanda's economy has been experiencing a steady growth and the country has ambitious plans to become a middle-income export-oriented economy by 2020. The skills development project aims to provide the required knowledge and skills to support this transformation and to increase the available pool of skilled workers for the private and public sectors. The quality of vocational education must be increased to bridge the gap between the current supply of labour market skills and the skills that are required to realize the desired economic growth.

Rwanda is not the only country facing this situation. Countries like South Africa (Pillay, 2010), Malaysia (Mustapha & Greenan, 2002), China (Velde, 2009), and Saudi Arabia (Baqadir, Patrick, & Burns, 2011) all experience that the available skills of the workforce do not match their aspired increases in economic growth and the demands of employers. We define this skills gap according to Cedefop (2010) as: 'a situation in which the level of skills of the employee or a group of employees is lower than that required to perform the job adequately, or the type of skill does not match the job requirements'.

Saudi Arabia

Saudi Arabia aspires to increase economic growth by expanding their economic activities beyond oil production (Madhi & Barrientos, 2003). If Saudi Arabia wants to move away from its dependence on oil production and towards a global knowledge-based economy, it should tackle three major issues: the perceived gap between labour supply and demand, the large number of expatriates being employed at the cost of Saudi workers, and the insufficient quality of vocational education (Baqadir, Patrick, & Burns, 2011). According to Alsarhani (2005), the lack of development in education and training before the discovery of oil is the main reason for the present skills gap. Furthermore, despite recent investments in vocational education there is evidence that this gap is still very much present in the Saudi Arabian labour market (Baqadir, Patrick, & Burns, 2011). Baqadir, Patrick, and Burns (2011) suggest that changing the general attitudes towards vocational education, increasing its quality, and making vocational education more responsive to the needs of employers are essential steps to establish the desired economic growth and to provide organisations with skilled workers.

China

In China, there is a transition from a traditional command-control economy to a market economy with a growing private sector. This creates a strong pressure to provide skilled individuals that meet modern labour market demands (Venter, 2004). Many organisations in China are experiencing skills shortages and employers do not perceive that the education system is addressing their skills needs. Although China's education system seems to be quite successful in meeting the lower-level skills requirements of the more traditional industry, it is lacking in providing students with the competencies that organisations require in the modern economy (Venter, 2003). However, simply improving the education system in China is easier said than done, because there are at least three kinds of employers (state-owned enterprises, foreign-owned enterprises, and private Chinese enterprises) that prioritise different skills and therefore place different demands on the education system (Venter, 2004). Although China is acting to reform and improve their education system, there are also several organisations (mainly foreign or state-owned) that take skills development more into their own hands by providing their employees with training programmes and other forms of workplace learning. These organisations tend to feel the pressure of international competition, as opposed to the more traditional companies that focus more on employees' qualifications and certification provided by the national education system. These latter organisations do not invest as much in training and development (Venter, 2003).

The first dimension of our self-assessment tool focuses on the knowledge and skills gap. Considering the situation in the countries presented above, it seems that there are two solutions when it comes to closing the knowledge and skills gap: one is to invest in the quality of vocational education in a country, and the other is to bridge the skills gap by investing in training and development within companies. However, only aiming at improving vocational education in a country could be problematic because there are many different types of organisations present within a country's labour market, and each type of organisation could have specific and distinct skill demands (as illustrated in the example of China). Accommodating for all these different demands might not be very practical within the curricula of vocational education institutions. On the other hand, putting all the responsibility for skills development on the shoulders of organisations is also not ideal, as some organisations simply do not have the means to support extensive training and development for their employees (Venter, 2003). We propose that a successful solution to the knowledge and skills gap must come from both sides: improvements in vocational education on the one hand, and further training and development within organisations on the other hand.

3.2. The Importance of Strategic Human Resource Development

The present business environment is characterised by strong competition, rising customer demands, changing market conditions and uncertainty (Chaudhary, Rangnekar & Barua, 2013). Due to these continuous changes, organisations are searching for ways to improve their organisational performance (Chaudhary et al., 2013). Within this exploration, the importance of the four P's (Product, Price, Promotion, Place) has shifted towards a fifth P, which is Personnel (Chaudhary et al., 2013). The employees of an organisation define the organisation's competitive advantage (Colan, 2009). In fact, human capital can be seen as the foundation of value creation (Becker, Huslid, & Ulrich, 2001). Consequently, organisations need to invest in developing their main assets, that is, human resources in order to gain competitive advantage (Chaudhary et al., 2013). To stay ahead of the competition and to keep up with changing business environments, organisations need to continuously update the knowledge, skills and abilities of their employees (Chaudhary et al., 2013). Accordingly, organisations need to establish HRD strategies to stimulate the professional development of their employees (Losey, 1999).

In previous research, the concept of Human Resource Development (HRD) has been defined as "the process of helping people acquire competencies which may include knowledge, skills, abilities and, values" (Rao, 1987, as cited in Chaudhary, 2013, p. 41). From this definition, Rao (1987) argued that HRD can be seen as an organisational process in which the employees are guided in a planned and continuous way to support: (a) the acquisition to required knowledge, skills, and abilities to meet the present and future needs; (b) the development of their individual capabilities and the realisation and exploitation of their hidden potential related to personal and organisational development; (c) the development of an organisational culture in which the relationships between supervisor and subordinate, teamwork and

collaboration are emphasized and contribute to employee motivation and well-being (Chaudhary et al., 2013).

When looking at SHRD and organisational learning in developing countries, many developing countries start to invest in organisational learning and employee development (Grönlund & Islam, 2010). However, those countries often face obstacles regarding infrastructure and resources (Raab et al., 2002) as well as obstacles in culture and policies (Shraim & Khlaif, 2010). Regardless of these obstacles, opportunities to support organisational learning and workplace learning in developing countries do exist (e.g. Santhanam et al., 2008). Consequently, a deeper focus is put on two aspects of SHRD to support workplace learning in member organisations: Workplace learning conditions that support workplace learning and establishing a learning climate. These two dimensions are described in more detail in the following sections.

Non-formal and Informal Learning Conditions

The next dimension focuses on non-formal and informal conditions that support workplace learning. Due to competing international markets, organisations must actively support the process of workplace learning in their organisation (Tynjälä, 2008) through policies, culture and specific procedures focussed on both non-formal and informal learning (Marsick & Watkins, 1990). Non-formal learning comprises of all types of education outside of the regular school system (Schugurensky, 2000). This method of learning can be seen as rather organised and it often includes the formulation of specific learning objectives (Kyndt et al., 2009). In this way of learning, both learning content and practical experience are emphasised (Fordham, 1993). Non-formal learning can be described as a process in which the individual employee learns out of self-discipline or because of a more organised learning activity (Kyndt et al., 2009). An example of non-formal learning are training sessions organised by the organisation.

In contrast to non-formal learning, informal learning is not seen as an organised event (Kyndt et al., 2009). Informal learning is merely an implicit and unplanned process without explicitly formulated learning objectives and with therefore more unpredictable learning outcomes (Hager, 1998). This type of learning takes place during daily working situations and often happens unconsciously and spontaneously (Kyndt et al., 2009). Through the process of informal learning, an individual employee develops himself by means of interacting with others (Marsick & Watkins, 1990). Consequently, informal learning could for example take

place when searching for information on the internet or asking a colleague for feedback about how to deal with a particular situation.

To support workplace learning, organisations need to implement certain learning conditions, more specifically the "characteristics of the organisation and the individual that enable or hinder learning from team members" (Tjepkema, 2002, p.111). The emphasis is placed on creating conditions, occasions and possibilities to support workplace learning (Kyndt et al., 2009). In past research, many authors have examined factors that could influence workplace learning (e.g. Ashton, 2004; Collin, 2002). Within these stimulating factors a distinction can be made between learning factors and context factors (Kyndt et al., 2009). Learning factors have a direct relationship with the learning process, whereas context factors refer to conditions that are present in the learner's context (Kyndt et al., 2009). The most important learning factors are feedback, evaluation, reflection, information and coaching (Ellström, 2001; Eraut, 1994; Skule, 2004; Sterck, 2004; Collin, 2002). Examples of these conditions translated into HRD infrastructures are: a mentoring system, individual coaching, personal development plans, internships, career consultation, databases, newsletters and work email addresses (Kyndt et al., 2009). In addition, the most important contextual factors to support workplace learning are communication and interaction, participation and cooperation (Collin, 2002; Education Development Center, 1998; Ellström, 2001; Eraut, 1994; Sterck, 2004). *Figure 4: Non-formal and informal learning conditions*
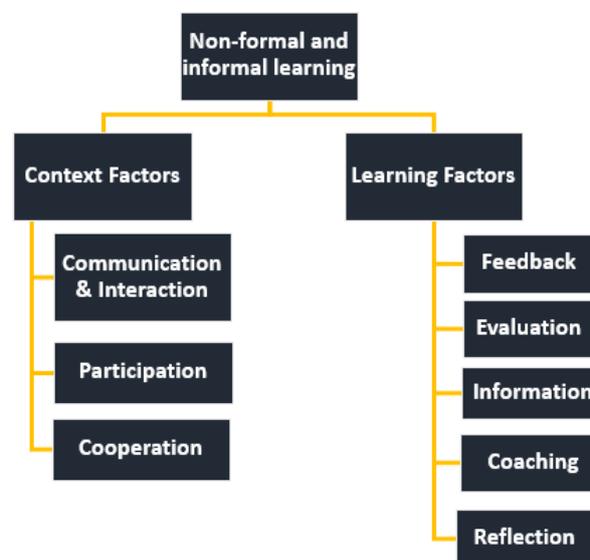
Examples of these conditions translated into HRD infrastructures are: job rotation opportunities, internal job openings, self-directing teams and company visits to external organisations (Kyndt et al., 2009). The learning factors as well as the contextual factors are included in the self-assessment tool.

To sum up, workplace learning has become more important for organisations to create sustained competitive advantage in the rapidly changing economy. To support this workplace

learning, organisations need to put certain workplace learning conditions in place. These conditions must be part of the organisational culture, as specific procedures or as policies aimed at supporting workplace learning. Previous research into this field of workplace learning has identified certain stimulating conditions that organisations can use to create an environment that supports workplace learning. An overview of these conditions is shown in figure 4.

Learning Climate

> *'Facilities are not enough to let employees learn'*
> *(Marsick & Watkins, 2003)*

Merely offering the necessary facilities is not enough to foster workplace learning behaviour. The other factors that influence learning processes can be summarized under the term 'learning climate' (Marsick & Watkins, 2003). When organisations want to promote workplace learning within their organisation, it is important that colleagues stimulate each other to learn. For this a learning climate is needed. Insights in the organisations' learning climate help the managers of organisations to make informed decisions about what interventions are necessary to support workplace learning (Marsick & Watkins, 2003). The learning climate is built by leaders and key people within the organisation, affect the learning of employees, and create an environment in which the desired outcomes are shaped, supported, measured, and rewarded.

There are different names given to an organisation in which learning is promoted, such as 'learning climate' (Bartram, et al., 1993), 'learning culture' (Egan, Yang, & Bartlett, 2004) and 'learning opportunities' (Billett, 2004). To solve this conceptual problem, a distinction is made with on the one hand climate, which is the notable layer and a more tangible concept. On the other hand, culture is the unconscious psychology of the workplace (Schein, 1990). More specifically, culture includes the beliefs and values of the employees within the organisation. Climate is easier to detect and is defined as the shared views and meaning given to the organisational policy, practice and procedures and the behaviour the employees observe by getting rewarded and which are supported and expected (Schneider, Ehrhart, &

Macey, 2013). In other words, the practices that employees perceive an organisation is undertaking with the aim to facilitate, reward and support employee learning behaviour. Conforming with Schein (1990), this report views learning climate and culture as separate concepts. This project focuses on learning climate because assessing the contribution of learning culture to workplace learning behaviour is more difficult (Nikolova, Van Ruysseveldt, De Witte, & Van Dam, 2014).

Having a learning climate positively affects learning and development and subsequently knowledge and skills within organisations. For example, learning climate is an important factor for employees' learning intentions, which are the positive views on learning and personal development and participation in the learning exercises (Armstrong-Stassen & Schlosser, 2008; Govaerts, Kyndt, Dochy, & Baert, 2011). Additionally, innovativeness, job satisfaction and the performance of employees are also positively affected by a learning climate (Nikolova, et al., 2014). To sum up, a learning climate can prevent organisations from experiencing negative employee outcomes, such as stress in the workplace and turnover. This means that learning climate plays an important role in the learning and development within organisations, and it has a broad variety of positive effects on the employees, such as a higher job satisfaction.
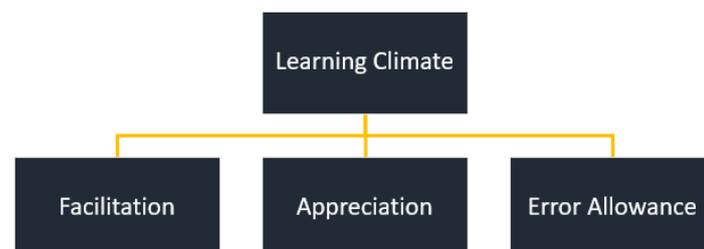
Figure 5: Dimensions of Learning Climate

The report is focuses on three dimensions of learning climate according to Nikolova et al. (2014). First, 'facilitation learning climate' refers to the perceived resources and opportunities an organisation is giving to support learning. Second, 'appreciation learning climate' includes the material (financial) and non-material (non-financial) rewards (e.g. appreciation of learning behaviour). Third, 'error-allowance learning climate' means that the climate should offer a safe environment in which errors are managed, because learning by doing is also based on learning from mistakes.

After explaining all dimensions of the self-assessment tool, we will describe how we developed the self-assessment tool in the next section.

4. The Development of the Self-Assessment Tool

The self-assessment tool incorporates questions on the dimensions of knowledge and skills gap and SHRD practices, namely learning climate and conditions which support workplace learning (figure 1). In this section, we will explain for each dimension how we selected the questions, we give some example questions, and at the end we present a summary of the manual that comes with the self-assessment tool. We would like to emphasise that we decided to create an extensive self-assessment tool with a large variety of questions. Subsequently, DECP and BMOs have to choose the questions relevant for the specific member organisations or cultural context of partner countries.

Dimensions of the Self-Assessment Tool

Knowledge & Skills Gap	SHRD Practices	General Information
- IF there is a knowledge and skills gap - WHICH knowledge and skills are lacking *(ETF, CEDEFOP, & ILO, 2017)*	- Top-Management commitment to HRD - Rewards, performance, appraisels *(Chaudhary, 2013)* **Learning Climate** *(Nikolova et al., 2014; Tracey & Tews, 2005; Watkins & Marsick, 1997)* **Workplace Learning Conditions** *(ETF, CEDEFOP, & ILO, 2017; Kyndt et al., 2009)*	- General information regarding organisation (e.g. size, sector) *(ETF, CEDEFOP, & ILO, 2017; Velde, 2009)*

Figure 6: Dimensions of the Self-Assessment Tool

Knowledge and Skills Gap

The questions for this dimension came from the ETF, CEDEFOP, and ILO (2017) guide "Developing and Running an Establishment Skills Survey". The aim of this part is to clearly establish if a skills gap exists and which knowledge and skills are lacking. Next to the general questions on workforce structure and characteristics, we only selected the questions that clearly pertained to the skills gap itself. Therefore, we excluded the parts on workforce development, demand for workforce, and business strategy and structure.

Some example questions are:

We would like to ask questions about any hiring that your organisation has attempted over the past 12 months.

		Managers	Human Resource managers and professionals	Technicians and associate professionals	Clerical support workers	Services and sales workers	Craft and related trades workers	Plant and machine operators and assemblers	Elementary occupations	Other………………	Other………………
In the past 12 months, have you tried to hire any {OCCUPATION}?	Yes										
	No										
Did you encounter any problems when trying to hire {OCCUPATION}?	Yes										
	No										
What problems did you encounter?											
1. There were no or few applicants											
2. Applicants lacked required qualification / education level											
3. Applicants lacked required technical skills											
4. Applicants lacked required core / soft skills											
5. Applicants expected wages higher than we can offer											
6. Applicants did not like working conditions we can currently offer											

If some applicants lacked necessary skills in your organisation, could you please indicate which skills were lacking? *(Please, take for these questions three occupations in mind.)*

	Occ 1	Occ 2	Occ 3
Technical skills required for this occupation			
Technical skills relating to specific equipment or processes used in the establishment			
Technical, technological, or scientific knowledge			
Understanding written documents and writing clearly			
Ability to calculate, read and use figures and tables			
Learn to learn skills			
Negotiation skills			
Acquiring, interpreting and communicating information			
Leaderships skills			
Team working			
ICT skills			
Decision-making skills			
Problem-solving skills			
Efficient use of materials, technology, equipment and tools			
Ability to work accurately and in compliance with standards			
Organisational and planning skills			
Any other skills			

SHRD practices

The second dimension of the self-assessment tool focuses on SHRD practices, which are divided into general SHRD questions, conditions that support workplace learning, and learning climate. For these dimensions, only questions from validated questionnaires were used.

General SHRD questions

The general questions focus on strategic human resource development. Based on research by Chaudhary et al. (2013), two elements are included:

1. Top management commitment to SHRD
2. Rewards, performance, and potential appraisals

Conditions that support workplace learning

One part of the dimension SHRD practices focuses on conditions that support workplace learning. The foundation of this dimension is based on the validated survey by Kyndt et al. (2009). Furthermore, some questions are added based on research by ETF, CEDEFOP, and ILO

Example questions of this dimension are the following:

In this organisation, …

1. Employees have the chance to propose ideas on different occasions or forums.
2. Employees have the chance to participate in project teams existing out of employees from different departments to work around a specific theme.
3. Employees have the chance to ask for feedback about their own functioning from colleagues, supervisors, inferiors as well as clients.
4. Employees can access internet and online learning packages.

Learning climate

For the learning climate part, we focussed on the three dimensions discussed above (i.e. facilitation, appreciation, error-allowance). We based ourselves on the validated questionnaires by Nikolova et al. (2014), Tracey and Tews (2005), and Watkins and Marsick (1997), and thoroughly checked for overlap between these questionnaires and the other dimensions of our self-assessment tool. Example questions are shown in the figure below.

General information

Next to these dimensions, we also included questions on general characteristics of organisations and employees in the self-assessment tool. We decided to do so because employees of large organisations are more likely to participate in training than employees of small organisations. In addition, older employees are less likely to participate in learning activities than younger employees (Kyndt, & Baert, 2013). It is therefore important to consider such characteristics when drawing conclusions based on the results of the tool.

Summary of the Manual

In this section, we will give a brief overview of the manual that comes with our self-assessment tool. The full manual can be found in the appendix of this report. The manual discusses several issues related to the self-assessment tool. In this summary, we will highlight the most important ones: aim, end-users, evaluating and reporting the results, and validation.

Aim of the Self-Assessment tool

The self-assessment tool aims to scan (1) whether there is a knowledge and skills gap existing in the specific member organisation, (2) what kind of knowledge and skills are lacking, and (3) if the member organisations themselves can bridge the gap through SHRD practices. The results of the self-assessment tool will provide member organisations, BMOs, and DECP with a solid base for negotiations on how to improve the current knowledge and skills situation the partner countries.

End-Users of the Self-Assessment tool

High or middle management of member organisations are responsible for the self-assessment tool. We suggest that the people with the best overview of knowledge, skills and HRD practices within the organisation (e.g. HR manager, leader of local unit) answer the questions. Thereby, it is ensured to receive unbiased results.

Evaluation and Reporting

We recommend that reports about the outcomes of the self-assessment tool and the subsequent organisational changes in member organisations are written by member organisations and BMOs. Reports ensure the storage of the gained knowledge and the effective use of the results for negotiations in the future.

Validation

The self-assessment tool that we provide is a pilot version that still needs to be validated to meet the specific cultural demands of the partner countries in which it will be used.

5. Recommendations

Recommendations for BMOs

The results of the self-assessment tool will indicate an organisation's strengths and weaknesses regarding their employees' knowledge and skills, workplace learning conditions, and learning climate and are a starting point for discussing the improvement process. We recommend that BMOs support member organisations in the interpretation process of the results and help them in formulating concrete adaptations of their SHRD practices. Furthermore, the questions of our self-assessment tool can already help BMOs and member organisations to become aware of changes they can make.

Based on our self-assessment tool, BMOs could come up with a variety of solutions for member organisations to improve their HRD practices (i.e. conditions that support workplace learning and learning climate), like formal training, job rotation, feedback systems, coaching, etc. However, when formulating solutions for skills development in member organisations it is important to take contextual factors into account. The nature of the advice to member organisations should consider the sector in which the organisations operate, the level of economic development within a country, and the size of the organisation. Furthermore, it is possible that some member organisations are not very experienced with learning and development. Therefore, it is important to take small, incremental steps when guiding these member organisations to improved HRD practices. We recommend that the BMOs help the member organisations to first acquire the necessary infrastructure to support learning (e.g. appointing an HR manager, internet access for all employees), before moving on to implementing specific HRD methods like job rotation or formal on-the-job training.

We advise to initially use the self-assessment tool in member organisations that are interested in actively improving the knowledge and skills gap. By supporting these interested sectors in developing their staff, a spill-over effect can be created by showing other organisations that skills development of employees is important to remain competitive.

Additionally, we would like to emphasise the importance of internships and company open days. Internships give students the possibility to gain practical experience and company open days can show students that pursuing a vocational education is worthwhile for their future career. These are just two examples of solutions that can be implemented to bridge the gap between education and the labour market.

Recommendations for DECP

In the short-term we advise DECP to support BMOs in the implementation of the self-assessment tool in member organisations. A concrete step-by-step guide on this can be found in the appendix.

In the long-term, the results of the self-assessment tool can be used to establish a strong cooperation between organisations and educational institutions. For example, educational institutions can use the information that our self-assessment tool provides on the knowledge and skills gap to develop their curricula according to organisational demands. Furthermore, we advise DECP to summarise the findings of the self-assessment tool in easy-to-read articles that are accessible for all stakeholders in a particular partner country (i.e. BMOs, member organisations, employees, governments, and vocational education). It is important that these articles create awareness regarding the current situation of knowledge and skills in partner countries, as even governments are not always aware that a knowledge and skills gap exists (DECP country manager, 2017).

To conclude, based on our self-assessment tool, BMOs can support member organisations in formulating different solutions for skills development. However, to successfully bridge the knowledge and skills gap it is essential that all stakeholders are on the same page and cooperate. Creating awareness of the knowledge and skills gap among all relevant stakeholders in a partner country is therefore one of the most important steps to undertake. The self-assessment tool we created assesses the current knowledge and skills situation in member organisations, and through its distribution DECP can play an important role in spreading this awareness and creating commitment. We are therefore looking forward to see how our self-assessment tool will become an essential tool within the DECP toolbox.

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7. Appendices

7.1   List of Interview Partners and Respondents of the Questionnaire

	Name	Organisation	Country	Interview
1	Dirk Joosse	DECP	The Netherlands	Telephone interview
2	Peter Boorsma	DECP	The Netherlands	Personal interview
3	Jannes van der Velde	DECP	The Netherlands	Personal interview
4	Esther Droppers	CNV International	The Netherlands	Skype interview
5	Jan Ridder	CNV Internationaal	The Netherlands	Skype interview
6	Henk van Beers	CNV Vakmensen	The Netherlands	Skype interview
7	Astrid Kaag, (Dian van Unen)	Mondiaal FNV	The Netherlands	E-mail contact
8	Uzziel Twagilimana	CNV Afrika	Bénin	Questionnaire
9	Hien Blaise	Trade-union	Burkina Faso	Questionnaire
10	Wenceslas Bancé	Responsable du service économique	Burkina Faso	Questionnaire
11	Bernard Craan	Le Forum Economique du Secteur Privé	Haiti	Questionnaire
12	Béatrice Ilias	Association des Industries d'Haiti	Haiti	Questionnaire
13	Rodrigue Majoie Abo	Embassy of the Kingdom of the Netherlands	Ivory Coast	Questionnaire
14	Jorge Illingworth	ILO	Switzerland	Skype interview
15	Magnus Ruderaas, (Tori Nettelhorst Tveit)	Confederation of Norwegian Enterprise	Norway	Skype interview

We would like to thank our interview partners and respondents on the questionnaire for their valuable time and expertise they shared with us.

7.2 Summary of Interviews & Questionnaire

Summary of Interviews

To be delivered on special request

7.3 List of Interview Questions for Personal and Skype Interviews

* All the questions are related to the specific country or region of the interviewee

** The questions are meant to be guiding the interview, but it is not mandatory to ask every question. The interview should be guided by the expertise of the interviewee.

*** Ask the interview partners if they have documents available on national level, and if yes, if they are able to send it to the project team.

**** Ask interview partners for their permission to use their answers and insights in the project report.

General questions

1. Could you please shortly introduce yourself and the work that you do?
2. What countries or region are you operating in?
3. Which economic sectors are most important in your country /region?
4. What is the ratio of multinationals to local or regional companies operating within these countries?

Questions on knowledge and skills gap

5. What is the situation regarding the employment of people under 30 within your country?

   Possible follow-up: What possible explanations are there for this situation? Perhaps the interviewee will already refer to a knowledge and skills gap; in this case, we go to question 7 directly.

6. Do you perceive a gap between the skills and knowledge provided by the country's vocational education system and the skills and knowledge that employers in this country demand from employees?

7. *If the previous question was answered affirmatively:* How do you think this gap is caused? Do you think for example that this gap is caused by a lack of job-specific knowledge and skills, a lack of general professional skills *(e.g. management skills, communication skills),* and/or a lack of work ethic?

8. What is already being done to overcome a knowledge and skills gap?

9. Do companies employ workers of foreign countries instead of employees of their own country? *Is this due to the knowledge and skills gap?*

10. How do you see the role of employers, the government and the vocational schools in closing the skills gap? What are possible solutions to overcome the skills gap?

Questions on vocational education

11. How do you perceive the quality of vocational education in your country?
12. Is vocational education in your country valued by individuals, companies and the government?
13. Does the government invest in vocational education? Are there plans for future investments in vocational education?
14. Are there existing cooperations between schools and companies? *(apprenticeships, internships, open days, presentations in schools,...)*
15. Are vocational programmes updating their curricula over time? What is considered when *(what are the main motivations for)* updating the curricula? Who do you think is responsible for this?

Questions on learning climate

16. How do you perceive the hierarchy within organisations?
17. Is it used that employees speak up in organizations?
18. Is feedback from employees valued within organisations?

Questions on conditions which support workplace learning

19. Is teamwork common within organisations?
20. Are their facilities to learn within the company?
21. Do organisations invest in employee learning and development?
22. Do companies reward employees and stimulate learning within the companies?

Specific questions focussing on trade union respondents

23. Could you tell us something about how your organization is involved in supporting workplace learning in organizations?
24. If you identify a knowledge and skills gap, what is your role in closing this gap?
25. Could you describe your relationship/partnership with *e.g. FNV* departments in developing countries?

26. What is the role of FNV Mondiaal/CNV Internationaal?

27. Do organizations in developing countries already have HRD practices in place to support workplace learning, according to you?

28. What is the responsibility of your organization in relation with foreign governments?

Additional question for ILO

29. What kind of services do you offer to address knowledge and skills gaps in developing countries?

30. Which organisations are similar to DECP?

7.4 Survey DECP Project on Skills Development in Partner Countries

Dear Sir or Madam,

We kindly ask you to answer the following questions and would like to thank you for your participation.
Please clearly highlight your answers.

What is your name?	
What is your organisation?	
What are your responsibilities within your organisation?	
In which country are you operating?	
What are the three most important sectors for the economy of your country? (e.g. agriculture, tourism)	
When answering the following questions please think about the country you are operating in, its labour market, and about the most important sectors for the economy of your country.		
1. It is easy for companies to hire employees from within the country with adequate knowledge and skills.	Yes	No
2. A mismatch between employees' knowledge and skills and employers required knowledge and skills is common when hiring employees. If yes, please give reasons for this.	Yes	No
3. Do you perceive a problem of underperforming employees in your country? If yes, in which sectors?	Yes	No
4. Which percentage of organisations is facing this problem? For which percentage of the employees in your country is underperforming problematic?		
5. A lack of adequate knowledge and skills is why employees underperform. If yes, can you shortly describe the reasons for this lack of knowledge and skills?	Yes	No
6. If questions 5 was answered with YES can you indicate how companies deal with the issue of a lack of knowledge and skills? Do companies for example provide trainings for them? Or other		

support?			
7. The following stakeholders are aware of this knowledge and skills gap.	Top management/	Yes	No
	Middle Management	Yes	No
	Employees	Yes	No
	Vocational Education Institutions	Yes	No
	Government	Yes	No
8. If question 7 was answered with YES, please explain what is currently being done by these stakeholders to close the knowledge and skills gap.			
9. Vocational education, companies, and government of my country act to close the knowledge and skills gap.	Yes	No	
10. Vocational education, companies, and government of my country cooperate to close the knowledge and skills gap.	Yes	No	
11. Please shortly describe these actions/cooperations.			

12. In the former questions you described the current situation. Now, in your opinion, what could be the other possible solutions to overcome the knowledge and skills gap?	In my opinion further possible solutions would be…	
13.The vocational education system is preparing their students sufficiently for the country's labour market.	Yes	No
14. Could you shortly explain your answer 13?		
15. I think the curricula of vocational education in my country are aligned with the labour market needs.	Yes	No
16. Could you shortly explain your answer 15?		
17. The population in my country values vocational education.	Yes	No
18. Could you shortly explain your answer 17?		
19.Companies in my country usually have a person assigned who is responsible for human resource tasks.	Yes	No
20. Large and medium sized companies in my country usually have a human resources department which takes care of employees' skills development.	Yes	No
21. In my opinion it is important that companies have a human resources department, which takes care of the employees' skills development.	Agree	Totally disagree

22.Companies in my country usually offer the following learning and development facilities/activities.	Formal, standardised training (everyone has the same	Yes	No

	training)		
	Formal, individualised training (training customised to personal needs)	Yes	No
	More experienced employees teach new employees on the job	Yes	No
	Team work	Yes	No
	Open discussion and feedback are valued	Yes	No
	Employees get rewarded for learning	Yes	No
	Employees who learn have a higher probability to get promoted	Yes	No
	Apprenticeships	Yes	No
	Internships	Yes	No
	Other: …		

Thank you for your support!
Please do not hesitate to contact us in case of unclarities.

Kind regards,

Casper Wijckmans, Josine A. van den Elsen, Julia Zeilinger, Robin de Graaf, Wendy Nuis
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