Policies & Partnership with
the World of Work – National and
Cross-National Perspectives

POLICIES & PARTNERSHIP WITH THE WORLD OF WORK – NATIONAL AND CROSS-NATIONAL PERSPECTIVES

EMERGING ISSUES IN RESEARCH ON VOCATIONAL EDUCATION & TRAINING VOL. 6

Lázaro Moreno Herrera,
Marianne Teräs
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PREFACE

This book is the sixth volume in the research book series *Emerging Issues in Research on Vocational Education & Training*. The series is published by the research group VETYL (*Vocational Education & Training/Yrkeskunnande och Lärande*), at the Department of Education, Stockholm University, Sweden. VETYL was created in 2011 with twofold aims: contributing to the advance of knowledge in the intricate area of vocational education and training (VET) and strengthening the research basis of the teacher education program for VET that is offered at the Department of Education, Stockholm University. The Swedish term "yrkeskunnande och lärande" in the name of the research group translates as "vocational knowing" and indicates one of the major research concerns of the group.

This volume, as well as most of the earlier ones, is an outcome of the international conferences organised yearly since 2012 by our research group VETYL. The conference has had two core aims: becoming a forum for sharing state of the art research in the field of VET and serving as a forum for networking and cooperation. The *Stockholm International Conference of Research in VET* is one of the major academic events organised in Europe as part of the European Network for Vocational Education and Training (VETNET).

The texts in this volume are selected papers submitted to the VIII Stockholm International Conference of Research in VET initially planned for May 7th and 8th 2020. Unfortunately, the

conference was postponed for 2022 consequence of the Covid 19 pandemic affecting all us globally. We missed the academic and social networking, the scholarly discussion and all the fun of our academic work that this conference facilitates but this volume is an excellent prove of our resilience and the continuity of our work even in these uncertain times.

The title of this volume *Policies & Partnership with the World of Work – National and Cross-national Perspectives* serves as an umbrella for the presentation of research that focuses on a variety of policies issues and dimensions of the partnership with the world of work. The research articles deal with transitions in VET systems and are introduced in connection to the section they are included in.

The contributions in this volume continue adding evidences to the acknowledgment of the research complexities in the field of VET. It has become now a tradition in our book series to quote our colleagues Felix Rauner and Rupert Maclean (*The International Handbook of Technical and Vocational Education and Training Research*, 2008, p.13) when they stress that:

> The variety of research questions and development tasks at the levels of vocational education and training systems (macro level), the organization and design of vocational training programs and institutions (meso level) and the analysis and shaping of education and learning processes (micro level) leads to the integration of different scientific disciplines and research traditions. VET research therefore can be organized only in an interdisciplinary way.

This volume continues the tradition of our book series to depict the diversity of research in the field in a way that is not frequently available in the literature today. We hope that the book will fulfil the expectations of a diversity of readers including under–graduate students, in particular students in initial and in-service teacher training programs for VET, post-graduate students, and policy makers.

Finally, we would like to thank the reviewers for their useful suggestions that helped to improve the contributions presented in this book.

Our gratitude goes also to all the contributors to this volume.

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Section I:

VET policies:
national and regional
perspectives

Vocational education and training (VET) is not only a concern about which organization, content and pedagogy is most appropriate. It is not just an education issue and what vocational educational institutions currently are doing. VET is a matter of several policy areas and, ultimately, about the priorities and investments of states and regions to create a better future and a good society to live in. When everything around us changes, at an accelerating pace, we are compelled to relate to these changes considering new ways of working, of producing and reproducing in society. The challenges societies are facing today are legion and give rise to reform policies of the education systems and in particular VET. Structural changes induced by global movements and values, technological development, new business models and work organisation, together with demographic changes and migration, have great impact on the supply of diversity of skilled labour and provision of VET. As a result of increasing internationalization, cross-border labor mobility and interdependence between regions and countries, there is a need for harmonization of VET systems and the problems that may arise with coordination and management, especially within supranational associations. Various aspects of the complexity of ongoing reform processes in different countries, aiming to meet

the challenges the VET system facing, are addressed in the contributions included in this section.

Illuminating examples of this ongoing reform process are

1. the case of VET system in Lombardy, outlined and discussed by Francesco Magni, where the main lines of historical evolution and the current pedagogical developments are explained
2. a comparison study, by Jane Pither, of VET policies between the European Union and four countries (Denmark, Finland, Scotland and England) since the onset of the Lisbon strategy, in which she explores some of the "Europeanization" consequences on national VET policies
3. the shift of recent VET reforms in an England, living under the shadow of the Brexit referendum outcome, examined and reflected from a European perspective by Bill Esmond.

Two chapters focus on integration of immigrants in the labour market in the receiving countries. The first one, by Eva Eliasson, Ali Osman & Marianne Teräs, is a literature review of research in matters related to integration of refugees with a previous professional experience and skills in Sweden and internationally. The review points out that accessing one's previous vocation is a complex interplay between individual factors, governmental social integration policies and labour market structures. A concrete initiative for fast integration of newly arrived immigrants with a professional background is explored in the chapter by Petros Gougoulakis & Katarina Lagercrantz All. The presentation is a sub-study on the collaboration about the program Swed-

ish for immigrants with previous professional training (Sfx), between all the municipalities in the Greater Stockholm and the Stockholm County Administrative Board.

Ute Clement, Paola García Fuentes & Claudia Hunink outline a conceptual frame to analyse in-depth interviews about representations of non-academic work in Mexico. In the last chapter of the section, Ramlee Mustapha & Irdayanti Mat Nashir present a new model of VET leadership for polytechnics system in Malaysia. The model was developed by using a modified Delphi technique to map the competence of the polytechnics administrators' innovative instructional leadership.

The VET system in Lombardy (Italy): a first pedagogical outlook

Francesco Magni*

Abstract: There are some great challenges facing the Italian youth population: among them, a high rate of early leavers from education and training (15%) and NEET for 18-24 years old (22,5%).

In this context, the Lombardy Region (about 10 million of inhabitants) has a lower rate of early school leavers (12,9%) and NEET (13,1%). One of the key aspects for these better numbers, compared to the national ones, is the orientation of the VET system towards excellence. In Italy, over time there has been increasing decentralization of responsibility, and regional authorities are now exclusively responsible for planning a vocational education system for secondary, higher and continuing training within and according to a set of national general principles. For these reasons VET system in Italy is extremely various and changes from region to region.

The VET system in Lombardy includes numerous secondary vocational schools, but also 22 higher vocational education institutions (ITS – Istituti Tecnici Superiori), nearly 25% of the national total.

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The paper aims to describe the VET system in Lombardy, explain which were the main lines of historical evolution in the recent past and provide an overlook of the main pedagogical paradigms, as work-based learning, that will drive the system today and tomorrow.

1. INTRODUCTION

During these uncertain times, characterized by economic crises and global pandemics, the vocational education and training (VET) systems around the world are even more important for providing a quality education and training perspective for the younger generations (Pilz, 2017).

Indeed, VET matters not only because is a way of learning that combine theory and practice, but also because can help not to losing young people who live in situations of social marginality, building for them training paths able to develop their human potential starting from the concrete reality and develop in them those skills necessary to face the challenges of the 21st century (Powell & McGrath, 2019).

This issue is particularly crucial in those countries, such as Italy, where there are high rates of early school leaving, NEET and youth unemployment.

This paper, after providing an overview of the Italian context, aims to analyze the historical evolution, the current shape and the future challenges of the VET system in one of the most important Italian regions: Lombardy. Why has an efficient VET system been built in this economically and culturally import-

ant region? What are its main characteristics? What pedagogical paradigms underlie the entire system? The VET system in Lombardy, one of the first in Italy to try to introduce a real "dual system", will be briefly analyzed in all its aspects: from secondary and tertiary level, up to the apprenticeships.

Finally, in the conclusion, the review will be discussed in light of John Dewey's views on vocational education, starting from his definition of "vocation".

2. THE VET SYSTEM IN ITALY: A FIRST OVERLOOK

In Italy all young people have the "right/duty" (Law No. 53/2003) to pursue their education and training for at least 12 years before reaching age 18. The aim is that young people should not leave education and training without a qualification or a degree. However, compulsory education lasts 10 years, up to 16 years, and includes the first two years of upper secondary general education or VET (CEDEFOP, 2014). (In Italy lower secondary school last three years and usually ends at the age of fourteen; while upper secondary school last five years and ends at the age of nineteen).

The VET system (*IeFP – Istruzione e Formazione Professionale*) is organized at regional level. Over time there has been increasing decentralization of responsibilities, and regional authorities are now exclusively responsible for planning vocational education and training for secondary, higher and continuing training within and according to a set of national general principles. For these reasons VET system in Italy is extremely various and changes from region to region, thus configuring a system that, nationwide, is made of light and

shadow. As has been pointed out (Zagardo, 2019, p. 20), in some realities, particularly in the South of the country, there are no VET paths (Basilicata), or they continue to exist only in a numerically reduced or almost symbolic form (Abruzzo, Calabria, Campania). The picture that presents itself, therefore, is "too differentiated at a regional level, unable to offer equal opportunities to all" (Censis, 2018, p. 108), failing the constitutional requirement to guarantee the same essential levels of performance for everyone.

But while in some cases the regulatory autonomy has not been used at all or has produced poor results, in other cases it has been a flywheel for the implementation of an efficient VET system. This is the case of the Lombardy region, which represents one of the most interesting cases to study for at least two reasons.

The first derives from Lombardy's industrious history and the particularly active socio-economic-entrepreneurial context (about 10 million of inhabitants, more than 20% of Italy's national GDP is produced in this region) often linked with vocational training institutions.

If the first reason has its roots in a slow historical evolution, the second has more recent origins and concerns the particular diffusion and success, far superior to that of other Italian regions, of vocational training centers at secondary level and tertiary level which makes Lombardy one of the most interesting case studies for this sector in a comparative perspective (Pilz & Li, 2020). But why is that?

In the last years, the Italian youth population is facing some great challenges: among them, a high rate of early leavers from education and training (15%), NEET for 18-24 years old (22,5%) and a high rate of youth unemployment (around 28% at national

level). Also, to counteract such phenomena, the VET system is more and more strategic, considering also its employment rates among graduate students (INAP, 2019).

In Lombardy the youth population (between 15 and 34 years old) is almost two million people (1.998.845): the majority (70.1%) of them have a high school diploma, 14.7% a lower secondary school diploma, 12.8% a university degree and 2.4% a postgraduate degree (Polis, 2019, pp. 2-3). In this context, the Lombardy Region has a lower rate of early school leavers (12,9%) and NEET – *Not (engaged) in Education, Employment or Training* (13,1%).

One of the key aspects for these better numbers, compared to the national one, is the orientation of the VET system towards excellence, declined in a pluralistic, autonomous, and differentiated ways.

3. HISTORICAL BACKGROUND

This is not the place for a complete reconstruction of the historical evolution of professional training and VET education system in Italy (D'Amico, 2015): a history that has crossed all centuries, from monasteries to medieval guilds and to Renaissance workshops; from the birth of craftsmanship to the season of "social saints", like Giovanni Bosco (1815–1888) or Leonardo Murialdo (1828–1900) in XIX century Piedmont.

After the Second World War, Italy (and in particular its northern part) was affected by important processes of technological innovation and reorganization of work in the various manufacturing sectors. At the same time there was a growing awareness that a modern and effective vocational education and

training system could become the preferred channel to promote social inclusion through economic growth and the creation of new jobs.

From 1970, with the launch of the Regions, provided since the Constitution of 1948 but never implemented until then, a new perspective opens up for the field of vocational training: state competencies in craft and vocational education and training were transferred to the Regions (Decree of the President of the Republic D.P.R. 15 gennaio 1972, n. 10). But to be transferred to the Regions was the competence only on the non-state-schools sector, i.e. vocational, education and craft training, company training and retraining courses, apprenticeships. Therefore, from this division of legislative competences between the central national state and Regions, remained a system characterized to a "double channel": on one hand the national state kept control of the state vocational schools (*Istituti professionali statali*); while, on the other hand, the Regions started to designed a parallel, mainly autonomous system of vocational education and training institutions.

This turning point was followed by a long period of transition, during which the vocational education sector moved from state to regional control, which were guaranteed the right to regulate the normative framework of VET system, to open and manage professional courses directly and to support and finance courses inaugurated by other entities.

As it has been pointed out (Salini, 2014), the delegation of responsibilities for craft and vocational education to the regions by the State made it possible to transform the chaotic myriad of existing activities into a genuine regional vocational training system.

Lombardy was one of the first regions to regulate the professional school system, through two regional laws issued in June 1975 (L.R. No. 93 and L.R. No. 94). Before that, during the 1973-1974 school year, out of 1,829 courses for apprentices in Lombardy, the region directly administered 455, most of which were held in the areas with the greatest industrial vocation, Milan (200) and Brescia (100).

From the 1970s onward, the region took on an increasingly decisive directing role, with the creation of the Territorial Centres for Technical and Educational Innovation (*CITE – Centri territoriali per l'innovazione tecnica ed educativa*) and the development of educational systems and legislation adapted to the changing times.

This new role of direction of the region and the collaboration between various public and private institutional bodies, allowed to start the first training experiments. The pluralist choice of different social actors who collaborate with each other (Berner, 2017), went over time to create a widespread system of VET institutions, spread throughout the Lombard territory, able to meet the needs of social and economic development of the region.

The Law No. 845/1979 ("*Framework law on vocational training*") marked the end of the transition period and definitively sanctioned the dualism between regional vocational training and state vocational education (national school system), establishing between the two appropriate connections, as well as the possibility to finance the VET system autonomously by the State, promoting the modular declination of teaching and training activities and a wide use of work-based learning, traineeships and work experience.

The most recent turning point is contained in the constitutional reforms approved at the turn of the millennium (Constitutional Laws No. 1/1999 and No. 3/2001) which provided the Regions with extensive legislative powers and administrative functions in some areas, including VET system, which led, in the years immediately following, in Lombardy as in other Italian regions, to start some further experiments on VET courses.

The lack of implementation of the so-called "essential levels of performance" throughout the national territory has meant that some Regions have taken action, while others remained partially or totally inactive in this area. On the other hand, this differentiation that marks the VET system in Italy, allows to examine cases where, as in Lombardy, an innovative and complete VET system has been tried to be implemented.

4. THE SECONDARY VET SYSTEM IN LOMBARDY

In Lombardy, Vocational Education and Training courses (*Istruzione e Formazione Professionale – IeFP*) are provided by numerous autonomous bodies promoted by private individuals accredited by the Region (there are over 150 entities with more than 270 locations throughout the region enrolled in the register of accredited bodies for Vocational Education and Training services) (Regione Lombardia, 2020) and 88 state vocational schools that provide the courses "in subsidiary mode": (this means that subject to regional accreditation, state vocational educational institutions can also provide training courses leading to regional qualifications). At these 88 schools over 13,400 students attend these courses, distributed in the mechani-

cal (3,800), electrical and electronic (2,428), tourism (1884), administration and sales (1,477), catering (1,402), graphic (1,029). Then there are other courses in clothing and fashion, food processing, agriculture (USR, 2020).

In Lombardy in the year 2017-2018 (the last year for which complete data are available) there are almost 62.191 students enrolled in Vocational Education and Training courses (**Table I and II**) and 13.906 students have obtained a three-year professional qualification and 7.292 a four-year diploma.

Furthermore, the VET system in Lombardy includes also 22 higher vocational education institutions (*Istituti Tecnici Superiori – ITS*), nearly 25% of the national total.

Responsibility for the governance of the VET system is shared between the various levels of government:

- the National State, through the Ministry of Education, sets the framework for VET in national school programmes (for technical and vocational schools in subsidiarity regime);
- the Ministry of Labour and Social Policies and the single regions sets the framework for the VET schools (*IeFP*);
- the regions are in charge of planning, organization, design and provision of the VET schools (*IeFP*);
- social partners play a general advisory board.

The VET programmes (three-year and four-year courses) are flexible and in 2011 some regulations issued by the State-Regions conference, have introduced several important systemic elements:

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- a set of training standards for basic skills to be developed in the three- year and four-year courses;
- a set of minimum standards (valid at national level) for technical and vocational skills in relation to the occupation profiles included in the national qualifications register (*Repertorio nazionale delle qualifiche*) (INAPP, 2020; Frisanco, 2010);
- intermediate and final certifications that are valid at national level.

The IeFP training centers are accredited by the regions according to criteria nationally established (CEDEFOP, 2014).

Secondary vocational education and training pathways are thus structured. *Three-year VET courses* lead to the achievement of the "Professional operator certificate" (*qualifica di operatore professionale*) EQF level 3. These three-year training courses have a total duration of at least 2,970 hours (990 hours per year). The curriculum is divided into a common quota of 842 hours per year and a more flexible specific training equal to at least 148 hours per year, identified by the individual training institutions with regard to the territorial peculiarities and the educational needs of their students. Into three years courses there is this hourly subdivision by thematic areas: 35% – 45% (1,040-1,337 hours) to the areas of languages, historical-socio-economic, mathematical-scientific and technological; a share of 40% – 50% (1,188-1,485 hours) to the technical-professional area and alternation; a share of 15% (445 hours) to the free choices of individual institutions thanks to flexibility. The internship is carried out in the second year (200 hours) and the third year (300 hours). Besides the achievement of the basic skills required

for reaching the right-duty to education (at the end of the second year of the course or after at least 10 years of education), the three examinations at the end of the three-year period aimed at the acquisition of the professional qualification include:

- a centralized test to assess basic educational standards (4 hours);
- a professional test to assess technical and professional skills (6 hours);
- an interview to verify the achievement of the PECUP (*Cultural and Professional Educational Profile*).

In addition to the three-year courses there are also *four-year VET courses* that lead to the achievement of the "Professional technician diploma" (*diploma professionale di tecnico*) EQF level 4. Both of them are awarded by the regions and nationally recognized.

Students who have completed a three year course can also continue their studies with a fourth and fifth years through state or private vocational schools, allowing them the access to the final state exam of the second cycle of education, and then the possibility to continue their tertiary education through university or ITS/IFTS courses (Zagardo, 2019, pp. 93-109).

Another qualifying and innovative point of the Lombard VET system is its method of financing (Salerno & Zagardo, 2015). The "dowry" system was introduced in 2008. The system has therefore moved from a rigid supply model focused on the needs and requests of the territories, to a flexible supply system linked to the dynamics of demand (students' choice) and the different economic and social characteristics of the territories.

The consequence of this choice is the application of the criterion of the quota per pupil (economic resources per pupil) for the financing of the courses. The value of the dowry is diversified according to the type of training course, with an annual cost per student ranging from € 4,000 to € 4,600. The recipients of the dowry are students resident in Lombardy and are assigned in chronological order of arrival of the enrolment request by the students, until the resources are exhausted by priority group. The funding is obviously subject to the actual attendance of the courses by the students.

Table I. Students enrolled in three-year VET courses by sector (Polis Lombardia, 2019, p. 30)

Three-year training course	Students enrolled 2017/2018
Wellness operator	10.245
Catering operator	9.607
Motor vehicle repair operator	5.788
Electric operator	4.514
Mechanical operator	4.162
Agri-food processing operator	3.662
Graphic operator	3.213
Administrative-secretarial operator	2.514
Agricultural operator	1.584
Operator at promotion and reception services	1.561
Sales Services Operator	1.256
Electronic operator	1.160

Clothing Operator	1.072
Operator of thermohydraulic systems	966
Wood operator	921
Operator of the artistic workings	338
Construction operator	335
Operator of logistics systems and services	243
Tot.	**53.141**

Table II. Students enrolled in the fourth year of VET courses by sector (Polis Lombardia, 2019, p. 31)

Fourth year training course	**Students enrolled 2017/2018**
Cooking technician	1.125
Beauty treatment technician	962
Hairstyle technician	894
Motor vehicle repair technician	893
Graphic designer	561
Food processing technician	545
Business services technician	537
Electrical technician	475
Technician for industrial automation	459
Promotion and reception services technician	437
Technician for the operation and maintenance of automated systems	387
Room and bar services technician	325
Sales Engineer	269

Clothing Technician	209
Agricultural technician	202
Heating system technician	170
Tourist-sporting and leisure time entertainment services technician	109
Wood technician	108
Electronic technician	101
Business Services Technician – Management Information Technology	77
Motor vehicle repair technician – Aircraft maintenance	49
Graphic designer – Audio Video	42
Artistic technician	29
Business services technician – CAD technical drawing	27
Business Services Technician – Logistics Services	26
Building technician	21
Tot.	**9.039**

5. THE TERTIARY VET SYSTEM IN LOMBARDY

At tertiary levels VET Italian education system is composed by two main blocks.

1) IFTS (percorsi d'Istruzione e Formazione Tecnica Superiore)

Planned by regions and delivered by at least four VET providers from the school system, vocational training, university, business sector.

These courses last two semesters (800-1.000 hours) which include theory, and practice. At the end of this courses the students obtain the Higher technical specialization certificate (*certificato di specializzazione tecnica superiore*), EQF level 4. During the training year 2017/18 there were 1.218 students enrolled in IFTS courses in Lombardy (**Table III**).

Table III. Courses and students enrolled in IFTS courses by technology area (Polis Lombardia, 2019, p. 36)

Technology area	Number of active courses	Students enrolled 2017/2018
Mechanics, plants and construction	11	300
Commercial services	8	225
Tourism and sport	9	199
Culture, information and information technology	5	119
Fashion and clothing	3	82
Electrical – electronics, information technology and telecommunications	3	72
Graphics, multimedia communication and entertainment	2	54
Mechanics	2	56
Wood and furniture	1	33
Artistic craftsmanship	1	28
Manufacturing and handicraft	1	28
Agro-food	1	22
Tot.	**47**	**1.218**

2) ITS (*Istituti Tecnici Superiori*) (ITS, 2020)

ITS are set up as foundations composed by:

- a higher secondary education institution, (either private or public) belonging to a technical or vocational association;
- a training provider accredited by the region for higher education;
- an enterprise in one of the sectors covered by the ITS;
- a university department or other body;
- a local authority.

At national level there are 104 ITS foundations (of which 20 in Lombardy), with 187 training courses, 6.800 teachers, a lot of them from the professional field and hired for part-time job and slightly more than 15.000 students enrolled (INDIRE, 2020).

While still having limited success in terms of number of students, especially when compared to similar international experiences, ITS are still gaining attention mainly because of the high employment rate of their graduate students: in fact, 83% of ITS students at one year are employed and in 92% of cases the student finds a job coherent with the training path undertaken (Zuccaro, 2020).

There are courses in six main technological and economic areas such as Energy efficiency; sustainable mobility; new life technologies; new technologies for "made in Italy"; innovative technologies for cultural heritage activities; information and communication technologies. These courses last four semesters (1.800-2.000 hours) 30% of which is devoted to completing an

internship, possibly abroad. At the end of this courses the students obtain the Higher technical education diploma (*diploma di tecnico superiore*), EQF level 5. In recent years in Lombardy, while maintaining limited numbers, there has been a constant increase in the number of students enrolled in these programs: during the training year 2017/18 there were 1.909 students enrolled in 89 ITS courses operating in the 20 ITS in Lombardy; two years later, in the 2019/2020 training year, there were 123 active regional courses with 3,133 students enrolled. (**Table IV**).

Table IV. Courses and students enrolled in ITS courses by technology area (2017/18 and 2019/20) (Polis Lombardia, 2019, p. 38)

Technology area	2017/18		2019/20	
	Number of active courses	Students enrolled	Number of active courses	Students enrolled
New technologies for made in Italy	43	961	59	1.548
Information and Communication Technologies	12	269	22	539
Sustainable mobility	13	259	14	342
New technologies of life	8	165	10	259
Innovative technologies for cultural heritage and tourism activities	7	144	9	232
Energy Efficiency	6	111	9	213
Tot.	**89**	**1.909**	**123**	**3.133**

6. APPRENTICESHIPS IN LOMBARDY

Apprenticeship has been at the centre of political debate in Europe over the past decade (Smith & Rauner, 2020). Also in Italy, in particular from the approval of the new "*testo unico*" on apprenticeship (Legislative Decree No. 167/2011) the apprenticeship has gone through phases of greater attention and luck, which have often been followed by periods of substantial disinterest, which has actually slowed down sharply further in recent years. (Massagli, 2016). Lombardy Region has followed mainly he European than the national trends and, thanks to the autonomy that the Constitution assigns to the Regions in this matter (Salerno, 2019; CNOS-FAP-Noviter, 2018), has issued its own regulations.

Regional Law No. 30/2015 regarding "*Quality, innovation and internationalization in education, training and work systems in Lombardy*" has outlined a "dual system", based on the centrality of experimentation in organizational and productive contexts, also directly in companies and workplaces, in a real working environment (Valente, 2017). Consistently with these objectives, it has also established the strategy which sees as priority training methods work-based learning and, for some programs, apprenticeships (level I, with 400 hours of educational activities). These regulatory provisions have consolidated the close connection with the industries and the effectiveness of the work placement, also aiming at reducing the transition time between school and work, in particular through work-based learning, curricular and extra-curricular internships, also abroad (for a certain amount of students) and the promotion of the apprenticeship institution.

In particular, with reference to the VET system, a further development of school-work alternation has been promoted in regional vocational training promgram and of apprenticeship pathways (level I, art. 43 Legislative Decree No. 81/2015). Furthermore, Regional Law No. 30/2015 establishes that a share of not less than 5% of the total resources within the third and fourth years of the Vocational Education and Training system and the *Higher Technical Education and Training* (IFTS) paths shall be allocated to apprenticeship training. 2,803 apprenticeship contracts were activated in Lombardy during 2018, divided into the various economic sectors as shown in **Table V**.

Table V. Economic sectors of apprenticeship contracts activated in Lombardy during 2018 (Polis Lombardia, 2019, p. 42)

Economic sector	Apprenticeship contracts activated in 2018
Manufacturing activities	662
Accommodation and food service activities	657
Other service activities	552
Wholesale and retail trade; repair of motor vehicles and motorcycles	398
Constructions	214
Information and communication services	61
Professional, scientific and technical activities	53
Rental, travel agencies, business support services	68
Financial and insurance activities	36
Agriculture, forestry and fishing	33

Transport and storage	23
Health and social care	11
Artistic, sports, entertainment and fun activities	10
Education	8
Real estate activities	7
Water supply; sewerage, waste management and remediation activities	5
Public administration and defense; compulsory social insurance	4
Activities of households as employers of domestic personnel; undifferentiated goods and services producing activities of households for own use by households	1
Electricity, gas, steam and air conditioning supply	0
Tot.	**2.803**

7. CONCLUSIONS

The importance of building a coherent and strong VET system, with equal dignity with more traditional school curricula (Bertagna, 2006), now internationally recognized as a priority for the educational policies of each country (Guile & Unwin, 2019), covers different levels and issues. First of all, a system founded on the work-based learning method (Potestio, 2020) helps young people to develop the skills (Mulder, 2017; Sandrone, 2018) that are increasingly needed to meet the uncertain and unpredictable challenges of our age. In this perspective, work-based learning could be a secure path for the youth in these troubled times.

One of the first effects of being able to offer young people an effective VET system, then, is not only to tackle early school

leaving, but also to prevent and fight youth unemployment, an issue particularly important in Italy (Cegolon, 2019).

But this is not the ultimate mission of a VET system. Introducing young people to work (Bertagna, 2011) cannot be reduced to learning a craft. It is something more. In fact, taking up John Dewey's concerns expressed more than a century ago, it is possible to agree that there is a danger: vocational education could be only "interpreted in theory and practice as trade education: as a means of securing technical efficiency in specialized future pursuits" (Dewey, 1916, p. 369).

Surely VET courses must help to learn a craft. And that's true, but it's not enough. First of all, "to predetermine some future occupation for which education is to be a strict preparation is to injure the possibilities of present development and thereby to reduce the adequacy of preparation for a future right employment" (*ibid*, p. 363). And this affirmation takes on even greater significance today in the era of increasingly sudden and rapid digital and technological revolutions. Probably much of the jobs of the next few decades have not yet been invented. And to invent them we will need intelligent, creative and flexible young people.

But there are something more, starting from the definition of "vocation", as Dewey put it: "A vocation means nothing but such a direction of life activities as renders them perceptibly significant to a person, because of the consequences they accomplish, and also useful to his associates. The opposite of a career is neither leisure nor culture, but aimlessness, capriciousness, the absence of cumulative achievement in experience, on the personal side, and idle display, parasitic dependence upon the others, on the social side" (*ibid*, p. 359).

So, according to Dewey, to achieve full training for a profession "the only adequate training for occupations is training

through occupations" (*ibid*, p. 363), intended as "continuous activity having a purpose" (*ibid*, p. 362). It is the idea of work-based learning – or in Dewey's words "Education through occupations" – witch consequently combines within itself more of the factors conducive to learning than any other method: "it calls instincts and habits into play; it is a foe to passive receptivity. It has an end in view; results are to be accomplished. Hence it appeals to thought; it demands that an idea of an end be steadily maintained, so that activity cannot be either routine or capricious" (*ibid*, p. 362). The danger, even in this perspective, "is to treat the schools as an agency for transferring the older division of labor and leisure, culture and service, mind and body, directed and directive class, into a society nominally democratic" (*ibid*, p. 372) and not for the integral development – cultural, social and moral – of every single human person.

Dewey goes on: "an education which acknowledges the full intellectual and social meaning of a vocation would include instruction in the historic background of present conditions; training in science to give intelligence and initiative in dealing with material and agencies of production; and study of economics, civics, and politics, to bring the future worker into touch with the problems of the day and the various methods proposed for its improvement. Above all, it would train power of readaptation to changing conditions so that future workers would not become blindly subject to a fate imposed upon them" (*ibid*, p. 373).

Even though more than a century has passed since these words were written, the call they make for a broad and integral education that always combines theory and practice, even if it is aimed at an employment in a particular economic or social sector, is still valid today and perhaps even more important than it was then.

In this perspective, work-based learning could really be the pedagogical and didactic fundamental paradigm for a new model of learning and training, aiming to an educational relaunch adapted to the challenges of the 21st century.

The VET system in Lombardy, which can certainly still be improved, has the merit of involving tens of thousands of young people every year who would otherwise probably swell the ranks of NEETs first and then youth unemployment into a structured, flexible and integrated system centered on the single person and his/her educational and professional talents, where theory and practice, study and work are mixed thoroughly.

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Shifting currents – the influence of Brexit on VET policy discourse in four countries (Denmark, England, Finland and Scotland) as portrayed through the European semester cycle

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Abstract: This paper is based on some findings from my Ph.D. study on a comparison of VET policies between the European Union and four countries (Denmark, Finland, Scotland and England) since the Lisbon strategy (European Council, 2000).

VET policies featured strongly in the European Semester documentation. From the initiation of the Semester in 2010 (European Commission, 2010) to the present date, VET or skills policy featured in 23% of recommendations from the European Union to the member states studied.

Through critical discourse analysis (Fairclough, 2015) based on official policy texts, I explored how the differing VET policy perspectives were expressed in the National Reform Programmes submitted by member states as part of the European Semester. Were VET policies in Denmark and Finland, diverging or converging (Aarkrog & Jørgensen, 2008) from the representations of VET policy in the United Kingdom between 2011 and 2019 and was there thus a European VET policy?

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The findings of a divergent pattern of VET policy discourse led me to consider whether there has been further divergence since June 2016 when the United Kingdom voted to leave the European Union (the 'Brexit' referendum) and to explore some of the consequences for policy making.

1. INTRODUCTION

This paper gives an account of aspects of vocational education and training (VET) policy discourse in four countries within the European Union (EU), exploring any changes arising from the United Kingdom's (UK's) decision to leave the European Union (Brexit) following a referendum in June 2016. It is based on a study of official documents produced during the European Semester process (Stevenson, 2019) between 2011 and 2019, relating to Denmark, the United Kingdom (representing England), and Finland (all of which are EU member states); and Scotland (a nation within the United Kingdom member state). These countries have been chosen because their VET policies have not often been compared in this way and also because each country operates a different type of VET system. As Scotland is a devolved administration of the UK, the Scottish Government is responsible for its education policies and systems and, increasingly, its welfare systems. Scotland has also attempted to develop a singular relationship with the EU in response to the Europe 2020 strategy as explained in section 2.

The study covered VET policy production (Gale, 2006) in the period between 2011 and 2019 and addressed two research questions. The first research question was:

To what extent was there policy convergence or divergence (Aarkrog & Jørgensen, 2008) between the countries studied and what might thus be inferred about the 'Europeanisation' of VET policy (Alexiadou, 2007)?

This was studied through representations of VET policy within the European Semester documents at the policy making level.

Arising from these findings, the second research question was:

Is there evidence for VET policy divergence from 2017 onwards (the first year in which changes arising from the Brexit referendum might become visible)?

2. EUROPEAN POLICY CONTEXT

Despite parallels being drawn between the co-ordination of higher education (HE) policy through the Bologna process and the co-ordination of VET policy through processes following the Lisbon Strategy (European Council, 2000) especially the Copenhagen Declaration (European Ministers of Vocational Education and Training, 2002; Lawn, 2011) a co-ordinated approach to VET policy appeared to alter following the agreement and publication of the Europe 2020 strategy by the European Council (European Council, 2010). This was notwithstanding the expectations that national VET policies would support the economic purposes of the EU brought to the fore by Europe 2020, summarised as: recovery from the global economic recession of 2008. Whilst this might be expected to promote VET policy convergence, this was not necessarily the case between 2011 and 2019 in the countries studied.

Instead, policies tended to evolve in keeping with existing national educational strategies although tensions were observed when those strategies were weaker. In that instance, EU influence might be observed, but this was by no means consistent. Even when a country clearly wished to demonstrate alignment with Europe 2020, as was the case of Scotland, the VET policies adopted differed from the European policy direction. This is illustrated by the 'Youth Guarantee' (European Commission, 2020) of employment, continued education, apprenticeship or traineeship for unemployed young people under 25, recommended by the EU and formally adopted in Denmark and Finland but not in England and Scotland. Not only was there a lack of convergence around an EU norm, but in the case of Scotland and England, as will be shown later, and as observed by Gallacher and Reeve (2019) and Hodgson, Spours, Gallacher, Irwin, and James (2019) there was further divergence.

The European Semester process was established following the publication of the Europe 2020 strategy in 2010, firstly through a document presented by Council President Barroso on behalf of the European Commission in March 2010 (European Commission, 2010) and secondly after subsequent approval by the European Council in June 2010 (European Council, 2010). As well as setting targets for improvement in areas considered significant to the economic and social recovery of the EU following the global economic recession of 2008, the strategy established the performance and reporting cycle known as the European Semester, building upon the Open Method of Coordination (OMC) established in 2000 by the Lisbon Strategy (Alexiadou, Fink-Hafner, and Lange, 2010; West, 2012). This was viewed as a soft governance approach, rather than a legislative approach (Brøgger, 2018; Cort, 2008b).

The Europe 2020 strategy set five headline targets for the monitoring of key objectives designed for 'reinforcing economic policy coordination' (European Council, 2010, p. 4) including an employment target, an educational target and a social inclusion target. The implications of target setting are outside the scope of this paper but for the purposes of the study it was noted that VET policies contributed to educational, economic and/or social policies, depending on underlying national beliefs about the purpose of VET. Member states were expected to:

> rapidly finalise their national targets, taking account of their relative starting positions and national circumstances, and according to their national decision-making procedures. ... Progress towards the headline targets will be regularly reviewed. (European Council, 2010, p. 3).

Education and education policies are, however, the responsibility of the member states, thus:

> The European Council emphasises the competence of Member States to define and implement quantitative targets in the field of education. (European Council, 2010, p. 12)

so the education target, understandably, was quite broad:

> improving education levels, in particular by aiming to reduce school drop-out rates to less than 10% and by increasing the share of 30-34 years old having completed tertiary or equivalent education to at least 40%; (European Council, 2010, p. 12)

Unsurprisingly, the definition of what constituted 'school drop-out' varied in each country that formed part of this study as a result of different interpretations of both 'school' and 'drop-out'. This led to the identification of different reasons for the occurrence of school drop-out and the development of different policies to address this problem.

Stevenson, Hagger-Vaughan, Milner, and Winchip (2017) observed that, in their studies of the European Semester, VET or skills policies featured strongly in the European documentation, and this was certainly the case for the three member states in this study. Skills policy has been included with VET policy where there are specific links, for example in the case of apprenticeship policies or adult basic skills policies. From 2011 to 2019, VET or skills policy recommendations formed 23% of the country specific recommendations (CSRs) for Denmark, Finland and the UK and were referenced extensively within the national reform programmes (NRPs) produced by the four countries. For clarity, the UK responses are covered by two NRPs because since 2011 the Scottish Government has produced and sent to the European Commission separate NRPs for Scotland. The rationale was that Scotland's policy context differs from that of the UK to the extent that separate reporting on the alignment with the EU was considered beneficial:

> However, to help provide the Commission with more detail on the unique characteristics of Scotland and the distinct approach we are taking forward within the UK, we have produced our own Scottish National Reform Programme (NRP) (The Scottish Government, 2012, p. 5).

The UK government clarified that most references to education policy in the UK NRPs refer to England with specific references to the devolved administrations.

> Education and skills policies are a devolved power, with each of the Devolved Administrations making their own policy decisions (HM Government, 2012, p. 23).

3. LITERATURE REVIEW
3.1 THE EUROPEAN SEMESTER AND VET POLICY CONVERGENCE

The influence of the European Semester (Stevenson, 2019) on VET policy has been described as operating through methods of soft governance (Grek et al., 2009; Lange & Alexiadou, 2010) in parallel with the methods used to develop the Bologna process in HE (Brøgger, 2018). This peer progress monitoring approach is illustrated by scorecards, including measures related to VET policy, that appeared in the later years of the Country Reports (2017-2019). However, the Country Specific Recommendations (CSRs) appeared more prescriptive. A full debate about the role of the European Semester in education policy making is outside the scope of this paper. However, a summary of relevant literature highlights key points in relation to convergence or divergence of policy.

Alexiadou, Helgøy, and Homme (2019), whilst exploring school transition policies, described the EU's more recent approach to education policies, highlighting from 2014 onwards a 'social dimension' (p. 304) to some policies (for example, the Youth Guarantee) that had been missing from the immediate

austerity policies first established by Europe 2020. This built from earlier work by Alexiadou and Lange (2014) that reviewed the mediating process between the EU and the UK as a member state in adjusting to the Open Method of Coordination (Cort, 2010; Stevenson, 2019). In their paper on transition policies, Alexiadou et al. (2019) identified 'Europeanisation' as arising from EU education policy definitions that were distributed through governance systems guiding national education systems and creating different boundaries, for example, the development of a European education policy space as outlined by Cort (2010) and further conceptualised by Lawn (2011) through methods such as benchmarking and policy learning. They further emphasised this as follows:

> The EU framework of education and inclusion governance provides a steering to how national education systems should resolve these tensions through a combination of equality legislation and policy actions. (Alexiadou et al., 2019, p. 437)

Antunes (2016) refined the debate about both 'Europeanisation', defined by her as the development of a common European policy and described an additional phenomenon, 'Europeification', defined as the alignment of national policies with European Union policy, when she explored the relationships between European and national education policies between 2011 and 2015 through document analysis and a case study in Portugal. Some parallels with VET policy may be drawn from her conclusion that education policy has been deployed as economic and employment policy from the perspective of the EU although this contrasts with the findings from the literature review car-

ried out by Stevenson (2019, p.28) in which he observed that the European Semester process had also 'developed as the EU's principal mechanism for social policy co-ordination'.

Valiente, Capsada-Munsech, and de Otero (2020) followed a similar method of discourse analysis, analysing national policy documents relating specifically to youth unemployment in nine European countries between 2010 and 2016. Their stance, however, treated the EU lifelong learning policy (LLL) as a single starting point, rather than recognising its evolution as national policy approaches evolved and they did not draw a distinction between VET and LLL. Nor did they explicitly recognise that education policy is the responsibility of the member states so that the tension they rightly identified between employment policies and the educational policies adopted by certain member states to solve the 'problem' of youth unemployment was not fully explored.

Referring specifically to literature about VET policy from the perspective of the selected countries, Keep (2017, 2019), Hodgson et al. (2019) and Gallacher and Reeve (2019) observed that the levels of divergence between English and Scottish VET policy were growing, rather than reducing, with Scottish VET policy potentially more aligned to EU VET policy. English VET policy was described as becoming an outlier within Europe, or, indeed, exceptionalist, as identified by Hodgson and Spours (2014) and which was further confirmed by Roosmaa, Martma, and Saar (2019).

The major comparative study of vocational education in the Nordic Countries (NordVET), (for example, Michelsen and Stenström, 2018; Jørgensen, Olsen, and Thunqvist, 2018), acknowledged the divergence between VET policies in Denmark and Finland, although both stem from the Nordic tradi-

tions. Within this project, Stenström and Virolainen (2018) recognised the 'adoption of European trends in Finnish education policy' (p. 118) and questioned this as a 'threat to understanding the meaning of the general skills and theoretical knowledge learned in vocational education' (p. 119). On the other hand, specific VET policy convergence within Denmark and Finland was identified from the emphasis on VET policies supporting employability, retention and completion (Jørgensen et al., 2018, ch. 1 and 5).

3.2 BREXIT AND VET POLICY – DIVERGENCE AND DISCOURSE

As is to be expected at this time, there is little literature on this topic so far. This paper aims to contribute to this literature. A study of post Brexit dialogue suggested that the decision to vote leave was influenced by negative perceptions of the EU and populist ideals of sovereignty (Ruzza & Pejovic, 2019). Zappettini and Krzyżanowski (2019) commented that there had been an:

> ideological shift from a political economic and cultural order of supranational and multicultural relations to a world order based on national independence and neoliberal intergovernmentalism.' (p. 386).

They also noted that a discourse of a single United Kingdom had emerged during the Brexit discourse, set against regional perspectives such as that held by Scotland (Zappettini & Krzyżanowski, 2019). This narrative runs counter to Scottish devolution, and, in the context of this study, the developing characteristics of Scottish VET policy.

In a review of literature and current discourse, Taylor-Gooby (2017) also addressed the conditions that led to decisions to vote leave. He concluded that the UK government's policy decisions to address long term structural problems of globalisation, technological change and population ageing through short term policy choices had heightened the polarisation of UK society. Giving as an example the reduction in adult vocational education funding between 2008 & 2014 he observed that following Brexit 'a positive outcome would require investment in education and training' (p. 829) but that 'the political context of policy-making in the UK militates against effective strategy building to tackle long term structural issues' (p. 831). Indeed, the UK has no education and training strategy for England, although Scotland has developed one.

In an introduction to a special edition of the European Educational Research Journal, Seddon and Niemeyer (2018) explored meanings of 'Europeanisation' negotiated between member states and the EU in an attempt to rationalise the outcome of the 2016 referendum in the UK. One conclusion was that:

> the European project depends on people's lived experience of belonging, engaging and actively participating in a democratic community.(Seddon & Niemeyer, 2018, p. 759)

From this, it may be inferred that education policy changes within member states were not perceived, at least by those who voted in the UK, to be anything other than of national concern. It would be unsurprising, therefore, to identify very little European influence in UK VET policy, although the distinction will be drawn between Scottish and English policy.

Drawing from these limited sources, the current discourse around Brexit and VET policy illustrates a further divergence between Scottish and English VET policy, reflecting different approaches to nationalism from a neoliberal or social democratic perspective that are outside the scope of this paper. There is a limited possibility, post Brexit, for changes to UK VET policy, in England that could indicate the development of a long-term structural approach rather than the short-term policy making described by Taylor-Gooby (2017). However, this would require approaches to English VET policy learning that do not currently appear within the grasp of the UK government (Keep, 2017; Hodgson & Spours, 2014; Hodgson et. al., 2019).

4. THEORY AND METHODS

4.1 THEORY: POLICY CONVERGENCE OR DIVERGENCE

This paper is produced in the tradition of analysis of policy (Gordon, Lewis, & Young, 2002), seeking to explore the production of VET policy in the cases of the EU and the four countries studied. Theories of policy convergence and divergence have been used to gain an understanding of the effects of the European Semester process on VET policy production in the four countries of the study.

It has been suggested that globalisation of education policy (Ball, 2017; Rizvi & Lingard, 2010) implied the convergence of education policies around a favoured model or 'best practice'. This globalisation movement was also linked to the development of policy governance (Grek et al., 2009) rather than government (Alexiadou, 2016; Ball, 2017; Dale, 2007) as part of the influence of neoliberal discourse on policy production within the EU. In

the context of this study, the EU, as a supranational institution, may be viewed as both a structure of policy production and an agent, capable of creating change as well as being changed. However, it is by no means certain that within the EU harmonisation or 'Europeanisation' (Antunes, 2016) was taking place at the level of VET policy production. The VET policy production may be more akin to Europeification (Antunes, 2016). Despite this, harmonisation and other mechanisms of policy transfer including policy borrowing and learning (Dale, 2007; Hill 2013) may be thought of as underlying the policy production processes arising from the European Semester.

Drawing from the work of Holzinger and Knill (2005, p. 780) on mechanisms of policy convergence, the mechanisms most likely to affect VET policy were likely to be 'transnational problem solving', defined as policy learning to develop a common solution to a problem; or 'international policy promotion', defined as legitimising a particular policy approach. These convergence mechanisms were perceived as politically neutral but the application of soft governance as viewed by Brøgger (2018) suggested that these mechanisms are no longer as neutral as they may once have been.

Issues of divergence or convergence have been considered extensively by Aarkrog and Jørgensen (2008). In terms of VET policy production, convergence or divergence has been related to whether the policies were seen to converge around their aims, for example, what change the policy was intended to bring about, such as increasing levels of literacy among working adults, or to converge around their outcomes. In some instances, it appeared a mere convergence of objectives was required; for example, the target of reducing school drop-out from 15%,

although the underlying aim was to keep young people in education and the consequential outcome a reduction of youth unemployment. Similarly, the objective expressed as a tertiary education target had an underlying aim interpreted as raising the skills of young people entering the labour market with the outcome of supplying the higher-level skills that employers were assumed to require as the economies recovered from the global economic recession.

Finally, Jakobi (2012, p.394) produced 'conceptual clarifications related to policy transfer' as a typology to describe the concept of policy diffusion where the same policy is adopted in different countries, contrasting this with policy convergence, where countries become similar over time and acknowledging that policy diffusion may eventually result in policy convergence. This relates to the questions of whether policies originated from EU proposals, for example the EU's Youth Guarantee, (a parallel may be drawn with international policy promotion) or were inherent in national policies, for example, the widescale reform of VET structures (paralleled with transnational policy solving). The diffusion effect may also be seen through the adoption of similar policies at different times, for example, the 15 routes of technical education developed for English VET have some parallels with Danish VET routes (Antunes, 2016; Cort, 2010).

4.2 METHODS

All documents selected for analysis formed part of the EU Semester process which operates as follows. EU officials from the European Commission issue a Country Report (CR) at the start of each calendar year to each member state. The member state responds with a National Reform Programme (NRP) by

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April in each year and the European Council follows this up with a summary of the dialogue and Country Specific Recommendations (CSRs) by July. This process, which began in 2011, is repeated each year.

These documents (24 CSRs and 32 NRPs and 24 extracts from CRs from the years 2011 to 2019) were first coded through an initial inductive (Scott & Morrison, 2007) thematic analysis. A second inductive coding, drawn from selected themes, for example vocational educational and training, honed the analysis so that comparisons between approaches could be made. This supported a critical discourse analysis approach (Fairclough, 2015).

All documents included representations of VET and skills policy and tracing these representations showed how this policy was produced and evolved in interactions between the member states and the EU. The type of VET either implied or specifically described was also noted – a distinction may be drawn between iVET (initial VET – aimed at school leavers) and cVET (continuing VET – which may include adult learning, higher professional education and workforce development).

5. ANALYSIS AND DISCUSSION

This section presents and discusses findings from the analysis of the documents. Section 5.1 refers to research question 1 and Section 5.2 refers to research question 2.

5.1 APPROACHES TO POLICY PRODUCTION BETWEEN 2011 AND 2019

This deals with the way VET policy production was represented in the European Semester in the documents produced by the EU

and by each country. I considered whether the EU adopted a homogenous approach to the CRs and CSRs in order, perhaps, to impose a particular VET policy or policies (to facilitate policy convergence) or whether the policy discourse was adapted to the needs (from the EU perspective) of each member state. Although there were some instances where a CSR may use similar language this tended to be year on year rather than across the countries studied. There were also elements of repetition within the documents as policy does not necessarily change in a convenient annual cycle, nor perhaps at the pace at which the EU might envisage.

It was clear, however, that the CRs and CSRs were distinct for each country and despite some differences in wording, the different stages of policy production observed in the NRPs were reflected in the CRs as well as the CSRs. The format of the reports produced by the EU was similar although the number of CSRs varied. The format of the NRPs, on the other hand, was more variable and there was a distinct evolution of style from each country between 2011 and 2019. NRPs from Denmark and Finland were broadly factual, containing tables and line diagrams, and reporting in what appeared to be a straightforward style. These NRPs were all presented in English, the official EU language, although the largest number of grammatical and typographical errors was actually noted in the UK NRPs. The NRPs from Scotland contained pictures and illustrations and heavily promoted Euro-Scottish relationships and the mutual benefits experienced by being part of the EU. This was amplified from the 2017 NRP onwards:

> To emphasise the benefits of continuing European Single
> Market and Customs Union membership, we are also taking

the opportunity of this report to outline some of the consequences for Scotland's economy and society of leaving the EU, and how the progress we have made towards achieving the targets of the Europe 2020 strategy could be undermined by Brexit (The Scottish Government, 2018, p. 3)

The political context was thus brought out. As already noted, Scotland produced NRPs on a voluntary basis. Between 2011 and 2016 this was noted in the introduction to the UK NRP. From 2017 to 2019 there was no mention of the Scottish NRP nor of any specific stakeholder consultations that the Scottish Government had carried out in relation to its NRPs.

From this, it was observed that whilst convergence of objective might be viewed as desirable by the EU, the process did not lend itself to developing a convergence of outcome. Similarly, the one to one relationship established between the EU and the member states by the European Semester did not formally facilitate policy transfer through policy borrowing or learning, although informal mechanisms did operate outside this process, for example, through the European Centre for the Development of Vocational Training (Cedefop). Although there are views that the OMC and peer comparisons can bring about policy convergence, as described by Brøgger (2018), there did not appear to be evidence that this was the case in terms of VET policy production.

DISCUSSION

Exploring the relative emphasis on VET and related policies (education, lifelong learning, adult learning, apprenticeships and skills) from the coding of the documents revealed differences

between each member state and divergence of policy production in terms both of content and timing. In the Country Reports for Denmark between 2011 and 2019, much attention was paid to the Danish education system overall and concerns about drop out from the system. There were few references to skills but VET was specifically cited in reference both to drop out and reforms. The number of apprenticeship places was a major concern. This picture was mirrored in the Danish NRPs where even greater emphasis was placed on the education system as a whole, and still more on VET but there was virtually no reference to skills. The CSRs then directed attention to apprenticeships, VET and the education system in almost equal measure.

Danish policies have been directed to reducing the high levels of drop out or low completion from upper secondary education, in particular, iVET, and to increase the number of young people choosing VET programmes. The number of free upper secondary courses that a student could undertake was reduced to five and Danish students were expected to progress more swiftly through their education system, for example, through changes to the state student support system and through shortening the length of university courses (The Danish Government, 2013). An increased annual number of apprenticeship places was also negotiated. These changes were intended to reduce the number of Danish NEETs (European Commission, 2014) through providing more VET opportunities and improving the quality (and perception of the quality) of those opportunities. These policies focussed on providing good education for young people and were not as overtly linked to the labour market as those in the UK.

However, alongside this, changes to VET policy (and other education policies) were made to accommodate migrants, as the

integration into both Danish society and the Danish economy was presented as a problem. In particular, the linkage of Danish language education for migrants to particular VET programmes to address shortages in the labour market (Cort, 2008a) suggested that VET policies were applied to different sections of society in different ways, potentially giving rise to increased social inequality, because the VET programmes available to migrants were linked to entry levels jobs within the economy.

In Finland, on the other hand, both Country Reports and NRPs highlighted the education system, with some elements of skills policy and VET and fewer references to lifelong learning, adult learning and apprenticeships. Although the European documents praised the Finnish education system initially, the tone became relatively more critical after PISA reports in 2015 (European Commission, 2017, p. 28). However, the CSRs placed most weight on VET policies, and gave equal emphasis to general education policies, adult learning and lifelong learning (iVET and cVET). There was no reference to skills policy and limited reference to apprenticeships, reflecting that in Finland VET policy is implemented in a school-based system and apprenticeships are usually undertaken by adults (Pither & Morris, 2020). The language of skills was limited to a specific skill, for example digital skills, rather than used to signify work related or work-based education and training.

Although there was policy divergence as signified by the different emphases on aspects of VET policy, in both Denmark and Finland, there was reference to selection for VET programmes. These were introduced in Denmark during 2015 with the hope that 'the tightened entry requirements are expected to imply that a greater percentage of the students will complete the cho-

sen specialised study programme' (Regeringen, 2017, p. 46) although there was the consequence that 'fewer disadvantaged youths starting vocational training, which could be the result of changed entry requirements for vocational education in 2015' (The Danish Government, 2019, p. 43). In Finland, on the other hand, the system was 'revised to give precedence to applicants newly graduated from basic education and those without an upper secondary qualification or study place' (Ministry of Finance, 2013, p. 27). The policy outcomes in relation to social inequality were potentially divergent.

The picture was also different in the UK. There was probably greatest consistency between the three document sets of Country Reports, NRPs and CSRs, in that apprenticeship policy formed the major part of the dialogue about VET policies. VET and skills policies occupied a significant portion of the UK NRPs but were less emphasised in the European documents. Low skill levels (for example basic skills for adults) and skills mismatches were referenced frequently by the EU. It was noticeable that the changes to policy outlined in the NRPs did not necessarily match with the problems identified by the European Commission, for example the CSR in 2019 recommended 'taking into account regional diversity' (Council of the European Union, 2019, p.8.). but there was no evidence of learning from Scottish VET policy. Similarly, there were few references to addressing adult basic skill levels.

Although England introduced Study Programmes for 16-19 year olds 'to help them move on to higher education or into secure skilled employment' (HM Government, 2013, p. 25) and then to ensure that 'the reforms to technical education will create 15 routes to skilled employment' (HM Treasury, 2018, p. 22)

there were a number of changes of direction between 2011-2019. Many new policies seemed to be aimed at small groups of young people rather than taking a more holistic approach. For example, the introduction of T levels (and indeed the new terminology of Technical Education) will divert a relatively small number of young people from the A level cohort (which in itself attracts less than 50% of the 16-19 cohort), leaving the majority of the cohort to study politically devalued VET programmes, with no government commitment to invest in changes, because they are viewed as being studied by those who do not matter.

The UK government aimed to solve high levels of NEETs post-recession by raising the age for compulsory training (either in education or employment) to 18 (HM Government, 2011), changing the benefits system and by forcing young people to continue to resit GCSE English and Maths (HM Government, 2014). Apprenticeships have been submerged into Technical Education, possibly as a diversion to evade the lack of progress against the bold targets for numbers of starts and attempts to engage employers (by taxing them. These policies have not greatly changed employers' willingness to employ 16-19 year olds, either as apprentices or in jobs.

The Scottish NRPs did not reflect the UK position. The apprenticeship policies adopted between 2011–2019 were presented as a success by the Scottish Government and more focus was directed to the Scottish education system overall (the reforms introduced by Curriculum for Excellence, which directly impacted on the VET sector and also the FE college reform in Scotland) and adult learning, in other words, both iVET and cVET.

Although the European Semester process itself did not appear designed to foster policy convergence, in fact policy convergence

of objectives was observed in the national objectives of three of the four countries (Denmark, Finland and Scotland). However, this was not demonstrably around EU objectives but was more akin to the policy diffusion concept described by Jakobi (2012).

This convergence of objective was not the only aim of the EU. For example, the narrative from the EU established that the targets 'do not represent a "one size fits all" approach' (European Commission, 2010, p. 9). The underlying message from the EU was that VET policies needed to be designed to achieve targets that result in economic improvements; an expectation of convergence of policy outcomes. These outcomes were expressed as targets for completion and attainment of education that would contribute to economic growth.

Although target setting as an aspect of governance (Rizvi & Lingard, 2010) was outside the scope of this study it is worth noting that there is evidence to suggest that this approach was not adopted by all the countries in the study. England (and therefore the UK for reporting purposes in this instance) did not set targets aligned to the EU targets, although Scotland did. The UK (England) chose not to set equivalent targets although data produced by the EU suggests that England in any case made the least progress towards the targets of the four countries in the study.

Finland's policy changes appeared to be more concerned with doing the right thing than producing the right number. Finland also gave the appearance of being more concerned to produce policy to address long term demographic implications rather than responding to the immediate future (Taylor-Gooby, 2017). Whilst Denmark's VET policies might be perceived to be more oriented towards an immediate problem, (school drop out), this was in fact a long-term concern for Danish governments.

5.2 BREXIT: CHANGES SINCE 2017

Since the Brexit referendum the tone of the Scottish NRPs has become more EU centric. Although the Scottish Government makes it clear that it also shared its NRPs with the UK Government and therefore contributed to the UK NRP, the educational data reported about Scotland in the UK NRP was found to differ from that included by the Scottish Government in the Scottish NRP. Additionally, the emphasis of VET policies has changed in both England and Scotland. Studying the NRP coding from 2011-2016 and from 2017-2019 suggests greater differentiation from 'generic' VET policies into apprenticeship policy, particularly in England and adult learning policy, particularly basic skills in England, from 2017-2019.

However, the main emphasis in the UK NRP was on English iVET rather than cVET although in Scotland more policies were directed towards cVET. Over the same periods, European guidance to the UK heavily emphasised apprenticeship policies in every year and placed some emphasis on lifelong learning from 2017 onwards.

A similar comparison for Denmark demonstrated a greater focus on iVET policies (including apprenticeships) in 2017-2019 whereas in Finland lifelong learning and adult learning (cVET) policy references increased in 2017-2019 as did skills and VET policy references. The European guidance for Denmark prioritised apprenticeships from 2011-2016 whilst in Finland these were only emphasised during 2013-2016. There were changes of emphasis, but these were not viewed as responses to Brexit.

DISCUSSION

Viewing Brexit as a crisis as in the 'double crisis' approach outlined by Taylor-Gooby (2017) provided an opportunity to study VET policy production in a time of crisis. As the UK is currently in the transition phase following delays (for various reasons) to the actual departure date, observations about policy production are confined to the immediate post referendum period. The state of readiness (or otherwise) in policy terms for the outcome of the referendum may provide an explanation for the lack of anything other than a short -term approach to policy production evidenced by the UK NRPs. This is made clear by the piecemeal development of technical education policy from 2016 onwards compared with more wide-ranging VET policy reforms conducted in Denmark, Finland and even Scotland over the same period.

The Brexit referendum appears to have had the most direct impact on VET policy production in Scotland and rather less of an impact in England; in other words, tending to intensify the divergence between policies and discourse. As the changes brought about by the Brexit 'crisis' begin to interact with VET policy production, it will be important to revisit this aspect of the study and to consider what other lessons may be learned, in support of future VET policies that may be developed in response to future crises (for example, the Covid-19 pandemic).

6. CONCLUSION AND SUGGESTIONS FOR FURTHER RESEARCH

In each country, the balance between iVET and cVET policies changed over the period of study. Additionally, there was no par-

ticular match between the European 'guidance' of CSRs and CRs in any year and the NRP for the following year or years. The perceptions of what VET policies were necessary therefore differed between the EU and its member states, with no appreciable convergence between the EU and a single member state or between the member states studied. Furthermore, the Scottish NRPs did not display a priority profile similar to the English profile or to the European 'guidance' for the UK. In the main, the response to European emphasis seemed more diluted in each country, presumably by local contextual factors, as previously observed by Cort (2008b). This does not align with the Holzinger & Knill (2005) model of policy convergence through transnational problem solving or international policy promotion.

As previously outlined, the Europe 2020 strategy was viewed as a means of delivering economic and social recovery and growth (European Council, 2010). The frequent references to VET policy within the European Semester may thus indicate that VET was recognised by the EU more as a vehicle for economic and (possibly) social growth rather than as part of an education space. It may also indicate that the European Semester, rather than developing a VET education space (Lawn, 2011) through policy convergence, is reconfiguring into a different form (Papanastasiou, 2019) although this is also an area requiring further research. In any event, the divergence of VET policy outcomes in the four countries studied does not suggest a solely economic rationale, in contrast to the findings of Valiente et al (2020).

To summarise, in response to research question 1, the evidence for either policy convergence or divergence is mixed. Although there was some evidence for a convergence of both objective and outcome, it is thought that policy diffusion rather than formal

mechanisms, may account for this. This being the case, on the surface, VET policies do not appear to have converged in the countries of study either by the development of a common EU policy – Europeanisation – (Alexiadou et al., 2019) or by the harmonisation of national policies into the EU policy – Europeification – (Antunes, 2016). However, below the surface, the discourses of short-termism and of social inequality within VET policy production are perhaps more convergent than might be expected, and perhaps there is a case to be made for Europeification. It is suggested that further research is conducted in this area.

In response to research question 2, the findings indicate English VET policy was already diverging both from other EU member states policy and from EU guidance before the Brexit referendum. This divergence was accentuated after 2016. By contrast, Scotland's VET policies appeared to be converging around objective and, to a lesser extent, outcome with those of Denmark and Finland. This is consistent with the literature on this topic. Whilst Danish and Finnish VET policies cannot be taken as representative of the whole of the EU, this suggested a post Brexit change in Scotland that is not solely attributable to devolution. VET and skills policies across the EU may, over time, be affected by Brexit, as a structural change within the EU, as well as creating new barriers to skills development but as yet there was little evidence of this. In any case, as England had pursued its exceptionalism stance in the production of its VET policies (Keep, 2017), former EU partners may not notice the changes. Unfortunately, the tide of English VET policy production seems to be on the ebb and heading towards a backwater.

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The shift to technical elite formation and residuality: a European perspective

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Abstract: European principles for VET, including those set out in ET2020, draw variously on the distinctive approaches of national VET systems in Europe. Aspirations for 'involving social partners, companies, chambers and VET providers' suggest the mechanisms that support industry-based systems in northern Europe; whilst qualifications frameworks, modularisation, competency-based outcomes and accreditation of prior learning, are associated with marketised systems in Anglophone countries. However, VET in England is increasingly predicated on processes of technical elite formation, characterised by strengthening of employer interest and specialist workplace learning opportunities for those best placed to benefit, whilst others are immersed in routine practices of precarious employment: corporatist processes that informed policy in several European countries have now been sidelined in favour of further marketised approaches. This paper examines these changes by situating an analysis of recent reforms in England within a discussion of the degree of convergence and divergence in contemporary European VET policies. It is argued that whilst the main characteristics of national systems remain intact, the forces

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that changing VET policies in England aim to accommodate are also present in other European states. Whilst convergence on European lines remains excluded, erosion to national systems remains a substantial threat.

1. INTRODUCTION

Tension between national systems of vocational education and training (VET) and pressures for convergence around international expectations increasingly features in comparative discussion of the field. Particularly across the older industrialised countries, VET still assumes distinctive forms within each nation-state, to a greater extent than in other phases of education. However, powerful discourses issuing from international bodies seek to shape policy and provide instruments for adoption and adaptation within individual countries. On the simplest interpretation, this tension could be portrayed as reflecting the contradictions between the nineteenth-century origins of VET systems (e.g. Greinert 2005) and an increasingly globalised world. The European Union plays a pivotal role in this process, although such policies are promoted neither through legal measures nor the subjection of nation states to European institutions, but through soft policy or 'open methods of coordination' (Rafaelli 2003). European bodies, notably its agency for VET, Cedefop, publicise and approve successful policies and models of 'good practice' issuing from nation states, and gently enjoin other nation states to follow their example. Our concerns here, however, are not so much with the form of coordination as with the content of European policy and its tensions between international and national models.

In particular we are concerned with the way the 'standard repertoire of EU policy' (Sćepanović and Artiles 2020) draws substantially on the work of the OECD and other global bodies that are seeking a liberalisation of education but also selects from the established policies of member states or kindred industrialised countries. For example, European policies such as the *New Skills Agenda for Europe* (European Commission 2016) call for 'a strong work-based dimension' including 'the "dual system" of apprenticeships' and the 'strong involvement of business and social partners'(European Commission 2016, 8). In this, respect, EU policies draw on the traditions of countries with strong VET systems that span school and workplace settings such as Germany and Switzerland, or other countries that have developed new or strengthened existing pathways with the support of social partners, including Sweden, Holland and Norway.

Conversely, policy instruments associated with Europeanisation, including qualification frameworks, competences, learning outcomes and modularisation, have their origins in Anglophone countries. The countries making up the United Kingdom (which has devolved education powers to its four constituents) and Ireland provide European examples, although non-European countries such as Australia and New Zealand have until recently advanced more quickly into these areas, the latter providing the world's first qualifications framework in 1991 and the former reducing vocational education to the narrowest forms of competency training during the intervening period (Allais et al. 2009).

Attempts at policy bricolage, pulling together elements from these distinctive systems, imply possibilities for policy transfer but encounter important difficulties. Firstly, the distinctive fea-

tures of national VET are closely linked to wider frameworks of economic and social policy, labour market, institutional and cultural differences, that make it difficult to transplant apparently desirable policies into new soil. Political economists and social policy theorists have sought to establish broad-based patterns of policy that enable the categorisation of various regions with distinctive approaches: so-called Varieties of Capitalism approaches (Hall and Soskice 2001; Busemeyer & Trampusch 2011) put VET at the heart of the clusters of policy that support production systems in different ways across countries; alternatively, different types of welfare state linked to regions of the industrialised world are seen to determine the objectives of education and specifically VET in those countries (Esping-Andersson 1990; Walther 2006).

Secondly, these national systems are themselves subject to contestation and change, at different paces and with different specific effects in each jurisdiction. The explanatory value of regionalised concepts or categories is diminished as neoliberal pressures affect all countries but take different forms in VET policy. In addition to the recommendations and soft policy instruments of international bodies, institutional forms, path dependency, cultural norms and a range of other factors mediate the outcomes of policy.

These issues are examined here in relation to recent reforms in England's full-time further education (the sector where most vocational education is located) and apprenticeships. Whilst England has long been seen as something of an outlier in Europe, or indeed one pole on a continuum of national VET systems (Ryan and Unwin 2001), many of the instruments associated with Europeanisation processes, such as the qualifi-

cation frameworks that followed the Copenhagen declaration, have their origins in Anglophone countries (Allais et al. 2009). Recent reforms to English education and training have particular significance for questions of international convergence. Firstly, apprenticeships and work-based learning, which provided the impetus for many of the devices now integrated into European VET policy, have been subjected to new reforms which call into question some of the instruments and intermediaries created during the creation of an open training market 40 years ago. Secondly, 'technical education' reforms since 2016 which include greater emphasis on learning in workplaces and have been justified and even to some extent modelled on 'dual training' systems, have encountered significant challenges.

The study reported here therefore addressed the question: what evidence do reforms in English further education and apprenticeship provide of the possibilities of convergence around European models? The following section reviews some of the ways in which the convergence of national systems, and (conversely) the persistence of systems diversity, has been theorised; and how such theorisation has made sense of developments during the last 20 years. The next section reports the methods through which this has been tested in relation to further education and apprenticeship in England. The main findings of the study are then set out and analysed, and in the discussion these are compared to equivalent processes in other European countries. This enables us to draw concrete conclusions about the limited possibilities for convergence but also to argue for different understandings of the processes of VET reform currently unfolding across Europe.

2. THEORY AND METHODS

2.1 THEORISING NATIONAL DIVERGENCE AND EUROPEAN CONVERGENCE

The distinctiveness of VET systems across Europe is widely acknowledged as greater than the differences in any stage of schooling or post-school education, owing to the close integration of this phase of education with labour markets, and with the sphere of production: the expectations of entrants to all kinds of jobs, and consequently the levels of prior and in-work training, vary widely across juridictions (Bosch 2017). To this one may add the relatively recent emergence of VET as a form of (or addition to) schooling and the distinctive ways that this has taken place in each country (Greinert 2005). These are sometimes characterised in terms of the locations in which young people have been prepared for employment over the past hundred years or so: through schooling in France and Sweden, in post-school on-the-job training in Anglophone countries and through dual training that spans school and workplace in Germany and neighbouring states. Notwithstanding the frequent oversimplification of national systems that are both complex and dynamic, such characterisations capture important national distinctions which are not easily overcome.

The educational distinctions among national systems however extend far beyond the location in which learning takes place and extends from pedagogic practice and didactics, through curricula to the institutions, cultures and philosophies that powerfully shape practice in educational and workplace settings. Whilst education and training policies are of course important in shaping day-to-day education practice,

even these take place within broader social and economic frameworks that possess their own inertia and powerfully shape educational practice. Institutional frameworks, for example the role of social partners, not only determine the settings within which education takes place but constrain the possibilities of pedagogic practice (Hordern 2020). The cultural differences between educational and employment settings determine such differences as learners encounter in assessment (Sandal, Smith and Wangensteen 2014).

Moreover, beyond the educational sphere, the distinctive approaches of nations to skills formation are enmeshed with networks of economic and social policy (Crouch, Finegold, and Sako 1999). These include the reliance on market mechanisms in Anglophone countries across wide areas of public policy: in skills formation, this takes the for of personal investments in skills in the expectation of short-term returns and lower state spending; this compares to compared to long-term state investments in social spending, including education, in France and Scandinavia; and the corporate investment in mechanisms that support high quality production in Germany and, to varying extents, its neighbours (Becker 1964; Piketty 2020; Sorge and Streeck 2018). The most widely-noted account produced by political scientists depicts 'liberal market' and 'coordinated market economies' (LMEs and CMEs) as 'varieties of capitalism' successful in their own terms (Hall and Soskice 2001). Perhaps the most significant argument from the political science perspective is that these models are self-reinforcing because of the mutual benefits of their policy networks, implying that these would provide powerful forces against European convergence (Ante 2016).

Against this background of national diversity, the European Union and its agencies have increasingly moved towards the promotion of common policies and practices across member states. This process, characterised as Europeanisation, began with a slow movement to support the integration of the then 'Common Market' through recognition of equivalent qualifications (Petrini 2004). However, these have intensified since the beginning of the 21st century. Whilst the principles of subsidiarity and the OMC still hold sway, European policies increasingly seek to identify characteristics that are recommended for adoption across member states. Key milestones in this process have been the over-arching Lisbon strategy and its aim to create a European 'knowledge-based economy'; the Copenhagen declaration and consequent European Qualifications Framework (EQF); the Riga Conclusions (European Commission 2015), New Skills Agenda for Europe (European Commission 2016) and ET2020.

At first sight many features of Europeanisation appear to be instruments to, support the development of standardisation and articulation among different systems. The EQF provides a framework against which all vocational qualifications can be recognised. This in turn is built around the identification of competences or learning outcomes which can be achieved in different countries and education systems, or indeed through work-based informal learning. This of course supports the labour mobility deemed essential to the Lisbon strategy and later articulations of an integrated European economy. From a technical perspective, then, the distinquishing features of Europeanisation can be seen as their emphasis on outcomes, on what the learner can do having achieved a particular learning outcome or competence in any setting. This can be compared to input or process-based

approaches that emphasise what takes place during education and training. The rationale for such instruments may then be explained in terms of quality, transparency and comparability.

Much of the debate in this area has focused on the possibility that such approaches may serve to displace national systems. Early objections focused on the question of whether the EQF introduced in 2002, by creating comparability of qualifications irrespective of where the holder had learnt their skills, would undermine those systems whose strength was perceived as learning in specific domains, in particular the dual training developed in Germany, Switzerland and neighbouring countries. Moreover, the purpose of the framework was to assign equal value to competences gained under quite variant circumstances, without reference to such policies, institutional arrangements and practices as defined curricula, training times, examinations and qualifications (Deissinger, Heine and Ott 2011). Moreover, even the notional equivalence of competence outcomes is understood very differently across European countries: in Anglophone countries competences are defined by the specific ability to perform individual tasks, rather than the broader contextual understandings associated with many other European education and training systems (Clarke and Winch 2015). Most of the instruments adopted from the UK and other Anglophone countries were purposely designed to break down learning to identifiable and observable tasks that could be easily assessed in workplace settings, independently of classroom teaching that might explain its wider significance (Jessup 1991).

These origins are significant for an apparent contradiction at the heart of the Europeanisation agenda: the emphasis on work-based learning and apprenticeship that has characterised many

European documents, particularly since the Riga conclusions and their emphasis on work-based learning (European Commission 2015; ESDE 2015; Cedefop 2018). With successive policy documents and reports emphasising the need for learning at work, apprenticeship and the involvement of social partners, Europeanisation can be seen as a bricolage of liberal market instruments and policies drawn from countries with more collaborative approaches to skills development. Ante (2016) for example argued that countries would implement Europeanisation in ways that most conform to their skill formation systems: that LMEs would retain the instruments they had already developed, whilst CMEs would adapt them in ways that retained the benefits of training across school and workplace settings. This perhaps understates the significance of the liberalising agenda that led to the EQF and related concepts. Coles et al. (2014) who were intimately involved in the development of qualifications frameworks during the 1990s described these as necessary to support the open training markets developed by neoliberal regimes (first in New Zealand and then in other Anglophone countries) as a means of taking education and training out of the hands of providers and placing them in the hands of employers and learners. Work-based learning qualifications including apprenticeships had already been reconceptualised as competence outcome-based education, which could be assessed in the workplace independent of teaching activities (Wolf 1995). Thus, workplace learning on its own does not constitute the foundation of a dual training system: it can equally facilitate the kind of liberalisation of education and training in which the origins of many European instruments lie, and which have the potential to marginalise educational provision and impoverish learning in workplace settings.

In a further twist, however, many features of this out-comes-based regime are now being put aside in England, formerly one of its leading protagonists. Reforms to apprenticeships and in the further education and skills sector in England suggest new directions from the mechanisms that have dominated VET in the country for the last 40 years. The study reported below examined the relationship between these developments and the Europeanisation agenda.

2.2 METHODS

The study reported here addressed the question, what evidence of convergence around European models emerges from reforms in English further education and apprenticeship, through a case study of its two most recent reforms during the decade 2010-2020, using a range of case study methods. These include the analysis of policy documents and empirical findings from a series of studies based on these emerging policies. In the analysis of these materials, the paper draws on concepts of process tracing, which can be used to examine the way policies develop and unfold in practice (Collier 2011).

This in turn determines the way that different methods are used to analyse the evolution, enactment and implementation of policies in this field. In the documentary analysis, emphasis is placed on comparison between key policy documents commissioned or issued by UK policymakers and agencies and equivalent European discourses. Empirical data provides a degree of confirmation as to how these play out in educational practice.

3. RESULTS

The two most significant changes to VET in England over the last decade have taken place in what constitute two quite distinct fields in that country: in apprenticeships, which are predominantly work-based qualifications where students are employed by firms, and in full-time further education, which until recently has included very little time in workplace settings. The findings begin with a review of historical developments that explains how these forms emerged in England; this also has the merit of explaining the emergence of instruments that have become central to Europeanisation. This section then continues with findings relating to each of these two recent policy developments and their implementation. In the following section the paper reviews the relationship between these developments and Europeanisation.

Taught programmes of vocational education in England are primarily associated with its further education (FE) sector, having developed from technical institutions in the 19th century to an uneven pattern of colleges and evening institutes under the direction of local government. In contrast with most European systems, FE was until the 1970s primarily a setting for young people who had already left school and were undertaking part-time post-compulsory studies, usually as apprentices or adults. UK apprenticeships in the post-war period remained subject to voluntarism, with well-organised day-release programmes strongest in the largest firms and the then extensive public sector. However, they benefitted from the support of the state and industry-based training boards after the Industrial Training Act (Ministry of Labour 1964).

The 1980s proved a watershed after the collapse of the youth labour market coincided with the election of Conservative governments committed to neoliberal policies both for industry and education. Alongside widespread redundancies and privatisation in the industries with strongest apprenticeships, this period saw the promotion of private training companies whose main market was the government initiatives such as the Youth Training Scheme (YTS) and later 'Youth Training' aimed to alleviate youth employment, through which they were funded to offer training and brokerage to employers through (Laczik and Mayhew 2015). Apprenticeships planned by employers were increasingly eclipsed by 'modern apprenticeships' at upper secondary level (level 3) which were first introduced in 1994 as a further government-funded scheme. Through a combination of government measures to convert earlier schemes (such as the adult initiative, 'Train to Gain') into apprenticeships, and financial incentives for employers, numbers increased further after New Labour governments from 1997 added Level 2 (lower secondary) qualifications; under Conservative-led governments after 2010 apprenticeship starts increased to half a million by 2016/17 (Keep and James 2011; Powell and Phelan 2019). This explosion of work-based learner numbers, however, took place largely independently of further education colleges, where full-time provision grew rapidly: colleges rather took on the role of 'warehousing' young people unable to find employment. Their full-time courses provided opportunities for students to progress from ostensibly 'vocational' qualifications to post-92 universities similar to the Universities of Applied Sciences in other European countries but led to increasing doubts about weak links to employment practice (Young 2006).

The same period saw the development of qualifications designed to accredit workplace skills through the continuous assessment of competences in the workplace. National vocational qualifications (NVQs) aimed to accredit existing workforce skills, on the premise that observation of work tasks could enable better judgments of learner outcomes than written tests of formal learning (Jessup 1991). These competence-based discourses of assessment and 'delivery' also permeated the growing full-time provision in colleges. Yet they actually served the purpose of diminishing the significance of colleges in favour of the development of the training provider market. As Coles et al. (2014) have acknowledged, the primary purpose of reforms in this period was the establishment of an open training market so that employers and private training providers could dominate education practice, at the expense of those located in publicly funded FE colleges. Qualifications frameworks introduced in the 1990s have supported this by implying an equivalence of all qualifications at the same 'level', irrespective of whether they are taught in school or college setttings, or assessed in the workplace.

The above account summarises a period of complex and continuous reforms matched in few other countries, which not only helped build the private training provider market but led to increasing nubers of young people and working adults with work-based qualifications. The value of these successes has been questionable, either in terms of industrial productivity relative to the UK's leading European competitors, as well as in the development of routes into meaningful employment. The 'quality' instruments supposedly strengthened by emphasis on outcomes and competences have also consistently noted the weak-

ness of many apprenticeships, with the regulator Ofsted recently reporting that 'low-value' courses entailed the accreditation of existing competences, with 'often... too little training whilst at work or during off-the-job learning sessions' (Ofsted 2015, p.7). The New Labour government after 1997 added so-called 'knowledge-based' elements that entailed more formalised learning in the shape of 'technical certificates'. Alongside such generic elements as numeracy and literacy, these were then described as apprenticeship 'frameworks': more cumbersome processes that that were supposed to provide equivalence to German dual training (Boreham 2002), whilst retaining the bureaucratic instruments of competency assessment.

This process provides the background to recent apprenticeship and technical education reforms. The Richard Review (Richard 2012) provided the initial impetus for both. Its purported aim was to simplify the administrative procedures associated with NVQs and competence assessment. Whereas compentences had formerly been assessed continuously through the work of 'assessors' (individuals deemed competent to make appropriate judgements but not necessarily possessing teaching or training skills) during apprenticeship or other work-based qualifications, this was replaced with end-point assessment (EPA), rationalised as restoring a valued mediaeval practice but chiming with government approval of formal tests of the type used in general education (Richard 2012, p.4). Thus competence assessment during the course was replaced by assessment of whether the apprentice had attained the 'standards' required for completing apprentices. This term was used to distinguish the new apprenticeships from the earlier 'frameworks'; the 'standards' were to be created by 'trailblazer groups' that were com-

posed of education and employment representatives but deemed to be 'employer-led' and approved by a government-appointed Institute of Apprenticeships (DBIS 2013; Newton et al. 2015).

There is some evidence that an important purpose of the reforms is to further weaken providers, and that the instruments developed during the 1980s and 1990s failed to achieve this. Certainly, the Richard Review suggests that neither public sector providers (who are estimated to teach less than 30% of apprenticeships) nor private providers are providing the service industry requires. The review calls on employers to take up '...teaching and training their staff, not simply seeing this as a task for the Government or training providers' (2012, 106). This of course implies a strengthening of the employer's role at the expense of providers, including those in the training quasi-market so assiduously developed under earlier, mainly Conservative, governments. It suggests that liberalisation may be achieved by alternative means to those now enshrined in the Europeanisation agenda.

Equally importantly for this discussion, the reforms did not expressly repudiate the earlier mechanisms of learning outcomes, competences and qualifications frameworks, although they do say there should be 'no unnecessary prescription for how an apprentice reaches the desired outcome' (2012, 82). The standard for each qualification is determined by each trailblazer group and particularly at higher levels may include extensive qualifications that are defined in terms of learning outcomes for the course and its components. Indeed, an important part of the reforms has been the attempt to increase the numbers of apprenticeships at level 4 and above at the expense of those at level 2. What is more significant is that such criteria appear to have

displaced the standardisation essential to the regime of competence assessment. For example, where qualifications frameworks sought to demonstrate the equivalence of work-based qualifications to those taught in the classroom, funding for apprenticeships is now provided solely for EPA and for training off-the-job, and this is expected to take 20% of the apprentice's time. This in turn implies a further repudation of the earlier competence regime, since the focus has shifted from continuous assessment to training: the assessor role is now effectively redundant other than for EPA, with assessors urged to develop training skills (UK Government 2015).

However, the extent to which this change provides valuable learning opportunities, and the extent to which the experience of apprenticeship has been transformed depends largely on the level, industry and job role for which it prepares the apprentice. The distinctions found among standards, with those at higher levels and in more complex areas of employment much more likely to include robust qualifications than shorter staments summarising the skills desired in low-way service roles, are also evident in pedagogic practice. Standards for more senior work roles, and those in established fields such as manufacturing, are likely to include substantial off-the-job learning supported by experienced teachers, whilst those for service roles are more likely to be provided in work locations that are often unsatisfactory as locations for learning (Esmond 202).

These apprenticeship reforms are frequently cited in government documents that support the implementation of the second major reform discussed here, the implementation of 'technical education' or 'T Level' reforms. These reforms primarily address what is now effectively the mainstream provision of

FE in England, the full-time qualifications undertaken mainly at upper secondary level (level 3), although they had important implications for progression and for earlier levels of study. They originated in the 'Sainsbury Review' (Independent Panel for Technical Education 2016). Its most distinctive feature is to add to the studies of 16-18-year-olds an 'industry placement' of two to three months. This has also proved its most problematic feature, and lies behind the relatively slow development of T Levels, discussed below.

However, from the perspective of Europeanisation an equally significant feature may be its original proposals to simplify and replace the whole range of vocational qualifications. Earlier (and current) practice has been to allow the 'awarding bodies' to design and market similar qualifications to providers; the Sainsbury Review and the government's 'Skills Plan' released the same day(DfE/DBEIS 2016) instead announced that the whole system could be replaced by a simpler system of 'technical education' with 15 'routes' and 25 'pathways' replacing thousands of vocational qualifications. Significantly, these would be designed by 'employer-led' panels in a more planned equivalent of the apprenticeship trailblazers. Here too, the mechanisms associated with the marketisation of earlier years were not explicitly set aside but appeared to be facing replacement by a combination of direct employer control and centralised planning. Indeed, the Skills Plan in particular adopted a stern tone towards providers and awarding bodies who 'have not provided an effective voice for business' (DBIS/DfE 2016, 11). Moreover, providers were tasked with ensuring that placements met the needs of the employer and student, and to:

ensure that work experience offers challenge and purpose, is set on pre-determined outcomes, and the duration and level of provider/ employer support is tailored to the individual needs of the student. (9).

This raises the question of the involvement of industry and social partners in this aspiration to extend learning into the workplace. The Sainsbury Review opened with a ministerial foreword regretting that earlier reformers had not learned from their international competitors (Boles 2016). An appendix listed practices across international VET systems that include workplace elements. Yet the progress of these reforms appears to have been mainly slowed by the difficulty in securing the necessary placement opportunities for young people to learn at work during extended industry. Instead of the systematic involvement by social partners, the UK government engaged a youth charity, The Challenge Network, to design placements for a round of trials at 26 institutions, covering around two thousand young people. This experiment achieved uneven result, leading to further trials organised solely by providers (Newton et al. 2018). The first round of courses is now planned to begin in September 2020, with only 30 providers still taking part. These will be restricted to three 'pathways': professional construction, software engineering and early childhood educator qualifications. Significantly, plans for higher-level progression have made greater progress than those for the earlier stages of study, although it now appears that the bar for these qualifications will be too high for many vocational students. 'T Levels' (the title references the 'A levels' at upper secondary level) appear increasingly restricted to a small minority of students at this

level in spite of huge efforts and expense by government bodies and agencies supporting this development.

Moreover, among those developments in workplace learning that have already taken place, a gap has already opened up with students in occupations leading to more established skilled roles, mainly male candidates from more advantaged groups whom we have characterised as technical elites, securing the best opportunities through workplace learning (Atkins, Esmond and Suart 2019). For others, particularly young women destined for service and care occupations, workplace learning experiences are more frequently concerned with socialisation into routine and repetitive roles (Esmond 2018). Students are prepared for such differentiation by briefings that emphasise the beviours required for work, rather than their opportunities to learn. If these opportunities provide improved transitions to the labour market for young people, early evidence has suggested that they do so in ways that strengthen reproduction rather than improving life-chances for disadvantaged groups. Both of these reforms are still at a relatively early stage: apprenticeship standards only began to overtake frameworks in 2018-19, whilst the limited implementation of three T Levels at a restricted number of centres began in September 2020. The evidence above suggests that they are more likely to strengthen the liberal market elements already underpinning English FE than to draw on the partnership-based approaches suggested in EU documents.

4. DISCUSSION

This review of these reforms to English FE raises inevitable questions about the future of VET Europeanisation, since in

many respects the reforms can be seen as moving away from, or beyond, many important aspects of the frameworks that have informed Europeanisation. The first question to address, however, relates to how the direction of FE has been determined and how this is to be characterised. The UK government is not alone in presenting its reforms as rational solutions to technical problems rather than as responses to crises, or interventions designed to sustain or alter the balance of power and interest in education, training or more widely in society. However, there is evidence of all of these in recent reforms.

Primarily, the reforms are presented as attempts to address the UK's sustained failures to maintain or increase either its productivity or its share of the world's markets, with the major continental economies its productivity after the Second World War (2020). For most of the last forty years, UK governments have taken the view that these difficulties have stemmed from a loss of managerial prerogative. In the 1980s, this loss was attributed to trade unions, leading to the dissolution of industry training boards and the creation of the training provider market. Currently this view takes the form of calls for 'employer-led' curricula and qualifications, with education providers and awarding bodies currently cast as the most significant obstacles to efficient and effective skills training, as in the Skills Plan (DfE/DBEIS 2016) cited above. This shift manifests itself in the move from a 'training market' (more accurately, a quasi-market) to a directly employer-led system, or a system that imitates this in the absence of widespread employer involvement (Chankseliani and Relly 2015). The direct consequence is that the mechanisms that sustained the provider market have to be swept away. Thus both apprenticeship and 'T Level' reforms clearly represent a depar-

ture from the practices that sustained FE from the introduction of work-based qualifications in the 1980s. However, these changes appear unlikely to lead to any real improvement in the transitions of young people to employment or their preparation either for adult citizenship or productive employment. Financial resources for further education have declined continuously over the last ten years. UK governnments have assumed considerable powers to manage the FE sector, particularly since its colleges were taken out of local government control in 1992, but have been unable to develop consistent long-term policies or devote increased resources to its growth.

However, these changes also benefit from the frustration of educators and educational researchers with the bureaucratic mechanisms of work-based learning and the problematic transitions from FE to the labour market. Wolf, Jenkins and Vignoles's (2006) critique of policies that 'certified the workforce' without really increasing education levels, skills or productivity exposed the fragility of New Labour's target-based policies. Wolf has since become a leading protagonist of recent reforms that both strengthened general education elements and introduced work-based learning to full-time FE programmes. The relative weakness of English VET companed to continental counterparts during recent years has led many to sympathise with attempts to create more direct links to work. However, such links are neither intended to engage with social partners nor to create the conditions for 'collective skill formation' (Busemeyer and Tramupsch 2011). The work-based learning promoted through England's 'technical education' reforms is no less tied to neoliberalism or the OECD's notions of liberalisation (Ollssen and Peters 2005; Kis and Windisch 2018). The reforms discussed

have the potential to provide new and enabling learning opportunities to many learners. However, this appears to be taking place largely at the expense of those excluded from these developments. The fragmentation of VET, with its upper strata overlapping increasingly with higher education and the lower strata increasingly liable to social and economic exclusion, is a widespread phenomenon that cannot be explored fully here.

The relationship of UK government policies to European developments is therefore very different from what might be suggested by a reading of European policy documents. Far from providing exemplars of the managerial instruments that inform Europeanisation policies, the UK government is divesting itself of competency frameworks and the like in favour of a more liberalised skills training policy. Far from developing meaningful arrangements with social partners to support meaningful workplace learning, students on upper-secondary programmes in FE are to be left to deploy their own social capital to negotiate learning opportunities, with inevitably inegalitarian results. Rather than being persuaded of the wisdom of combining 'dual training' with qualifications frameworks and the like by the OMC, further education is racing away towards new levels of liberalisation.

5. CONCLUSIONS AND SUGGESTIONS FOR FURTHER RESEARCH

Some answers are now possible to the original question of what evidence English reforms provided of convergence around Europeanisation agendas. In spite of having (alongside its Anglophone neoliberal neighbours) gifted many instruments to the Europeanisation agenda, including qualification frameworks

and competence assessment, the present UK government has little interest in retaining or updating them. Any continuities appear to derive mainly from inertia. There is no suggestion that these elements will be central to future reforms, although they may carry on living for many years. The liberalisation that UK governments seek has gone beyond the agendas pursued on continental Europe, in a new round of reforms that appear more attentive to the needs of major businesses than the creation of quasi-market mechanisms.

For a European audience, the question inevitably arises of how this divergence relates to the UK's exit from the European Union. VET has assumed a high profile in government announcements about the post-Brexit economy, and the post-COVID recovery, although promised levels of investment have yet to materialise at the time of writing. In the short term, the process of withdrawal, which began with negotiations for a relatively harmonious relationship between the UK and Europe, appears to have deepened into a fundamental distinction between liberal and more corporatist approaches to economic and social issues, which would confirm the direction indicated in this study. In the longer term, policies in England and other UK countries may yet urn out to align more with liberalising changes in Europe.

If this suggests a future focus for research, it may be to provide alternative perspectives for research into policy change in other jurisdictions. To what extent do struggles for control seek to undermine collective arrangements with social partners, or the autonomy of educational instutions? How far can VET be regarded as a continuing coherent system and to what extent is it polarising on the lines of so many older industrialised econ-

omies? In exploring these questions, it is necessary to look beneath some of the benign phraseology of European policy documents, to discover some of the policies at work and where they are heading.

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Integration of Refugees through Access to Their Previous Vocation: A Literature Review[1]

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Abstract: The aim of this review is to examine research about refugees' integration into and access to the labour market in Sweden and internationally through their previous vocation. The method follows the phases of a systematic literature review. The results suggest that both Swedish and international studies focus mostly on factors that impede integration and access. These factors can be reduced to three types of deficit – language, competence, culture and social networks. On the other hand, good language skills, socio-cultural competence, networks and personal characteristics facilitate access to employment. Quality language training and validation processes and co-operation between different agencies, such as employment services, education organisers and employers may also benefit migrants' access to their vocations. Thus, accessing one's previous vocation is a complex interplay between individual fac-

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tors, governmental social integration policies and labour market structures.

1. INTRODUCTION

The integration of refugees triggers academic and policy debates and is a key political debate in Sweden as well as in other EU countries. The debates generally revolve around factors that affect the employment of migrants and their descendants, economic costs and the benefits of migration and integration. Bucken-Knapp et al. (2018), for instance, state that integration of refugees into the labour market is challenging because of economic, political, social and cultural barriers. Generally, it takes about five to seven years for refugees to establish themselves in the Swedish labour market (Joyce, 2015). In this context, it is important to emphasise that there is a critical mass of studies that have identified factors that hinder the inclusion of refugees and other types of migrants in the Swedish labour market. However, there is (to our knowledge), no review of research in Sweden that primarily focuses on factors that facilitate refugees' access to their previous vocation in Sweden. There is some research on the validation of migrants and refugees prior skills, but these studies, similarly, tend to focus on the practice of validation itself and consequences for the individual migrant. The focus of this chapter, hence, is to present an overview of the current state of research on policy and measures that facilitate the integration of refugees into their previous vocations in new host countries and on factors that hinder or facilitate skilled refugees' access to their previous vocation.

We identified two categories of skilled migrants/refugees in the literature – those with tertiary education from their country of origin such as doctors and teachers, and people with different types of vocational training, post secondary or post primary level vocations. In the first category of labour market migrants are "highly skilled migrants" or "designer immigrants" often recruited directly from different countries (particularly from India). In the second category are the refugees which the literature tends to focus on and whom they identifiy as "problematic" – those who struggle to integrate and get a foothold in the labour market related to their vocations. As Mozetic (2018) claims, this refugee categorisation can obscure the competence of refugees. In most studies of skilled migrants, the use of the concept "skilled" refers to professionals who have passed an academic exam. However, there are many vocational occupations (certified at upper secondary school level), where previous education and competence can be validated and formally recognised, and the professionals labelled "skilled". In this chapter the target group is not skilled labour force immigrants, but formally recognised refugees with a previous vocational education from their home countries.

We used databases such as ERIC, Scopus, EBSCO and Science Direct and employed the following search terms (the frequency of resulting hits is shown in parenthesis): migrant*[2] labour market integration Swed* (168); skill* migrant* labour market integration Swed* (15); migrant* validation Sweden (23); migrant* fast track Sweden (3); migrant* labour market measures Sweden (23). In addition, we used search words refugee*; successful work*

2   * Means that different forms of a word were included.

and refugee* successful employment. These search terms were located in "key words" and the articles we looked at were published between 2000 and 2020 and were peer reviewed. We also did several manual searches based on the relevance of articles to the review. The research team read article abstracts and removed duplicates. In the final selection, we included 44 articles based on their relevance to the review questions.

The following review questions guided the analysis:

a) What is the current state of research on policy and measures that facilitate refugees' access to their previous vocation in Sweden?
b) What is the current state of research on and knowledge about factors that facilitate or impede refugees' access to their previous vocation in Sweden and internationally?

Before we delve into this exercise, it is important to briefly delineate the Swedish policy on integration. This will provide the reader with some contextual background for understanding the Swedish research and being able to relate it to the international studies. This review, hence, starts with a brief overview of the Swedish integration policy, followed by studies that have examined measures that facilitate refugees' access to their previous vocations in Sweden. Thereafter, we look at studies that specifically focus on factors that facilitate or impede refugees' access to their previous vocations in the Swedish labour market, followed by international studies on the same theme. Finally, we discuss the Swedish research in relation to the international research.

2. THE SWEDISH INTEGRATION POLICY

Before the mid-70s, Sweden had no coherent policy targeting asylum seekers and their families (who had arrived and been recognised as refugees), to facilitate their integration into Sweden (Borevi, 2014; Castles et al., 2014). In the mid-70s Sweden adopted a multicultural policy based on the three principles of equity, freedom of choice and cooperation. Equity meant that refugees and migrants were given similar rights to native-born Swedes. Freedom of choice meant that the individuals were given the right to choose to assimilate or to maintain their cultural heritage, language and so on. Cooperation spoke to the importance of social links between different cultural groups (Ålund & Schierup, 1991; Ager & Strang, 2004)). This policy was criticised, as the following quotation reveals:

> Sweden had set out on a policy track in the 1970s with the 'multicultural' ambition to support immigrants' ethno-cultural identities. The latter ambition came to be subject to critical re-evaluations already in the mid-1980s. Two government-appointed investigations criticised the goal of actively helping immigrants maintain their ethno-cultural identities, arguing that this in effect risked jeopardising their swift and successful integration. (Borevi, 2014, pp. 713-714)

The second major criticism of the policy stressed gender equity concerns – that the freedom of choice given to refugees regarding integration could lead to immigrants maintaining patriarchal gender attitudes and practices which would clash with Swedish gender equality norms (Ålund & Schierup, 2014).

Subsequent discussions resulted in a government bill that led to Sweden discarding this policy of multiculturalism and introducing its policy of integration (Borevi, 2014; Government Bill 1985/86, p. 98)

The integration system and policy was also criticised because it took time for refugees to access the labour market (see Åslund et al., 2017). Hence, to improve refugees' integration into the Swedish labour market, the policy was reformed in 2009 and implemented in 2010 (Government Law, 2010:197). According to Wiesbrock (2011), the purpose of the reform was to facilitate:

> ...the introduction of newly arrived immigrants into working and social life by encouraging them to become actively employed, clarifying the division of responsibilities between governmental agencies and improving the use of skills of new arrivals (see Section 1 of the Law). It does not, however, alter the underlying mantra of Swedish integration policies of equal rights, obligations and opportunities for all, regardless of ethnic or cultural background (Wiesbrock, 2011, p. 50).

Hence, the main feature of the reform in 2010 was the "establishment programme" (*etableringsprogrammet*), wherein the responsibility for the integration of refugees fell to the Public Employment Service (PES). In the previous integration policy, the "introduction programme" and the responsibility for refugee integration fell to municipalities. This resulted in variations in the way the programme was implemented in the different municipalities. However, there were some common programmes that were implemented in all municipalities, such as "Swedish as a foreign language" (commonly known as *SFI*) and various

civics courses. The core idea of the establishment programme was to facilitate employability of refugees, and the institution that was considered to achieve this core goal best was the PES, which worked closely with the labour market. It is responsible for implementing the Swedish policy and measures intended to meet and match employers' competency needs with individuals who have relevant competencies. The PES was also given the responsibility of providing practical assistance to individuals to make them more employable. This can take the form of short or long trainings as well as other types of support measures such as guidance and counselling or referring individuals to other institutions, if the individual lacks the basic knowledge or skills to be immediately employable.

Those eligible for participation in the establishment programme are expected to meet with caseworkers soon after receiving residence permits. The participants are given an individualised establishment plan and they may choose a private establishment coach. The objective of these private coaches is for them to serve as a link to the labour market and assist newly-arrived migrants to realise their establishment plans.

Integration and inclusion of refugees is a priority for EU countries, but particularly for Sweden since 2015 when they received a large number of asylum seekers. Sweden's objective is to mitigate the marginalisation of refugees and to proactively counteract social problems like segregation, unemployment and inequality between refugees and their hosts. This goal or ambition is the essence of Swedish integration policy today and is explicit in the following instructions given by the ministry of finance to various Swedish agencies during the crisis in 2015:

The aim of this assignment is to give recently arrived work seekers, women as well as men, the opportunity to develop their Swedish language skills, increase their networks and gain knowledge of the different types of work performed within governmental agencies, which could increase their possibility to find future work regardless of the sector of the labour market. (The Government, 2016, p. 2)

The debate about and research on why integration has not been successful have focused on the following topics: 1) language deficit, 2) cultural deficit, 3) skill deficit and 4) discrimination (Osman, 1999; Aldén et al., 2015). Deficit thinking along these lines is at the core of Swedish integration policy as well as measures that stem from the policy. In other words, this kind of deficit thinking is still at the core of current discourse and integration policy in Sweden.

The question of how to integrate refugee and family immigrants into society is high on the political agenda in all the Nordic countries. Since many refugees are low-educated and come from countries with labour markets that are very different from the Nordic ones, their qualifications and experiences are often not a good match for the labour demand here. (Calmfors & Sánchez Gassen, 2015, p. 12)

The point of contention in current discourse as well as policy research on integration revolves around how to remove the obstacles refugees encounter in the process of integration into Swedish society and enhance their possibilities for integration – particularly in relation to the labour market and the role of welfare regimes in this process.

In addition, discussion revolves around the culturalisation of the labour force, where a large percentage of migrants, especially refugees, are either unemployed or at the bottom of the labour hierarchy. This discourse, as Ålund and Shierup rightly point out, tends to locate the problem in the "cultures" of these communities, as is evident in the following statements:

> The view of 'immigrants as a problem' in research and political context is part of a more comprehensive collective ascription of ethnocentric conceptions that are based on and underpin a dichotomy between the traditional and the modern in terms of cultural conflicts, including an understanding of migrants integration as tied to civilising development (Ålund & Schierup, 2014, p. 245).

Finally, it is good to remember that the Swedish policies targeting the process of integrating refugees cover different policy areas such as education, social security and the labour market. In other words, the integration policies are expected to permeate all institutions in Swedish society.

3. MEASURES AND NATIONAL PROGRAMMES TO FACILITATE SKILLED REFUGEES' ACCESS TO THE SWEDISH LABOUR MARKET

To facilitate integration and refugees' access to their previous vocation, the Swedish government has implemented several measures. These measures can be divided roughly into two categories: a) measures targeting individuals and their skills and competences such as language skills, cultural and technical/

vocational skills, and b) measures directed to the labour market to facilitate employers' employment of migrants; for example, start-up jobs and tax reduction. Furthermore, measures typically involve either work practice/internship periods at workplaces and/or education and training such as SFI (Swedish for immigrants) and SFX (a programme targeting skilled migrants, see article by Gougoulakis and Lagercrantz All in this volume).

Pettersson (2014, p. 60) found in her review that measures which had helped foreign-born employees find employment in the Swedish labour market were job coaching and internship, so-called start-up jobs and job tax reduction. In job coaching the Public Employment Services' employees assist job seekers with support and advice in the application process. With start-up jobs, employers qualify for employment subsidies for these employees where they were previously unemployed for at least one year. Job tax reduction means that workers with lower incomes pay less tax than workers with higher incomes; this applies to all workers in Sweden, not only migrants. Validation plays a central role in refugees accessing their previous vocations.

Recognition and validation of competences and prior learning (RPL) is a vital part of measures to facilitate employment in a new cultural environment and has been a frequent topic of research in Sweden. However, Andersson (2007) showed that RPL classifies knowledge and uses assessment criteria based on a formal vocational training framework. This poses the risk that informal skills and competences are not validated. In a study by Andersson and Osman (2008), it was apparent that the validation practice functioned as a dividing practice, which placed immigrants either in subordinate positions or totally excluded them from their vocations. In other words, immigrants'

competences were either given partial recognition or were mis-recognised. Andersson and Fejes (2010) raised the question of transferring knowledge and skills between different contexts.

Diedrich (2013) focused on RPL of newly-arrived migrants and suggested that the difficulties of effectively implementing RPL practices with immigrants may be due to an emphasis on procedural efficiency over a more comprehensive understanding of the heterogeneous nature of migrants' skills. In addition, the study demonstrated how the idea and tools of validation can be translated into relevant socio-material practices of validation, and avoid subjecting people (despite good intentions to the contrary) to alternative forms of discrimination or exclusion. Diedrich (2014) held that migrants' prior skills were difficult to place into the existing stable, standardised occupation classification system and that the validation process was arbitrary and inflexible. He called for a more open assessment that could capture the hetero-geneity and multiple knowledges of skilled migrants. In a 2017 study, Diedrich focused on validation as a framing practice. Inter-estingly, he found out that recognition of foreign work-related experience was a challenge, because vocational experts compared skills acquired elsewhere with the Swedish training system and thus ignored the vastness of foreign experience, including skills and competence. Rodin et al. (2017) perceived another obstacle in the validation process to be complex and lengthy administra-tive procedures, also described by Bucken-Knapp et al. (2019). Rodin et al. (2017) asserted that skilled refugees were a group with a cultural capital advantage but that seemed to struggle with how to operationalise this advantage in their new context.

To facilitate migrants' access to their previous vocation Swe-den has implemented several platforms such as the establish-

ment programme, various introduction programmes and the Fast Track programme (which specifically facilitates migrants' access to their previous vocation). The aim of Fast Track is to help newly-arrived skilled migrants to enter the labour market quickly (Vågen et al., 2019). Thus, the programme contributes both to matching employers' labour needs and faster access for refugees to their previous vocations. A limitation of the programme is that it targets only those vocations and sectors where there is a shortage of employees.

In the evaluation of Fast Track by the Swedish Public Employment Service (Vågen et al., 2019), which also hosts the programme, statistics showed that about 50% of programme participants were employed 19-21 months after the start of the programme. The rate was lower (40%) in higher-level professions where a license was required, such as medical doctors. An underlying assumption about the programme was that cooperation between the Employment Service, the labour market, authorities and educational organisers nationally, which would facilitate continuous dialogue between the different sectors of the labour market, was key to its success (Arbetsförmedlingen, 2017; Vågen et al., 2019). The Fast Track evaluation also called for clarification of the process of matching people and vocations (Arbetsförmedlingen, 2017).

The internhip programme, established in 2016 by the Swedish government, aimed to enhance migrants' Swedish language skills as well as their cultural and contextual knowledge about Sweden. Internships have now become embedded in the national integration programmes. The idea is to match the newly arrived migrants' skills to those required by the workplace, in dialogue with relevant authorities – mainly the Public

Employment Service (The Government, 2016). From the skilled migrants' point of view, however, it seems that the emphasis is more on accessing the labour market, than on supporting their re-entry into previous vocations.

Alaraj et al. (2019) interviewed trainees and supervisors about their experiences of the internship programme. The aim of these practical periods at workplaces is typically to increase the trainee's linguistic and cultural knowledge about working practices in Sweden and society at large, and seldom however, as the researchers stated, to increase Swedish workplaces and Swedish society's linguistic and cultural knowledge about migrants. In their results, they wrote that the trainees were regarded both as a resource and as people who represent multiculturalism. The trainees felt that they had learned both language and cultural practices; however, they were framed as refugees and guests and not integrated members of the workplace. In this context, the measures tailored to facilitate the integration of migrants into their areas of competence were informed by or based on the idea that refugees need to compensate for language, network, and cultural deficits for them to be employable and competitive in the labour market. And these measures are aimed at bridging these deficits.

4. FACTORS THAT FACILITATE OR IMPEDE SKILLED REFUGEES' ACCESS TO THEIR PREVIOUS VOCATIONS IN SWEDEN

There is a relatively large body of research in Sweden identifying factors that facilitate or impede refugees' access to their previous vocation. These factors can be divided into three categories: micro-level factors connected to individuals, such as language or

vocational skills; meso-level factors related to workplaces, such as recruiting practices and job coaching; and macro-level factors involving societal measures such as integration policies. In the literature, we found that most studies concern the micro level, for example, through interviews with refugees. But in their stories, the meso- and makro-level factors are also visible. Another important observation in relation to factors which facilitate and impede was that it is not a case of "either/or" – the same factor can both facilite and impede access to a vocation.

In some studies, the quality of language training was emphasised as important. Rodin et al. (2017), who interviewed participants from the Fast Track programme, claimed that despite respondents' appreciation of language training, they felt that this training was not always linked to vocational language and secure establishment in the labour market. Bucken-Knapp et al. (2018) explored how Syrian refugees experienced the introduction programme in Sweden, and their findings suggest that the migrants, mostly the well-educated, were critical of the quality of the language lessons. Lack of teacher-driven lessons, mixed groups, lots of self-study and arbitrary assessment of students' language skills were conditions that were criticised. In the evaluation of Fast Track, Vågen et al. (2019) said that a successful measure for strengthening vocational knowledge and Swedish language skills was vocational practice. In relation to the criticism mentioned above, it seems important that migrants believe that language training should be connected to their vocation, something that is perhaps easier to fulfill at work places. The findings of Rodin et al. (2017) showed that workplace training was appreciated among the participants of the programme, and one reason is the opportunity of language training. It is also

important to emphasise that language development should continue even after employment is secured.

Andersson and Fejes (2010), who investigated the process of validating migrants' vocational competences, claimed that validators shared the opinion that mastering a vocational language was important, but that they held various arbitrary assumptions about the language level needed for employment, something that affected their assessment. When validators perceived migrants to have a lack of vocational words and concepts there was the risk that real competences would remain invisible to them.

Another important factor in the literature is connected to cultural competence. Teaching participants about Swedish society is integral to the introduction programmes which aim to inform participants about Swedish values. Findings from a questionnaire survey conducted with participants in the Fast Track programme for teachers in Sweden suggested a significant development in teachers' participation-oriented beliefs about learning (Economou & Hajer, 2019). The opportunity to learn cultural competence was identified as an outcome of vocational practice (Rodin et al., 2017). Besides lack of cultural competence and language skills, unfamiliarity with the context was stressed as an explanation for the lower employment rate among refugees (Dehghanpour Farashah & Blomquist, 2020).

There were significant differences among firms that recruited non-Western refugees, as Daunfeldt et al. (2019) found in their study of Swedish labour market statistics. According to their results, companies in service sectors such as hospitality, transport, and healthcare were much more likely to hire unemployed non-Western migrants than companies in high-tech and manufacturing industries. Furthermore, firms with non-Western

managers recruited more than four times as many unemployed non-Western migrants than firms that had no managers with non-Western origins. The researchers explained this by highlighting the importance of social networks or that employers prefer hiring individuals who are demographically similar to themselves (see also Osman & Thunborg, 2019).

Backman et al. (2020) analysed long-term individual occupational trajectories of refugees over 22 years (1991-2013) in Sweden, based on longitudinal statistical datasets. In their year of arrival, the majority of refugees were actively seeking a job or studying. However, the number of individuals who had jobs increased over time and after ten years of arrival over one third of the refugees were employed. This varied a lot between people from different regions – people from the Balkan region had the highest level of employment after five years. People from the Middle East region worked mostly as entrepreneurs. From an education point of view, the results suggested that education from their country of origin per se did not help them to secure stable employment, but did help prevent them experiencing a period of persistent inactivity and thus increased their chances of employment. The researchers therefore emphaisized the significance of recognition and validation of prior learning. Their results indicated a mixed picture of refugees' long-term labour market integration. Over a third had had a successful career pathway, that is, had been rapidly employed or become successful entrepreneurs, but well over one third (especially older and female refugees) had experienced less successful career pathways, suffering consistently long periods of inactivity, without work or study. The researchers concluded that successful career pathways seemed to depend on cultural proximity (Backman et al., 2020).

5. COMPARING INTERNATIONAL AND SWEDISH RESEARCH ON FACTORS WHICH FACILITATE AND IMPEDE REFUGEES' INTEGRATION

Both the international and Swedish research we reviewed stressed that language proficiency was a key factor in either broadening or limiting migrants' opportunities for employment (e.g., Johansson & Sliwa, 2016; Musgrave & Bradshaw, 2014; Roberts, 2013; Ganassin & Johnstone Young, 2020). As Eggenhofer-Rehart et al. (2018, p. 40) state, in a study of refugees in Austria, "… language proficiency is a prerequisite for connecting with natives and getting access to both training and volunteer work". Insufficient language skills in the host country hinder formal job searching, for example, in writing applications and being successful in job interviews (Werwiebe et al., 2019). In an Australian study, Major et al. (2014) highlighted the central role language plays in the social inclusion or exclusion of migrants in workplaces. Both self-imposed exclusion due to lack of confidence using English and active marginalisation by colleagues and customers were identified as critical limiting factors in migrants' careers. In this respect, interpersonal relationships at workplaces play a crucial role and language learning and social inclusion are dialectically related (Major et al., 2014; Piller, 2014). However, in a Swedish study by Bucken-Knapp et al. (2018), they noted that the criteria for assessment of language skills are not always clear. This is a point which is neither discussed nor problematised within the language deficit paradigm in most Swedish and international studies that identify language as both an impeding and facilitating factor for the integration of refugees into their previous vocations.

Many international and Swedish studies focused on the problems refugees and migrants face on their journey to regaining their previous vocations, and as a consequence studies may give a picture of factors that are necessary for succeeding. However, there are not many studies of refugees that explicitly focus on what facilitates refugees' access to their previous vocations. One exception is a recent study by Ganassin and Johnstone Young (2020) who studied factors that supported professional reintegration among five highly skilled refugees in the United Kingdom. Many of the factors they described are already mentioned in the Swedish studies, like language proficiency and cultural competence, but the researchers also revealed the importance of motivation and resilience among the individuals, and the ability to build social and professional networks. In addition, refugees had experiences that hindered their professional reintegration, like local bureaucracy, legislation, financial constraints and mental illness. Further, Ganassin and Johnstone Young (2020) talked about the importance of intercultural communication and interaction – that successful factors for migrants' access to their previous professions were, for example, curiosity and openness to another culture and an ability to interpret and evaluate other perspectives and practices.

Some studies of refugees who have succeeded in becoming employed in their new country also stressed the importance of personal factors (Verwiebe et al., 2019; Obschonka et al, 2018; Pajic et al. 2018). In a study of non-European refugees in Austria, Verwiebe et al. (2019) found that personal agency and a proactive approach to seeking opportunities was key to overcoming initial barriers. Others aspects mentioned were high levels of work motivation and a willingness to restart their career. Some-

times this included giving up their original professions. Personal agency was also essential for establishing social ties in the host country. As Ganassin and Johnstone Young (2020) found, volunteer work could be one way to increase contact with native populations. Gericke et al. (2018), who interviewed Syrian refugees who had been employed in Germany, were interested in how different kinds of social capital were used by the refugees to find employment. They found that horizontal bridging social capital, i.e., having family members or friends of the same nationality or ethnicity more often led to low-skilled work, while vertical bridging social capital, e.g., contacts with social workers, volunteers, co-workers and supervisors were valuable resources for attaining more adequate employment.

Something many refugees face is the loss of career capital. In an interview study of Afghan and Syrian refugees in Austria, Eggenhofer-Rehart et al. (2018) used Bourdieu's concept of capital to examine how refugees acquired and converted different forms of capital in their struggle to enter the labour market. Their findings revealed that all capital forms were strongly devaluated in the host society. Some refugees with a completed professional education did not always invest further in their profession because of the difficulties involved in getting their vocational knowledge formally recognised. Some of them even preferred to retrain and become certified in another profession, something that seemed to be more valuable in their job searches. Eggenhofer-Rehart et al. (2018) believe that institutionalised capital can even be a burden for highly skilled refugees when strong professional identity and fear of status loss drive them to stick to their previous professions, despite the challenges in doing so. A conclusion made by Eggenhofer-Rehart et al. (2018)

was that refugees' labour market integration is only successful if they strive for new career capital and renegotiate existing career capital while the host society supports these efforts.

When it comes to support from society, Werwiebe et al. (2019) found that Austrian labour market institutions interact with refugees' agency in complex ways – by setting up strong barriers and by providing opportunities. Other researchers examined how barriers in the host society threaten refugees' fundamental identities. Wehrle et al. (2018) stated that the inability to re-establish their previous careers can threaten refugees' identities. Their profession was not only important for financial reasons, but also for their self-definition. Refugees could also find stigmatised identities such as "unemployed refugees" and "benefit scroungers" imposed on them. Their findings concur with those of Ng Chok et al. (2018) who studied nurses with refugee backgrounds. The challenging factors for the nurses were loss of control, shock in a new environment and a bleak employment trajectory, wheras reconciling with a new reality, establishing a new identity and hope for the future were factors that facilitated their transition into society and the working place. Although, Wehrle et al. (2018) found that combining the protection of their previous identities with a restructuring of these identities to suit the new situation was also a successful strategy.

Dehghanpour Farashah and Blomqvist (2019) employed a quantitative approach to identify migrant workers' most important qualifications from an employer's perspective and to explore factors that influenced employers' attitudes towards migrants. The researchers used European Social Survey data that include responses from managers in European countries in 2014 (N=2,828) and 2016 (N=3,014). Their findings showed that

migrants' employment and career outcomes were not merely influenced by their human capital and qualifications but also by employers' values and cultural expectations. The researchers concluded that for the managers, migrants' commitment to the host country's way of life was more important than their job skills, educational level and language proficiency. With the empirical implications of these findings in mind, the researchers recommend that migrants be offered courses in language and job searching techniques, and that labour market integration initiatives should encompass working-culture orientation (Dehghanpour Farashah & Blomqvist, 2019).

6. DISCUSSION

In this chapter we reviewed both Swedish and international literature to illuminate the complex question of refugees' access to their previous vocation in their new host countries. First, we described the development of Swedish integration policy over decades and identified a shift from a multicultural to an integration policy especially aimed at labour market integration. To achieve this aim several measures were taken and programmes introduced, including both language and cultural training.

In both the Swedish and international studies, there are common themes about how integration and refugees' access to previous vocations in their new host country are constructed. Most studies focused on impeding factors, understood in the form of four types of deficit: language, competence, culture and lack of relevant networks in their new host society.

The deficit model is typical, and implies that refugees have weak language skills and lack the relevant cultural capital, networks and cultural competences. Many international studies

support findings that weak language skills limit the employment prospects of refugees. For instance, researchers in sociolinguistics stress the importance of migrants' linguistic proficiency, and emphasise how the degree of language proficiency can either widen or limit migrants' employment opportunities (Johansson & Śliwa, 2016; Musgrave & Bradshaw, 2014). But they also point out that language proficiency in the host community does not automatically lead to social inclusion (Johansson & Śliwa, 2016; Piller, 2014). There are also studies suggesting that the focus on migrants' language deficiencies can itself create a feeling of exclusion (Butorac, 2014; Major et al., 2014; Piller & Takahashi, 2011). Robert's (2013) study showed that a lower employment rate among migrants could be the consequence of a lack, not only of language proficiency, but also cultural skills and familiarity with the context. Further, Major et al. (2014) emphasised that social inclusion is not solely about getting a job, it is also about feelings of connectedness, acceptance and opportunities for development and advancement in working life. Hence, interpersonal relationships in the workplace play a crucial role and language learning and social inclusion are dialectically related (Major, et al., 2014; Piller, 2014).

Unlike the studies focusing on deficits, Ganassin and Johnstone Young (2020), focused on success factors in studies of skilled refugees who had re-entered their previous vocations. Many of the factors they described were also found in the Swedish research, like language proficiency and cultural competence, but the researchers also stressed the importance of individual motivation and resilience, and the ability to build social and professional networks (see also Verwiebe et al., 2019; Obschonka et al., 2018 & Pajic et al., 2018).

An important aspect is the employer's attitude. Dehghan-pour Farashah and Blomquist, (2020) suggested that migrants' employment and career outcomes were not merely influenced by their human capital and qualifications but also by employers' values and cultural expectations. The researchers concluded that for managers, migrants' commitment to the host country's way of life was more important than their job skills, educational level and language proficiency. This indicates that socio-cultural competences are important for employment. For an individual, the ability to interpret and evaluate perspectives and practices in a workplace and act on the basis of this knowledge can be a real door-opener. This is in line with the concept of intercultural communication (Ganassin & Johnstone Young, 2020) and Lave and Wenger's (1991) ideas about becoming part of a community of practice. But talk of adaptation can lead to the assumption that migrants are forced to abandon their cultures and traditions to fit in and to gain employment in their new societies. To avoid such a conclusion, one need only compare migrants with anyone entering new employment, where the keys to success are the same as mentioned above: observe, interpret and act accordingly. According to Daunfeldt et al. (2019), when firms already had non-European employees, they were more likely to hire non-European people, which makes the entrance of the first employees to the workplace even more important. If they are accepted as participants into the community of practice, they can function as door-openers for others and contribute to the development of a more inclusive workplace. However, if employers exercised the same abilities pointed out by Ganassin & Johnstone Young (2020) – curiosity and openness to another culture and an ability to interpret and evaluate other perspec-

tives and practices – one could argue that this would also facilitate migrants' access to their previous vocations.

When we compare the Swedish with the international literature, it is apparent that, regardless of context, studies identify similar factors that impede the access of refugees to the work sectors in which they have previous competence. Factors that make it more difficult to gain employment in a previous vocation are lack of competences, difficulties with transferring vocations and vocational knowledge between different societies, difficulties with matching, difficulties with the validation process and long administrative processes. Some studies highlighted migrants' criticism of the quality of the language training they were offered.

However, these impeding factors can be turned around and highlighted as potentially facilitating factors. Good language skills, socio-cultural competence, networks in the new context and personal characteristics may facilitate access to employment, despite a jobseeker having low qualifications. Furthermore, quality language training and more effective validation processes as well as co-operation between different agencies, such as employment services, education organisers and employers may benefit migrants' access to their vocations. Thus, accessing one's previous vocation is a complex interplay between individual factors, governmental policies for social integration and labour market structures.

Finally, it is important to stress that an understanding of the deficits identified above should be used to implement measures that facilitate refugees' integration into the labour market. In other words, measures that attempt to ameliorate the different deficits. There is, however, very limited research on the factors

that facilitate migrants'success. Such research could be important for developing more appropriate policy programmes and measures. In our forthcoming study, we will examine factors which facilitate the successful inclusion of refugees in the professions that suit their prior knowledge, experiences and competences (Teräs et al., in press).

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Regional collaboration for integration and competence – The case of Swedish for immigrants with previous professional training (Sfx)

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Abstract: The purpose of this study is to map the existing cooperation with regard to the SFX program in the Stockholm region for newly arrived immigrants' establishment and integration into the labour market. The research question was: What works and what can be improved in the existing collaboration for a more efficient SFX program. SFX is education for adult immigrants in Swedish as a foreign language with a focus on professional language, organized in collaboration with all the municipalities in the Greater Stockholm region and the Stockholm County Board. The aim of the program is to shorten the time it takes to get employment or entrepreneurship, so that immigrants can rejoin their own area of work. The analysis is based on a qualitative interview study that is currently being conducted (spring 2020) with various stakeholders involved in SFX. The analysis is also based on previous studies of SFX, relevant research literature and a review of policy documents related to SFX. The preliminary results indicate that the dis-

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tribution of responsibilities regarding SFX collaboration is not very specific; the education's focus on working life needs to be strengthened and reflected in the content; the collaboration with the actors that could streamline the individual's path to further supplementary studies or work is blurred; the participation of important actors in SFX planning and implementation is not satisfactory. SFX has so far been much appreciated and has all the prerequisites to develop into a more cohesive organization with steadier coordination, provided it becomes part of a regional player's operational responsibility for the provision of adult education and skills.

Keywords: SFX – Swedish for Immigrants with previous professional training, regional collaboration, integration, municipal adult education (komvux)

1. INTRODUCTION

The responsibility for the establishment of newly arrived immigrants is divided between several state, municipal and civil society actors. Among other things the municipalities provide education in Swedish for immigrants and orientation to society as well as other initiatives to facilitate establishment in the labour market, while the County Administrative Board 's task is to promote collaboration on establishment initiatives between relevant municipalities, authorities, enterprises and organizations.

One of the initiatives developed in the Stockholm region is SFX, Swedish for immigrants with previous professional training) (see https://sfx.se/). SFX is education for adult immigrants in Swedish as a foreign language with a focus on professional language, organized in collaboration with all the municipalities

in the Greater Stockholm Region and the Stockholm County Administrative Board. The aim is to shorten the time it takes to get an employment or entrepreneurship, allowing immigrants to reconnect with their own field of work. In the current situation there are programs for eleven different occupations. In addition to the language instruction with a specific focus on vocational vocabulary, the program includes study visits, external lectures and work-based training or mentoring in some programs. SFX has existed for two decades; today it constitutes part of the region's infrastructure for adult education and competence development and is a common concern for all the municipalities in Stockholm County (Stockholms län), the County Administrative Board in Stockholm (Länstyrelsen I Stockholm) and the Municipal Association of Stockholm County (Storstockholm).

This article highlights preliminary results from a qualitative interview study currently being carried out (Spring 2020) with various stakeholders who are involved in SFX. The purpose of this study is to survey their views on the existing collaboration with regard to SFX within the Stockholm region for the establishment and integration of newly arrived immigrants in the labour market. The analysis is also based on previous SFX studies, relevant research literature and a review of policy documents related to SFX. The collaboration study was carried out within the framework of a major research project consisting of four sub-studies that shed light on the SFX program from different perspectives. The purpose of the project is to provide a basis for proposals that result in more participants being given the opportunity to follow a suitable SFX program, which hopefully leads to a greater extent to employment in a profession that corresponds to their skills.

The sub-study on which this article is based examines whether the collaboration within Stockholm region regarding SFX is appropriate. What works and what can be improved, in the existing collaboration for a more effective SFX, is the question we attempt to answer in the above-mentioned sub-study[3].

2. THE SFX PROGRAM 'SWEDISH FOR PROFESSIONALS'

Since 2001, target-group-specific education in Swedish for newly arrived immigrants has been offered in Stockholm County. The first SFX program was for the medical professions, started initially as a project financed by the European Social Fund. Today, there are ten such programs aimed at participants with different professional backgrounds. In addition to the above-mentioned *Swedish for medical staff*, similar programs are arranged for *bakers*, for *craftsmen and welders*, for *engineers and architects*, for *bus drivers*, for *educators*, for *entrepreneurs*, for *economists, lawyers and social scientists* and for *programmers*. The purpose of SFX has been to streamline the learning of Swedish language and make it easier for professionally competent immigrants to get into working life quickly (https://sfx.se/; Stiessel Fonseca, 2016).

All SFX programs are based on certain common assumptions, prerequisites and goals. They have been around for two decades and have been the subject of recurring surveys and evaluations:

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3   The other sub-studies that will be carried out explore SFX education from adult pedagogical, participant and working-life perspectives.

> *The SFX idea has its origins in many years of experience from*
> *practical integration work of newly arrived refugees and immi-*
> *grants. The picture that emerges from decades of state and munic-*
> *ipal immigration policy is that the entry of newcomers into*
> *Swedish society is an odyssey whose capricious entanglements*
> *take place with the best of intentions. However, the goal of rapid*
> *integration is lost as the action machinery rolls on in accordance*
> *with well-designed drawings. The journey becomes long and*
> *full of unpleasant adventures that break down and demotivate.*
> (Höghielm & Gougoulakis, 2008, p. 64)

The intention with SFX is to emphasize the professional identity of the participants when learning Swedish for immigrants (SFI). The underlying pedagogical idea concerns vocational learning, which means education should primarily be workplace-based and connected to the participants' professional identity.

Evaluations have shown that SFX, in contrast to traditional SFI instruction, has been an appreciated form of education by the participants, facilitating their establishment in the labour market. A total of 60 percent of all SFX participants had an employment two years after completing their education and seven percent continue their studies. This is a more positive development compared with similar individuals who complete a regular SFI education (Länsstyrelsen Stockholm, 2017). However, relatively few of those who have completed SFX get work in their professions. This may be partly due to weak interaction between education and the labour market, which is also pointed out in previous evaluations.

The evaluations also state that various collaborating actors involved in SFX, are governed by different logics that may

impede SFX's further development and potential to improve the participants' prospects of getting a job in their professional field after completing language studies, thus providing a stable basis for labour market establishment and integration.

Considering that SFX started as a regional initiative and has become a matter for all municipalities in Stockholm County, it is important to map the collaborating parties' views on their collaboration with regard to SFX's significance for the region's work to promote competence and integration.

2.1 INTER-MUNICIPAL AGREEMENT ON SFX

SFX relies on cooperation between the municipalities in the county of Stockholm; it is coordinated by the Stockholm County Association of Local Authorities (County Association/Storstockholm). One of the basic ideas about SFX is that the municipalities should cooperate so that students from all 26 municipalities with the same professional background can participate in an SFX program arranged by a municipality which is not necessarily the home municipality. All the 26 municipalities in Stockholm County have signed an agreement and a letter of intent stating that all eligible students who match the respective program's requirements and wish to pursue his/her studies in an SFX program should have the right to attend, regardless of municipality of residence.

The agreement sets out certain criteria that must be met for an SFX to be approved:

·   *SFX should be aimed at individuals who already have professional experience and/or vocational education*

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- *SFX should address the persons who are entitled to study SFI (Swedish for immigrants)*
- *SFX should provide a vocational language education adapted to the current professional area*
- *SFX must be based on and adapted to the individual's existing knowledge and experience*
- *SFX must be designed and executed in close and active collaboration with actors concerned with the profession*
- *SFX should receive applicants from all the county's municipalities and admission should, as far as possible, take place continuously during the year.*
- *SFX must respond to the needs of the labour market.* (KSL, 2012)

The municipality that wants to start an SFX program needs to consider the above criteria and to specify in its application submitted to the County Association the content of the education, the objectives and the admission criteria; it should also present a cost estimate. The decision to set up a new SFX program is taken by the committee within the County Association that is responsible for issues related to adult education. The organizer of SFX can be an adult education institution under the municipality's own auspices or an individual organizer who has an agreement with the municipality to conduct SFI and municipal adult education.

Each municipality's commitment is to refer potential participants within the relevant target group to the respective SFX provider, who then assesses whether the person in question should be offered a place or not. Upon the acceptance, the home municipality undertakes to pay the SFX provider

inter-municipal compensation according to a price list. In addition, it is the responsibility of the organizer of SFX program to assess whether the student also needs to participate in vocational courses at upper secondary level, but then an approval from the participant's home municipality is required as it may affect the inter-municipal compensation.

The agreement also regulates the coordination between the SFX municipalities by financing a coordinator post. The coordinator's tasks may include serving as a contact person for the municipalities vis-à-vis the SFX organizers and coordinate joint activities for them, as well as continuously disseminating information about SFX and establishing contact interfaces with employers, trade unions and authorities.

3. STOCKHOLM MUNICIPALITIES' SFX COLLABORATION FOR FASTER WORK TRANSITION

From the previous section, it appeared that the SFX programs are the result of collaboration between different actors at the regional level around Swedish with a vocational focus for new arrivals. Collaboration of this nature, of which SFX is an example, is a clear statement of educational policy in Sweden. To put SFX's activities in a wider adult education and labour market context, a selection of activities is presented below that are aimed at basically the same target group. This is to illustrate existing regulations and recommendations in favour of collaboration between municipalities in the regions.

3.1 COLLABORATION AND ADULT EDUCATION

Adult education is an extensive activity. Publicly funded adult education consists of municipal adult education (*komvux*), special education for adults (*särvux*), Higher Vocational Education (*Yrkeshögskolan*) and popular adult education (*folkbildning*). Municipal adult education also includes education in Swedish for immigrants (SFI). Adult education should provide a good foundation for students' further education and a platform for the national and regional provision of skills for working life based on individual's needs and conditions. In 2019, a total of 261,219 students studied in municipal adult education, 61,000 at the basic level and 201,000 at the upper secondary level. The proportion of foreign-born students during the same year in municipal adult education was 56 percent. In SFI, 153,003 students participated, of whom 57 percent were women and 43 percent men (Prop.2020 / 21: 1).

Among those who completed SFI in 2015, two years after completing their studies, 29 percent had stable employment (22 percent women, 37 percent men), 15 percent precarious employment (12 percent women, and 19 percent men) and 17 percent a weak position in the labour market (18 percent women, 16 percent men). Furthermore, 2 percent studied in higher education (2 percent women, 2 percent men), 11 percent pursued other studies (15 percent women, 7 percent of men) and 26 percent were in the category for those neither studying nor working (32 percent women, 20 percent men) (a.a.).

Adult education is increasingly seen as an important instrument for managing the regional and national provision of skills. Since 2009, the National Agency for Education has been conducting annual regional dialogues (Skolverket, 2019b) on adult

education with politicians, managers and school leaders as well as representatives from regions and the Swedish Public Employment Service. These dialogues cover all regions of the country, addressing a range of areas of the municipalities' adult education. In the latest compilation of these dialogues, collaboration is highlighted as an important area under development. Several participants emphasised in the dialogues that organization, management structure and a broad holistic view of adult education are important; it is therefore necessary to collaborate both within the municipality, across different administrative boundaries, and between municipalities to solve the challenge of the provision of skills in society (a.a.).

Collaboration on adult education occurs to varying degrees and extents within municipalities and regions, including issues such as vocational education, learning centres and validation. The development areas that collaboration revolves around include needs analyses in educational planning, creation of joint course offers, better coordination and division of responsibilities between different collaborating actors, further development of pedagogy and flexible study forms and study support such as distance education and vocational training in combination with language education.

The tasks of adult education are complex and there are large differences in the municipalities' financial conditions and organization, as well as the opportunities for studies for adults that the municipalities offer. That is why cooperation and united action from both the state and the regions are encouraged in various initiatives concerning adult education and skills. One such initiative is, for example, *regionalt yrkesvux* (regional adult vocational education), which is part of the government's new knowledge boost; another is SFX, which is the focus of this article.

3.2 REGIONALT YRKESVUX (REGIONAL ADULT VOCATIONAL EDUCATION)

Collaboration on vocational education within municipal adult education at the regional level is advocated in an ordinance which came into force in 2017 (Förordning 2016: 937). This ordinance contains provisions for state subsidies for vocational education in municipal adult education at upper secondary level that is planned and conducted in collaboration between municipalities (*regional yrkesvux*/regional vocational adult education). In order to apply for the state grant, at least three municipalities need to collaborate on planning and implementing the program, provided that they together co-finance the program (number of training places) that corresponds to the education for which they receive state funding (see Skolverket, 2019a).

Another condition that must be met in order to receive a state subsidy, according to the ordinance for regional vocational adult education (2016: 937, section 20), is that there must be one or more professional boards for consultation. These professional board(s) should help to develop collaboration between education and working life, promoting work-based learning of high quality. The Vocational Board(s) should assist the municipalities by highlighting the needs in working life and arranging places for workplace-based learning in the program.

The provision of *Ykesvux* educations should be planned after consultation with the stakeholder who has regional development responsibility in the county, and with the Swedish Public Employment Service. The cooperating municipalities must

(a) show the need for training;

(b) offer an opportunity for validation

(c) offer study and vocational guidance and in the planning and implementation of the education, make use of the student's previously acquired knowledge and skills. (a. a.)

According to the Government's budget (Prop. 2019/20: 1), an expansion of vocational education in municipal adult education makes it possible for more unemployed people to enter the labour market. Collaboration within the regional *Yrkesvux* initiative also includes involvement in working life and aims to develop skills that are in demand in the labour market. It also offers people the opportunity to develop and strengthen their employability and conditions for both the public sector and businesses to provide the skills required (a.a., p.146).

However, what this collaboration looks like varies between regions. Even before regional *Yrkesvux* was introduced, collaboration structures and processes existed in certain regions. The introduction of regional *Yrkesvux* contributed to the further development and deepening of existing collaborations, while new ones were established. The Municipal Adult Education Inquiry (SOU 2018: 71) states that there may well be several measures regarding regional vocational adult education that could improve the opportunities to achieve a wider range of education offers, with more efficient and coordinated locations of the education programs, and to increase the number of training places, which would help reduce unemployment and strengthen the provision of skills (p. 408).

One main reason for investing in regional *Yrkesvux* has been the difficulty many municipalities have in providing certain pro-

grams themselves due to the large investment costs. Through collaboration, more municipalities can get the special state subsidy and share the expenditure the education entails. In this way, even resource-poor municipalities can gain access to a rich range of education and training programs, in close cooperation with authorities and important stakeholders from working life. What is characteristic of the education provisions in regional *Yrkesvux* programs is that they should meet the regions' needs of skills and competences. It is therefore not surprising that certain vocational orientations in high demand in the labour market such as "care and nursing" and "children and leisure" dominate regional *Yrkesvux* (see Skolverket, 2019a).

The number of students in regional vocational adult education increased by 20 percent between 2017 and 2018, while participants in *Yrkesvux* studying in combination with SFI or Swedish as a second language (SVA) more than doubled during the same period. The number of participants studying an apprenticeship vocational program (lärlingsvux) in combination with SFI or SVA also increased by 54 percent. In total, 10 percent of the participants in vocational adult and apprentice Yrkesvux, in 2018, combined vocational studies with SFI or SVA. A large proportion of vocational adult students were born abroad, in 2018 amounting to almost 50 percent. Of these, 26 percent had lived in Sweden for less than 4 years (a.a.).

Although the number of students increased between 2017 and 2018, the Government stated in the Budget Bill for 2020 (Bill 2019/20: 1) that regional vocational adult education has not developed as expected. In addition, the National Agency for Education's follow-up showed that the municipalities were not able to use more than three quarters of the state grants they

applied for in 2018, which is attributed to the then relatively good situation in the labour market. [4]

3.3 DIMENSIONING INQUIRY (DIMENSIONERINGS-UTREDNINGEN)

For better planning and dimensioning of upper secondary education, including adult education, based on regional and national needs for skills, the Government initiated a special inquiry (SOU 2020: 33). The inquiry's assignment included proposing a regionally based model for planning and dimensioning upper secondary education, investigating how the responsibility between the state, the municipalities and other stakeholders should be divided in upper secondary education, and proposing a financing model.

In its proposals regarding planning and dimensioning, the inquiry assumes that the need for vocational training in municipal adult education will probably increase at a rapid pace and needs to be expanded. With reference to regional *yrkesvux*, it is proposed, among other things, that the municipalities must cooperate at the regional level on planning and dimensioning vocational education, as follows:

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4   In the latest government Budget Bill (Prop. 2020/21: 1), the government announces that the initiatives in vocational education in municipal adult education will continue. To make it easier for more municipalities to use the state subsidies and offer opportunities for more adults to have access to vocational adult education, the government has amended the ordinance (2016: 937) on state subsidies for regional vocational adult education. The new provisions mean that the requirement for municipalities to co-finance regional vocational adult education is significantly reduced and a special compensation level is introduced for *yrkesvux* that is combined with SFI or SVA.

- by entering into a collaboration agreement to form a collaboration area that gives all individuals who belong to it the opportunity to apply freely for education programs offered within the collaboration area
- the municipalities introduce and are responsible for regional branch boards to strengthen the labour market connection of vocational education
- all cohesive vocational education should include workplace-based learning
- the municipalities are permanently compensated financially via the general state subsidies, with the opportunity to apply for a state subsidy for compensation to the workplace used for learning, for costs for supervisor training for apprenticeships and for support measures for combined education (SFI and vocational courses)
- the state's influence over dimensioning should increase and for this purpose the National Agency for Education will be commissioned, after dialogue with the municipalities, to decide on regional frameworks for the provision of all cohesive vocational education in municipal adult education. (SOU 2020: 33, see p. 27 *et seq.*)

3.4 NATIONAL VOCATIONAL PACKAGES (YRKESPAKET)

Another relatively new feature in adult education is the national vocational package, which consists of cohesive vocational programs (Skolverket, 2020). Vocational packages consist of a specific combination of courses in subjects that are relevant to different vocational areas. The National Agency for Education designs the vocational packages in consultation with industrial

experts and they can also be used in municipal adult education at upper secondary level and in municipal adult education at upper secondary level in combination with SFI or courses at the basic level. The municipalities that carry out vocational training in municipal adult education can choose whether and how to use the national vocational packages. The opportunity to offer flexible combinations of national, regional or local professional packages based on the needs of the labour market is large. It is also possible to combine several national vocational packages or supplement them with other individual courses than the recommended ones, all based on wishes and needs. This is considered to be in line with the aim of introducing vocational packages, which is to create more ways of developing skills in demand and a basis for further studies. There are currently more than 50 different professional packages, and the number is expected to grow as more industries ask for them.

3.5 OBLIGATORY EDUCATION DUTY (UTBILDNINGSPLIKT)

Since 1 January 2018, there has been obligatory education for newly arrived immigrants who are judged to be in need of education to get a job. This obligation is included in the Government's labour market policy initiative (establishment program), which aims to get more new arrivals into work more quickly. The "philosophy" behind this initiative is justified in the following way:

> *Effective use of time from day one is fundamental to effective establishment. Everyone who can work should work and contribute to our common welfare. Important tools for shortening the*

time to find work for those who have been granted a residence
permit are:
Early competence assessments
Swedish from day one
Clear demands on the individual
Obligatory education
Fast track to occupations in demand.
(Regeringskansliet, 2018)

Obligatory education is one of many initiatives in the Swedish Public Employment Service's (AF) establishment program for new arrivals. AF assesses the education that is appropriate for the individual's needs and conditions and can be conducted within the framework of a labour market policy program with activity grant, development allowance or establishment allowance. The funds for obligatory education are included in the standard compensation that the municipalities receive for the reception of new arrivals referring to various forms of adult education. Within the framework of establishment, the intention is for the new arrivals to strengthen their employability in Swedish working life by acquiring the knowledge required to match a job, embracing other labour market initiatives or participating in further studies. How long an individual is subject to some form of establishment measure depends on whether he or she can be matched to a job or other relevant efforts are made to get him or her work. The assessment is made by AF on the basis of the policy "everyone who can work should work":

All new arrivals should normally take part in SFI, civic orienta-
tion and other initiatives in order to establish themselves in the
labour market. If a person has previous work experience and is

judged to be able to be matched to a job, this is what should be
in focus. Obligatory education applies to those individuals who
are thought to need education in order to be matched to work.
(Regeringskansliet, 2017)

Obligatory education also applies to new arrivals who already
have an education and/or work experience. They must also take
part in SFI, civic orientation and other initiatives to be matched
to work. The Government, together with the social partners,
has established various initiatives in the form of fast track to
the occupations in demand to take advantage of the new arriv-
als' education and professional experience so that they can start
work more quickly.

3.6 THE KLIVA-INVESTIGATION

In which ways education that forms part of the above men-
tioned "education duty" initiative, can be offered to newly-ar-
rived immigrants is one of the tasks of KLIVA, the Investigation
on improving quality and equality within komvux (municipal
adult education) concerning students with Swedish as a sec-
ond language. The KLIVA's tasks also include investigating the
need for change in the municipalities' programs for Swedish for
Immigrants (SFI) and the ways in which SFI can be combined
with other education. Its preliminary report (KLIVA 2019)
assesses various quality-raising steps concerning the execution
of, in the first place, compulsory education, but it also refers to
other student groups in adult education.

   One of KLIVA's starting points is that educational efforts for
those embraced by the education duty must be made in the light

of the mission of adult education and its pedagogical competence, and of labour market policy demands for full-time activity for the participants based on each individual's requirements and circumstances. This means that the problems that today are connected with the division of leadership and responsibility should be dealt with by systematic follow-up and quality-assessment work. KLIVA also points out the importance of shaping the education in a way that makes it possible for every student to assimilate it:

> *Responsibility for the education being able to adequately meet the students' needs lies with the organiser, who among other things must allocate sufficient and relevant resources and organize the education in an appropriate way.* (a.a., p.13)

Based on a pedagogical assessment of what may be considered effective education for a newly-arrived immigrant and what may be considered reasonable conditions for organising an education program that is sufficiently flexible and individualised, KLIVA recommends "unstreamed education". By this it means a cohesive education that consists of a number of courses selected to meet the target group's common needs and circumstances. Responsibility for the education being allocated adequate resources (financial and organisational) lies with the organiser, as does the production of a pedagogical plan for the unstreamed education.

In this way, according to KLIVA, a structure will be created that facilitates cooperation between different groups of staff and forward planning for the organisers regarding resource allocation and support programs, including teacher competence development. In its memorandum, KLIVA supports the Municipal

Adult Education Inquiry (SOU 2018:71) with regard to adult teachers' competence development in the field of newly-arrived adults' learning, and submits its proposals to the National Agency for Education to support education organisers in their work of developing an education plan for cohesive education.

The above report exemplifies the existence of a large number of educational efforts aimed at the "new arrivals", which have been initiated by different authorities. These include the government, the region, the municipality, but also the European Union via, for example, the European Social Fund. From case to case, authorities, municipal and regional administrations, education organisers and labour-market partners collaborate in the execution of these educational efforts. What is common to all these efforts is that: a) ad-hoc efforts with different organisational, financial and pedagogical conditions arise; b) they are dependent on some kind of collaboration between various actors; and c) they suffer from a lack of long-term planning, with consequences for the sustained development and quality of the programs.

4. A THEORETICAL PERSPECTIVE ON COOPERATION

Cooperation has a long tradition in Sweden's political history, resting on a well-developed culture of trust. However, it requires sustained anchorage work among many participants if different interests are to be brought into line. Since cooperation at the regional level, as is the case in adult education, is based on voluntariness, the prospects for it being realised and functioning are that there are clear incentives, not least financial ones. What is important for long-term and sustained cooperation is that it is based on a firm structure with formalised division of responsi-

bility and continuous follow-up in order to ensure stability. The cooperative structure should also be characterised by flexibility, adaptability and willingness to change if it is not to stagnate.

Stability and flexibility are concepts that occur in a system-theoretical perspective on the structure of organisations. The traditional perspective emphasises the importance of well-defined roles and relations (Bolman & Deal, 2005). Such organisations are inspired by scientific management conditions and are characterised by a high degree of standardisation, central planning and clear division of work concerning defined tasks that seem realistic and understandable. The aim is to achieve the greatest possible functionality and efficiency. By means of constant follow-up and analysis the organisation's management tries to eliminate problematic behaviours, optimise other more result-oriented ones or add new ones. The model is technical-rational, building on the idea that the work can be steered with rationally-expressed goals and methods anchored in scientific knowledge and proven experience. Co-ordination and control, according to this model, are central in an organisation's management and decisive for its stability and efficiency.

Stability is considered to benefit the organisation, which is dependent on the permanence of its work (Abrahamson et.al. 2000), a high degree of the formalisation/standardisation of the steering and decision-making process and predictability (Ahrne & Hedström, 1999). By means of central planning, well-defined procedures and specialisation the organisation tries to minimise uncertainty and maximise stability. On the other hand, the same qualities that benefit stability in organisations in normal periods may be a disadvantage in times of rapid change since they tend to be rigid and less adaptable. Activities that take place in

dynamic and changeable environments benefit from being flexible and more easily adapted to circumstances; they dare to test new ways of working. According to this perspective, the focus is on increasing what is right rather than on reducing the number of mistakes in complex social systems. Such systems function thanks to the people who work in them being flexible and adaptable rather than because the system is perfectly designed (Besnard & Hollnagel, 2014). Thus stability and flexibility seem to emerge in part as each other's opposites, but the answer is to find the right proportions for maintaining an organisation's vitality and functionality

Co-operation is important for being able to deal with today's complex social problems. The more changeable and complex a society is, the greater the need for collaboration between different actors in order to deal with urgent problems effectively. But how is successful co-operation achieved, in a municipal context, for instance, and what factors promote or prevent these problems? Co-operation can work with various external actors, as well as between different administrations / policy areas within the same municipal organization, and involves interplay between them that is regulated and co-ordinated within certain economic and organisational frameworks. Functioning interplay depends on trust and confidence as well as on access to resources and supportive steering and management structures.

A mapping (Oxford Research, 2015) of the way co-operation between different actors in adult education and other activities functions, in order to increase access to and adaptability in adult education according to the target group's needs, lists some over-arching issues. These include:

a) co-operation between The Employment Agency, The Social Insurance Office, The Social Welfare Office, the various local district administrations, folk high schools, interest organisations and project activities in education and the labour market
b) what fields are embraced by the co-operation and what characterises it with regard to division of responsibility, formal contacts between the various actors involved and long-term activities
c) whether and how the individual's needs and present life situation form the starting point for the co-operation

Similar issues have been addressed during our interview conversations about collaboration over SFX with relevant actors. The same report also highlights the results of another research review on factors influencing successful collaboration by Mattessich, Murray-Close & Monsey (2001), who identified a number of collaboration factors related to:

(1) *context/environment*, which deals with the tradition of collaboration and the political and social climate in which collaboration takes place
(2) *membership characteristics* (relationships and responsibilities), and which relate to the partners' trust and confidence in each other, clear division of responsibilities and motives for collaboration
(3) *structure processes,* which concern the supporting structures and the flexibility required for a functioning collaboration

(4) *communication*, which is about the possibility and ability to inform, discuss and establish contact channels both internally and with other actors,

(5) *purpose*, which is related to the object of the collaboration itself and its identity (goals, vision and specific aims of the collaboration)

(6) *resources*, both material and symbolic, including personnel competences.

Danermark & Kullberg (1999) have compiled a number of factors that can affect a collaboration process, categorised as those that inhibit and those that promote collaboration (see Table below).

Table: Factors that inhibit or promote collaboration (by Danermark & Kullberg, 1999)

Factors that inhibit collaboration	Factors that promote collaboration
- Vaguely formulated goals - Different knowledge traditions and professional goals - Different financial interests - Diverse organizational structures - Unclear division of responsibilities - Asymmetrical relationship between the collaborators - Separate ethical practices - Poor coordination - High staff turnover - Heavy workload	- The activities are organized in common districts/sectors - Limits of liability have been determined in an appropriate/ distinct manner - The operations are located in one place - Management is coordinated - Collaboration includes all levels in the organizations that are to collaborate - Teamwork where everyone is involved - Joint development projects are conducted - Joint competence development is pursued - Financial incentives exist - Mandatory legislation exists

These factors apply to a large extent to SFX collaboration in Stockholm County and will be taken into account in the presentation of results and in the discussion.

5. METHODS AND REPORT ON RESULTS

5.1 METHODS

The interview survey was based on a strategic selection of people in different areas that were considered relevant to the SFX program. The interviews were conducted with principals, deputy principals and teachers from the four SFXs included in our study[5], the Swedish Public Employment Service (AF), the Stockholm Region, the County Administrative Board and the Ministry of Education.

In the interviews with the four principals, the assistant principal or teacher participated in all conversations. In the interview with the employment service, three people participated who represented different areas within AF. Individual interviews were conducted with a representative from Greater Stockholm, the Stockholm Region and the County Administrative Board, as well as the Ministry of Education. The researchers both actively participated in all the interviews.

The interviews were in the form of conversations with open-ended questions concerning various aspects of collaboration. Other issues focused on: SFX as a form of education, the basic pedagogical features of the education and important areas of development. Due to the current Corona pandemic, most of the

5   The four SFX programs are: Swedish for craftsmen and welders (Sfh), Swedish for educators(Sfp), Swedish for engineers and architects (Sfinx), Swedish for medical staff (Sfm).

interviews were held via digital communication channels instead of, as planned, physical meetings. Most of the interviews were recorded via the digital tool Zoom, but two took place physically and were recorded via mobile. The conversations lasted between 50-90 minutes and were transcribed in their entirety. Before the interview, the respondents were informed about the issues that the conversation would cover.

5.1.2 RESULTS

The presentation of results is structured on the basis of the factors presented in the theory section: Context, Relationships and Responsibilities, Communication and Structure, Purpose and Resources. The interviewees' names and affiliation in the utterances cited are anonymized and replaced with numbers. The numbers 1-4 represent school leaders, 5-10 other informants affiliated with SFX.

5.1.3 CONTEXT: THE "SFX FAMILY"

SFX as a form of education is described as an intensive language education in Swedish with a clear vocational orientation towards language teaching. How the education is organized, however, varies among education providers and among professional areas. There is a need on the part of the municipalities to clarify what is meant by SFX: to know what is offered to the participants and what to expect from the education from the municipalities – what they pay for.

> *The major issues discussed by the municipalities are: What constitutes an SFX? And what makes an SFX?*

Identifying SFX is difficult. It has been a mixture of SFI and SF(X) and here the different groups have been mixed. As a result, the home municipalities have had to bear the cost of supplementary vocational training. (1)

A recurring discussion regarding SFX aimed, for example, at craftsmen, is how these differ from other forms of education with a focus on language and vocational courses. It happens that SFX participants have been mixed with students in regular SFI programs who do not belong to the SFX target group. One difficulty in creating a clear identity may be the variation between the different SFX specialisations.

However, there is a declared ambition to create a common identity of SFX as a form of education, something that is sustained by the designation "SFX family". Joint annual meetings are arranged for the teaching staff, where they have the opportunity to listen to invited speakers and be informed about current issues. There is also regular contact with other SFX organizers in the country.

5.1.4 RELATIONS AND RESPONSIBILITIES

A prerequisite for creating sustainable relationships is that there is trust and confidence between the parties. The interviewees talk about the need for collaboration between employers and education and about a mutual responsibility to create relationships for lasting collaboration.

It's about creating chains so no one is lost on the way and to involve employers so the people get work right away. (10)

The lack of collaboration between the labour market and job-seekers is described as leading to a "hell hole", what appears to be an almost insurmountable obstacle to entering working life in the professions that the participants already have. One way to overcome this obstacle is to facilitate a relationship between employers and jobseekers.

> *Work place-based learning makes you to hook up with the employers. It's very important that they get out into the labour market. As soon as you've met Mohammed, [you realize] Mohammed is great, he's on time, obviously you want to hire him later.* (1)

In the quote, the interviewee describes how employers prefer to employ people like themselves in terms of cultural and ethnic background: "I prefer to hire those who remind me of myself". This often-dubious attitude towards the others, which in various ways deviates from the current norm in terms of linguistic and cultural background, can change when employers meet jobseekers and a relationship emerges.

When it comes to relations between municipalities and other stakeholders within SFX, the responsibilities need to be developed and collaboration strengthened. Even if there is a common goal that concerns integration and helping people to get into working life, the task is made more difficult by the fact that there is no one who has the overall responsibility.

> *There's nobody that takes formal ownership responsibility of SFX. If you look at it from a larger competence perspective in the county, it's the same thing. There is none and it has to do with the uniquely strong municipal self-government.* (5)

It seems that there is a lack of formal responsibility for SFX as a form of education. This is despite the fact that there is an agreement between the municipalities in the county; this however, does not regulate ownership very clearly, leaving room for different interpretations from the participating municipalities.

5.1.5 RESOURCES AND PURPOSE(S)

If the purpose of the education is to be fulfilled, resources are required, both financial and timewise. Some SFX educations are more resource-intensive than regular SFI educations, which can affect the municipalities' willingness to send participants to SFX.

> *Employers need to give more time, create possibilities for newly arrived [immigrants] to get involved in their work activities, to learn the language. Organising traineeships is a matter of resources. A financial matter.* (2)

> *SFX is somewhere twice as expensive or more compared to regular SFI or Swedish as a Second Language. For the municipalities this creates uncertainty if too many SFX students start showing up. It steals from the other business.* (1)

As SFX is a regional matter, collaboration should include all key stakeholders so as to better utilise existing resources and fulfil the purpose of the education. Positive synergy effects arise when, for example, the municipal adult education and AF (the public employment service) coordinate their educational and integration efforts.

It's turned into a battle between "short-way" initiatives and SFX. It's been about cooperation with the university. Getting an internship too, they do not always get it at SFX. (10)

There is a competition between different forms of education, between the municipalities' adult education and educations that are under AF, with its integration assignment (SKL, *Arbetsförmedlingen* 2017).

5.1.6 STRUCTURE AND COMMUNICATION

Sustainable collaboration requires well thought-out and robust management and a good organizational structure as well as effective communication channels. The results illustrate the complex picture regarding structure and communication that prevails between the various actors regarding SFX; this constitutes a serious challenge to collaboration.

There's not one single agency that you can turn to and ask. There's also the county administrative board that comes and pokes around, integration and some other stuff... It's very tricky... Dual steering, really, and an exciting landscape to orient in. For SFX it's a huge drawback that there isn't one actor. (---)

We can't guarantee that this person I have sent to the adult education centre will be taken care of there. There are no links that work, people slip through the cracks and it is frustrating for us who work here (....) It will not be the group that works with this in adult education and AF. Even if we meet regularly we have no common material and structure with the clients. (10)

There is uncertainty between different actors about how they should act best to support new arrivals in education and further into gainful employment. Although the municipalities have an agreement about SFX, it happens that municipalities reject applicants on the basis of sometimes unclear grounds. This may be partly because the agreement invites different interpretations, which suggests that a review of its content should be made so that the structure around collaboration becomes stronger.

Successful integration work, from an individual and societal perspective, requires a formalized structure characterized by effective communication, established routines and consensus:

> *People enrolled here need, for example, child care and registration at the tax office, and then they're supposed to come to AF. Suppose I come from Afghanistan, have never been here before, have children, have never been to school, don't know what AF is, what Social Services is... It's the responsibility of the municipality that there's child care, so that we can enrol the persons and so they can participate in the activities, to get an allowance. If we had closer collaboration, sat together, these people would get established so much faster. Now one person is doing this, another is doing that, and another one's not here...* (10)

6. FINAL DISCUSSION AND TENTATIVE CONCLUSIONS

The results of the interview study on co-operation concerning SFX between the municipalities in Greater Stockholm that are presented here are preliminary and hence tentative, since this study forms part of a larger study that is not yet completed.

This co-operation, in various forms, to produce and offer education programs aimed at achieving integration and labour-market goals, is encouraged and returns as a standard recommendation in adult education documents, at both the national and the international level. The role of adult education to increase the employability of individuals has become increasingly important; it provides an effective ground for the establishment of new arrivals on the labour market as well as for the provision of competence in both the public sector and business life.

The co-operation has proved to be at its best when common goals are to be achieved. Its strength lies in its synergy, with effective use of resources and lower costs for planning and executing various activities. It builds on mutual trust, structure, responsibility and obligation to report. It is dynamic. It is important for its ability to deal with today's complex social problems. The more changeable and complex a society is, the greater the need for co-operation between different societal actors to deal with urgent problems effectively. Co-operation to provide flexible solutions in adult education regarding organisation, working methods and forms of work based on the individual's needs and circumstances is urged in various reports and not least in the curriculum for adult education.

There is a demand for close co-operation between education actors who complement each other, offering various solutions that are suited to the students' needs. This co-ordination also applies to business life, The Employment Agency and the labour market partners since it facilitates the transition from education to the labour market. Functioning co-ordination involves creating a cohesive link to further studies or work. It includes making outreach and recruiting activities more effective as well

as increasing the relevance of the education to the labour market and hence the participants' employability.

SFX programs have proved to be an appreciated and successful form of education for new arrivals who have attractive professional competence for Sweden and/or university education from their home country. Evaluations carried out so far have shown that immigrants who have followed the SFX program and studied Swedish of a professional nature have a higher rate of employment than those who have studied ordinary Swedish for Immigrants (SFI). Other advantages of SFX as an education concept are that the Swedish lessons are given to homogeneous classes, that they are adapted to the educational level of the participants, and to varying degrees the individual programs are given in collaboration with universities or colleges or businesses. The time usually taken for a new arrival to learn Swedish and possibly retrain to take part in working life is considerably shorter for those who take part in an SFX program. This is partly because the education is aimed at well-defined target groups and partly because the content of the language training has proved to be more effective, leading more rapidly into working life compared with those who follow the ordinary SFI program.

In contrast to vocationally-oriented adult education, which is combined with SFI and Swedish as a second language and is part of regional vocational adult education (yrkesvux), SFX is not vocational training, nor is it a combination education. It is an SFI language program aimed at vocational Swedish for new arrivals who already have a profession. So, whereas the aim of yrkesvux is to offer a wide range of programs corresponding with the needs in different regions, the aim of SFX is to bring to the labour market already existing competence. SFX began as a

regional project, was seen as a regional matter and is generally appreciated by the various actors in the region. Although SFX is important for all the municipalities in Stockholm County, it seems to lack a definite organisational home, which more clearly and more naturally was linked to the region's mission to provide competence and integration.

SFX started in the very early 21st century as a successful project that later became a more permanent activity embraced by all the municipalities in Stockholm County. SFX in Stockholm County has also inspired other municipalities in Sweden to follow suit. Nevertheless, our interview material indicates that SFX co-operation is still struggling with a number of uncertainties that weaken the activity's stipulated responsibility to be a connected chain that establishes new arrivals on the labour market, even for individuals outside the mission of establishment.

The combined impression from the so far conducted interviews is that SFX as an education program is characterised by short-sightedness and temporary structure. This can be interpreted as meaning that SFX suffers from a certain project disease, which risks dooming it to a relatively peripheral existence within the region's adult education work.

The division of responsibility in SFX is not very clear; its orientation towards working life needs to be strengthened and reflected in its content. Its co-ordination with its surroundings which would make the individual's path towards further, complementary studies or work is blurred, and the participation of important actors in the planning and execution of SFX is not adequate or is totally lacking. This is reflected in SFX's unclear identity as a form of education, its lack of long-sightedness and, by extension, in need of a more cohesive and robust collabora-

tion (and co-ordination) with respect to its mission. Its unclear identity is also due to the divided picture given by different SFX programs in respect of its anchorage in work places and learning, guidance and validation. A more systematic co-ordination between different SFX programs will in all probability contribute to the development of SFX as a complete form of education.

SFX has the potentiality to be the strategic venture that promotes a positive climate of growth in society, increasing the quality of life of new arrivals and decreasing feelings of alienation – provided the competence of new arrivals is recognised, enriched and utilised to an optimal extent and provided it receives the political attention and support it deserves. In a regional perspective, SFX can function as an infrastructure for good integration work by allowing it to become a meeting place and an arena for societal information, advice and guidance, support for business life and recruitment, education and lifelong learning.

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The potential value of social representations for comparative TVET research. A Mexican case study

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Abstract: What people think and feel about labour depends on their personal experiences but also on the (sub-)cultural context they live in. And it depends on the ways, labour is organized in this culture: From the ways of recruiting new workers, to wages, etc. the social perception of labour may differ considerably between cultures.

We grasp such social representations of labour, in the forms of ideas, beliefs and feelings which are recorded and remembered in a collective way and can be understood by analyzing its manifestations.

We suppose that social representations of labour are crucial for individual educational choices and job selection. By means of an in-depth qualitative approach, we analyse representations of non-academic work in Mexico shown in artefacts. By reveiling connotations, stereotypes, etc. linked to non-academic labour data, we contribute to theory building regarding poten-

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tial options or barriers for trans-national transfer of vocational educational systems.

1. COMPARATIVE TVET RESEARCH IN TIMES OF CBET APPROACH (AND AFTERWARDS)

How useful is comparative vocational training research in times of globalisation? Can it provide helpful insights for globally active people and corporations into different forms of qualification and work? And does it contribute to (depending on the intention) facilitate integration, profit creation and poverty reduction, etc.?

At the turn of the millennium, the promise of comparative research seemed to have become somewhat weakened. It was believed, this kind of research could add to academic debate. But for practical purposes, given the globalisation of population movements and production sites, it seemed more efficient to focus on the *results* of qualification process: competencies. Any differences in the production of knowledge and skills could be regarded as a kind of black box, so to speak. The important issue would no longer be where and how long somebody studied or was trained, but what the results of this process had been.

Even before experts in Europe started to design, discuss and coordinate competence frameworks, systems for the recognition of previously acquired qualifications had been created in Chile, Argentina, Colombia or Mexico in the early nineteenth century.

The reasoning behind Competency Based Education and Training (CBET) was somewhat compelling: If it no longer

matters in which institution, by which certificate and in what period of time a qualification is acquired, but only what a person knows and can do, then at last people will be appreciated for what they are. And they will be hired and paid according to their skills instead of their social capital. In particular, the ILO (International Labour Organization) and its Uruguayan branch, CINTERFOR (Inter-American Centre for Knowledge Development in Vocational Training), pursued the CBET approach as it promised to overcome social and educational borders. In Mexico, the National Council for the Standardization and Certification of Labour Competencies (Consejo Nacional de Normalización y Certificación de Competencias Laborales, CONOCER) started to develop a list of competence standards for numerous fields of activity. Up to now, a total of 29 sectors are listed in the National Register of Competence Standards (Registro Nacional de Estándares de Competencia, RENEC).

The debate about CBET had a rather unintended side effect: Comparative TVET research lost weight due to the concentration on the output side of education and training. In the 1980s and 1990s, there had been numerous attempts to understand different systems of vocational education and training in Latin America (and to understand one's own in a new light from this distance) (cf. the systematisation by Deißinger and Frommberger, 2010), but also studies by Georg (1997), or fundamental considerations by Lauterbach (1994). In Latin America, researchers such as Arnold (1989), Clement (1999), Greinert (1997), Lehner (1994) and Wallenborn (2001) had described institutional structures of education and training. Additionally, studies on the informal sector (in summary: Bayón, 2008)

were overshadowed by the promise that competence orientation could also overcome these barriers.

Yet since the euphoria regarding CBET has slowly subsided (Clement, 2016), comparative TVET researchers have been re-establishing the traditions of structure and system descriptions. For Latin America, this is demonstrated in Clement and Oelsner (2016), Oelsner and Richter (2015), Schoenstedt-Maschke (2013), Sevilla (2017) and Wolf (2011); for Mexico Cáceres-Reebs and Schneider (2013), and Wiemann (2018).

However, the criticism of CBET has also left its mark on comparative educational research itself. Wasn't it true that long descriptions of demographics, complicated educational institutions, and labour market statistics in some strange way always seem to miss the really important issues – the glue, the logic, the mutual understanding that could explain how all the institutions, facts and figures come to life? Where forms of training and employment are only described by listing institutional structures (types of school, certificates, authorisation systems) and empirical data (labour market, education), something essential is missing – this is becoming increasingly clear.

Therefore, system-theoretical considerations in the tradition of Luhmann found their way into comparative TVET research early on, and triggered considerations about those communicative and meaning-related logics that coordinate institutional and individual actions. Also, sociological concepts such as the description of labour market regimes or psychological approaches (e.g. on professional identity or self-concept) give hints to social connections beyond the level of institutions and structures. The complex coordination between educational aspirations and selection, labour market and allocation,

demand and supply, norms, interests and emotions, state, private sector and individual action, etc., cannot be understood entirely through the description of structures. And competences may have a closer relationship to social context, as the CBET concept makes us believe. Rather, humans have socially-shaped perceptions, normality assumptions and expectations, in which such structures (often in a rather reduced way) are condensed and reflected.

2. INCLUDING CULTURAL ASPECTS TO A MORE COMPREHENSIVE APPROACH

Such considerations have led to repeated attempts to develop schemes for a comprehensive description of TVET and labour in other countries. The *International Manual of Vocational Training* (*Internationales Handbuch der Berufsbildung*) is an example here. After an intensive discussion, the editors devised a guide for the preparation of country reports, which includes subjective perspectives and typical educational and employment careers in the guidelines for country studies, so as to obtain a more comprehensive view of foreign training systems.

Economic research also points out that labour markets and corporate actions can only be understood against the background of socio-cultural differences. Sagiv and Schwartz (2007) formulate that organisations are shaped by the societies around them, the personal values and priorities of their members, and the core tasks of the organisation. To characterise such cultures, they propose bipolar dimensions such as embeddedness versus autonomy, hierarchy versus egalitarianism, and mastery versus harmony.

Cameron and Quinn (2006) developed their 'Competing Values Framework' based on empirical studies on the characteristics of organisational culture and extensive factor analyses. Their model contains a four-field matrix between the poles of flexibility and discretion, and stability and control in the vertical; and internal focus and integration, and external focus and differentiation in the horizontal. As a result, clan and adhocracy correspond to the values of flexibility and discretion, and hierarchy and market to those of stability and control.

Wolf (2011) proposed an analysis scheme specifically related to the relationship between vocational training and the labour market. In order to describe the work-cultural background of employment and qualification, Wolf names six dimensions (labour regime, labour law, technology, collective actors, social security and institutional order).

Those classifications help to understand that TVET systems, labour markets and even single organisations differ from each other not only by different structures, but also by logics and social understanding.

As helpful as these attempts are to bring together cultural, social and structural aspects, they remain at the level of a fairly abstract classification of societies, milieus and communities into previously formulated categories. We would like to take one step back and come to understand foreign training and labour market in a qualitative, hermeneutical sense, in order to allow peculiarities and unexpected aspects to enter our analysis.

3. EMPLOYMENT REGULATION AND SOCIAL REPRESENTATIONS

In a society, employment is shaped by historically grown and relatively stable institutions. There are cross-generational routines, rules, norms and mutual expectations that give sense to certain areas of social life and at the same time convey identity, stability and certainty (Pries, 2010). People have culturally anchored images of 'normal work', which they use to orientate their decisions and which help them to coordinate their actions with others through mutual trust. The ways in which people look for work, integrate themselves into work, submit to work requirements, or defend themselves against unreasonable demands are both the results of this, and guidelines for social action. Such cultural patterns are "rooted in societies" (Becker, 2004) and are only partially transformed by globalisation and deregulation, even if – as social phenomena – they can also be subject to changes and social dynamics (with a view for Germany see Voß 1998, the contributions to Behringer 2004, or Brose and Wohlrab-Sahr (2018).

In many countries of the world, academic professionalism serves as such a cultural pattern. It is an organisational form of work that creates social norms and expectations. Professionalism enables a specific form of social coexistence, which is neither controlled purely by the state nor by the market. Instead, the "cooperation model [...] of social networks, of service contexts in which people assume joint responsibility based on solidarity" (Fürstenberg, 2000, p. 115) is shaped.

It is well known that this particular format of employment regulation (Pries, 2010) does not work for skill-based work or

occupations in many countries, even if it can be found in some taxi or market cooperatives in Latin America (Fürstenberg, 2000, p. 115).

Nevertheless, while analysing training and labour markets all over the world, nowadays we look for culturally rooted, individual and organisational patterns about skill-based work that people experience as 'normal'. This cultural normality, of course, is not only found in formalised working relationships. We are aware that in Latin America informal work can also be 'normal work' (Pérez Saínz, 2013), which has specific forms of institutionalisation (Senghaas-Knobloch, 2010). We are looking for normality assumptions that go far beyond legal regulations and explicit standards.

We assume that it is the concept of social representations in which such normality assumptions manifest themselves (Andresen et al., 2018) and that can be scientifically identified and analysed. In French sociology, representation is understood to mean "a system of practical knowledge" (Barlösius, 2005, p. 45). Such a system includes opinions, images, attitudes, stereotypes and beliefs that are used in communication. "Representations contain agreements on how social conditions, relationships or facts are to be assessed and thus reflect the common sense about the social world" (Barlösius, 2005, p. 45, translation by the authors). Representations include both sensual and pre-reflective perceptions of an object as well as such characteristics that are linguistically accentuated as particularly typical (Barlösius, 2005, p. 48).

Social representations are two-fold: stable and mobile, rigid and flexible. They are rigid and stable because they are determined by a central core deeply anchored to the memory of

people and their belief systems. They are mobile and flexible because they belong to individual experiences and integrate the data of what certain persons have lived in specific situations. At the same time, they are narrated and shared and thereby part of relationships and practices in which people are immersed (Araya Umaña, 2002; Abric, 1993; Moscovici, 1984).

In addition, Ibáñez (1994) indicates that for many researchers, social representations are first and foremost "sociocultural products". They are significant structures that emanate from society and that inform us about the society's social material or knowledge of specific groups or communities.

Following the model of labour regulation by Pries (2010), we take a look at social representations that relate to certain mechanisms and norms of gainful employment. We are keen to understand formal and informal rules as well as real practices and mechanisms of:

- Conditions of employment (i.e. the definition, control and further development of the conditions under which people are employed). In the context of vocational training, the requirements for employment (i.e. educational studies) are subsumed.
- The working conditions under which people do their work, and
- The conditions of participation under which they are involved in the work and production process (Pries, 2010, p. 25).

4. THE CASE STUDY OF MEXICO

On the base of those rather theoretical explanations, the following lines will concretise those ideas for Mexico. KuPraMex (Cultural Practices of non-academic Work in Mexico) is a project funded by the Federal Ministry of Science and Technology (BMBF) in Germany since 2019. In this article we are yet not able to provide results of this project. Our intention nevertheless is to show the conceptual ways we are narrowing in on the subject and putting our methodological approach to discussion.

In our attempt to get a better understanding of Mexican training and labour markets regarding the aspects mentioned above, we plan to conduct the analysis in three steps:

1. Facts and figures – collect and revise existing data
2. Social representations – analyse cultural artefacts like films, novels, memes, proverbs, etc.
3. Social representations – qualitative interviews.

Each step will lead to conclusions and hypotheses that will inform the next steps, and have to be proven in further investigation. Until now (August 2020), we have concluded the first step and begun with the second.

First, we must collect the facts and figures about Mexico's labour system along the lines of:

a) Education and conditions of employment,
b) Working conditions, and
c) Participation according to the approach of employment regulation (Pries 2010).

4.1 EDUCATION AND CONDITIONS OF EMPLOYMENT

Mexico is a country composed mainly of young people: About half of the population will be of working age over the next 20 years. According to figures from the National Census of Population and Housing prepared in 2017 by the National Institute of Statistics, Geography and Informatics (Instituto Nacional de Estadística y Geografía, INEGI), around 119 million people live in Mexico, of which 3.6 million are young (representing 25.7% of the total national population). This population group ranges from 15 to 29 years in age (35.1% are aged between 15 and 19 years; 34.8% are aged 20 to 24 years; and 30.1% are 25 to 29 years (INEGI, 2017).

At the beginning of the 2017-2018 school year, the National Education System enrolled 36.6 million children and youth in more than 255,000 schools – 85.5% of students attended public schools; 14.5% attended private ones. This makes it one of the largest education systems in the world and the third largest in America (INEE, 2018).

In addition to general high schools, there are technological high schools, which are considered to be of a bivalent nature: that is to say, students attend high school but are, at the same time, following a technical career. The propaedeutic subjects are the same as in the general high school, so students are prepared to study a higher-level professional technical career within the curriculum. It also includes technological subjects to prepare the graduates as technicians. As a result, they receive a diploma, title and certificate of the career taken. The programmes usually last six semesters (three years), but are sometimes extended to four or five years. The educational offer covers areas including

electrical, electro mechanics and automotive industry, construction, decorative design, industrial mechanics, chemical laboratory, accounting, childcare and tourism services (INEE, 2011).

On the other hand, the technical professional model is primarily driven by the National College of Technical and Vocational Education (CONALEP) as part of the National System of Technical Education. In the beginning it was oriented to the formation of technical professionals who had graduated in high school. During the last ten years, CONALEP has offered professional titles of Technical Baccalaureate (Bachillerato tecnológico), seeking to support adequate access to the labour market. This educational model offers 48 different options grouped into nine areas of vocational training, which are taught across three years (INEE, 2011).

Finally, the *capacitación para el trabajo* does not allow access to the *Escuela Media Superior* (High School Education), therefore it is not possible to continue with higher studies. The school modality is offered and aims to transmit knowledge, skills and attitudes for young people and adults in order to facilitate access to the productive system. There are 55 specialties in 17 economic areas, offering Training Centers for Industrial Work (CECATI) and Institutes Job Training (ICATI). Enrolled students may acquire skills for job performance; for those already working, it is an option to improve the technical skills and increase knowledge and even to obtain certifications as a result of permanent training. If required, tools are provided for trainees to start their own business. In all cases, after successful completion, the student receives an officially validated diploma (INEE, 2011).

One of the biggest challenges facing the country today is the successful transition from school to work for young people

lacking educational opportunities, and appropriate work for this population. In general, young people are faced with situations that lead to prolonged periods of unemployment, prohibiting the improvement of their skills and consistent experience. Some of these situations are related to the difficulty in obtaining a stable job in the formal sector or the tendency to be laid off in times of crisis.

In recent years, countless articles were written about the existence of several million young people who neither study nor work (NiNis, or in English: NEETs). Although this is not a recent phenomenon, the publication of the figure of seven million NEETs released by José Narro in 2009 seemed to inflame discussions around the unemployment of these young persons (Martínez, 2009). Women are the most affected by this phenomenon – more than a third of the total are a part of this group, compared to men, who account for less than 10% (OECD, 2019, p. 16).

However, the existence of NEETs is not a new or unique phenomenon in Mexico. In recent years, various international organisations have pointed out that unemployment rates are higher for young people in many countries regardless of their income (World Bank, 2007). High unemployment rates are partly a result of increased labour mobility experienced by young people in relation to adults (Faber, 1999). This mobility seems to depend on two reasons. The first one concerns the decisions of young people: young people move from one job to another to learn different jobs and find one that most fits their preferences. The second reason is due to business decisions, as these are more likely to dismiss young people in recessionary periods. This higher rate of layoffs is because it is less expensive to fire

an inexperienced young worker than an experienced one – the young can be replaced more easily and, in the case of formal jobs, the economic cost of dismissal is lower. For the latter reason, it has been found that the rate of youth unemployment is more volatile than more mature individuals (Tong, 2010).

The Mexican labour market also features a high degree of informality (Loayza & Sugawara, 2009, p. 909). About 57.7% of the workforce is employed in the informal sector (INEGI, 2018), constituted by subsistence economy, microenterprises, small retailers, etc. The INEGI distinguishes, with regard to ILO, two modalities. The first mode refers to non-registered microenterprises with about 26.9% of all employees in the informal sector. The second mode is related to 30% of the workforce, who see themselves in the agricultural subsistence economy, paid domestic services and irregular employment in registered enterprises (INEGI, 2018). However, half of all informal employment can be located in the tertiary sector, i.e. the service sector (ILO, 2014, p. 6).

4.2 WORKING CONDITIONS

Only 43% of the workforce is employed in Mexico's formal sector, but the majority of the gross domestic product (about 77.3%) is generated there (INEGI, 2018). The average wage in the formal sector is higher than in the informal sector (Gong & van Soest, 2002, p. 515). In addition, workers in the formal sector in Mexico have a guaranteed daily minimum wage, which is about US $6.90 (MXN 128.41[6]) (STPS & CONA-

6   Exchange rate 1 US$ = 18,5747 MXN

SAMI, 2020, p. 2). Compared to the per capita income poverty line (food plus non-food basket) which amounts to US $111.52 (MXN 2,071.90) in the rural and US $171.99 (MXN 3,195.43) in the urban area, this seems to be low (CONEVAL). Furthermore, the minimum wage has increased very little in the last years (STPS & CONASAMI, 2020, p. 2).

Young people especially suffer from low-income situations. According to reports on youth employment, it is confirmed that 80% young people earn less than MXN $6,200 a month, and therefore have insufficient income to support a family of two members. Half of the working young people lack social security (51%), and 63% lack a stable contract. One third of young people receives an income that does not cover the cost of the basic food basket for one person earning MXN $3,100 a month. Another third of those working have an income of between MXN $3,101 and MXN $5,000 a month (ILO & SNE, 2020).

4.3 PARTICIPATION

The trade union movement did not play a key role until the second half of the last century in Mexico. The social breakthroughs achieved in this time set an example throughout Latin America. They were also due less to trade union mobilisation than to a paternalistic post-revolutionary regime.

In recent decades the trade union system has changed and expanded. However, the diversity of trade unions favours fragmentation. This results in unions with low membership and correspondingly reduced influence (Manz, 2015, p. 323). Thus, approximately 1.9 million people in the workforce are concentrated in 532 associations and 2,768 unions (STPS, 2017). As a further consequence of the fragmentation, company collec-

tive agreements dominate compared to sectoral collective agreements (*contratos ley*). In addition, so-called 'protection agreements' (*contratos colectivos de protección patronal*) undermine the freedom of collective bargaining. This is the simulation of collective bargaining in which persons without a real basis among the employees of a company, but in possession of an official approbation by government, (*toma de nota*), conclude collective agreements with companies whose primary purpose is to ensure industrial peace by keeping away authentic representation of interests and to keep wages and working conditions at a minimum level (Manz, 2015, p. 323).

Another trade union model is the so-called yellow unions. These are characterised by a strong proximity to the employer and focus on harmonious cooperation between employers and employees. Consequently, no authentic representation of interests can be expected from the yellow unions either.

5. PRELIMINARY CONCLUSIONS AND SUGGESTIONS FOR FURTHER RESEARCH

Thus, after the description of structures and figures in Mexican training and labour markets, we can extract the following hypotheses:

1. It is more difficult for young people, especially with low education, to enter the labour market. Intersectional effects such as gender and race are also visible with regard to youth unemployment.
2. The difficulty for young people to get into the labour system is related to their lack of social membership

(to a professional group or any other functional
   equivalent).
3. The labour market itself is dominated by informality and
    complexity. There are no defined entry paths due to het-
    erogeneity of educational options.
4. As a consequence, youth unemployment is high and
    income is low.
5. Although trade unions seem to be ubiquitous, their ability
    to represent worker interests is rather limited.

These hypotheses, although certainly important and meaning-
ful, can only provide information on a structural level. In order
to find out more about subjective perspectives, we began a sec-
ond step: to analyse cultural artefacts concerning skills-based
work, such as films, novels, memes (on the internet), and prov-
erbs etc. "Artefacts are defined as objects that are anchored in
the material world that have been and will be produced, han-
dled, modified or transformed by human intervention. In this
way, they are externalisations of human action which, once set
into the world, encounter humans as external and as such inter-
vene in their ways of thinking and acting" (Lueger & Froschauer,
2018, p. 11, translation by the authors). The selection criteria for
those cultural artefacts is the general spreading or recurrence
within the Mexican population. So our findings are widely dis-
cussed and measured within the binational working group[7]
and our Mexican project partners in order to define the cultural
weight of those artefacts. The main focus of our research project

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7   Besides the authors, Stefan Gold, Lydia Raesfeld, Alistair Fritz López
    Mercado, and Francisco Padilla Reyeros participate in this group.

will be directed at the fields of gastronomy, administration, mechanics and tourism, but at this early stage of our investigation, some aspects of general work already have become evident.

By analysing widely known films of the famous Mexican actor Cantinflas, sitcoms like *La familia Peluche*, Mexican proverbs and Internet memes, we identified our first hypothesis. Although each medium required a different method of analysis, the analytical scheme we applied to all of them is similar: We used the criteria offered by Pries' (2010) concept of employment regulation as well as the above described understanding of professionalism. So we searched for information about shown working tasks, competence, working conditions, institutions, resources, norms and means of exchange.

Though some of the identified hypotheses are to be proven in the later steps of our research, we have revealed the following preliminary learnings:

1. Working tasks: Improvisation is an important choice and plays a prominent role in Mexican everyday life and work contexts. Competence is often the ability to find original solutions.
2. Working conditions: If not professional, work is often seen as demanding and 'dirty' in multiple ways. On the other hand, it is precious (and necessary) to have work at all (for feeding oneself and one's family). But if employment can be avoided because of social status or because someone gets around it otherwise, then it is likely to be avoided.
3. Competence: Interestingly, some proverbs tell a different story. They emphasise, for instance, the importance of constant practice and focus on what one knows best (one's

trade). Those proverbs seem to reach back to times when trades had more importance in Mexican society.

4. Norms and means of exchange: Loyalty and mutual favours seem to be important. They always have to be paid back.

5. Institutions: There is a 'heavenly' order of things that gives every human being its position. A good person works without complaint and humbly. He/she knows his/her place (ser ubicado).

It should be emphasised that we are still in the process of data gathering. These findings do not show the final results of our project but rather aim to explain our procedures. In a third step, and on the fundament of step one and two, we will interview workers and personnel responsibles in order to confirm or to falsify our conclusions.

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A VET Leadership Model

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Abstract: This study was designed to develop a new model of VET leadership for polytechnics system in Malaysia. The study used Hallinger and Murphy theories as the main underpinning leadership development framework. This study has utilized a model development approach as its research design. In an earlier stage, a modified Delphi technique was used to gather initial data regarding innovative instructional leadership. Eleven experts were selected based on their expertise and experience. They confirmed 13 constructs for the new innovative instructional VET leadership model. Besides the experts, a stratified random sampling was used to select the polytechnic lecturers. A new instrument was developed which consisted of 13 constructs and 185 items and it was distributed to the lecturers in the selected polytechnics to verify the proposed constructs of the innovative instructional leadership. The empirical data collected were analyzed using descriptive and inferential statistics that included confirmatory factor analysis. Alarming results showed that the lecturers at the polytechnics disagreed that their administrators possessed the innovative instructional leadership particularly related to strategic thinking, innovative thinking and network management. In addition, the study also found

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that the administrators of the polytechnics have only moderate level of innovative instructional leadership for most of the constructs. Based on the confirmatory factor analysis, it was found that only 65 items out of 185 items that are valid to measure the innovative instructional leadership in the polytechnics system in Malaysia. In conclusion, this study confirmed the importance of innovative instructional leadership in the polytechnic system in Malaysia. The usage of this model is expected to map the leadership competence of the polytechnics adminstrators.

Keywords: Vocational Educational and Training (VET), innovative instructional VET leadership model, polytechnics, modified Delphi technique, Malaysia

INTRODUCTION

Leadership is a critical aspect in an organization. Generally, leaders have to assemble a strategic plan for the staff to follow. This is a conventional leadership concept. The evolution of the leadership concept has produced several theories and leadership strategies. However, according to Owen (2011), there is no consensus regarding the definition of leadership. From a historical perspective, there had been several great leaders that portrayed varied leadership traits. A great leader may have leadership traits of Genghis Khan, Nelson Mandela or Niccolo Machiavelli. Genghis Khan was very shrewd in terms of war strategies that he had conquered a huge part of Asia, including China, Persia and Mongolia. Nelson Mandela was famous for being a leader who fought for independence through anti-apartheid activities which ended the white minority regime and discrimination toward black people in South Africa (Zoll, 2012). Whereas

Machiavelli was renowned for his political theory in retaining ruling powers (Avolio & Gardner, 2005). It seems that these leaders have one thing in common: innovative thinking.

Innovative theory was coined by Joseph Schumpeter in the early 20th century. He was an economic and political thinker. He believed that innovation is the key to economic development. He also theorized a new innovative action would replace an old innovation as a creative destruction process where innovative development cannot be avoided for economic continuity. Therefore, an investment in innovation is critical to generate economic development (Schumpeter, 1942). Romer stated that ideas and technological discoveries are the driving engines of economic growth (Wysocki, 1997). According to Bennis, Spreitzer, Cummings and Corsini (2001), to instill an innovative culture, leaders need to reward employees who contributed new ideas. Future competitions depend on who is able to create a new and innovative idea. A proactive, innovative and competitive leader is highly needed in the era of globalization (Mustapha, 2013). Globalization is a phenomenon where companies and organizations are competing to create successes or they will be left behind. (Jack, 2018). The presence of digital technology has catalyzed globalization changes (Castillo & Hallinger, 2017). Rapid changes in world economy in the era of globalization have forced leaders to be competitive and innovative in order to survive.

In Malaysia, *Model Baharu Ekonomi* (New Economic Model) was introduced in 2010 and it was aimed to increase the productivity of public and private organizations. However, it was not easy to achieve high productivity. Leaders need to constantly be able to come up with creative and innovative ideas where

they have to break through, to think outside of the box and to go beyond the limit (Harrari, 2007; Abib-Pech, 2013). Based on the new economic model, the government has outlined key strategies to develop and maintain Malaysia as a high-income earning country. In one of the strategies, the government attempted to promote tertiary education by transforming vocational education and training (VET). Although several strategies have been carried out there are still significant weaknesses in the VET system including the polytechnic system. Past research has shown that polytechnic administrators still practice conventional leadership without inserting creative and innovative elements in their organizational management (Rasul et al., 2015). Therefore, it is critical to evaluate VET leadership especially in a polytechnic system.

BACKGROUND OF THE STUDY

Vocational Education and Training (VET) plays a vital role in economic development of a nation (Mustapha, 2013; 2017). In some countries like Germany, VET has known to produce competitive and skilled workers. Based on the New Economic Model (NEM), the Malaysian government has underlined the importance of developing and maintaining world-class talent for Malaysia to become a high income country. Hence, the government is trying to mainstream VET as one of the preferred choices of the education system. However, VET still has a negative image among parents and students where the majority of parents preferred academic track for their children.

In Malaysia, each year, about 100,000 secondary school leavers enter the job market without any formal skills training.

Based on the labor statistics, only 23% of the Malaysian workforce comprised skilled workers. This percentage is much lower as compared to other developed countries. Malaysia hopes to increase the proportion of highly skilled workers to 35% by 2020 (Mustapha, 2013; 2017). According to Ilies, Morgeson and Nahrgang (2005), VET is an educational system that provides specialized training to increase the number of skilled workers. In addition, UNESCO-UNEVOC has outlined three main themes to sustain VET: (a) fostering youth employment and entrepreneurship, (b) promoting equity and gender equality, and (c) facilitating the transition to green economies and sustainable development. Most empirical studies in VET used quantitative research design with an exception of few that used Delphi technique.

A modified Delphi technique was utilized in this study to develop an innovative instructional VET leadership model for polytechnic system in Malaysia. A model could be used as a decision-making and prediction tool (Manley & Zinser, 2012). A modified Delphi technique could also be used to create a new model or program (Hacker, 1988). In general, a modified Delphi technique can be used when there is incomplete knowledge about a problem or a phenomenon (Skulmoski, Hartman & Krahn, 2007). The technique could be applied to problems that do not lend themselves to precise analytical techniques. Delphi technique is based on concerted judgments of experts on a collective basis (Loo, 2002). Also, the modified Delphi technique is adaptable and flexible that it could be used in qualitative and quantitative studies. Before delving onto more detailed discussion of the technique, it is proper to review the brief origin of leadership.

In ancient times, our ancestors built and protected their community through cooperative efforts led by an appointed leader or a group of elders. The concerted and cooperative effort was critical to protect and defend lives against ferocious animals or enemies. Throughout ancient history, most appointed leader for a particular community was said to be noble, strong and brave. A leader had to be borned from a noble family, healthy, strong, brave and wise, and influential over others.

In the corpus of leadership, there are several theories that explain the concept of leadership. Genetic theory explains that the root of leadership is based on a trait that is passed on from generation to generation, usually from a father to a son (Bunnell, 2017). The social theory asserts that a leader could be selected and nurtured; in other words, leaders are not appointed through inheritance but each individual is able to be a leader (Yidong & Xinxin, 2013). Scholars and philosophers have written about the characteristics of leaders and their roles since the beginning of human civilization. Plato in his renowned book The Republic displayed the life story of Plutarch. Plutarch was a Greek historian that wrote about the life and heroic characteristics of Greek leaders such as Alexander the Great.

In modern times, there have been several leadership theories such as distributed leadership that focuses on the distribution of expertise in an organization (Harris & Spillane, 2008). According to Harris and Spillane (2008), distributed leadership is the tendency for higher-ups to distribute work to followers based on their expertise, skills, and knowledge. However, Harris and Spillane (2008) stress that the key factor of a successful distributed leadership depends on how it is made easier, moved and supported. Next, sustainable leadership by Hargreaves and

Fink came about in the year 2003. Hargreaves and Fink (2003) defined sustainable leadership as a shared responsibility to reduce negative forces that affect the organization and the environment. Distributed and sustainable leadership are connected to each other based on the principles and practices of delegated responsibility and continues improvement.

Another emerging theory of leadership is innovative leadership. Şen and Eren (2012) classified innovative leadership as a new approach in developing organization. Innovative leadership supports the accomplishment of vision and mission of an organization or a group by using new technology and processes. Innovative leaders possess creative mindset to ensure continuous success and to remain competitive (Medvedeva, 2012). Innovation in an organization has led to a new focus toward the roles of leaders in creating strategic and a more creative venture. Other leadership theories such as prime, resonant, digital and futuristic leaderships are evolving theories. Despite modern leadership theories and models, in this research, the researchers have decided to examine the Instructional and Innovative Leadership (IIL) among Malaysian polytechnics leaders as a core investigation in this research. Polytechnics were selected because they were involved with the teaching and learning process but mainly in the traditional way. Therefore, it is critical to develop an innovative instructional VET leadership model for the polytechnic system.

METHODS

Research design has two aims that are to prepare answers to research questions and to control variables (Chua, 2009; Kahn, 2006). Model development is the main research design used

in this study. According to Richey and Klein (2007), model development is a systematic study of design, development and evaluation processes with the aim of establishing an empirical basis for a creation of an instructional or non-instructional model, tool, or product. In this study, the researchers used model development design to construct a measurement model of innovative instructional VET leadership. Besides model development design, this study also employed modified Delphi technique to obtain relevant constructs for the model.

In the first phase, this research used the modified Delphi technique to obtain experts' opinion regarding the initial constructs for the innovative instructional leadership. The modified Delphi is a cycle series technique based on experts' aggreement to confirm relevant constructs (Keeney, Hasson, & McKenna, 2011). To select the constructs and to develop the items regarding the innovative instructional leadership in Malaysian polytechnic system, the researchers used the modified Delphi technique. Skulmoski et al. (2007) and Keeney, Hasson and McKenna (2011) stated that this technique is suitable for exploring and confirming the relevant constructs based on the experts' perception. According to Loo (2002) and Manley and Zinser (2012), using modified Delphi technique, a strong agreement among the experts is required to confirm the constructs.

The confirmed constructs from the modified Delphi panel of experts were used to develop the items for the instrument. A set of questionnaires was constructed based on the Delphi's input. The constructs were tested and verified in several rounds before they were incorporated in the instrument. Then, the instrument was validated in a pilot study before it was administered to target respondents who were the administrators and lecturers at

the five polytechnics in Malaysia. Confirmatory Factor Analysis was carried out to determine the Instructional Innovation Leadership (IIL) measurement model based on the survey data consisted of 575 respondents.

RESEARCH PROCEDURE

This study comprised four phases. Figure 1 showed the executing procedure of those phases. The first phase involved the construct definition process that covered the determination, development and purification of the constructs. This stage was critical in ensuring that only valid constructs can be included in the research. Initial constructs were derived from an extensive literature review and refined to be included in the modified Delphi technique. The second phase was research design. Researchers have selected the research design, population and sample, data collection and data analysis methods. The third phase involved process of determining the compatibility of the measurement model. Based on the empirical data that were collected using the research instrument, the measurement model would be developed and tested. It also involved the determining of relationship between latent and observed variables. In the fourth phase, the validity assessment of measurement model was tested using convergent, discriminant and nomological validity.
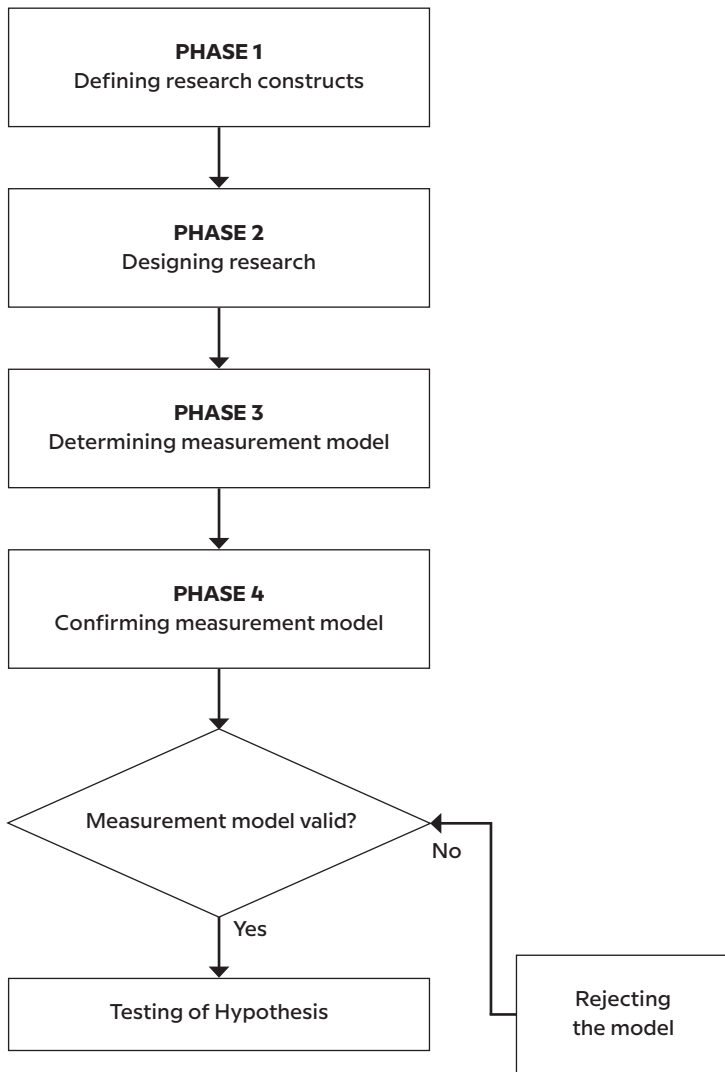
Figure 1: Research procedure

PHASE 1: DEFINING CONSTRUCTS

Defining the research constructs was the first step in ensuring the chosen constructs were appropriate and matched the research objectives.

PHASE 2: DESIGNING RESEARCH

This phase involved the research design process. Decision about Delphi panel and rounds, population and sample, instrumentation, data collection and data analysis was finalized in this stage.

PHASE 3: DETERMINING MEASUREMENT MODEL

Measurement model was formed by measuring the relationship between latent and indicator variables and variant errors. Compatibility of measurement model with the research data was important to show the credibility of the model. If the measurement model was not compatible with the research data then the model was not valid. Hence, the first step in the Confirmatory Factor Analysis (CFA) was to determine the compatibility of the constructs in the measurement model. The results of CFA showed the credibility of the indicator variables to represent the latent variables in the measurement model. In other words, if the confirmatory factor analysis result showed that the items did not represent the resilient latent variables then the measurement model was not valid. Since the indicator variables were formed from the questionnaire items, researchers needed to ensure that those items have a high credibility because an item that has a low credibility would affect the decision-making based on the

measurement model. Therefore, the result of CFA's credibility was very critical.

Confirmatory Factor Analysis (CFA) was carried out using *Analysis of Moment Structure* (AMOS) version 20. This analysis was designed to determine the suitability of 13 constructs that were developed to determine the innovative instructional leadership among polytechnic leaders. All items loaded in the CFA measurement model need to show convergent validity (Hair et al., 2010). Three indicators were used to evaluate the convergent validity which was based on the weighting factor value (λ) more than >0.50 (Hair et al., 2010), extracted average variant value of each construct $\geq$ 0.50 (Hair et al., 2010), and the credible construct value > 0.60 (Hair et al., 2010). In addition, comparability (good fit) between construct and research data was determined based on the combination of at least one *Absolute Fit Indices* and one *Incremental Fit Indices* (Brown, 2012in conditions of repeated administration. Design/methodology/approach – In 2006 and 2007, nearly all of New Zealand's newly-appointed school principals participated in an 18 month induction program (First Time Principals; Hair et al., 2010).

PHASE 4: CONFIRMING MEASUREMENT MODEL

To confirm a model, the validity of constructs and items is critical. This means that the validity of construct is an index of the accuracy of the measurement model. Constructs that reach an acceptable level of validity indicate that the measuring items obtained from research sample truly described the traits that exists in a population. There are three forms of construct validity – convergent, discriminant and nomological validity. Con-

vergent validity shows how the items for a construct in general can contribute to a number of variants for that particular construct (Hair et al., 2010). There are three methods to measure convergent validity through: (a) determination of standard weighting factor value, (b) extracted average variant, and (c) credibility of construct (De Jong & den Hartog, 2010; Hair et al., 2010).

A discriminant validity shows a uniqueness of a particular construct. A discriminant validity indicator shows to what extent that a particular construct is different from the other constructs (Brown, 2012in conditions of repeated administration. Design/methodology/approach – In 2006 and 2007, nearly all of New Zealand's newly-appointed school principals participated in an 18 month induction program (First Time Principals; Hair et al., 2010). There are two methods to measure discriminant validity. The first method is to make a comparison between the average value of extracted variants (AVE) and the construct that has a squared correlation value (r^2) (De Jong & den Hartog, 2010; Hair et al., 2010). The squared correlation value is obtained from the two constructs. To fulfill the requirements of the discriminant validity between constructs, the AVE value needs to be larger than the squared correlation value (Brown, 2012)in conditions of repeated administration. Design/methodology/approach – In 2006 and 2007, nearly all of New Zealand's newly-appointed school principals participated in an 18 month induction program (First Time Principals. The determining method for discriminant validity is also used for the measurement model. The second method to determine discriminant validity is when there are no cross loadings between observation variables and errors (Hair et al., 2010). Nomolog-

ical validity is conducted to determine the level of relationship between the constructs that have been accurately tested whether each construct is according to theoretical forecast or backed up literature (Hair et al., 2010).

RESULTS

To identify the relevant constructs, the researchers have reviewed extensively the literature including the past research related to innovative instructional leadership. Next, an interview protocol was developed for the Delphi experts and it went through the validation process by three experts as well as the declaration form was distributed to the Delphi experts. The Delphi panel consisted of 11 experts and they were selected based on specific criteria. After the interviews with the 11 experts were completed in the first round, the list of constructs was drafted. The experts were in agreement that only 13 out of the following 17 constructs were suitable. The constructs before the interview (17 constructs) and after the interview (13 constructs) are displayed in Table 1.

Table 1: Constructs identification

Number	Constructs before the Interview	Constructs after the Interview
1)	Setting vision and mission	Setting vision and mission
2)	Providing necessities	Providing necessities
3)	Showing concerns	Showing concerns
4)	Projecting self-personality	Projecting self-personality

Number	Constructs before the Interview	Constructs after the Interview
5)	Creating conducive environment	Creating conducive environment
6)	Managing educational management functions	Managing educational management functions
7)	Building teamwork	Building teamwork
8)	Promoting academic climate of learning	Promoting academic climate of learning
9)	Organizing talents/abilities	Organizing talents/abilities
10)	Monitoring teaching and learning process	Monitoring teaching and learning process
11)	Having strategic thinking	Having strategic thinking
12)	Having innovative thinking	Having innovative thinking
13)	Building networking	Building Networking
14)	Conducting class supervision	Not chosen by experts
15)	Using effective pedagogical strategies	Not chosen by experts
16)	Showing endurance	Not chosen by experts
17)	Managing changes	Not chosen by experts

For the second, third and fourth rounds – the consensus for the 13 constructs was gained from the Delphi experts. Median and range between quartiles (IQR) were used as indexes for experts' agreement. The median values of 4 and 5 showed the agreement among expertices toward the constructs while IQR that showed the values of 0 and 1 indicated the unanimous decision of experts toward the constructs. Table 2 illustrated the summary of findings on expert agreement for the second, third and fourth rounds.

Table 2: Experts agreement on the constructs

No	Round/Construct	Second	Third	Fourth
1)	Setting vision and mission	11	9	9
2)	Providing necessities	13	13	13
3)	Showing concerns	11	11	11
4)	Projecting self-personality	12	12	12
5)	Creating conducive environment	16	16	16
6)	Managing educational management functions	16	16	16
7)	Building teamwork	16	16	16
8)	Promoting academic climate of learning	15	16	16
9)	Organizing talents/ability	17	17	17
10)	Monitoring teaching and learning process	12	12	12
11)	Having strategic thinking	18	18	18
12)	Having innovative thinking	11	11	11
13)	Building networking	17	21	21

Based on the findings of the modified Delphi technique, the measurement model research consisted of 13 constructs of innovative instructional leadership items (see Table 3). Based on several rounds of testing, CFA confirmed that only 65 items out of 185 items that are relevant in the new innovative instructional leadership model (see Tables 4 and 5). In the nutshell, this study confirmed the importance of innovative instructional leadership in the polytechnic system in Malaysia.

Table 3: Summary of constructs and items used in the CFA

Symbol	Explanation
1	Setting vision and mission construct
2	Providing necessities construct
3	Showing concerns construct
4	Projecting self-personality construct
5	Creating conducive environment construct
6	Organizing educational management functions construct
7	Building teamwork construct
8	Promoting academic climate of learning construct
9	Organizing talents construct
10	Monitoring teaching and learning process construct
11	Strategic thinking construct
12	Innovative thinking construct
13	Networking construct
i1-i8	Setting vision and mission items
i11-i22	Providing necessities items
i29-i33	Showing concerns items
i36-i42	Projecting self-personality items
i49-i61	Creating conducive environment items
i70-i75	Organizing educational management functions items
i79-i82	Building teamwork items
i100-i103	Promoting academic climate of learning items
i120-i125	Organizing talents items
i131-i135	Monitoring teaching and learning process items
i148-i152	Strategic thinking items
i157-i160	Innovative thinking items
i172-i185	Networking items

Figure 2 showed the items and the constructs that have reached a good comparability level. Analysis model in Table 5 shows that the model formed have reached a good comparability level based on the fixed indicators such as CMIN/DF, CFI, and RMSEA (CMIN/DF=3.25, CFI=0.96 and RMSEA=0.06). This gives the justification that the data matched the measurement model that has been hypothesized in Table 5.
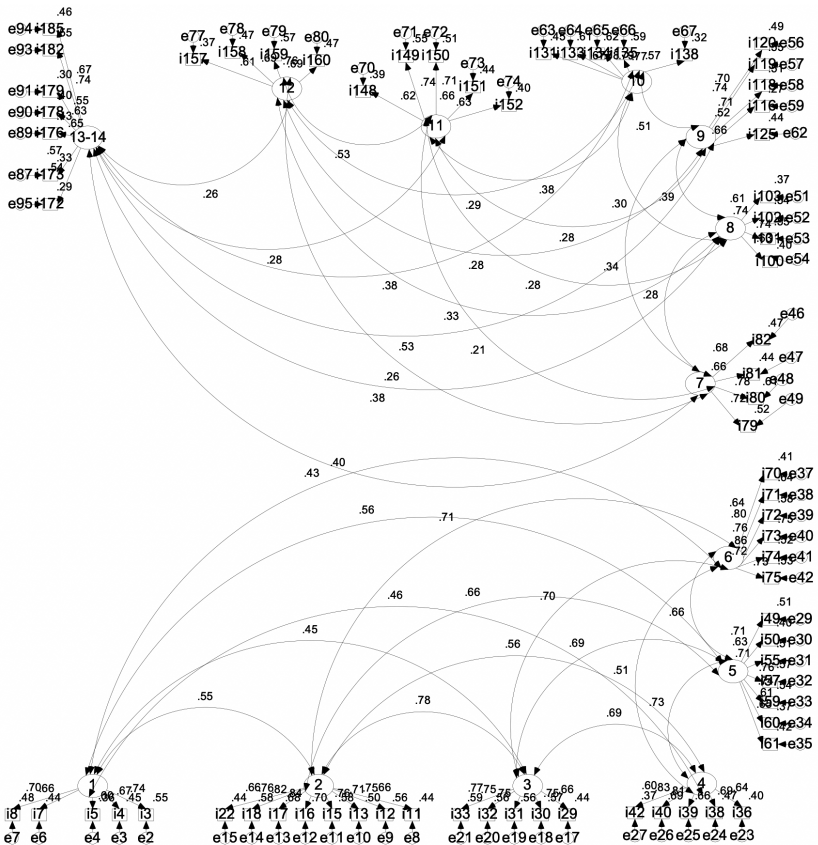
Figure 2: Confirmatory factor analysis (CFA) measurement model for innovative instructional leadership (IIL)

Table 4: Overall good fit measurement model of each construct of IIL

No	Construct	CFI ≥ 0.9	RMSEA ≤ 0.08	CMIN/df < 5.0	GFI ≥ 0.9
1	Setting vision and mission	0.99	0.01	1.07	0.99
2	Providing necessities	0.96	0.08	4.45	0.95
3	Showing concerns	0.98	0.08	4.99	0.98
4	Projecting self-personality	0.99	0.06	3.26	0.99
5	Creating conducive environment	0.97	0.08	4.46	0.96
6	Organizing educational management functions	0.98	0.07	4.73	0.98
7	Building teamwork	0.94	0.04	1.81	0.99
8	Promoting academic climate of learning	0.99	0.08	4.43	0.99
9	Organizing talents	0.95	0.03	4.40	
10	Monitoring teaching and learning process	0.98	0.07	4.06	0.99
11	Strategic thinking	0.94	0.07	3.99	0.99
12	Innovative thinking	0.95	0.04	1.71	0.99
13	Networking construction	0.92	0.01	1.11	0.99

Table 5: Overall good fit of CFA IIL constructs

	Hypothesized measurement model	Recommended values	Sources
CMIN/df	3.25	≤ 5.00	Hair et al. (2006); McGrath (2011)
CFI	0.96	≥ 0.90	Hair et al. (2006); McGrath (2011); Brown (2012in conditions of repeated administration. Design/methodology/ approach – In 2006 and 2007, nearly all of New Zealand's newly-appoint-ed school principals par-ticipated in an 18 month induction program (First Time Principals);
RMSEA	0.06	≤ 0.08	Browne & Cudeck (1993); Hair et al. (2006); Mc-Grath (2011)

VALIDITY EVALUATION OF THE CONSTRUCTS

Table 6 illustrated the weighting factor values. The the highest credibility can be seen in item number 73 in the education management construct with the value of 0.93. In general, all items have a high weighting factor values ranging from 0.73-0.93. Therefore, they adhere the internal credibility value of ≥ 0.7. Next, for convergence validity, all items have high significant levels that satisfy the AVE value of 0.5 or higher for each

construct. Lastly is CR which is the composite credibility value which satisfies the value of ≥ 0.6 for each construct. The values satisfy the criteria set by Hair et al. (2009) and Bentler and Yuan (2000) The second level of innovative instructional leadership CFA model in Figure 2 also shows that IIL constructs have a discriminant validity where there is no item that is cross-loading or is redundant with other items (Hair et al. 2010). This shows that all items contained in these constructs can be unidimensionally measured, thus, they are valid and credible. In brief, this model has a good fit in terms of convergent validity, discriminant, and a good composite credibility. The decision is based on the overall findings of the measurement model as posited in Tables 5 and 6.

Table 6: Construct validity evaluation

No	Construct	Item	λ (KC) ≥ 0.7	AVE ≥ 0.5	*pc* / CR ≥ 0.6
1	Vision and mission	I4	0.79	0.66	0.89
		I5	0.78		
		I7	0.88		
		I8	0.80		
2	Infrastructure	I11	0.75	0.56	0.91
		I12	0.73		
		I13	0.78		
		I15	0.77		
		I16	0.86		
		I17	0.84		
		I18	0.76		
		I22	0.65		
3	Concerns	I29	0.81	0.74	0.93
		I30	0.87		
		I31	0.86		
		I32	0.86		
		I33	0.88		

4	Self-personality	I36	0.70	0.71	0.93
		I38	0.84		
		I39	0.88		
		I40	0.93		
		I42	0.78		
· 5	Conducive environment	I49	0.84	0.69	0.94
		I50	0.78		
		I55	0.83		
		I57	0.88		
		I59	0.88		
		I60	0.76		
		I61	0.82		
· 6	Educational management	I70	0.80	0.75	0.95
		I71	0.90		
		I72	0.88		
		I73	0.93		
		I74	0.85		
		I75	0.85		
7	Teamwork	I79	0.84	0.71	0.91
		I80	0.89		
		I81	0.82		
		I82	0.83		
8	Learning climate	I100	0.79	0.68	0.90
		I101	0.88		
		I102	0.86		
		I103	0.78		
9	Organizing talents	I118	0.84	0.71	0.91
		I119	0.89		
		I120	0.82		
		I125	0.80		
10	Monitoring teaching and learning process	I131	0.83	0.76	0.93
		I133	0.90		
		I134	0.89		
		I135	0.87		

11	Strategic thinking	I148	0.78	0.68	0.91
		I149	0.85		
		I150	0.86		
		I151	0.82		
		I152	0.79		
12	Innovative thinking	I157	0.78	0.69	0.90
		I158	0.84		
		I159	0.86		
		I160	0.84		
13	Network construction	I176	0.75	0.54	0.80
		I178	0.72		
		I179	0.80		
		I182	0.73		
		I185	0.80		

Note: λ = Weighting factor (Cronbach Coefficient) (KC), CR = AVE Credibility Composite = Average Variance Extracted

DISCUSSION AND IMPLICATIONS

The modified Delphi technique provided a platform for the experts to confirm the proposed constructs. The key strength in modified Delhi technique lies in its ability to obtain opinions and to reach consensus among a panel of experts in several rounds. Hence, this technique is a flexible research technique well suited when there is incomplete knowledge about a phenomenon. Defining the research constructs was the first step in ensuring the constructs were appropriate and matched the research objectives. Next, the researchers selected the Delphi experts based on the specific criteria. The measurement model was formed by measuring the relationship between latent and indicator variables and variant errors. Compatibility of measurement model with research data was important to show the credibility of the model. If the measurement model was

not compatible with the research data then the model was not valid. Hence, the first step in the Confirmatory Factor Analysis (CFA) was to determine the compatibility of the constructs in the measurement model. The results of CFA showed the credibility of the indicator variables to represent the latent variables in the measurement model. In other words, if the confirmatory factor analysis result showed that the items did not represent the resilient latent variables then the measurement model was not valid. Since the indicator variables were formed from the questionnaire items, researchers needed to ensure that those items have a high credibility because an item that has a low credibility would affect the decision-making based on the measurement model. Therefore, the result of CFA's credibility was very critical.

Confirmatory Factor Analysis (CFA) was carried out using *Analysis of Moment Structure* (AMOS) version 20. This analysis was designed to determine the suitability of 13 constructs that were developed to determine the innovative instructional leadership among polytechnic administrators. All items loaded in the CFA measurement model need to show convergent validity (Hair et al., 2010). Three indicators were used to evaluate the convergent validity which was based on the weighting factor value (λ) more than >0.50 (Hair et al., 2010), extracted average variant value of each construct ≥ 0.50 (Hair et al., 2010), and the credible construct value > 0.60 (Hair et al., 2010). In addition, comparability (good fit) between construct and research data was determined based on the combination of at least one *Absolute Fit Indices* and one *Incremental Fit Indices* (Brown, 2012in conditions of repeated administration. Design/methodology/approach – In 2006 and 2007, nearly all of New Zealand's

newly-appointed school principals participated in an 18 month induction program (First Time Principals; Hair et al., 2010).

In addition, the CFA conducted on 13 constructs has confirmed 65 out of 185 items that are pertinent in the new model of innovative instructional leadership (IIL) for the polytechnic system in Malaysia. The descriptive analysis used means, median, standard deviation, and quartile between ranges (IQR) to obtain concerted agreement among the 11 experts. Confirmatory Factor Analysis was carried out to determine the Instructional Innovation Leadership (IIL) measurement model based on the survey data consisted of 575 respondents. In CFA, a fit of indices measurement model was achieved with the values of CMIN/DF=3.25, CFI=0.96 and RMSEA=0.06. The data have supported the previous models used in this study such Hallinger and Murphy (1985), Liedtka (1990), Murphy (1990), Moss and Jerome (1994), McEwan (1998) and NASSP (2001).

CONCLUSION

The research on innovative instructional leadership (IIL) was conducted because the lack of measuring model of IIL in Malaysian polytechnic system. Specifically, the main objective of this study was to determine the constructs to develop a new model of innovative instructional VET leadership for the polytechnics system in Malaysia. This study has utilized a model development approach as its research design. In the first phase, a modified Delphi technique was used to gather initial data regarding the relevant constructs of innovative instructional leadership. Eleven experts were selected based on their expertise and experience. They confirmed the 13 constructs of innovative instruc-

tional leadership for the polytechnics system. Based on the 13 constructs, a total of 185 items was developed and distributed to the respondents in the selected polytechnics to determine the innovative instructional leadership of polytechnic administrators. Empirical data collected were analyzed using descriptive and inferential statistics such as means, standard deviation, correlation and confirmatory factor analysis. The alarming result showed that lecturers at the polytechnics disagreed that their administrators possessed the innovative instructional leadership particularly related to strategic thinking, innovative thinking and network management. In addition, the study also found that the administrators of the polytechnics have only moderate level of innovative instructional leadership for most of the constructs. Based on confirmatory factor analysis, it was found that only 65 items out of 185 items that are important in the new VET leadership model. The main implication of this study is that the new VET innovative instructional leadership model could be used to measure and map the competencies and professionalism of leaders in polytechnics and other VET institutions.

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Section II:

Collaboration and partnership with the world of work

This section includes contributions which in varying degree deal with the importance of collaboration, leadership and partnerships to meet the challenges the transformation of the world of work entail and its impact on VET provision. The more the world of work transforms, the greater the need for changing in our understanding and readiness to learn and act to solve problems in concert.

The studies presented in this section provides glimpses from diverse VET systems that broaden our understanding of diverse contexts from a comparative perspective. The first part commences with a chapter, in which Lorenz Lassnigg takes up main political expectations in Continental and Nordic education structures, including VET. Based on institutionalist ideas of complex interplays between structures and agency, he contrasts the different systems exploring the extent these political expectations are met in practice.

The Cuban model of collaboration on VET between vocational education providers and companies is outlined by Juan Alberto Mena Lorenzo & associates. Although the main feature of the Cuban collaboration model relies on almost equal responsibilities among vocational teachers and company instructors in the training process, the authors reflect on the frictions that can occur when the logic of school and the workplace intersect.

In fact, models of duality in VET systems are based on certain co-operation between vocational education providers and

the world of work. In their literature review, Luis Martínez-Izquierdo, Mónica Torres & Miguel A. Pereyra, systematise the difficulties and constraints faced when a dual vocational is transferred from one national context, for example Germany, to Spain.

Haryanti Mohd Affandi & associates analyse in their chapter the results of a quantitative survey on the collaboration between Malaysian vocational training institutions and industry. The findings from the survey underscore the importance of collaboration between industry and vocational training institutions in aligning VET curricula to Industry requirements, and emphasizes the active role of the state in encouraging the collaboration.

The position of VET as a contested partner in innovation projects concerning local/regional development processes, is discussed in the final chapter by Magdolna Benke. Based on the findings of an expert survey she argues for a stronger involvement of VET institutions in the transformation of the regions to Learning Regions.

Different structures, different results? Continental and Nordic education structures compared.

Lorenz Lassnigg*

Abstract: In policy debates the Continental structures include strong VET and apprenticeship-like "collective skills formation systems", with good labour market transition, and with low youth unemployment as main indicators that signify success. In contrast, the Nordic countries support equity and equality of opportunity as an important asset, with a weak influence of social background on the results of education.

This paper, as a small N study in comparative research looks in detail for both groups of countries at the main indicators representing the main assets of the different structures, youth unemployment, and social background influence on PISA results. The results show more country group differences concerning equity and more overlap in unemployment; however, the main message points to much variation within the country groups at all indicators, including certain "outstanding" countries, e.g., Finland with equity and Germany with low youth unemployment, and less typical differences between the groups of countries than would be expected by common political beliefs.

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1. INTRODUCTION

This paper takes up main political expectations about differences in purpose and results between Continental education structures and Nordic education structures, and explores to which extent these political expectations are met in practice. For this purpose, the main indicators used in the political discourse about the specific advantages of the contrasting structures are analysed in a symmetrical way to both groups of countries.

This analysis is inspired by the observation that the policy discourse is mostly influenced by looking at "evidence" from the "other systems" or groups of countries, or on the large N comparative indicators (e.g., given by the OECD or EUROSTAT data bases). The "own" system is taken as a blind spot. In the Continental countries we often we find aggressive disputes between advocates of the own system, and advocates of the comprehensive Nordic system, which cannot be easily resolved by the conventional indicators systems. In the German and Swiss discourse, the support of VET is flanked by a devaluation of higher education, using concepts of delusion or traps of academisation (*Akademisierungswahn*; *Akademisierungsfalle*; Nida-Rümelin, 2014; Strahm, 2014). The Nordic countries have provided deeper analyses of the transition process (e.g., Albæk et al., 2015), the Nord VET project has more recently built on high expectations in the strength of collective skills formation (Jørgensen, 2018). More symmetrical analyses of quantitative indicators that directly compare more deeply the "own" with the

"other" structures are missing or rare to the knowledge of the author, tendencies in research are rather to dig deeper into the "own" structures (e.g., by the Nord VET project: http://nord-vet.dk/, or by the Swiss Govpet project https://gce.unisg.ch/en/govpet/research-program).

The main research question of this paper is, to which extent the politically expected huge structural differences between the Continental and the Nordic countries are corroborated, when the main "success" indicators of either structure are applied to both groups of countries. A small N analysis using robust indicators over a couple of years is applied for this purpose. Thus, the strength of the approach is to compare rather persistent structures than actual development: on the unemployment side ten-years country averages 2006-16, and on the social reproduction side average PISA results from the cycle 2009-15, and from all available waves 2003-15. A more detailed documentation of data is provided at http://www.equi.at/material/annex-nord.pdf.

2. THEORY AND METHODS

2.1 THEORY

The theoretical background of this analysis is based on institutionalist ideas of complex interplays between structures and agency leading to the incrementalistic (historical) emergence of idiosyncratic structures, and using rather a concept of structures than one of dense "systems". The research about collective skills formation has pointed to the marked differences between the typical Continental dual apprenticeship systems (Busemeyer & Trampusch, 2011), and the contingencies included in their dynamic (Emmenegger et al., 2019). The research in the Nordic

region also has often even questioned whether a distinct Nordic "system" would exist (see Vol.50 of the Scandinavian Journal of Educational Research, e.g., Frímannsson, 2006), or persist (Imsen et al., 2017). The more current reasoning about typologies, that tries to deal with the complexities of education structures (Pilz, 2016) is also considered.

This approach does of course not deny systemic interrelations between the different parts and sectors within national education structures. For the concrete research question of comparing aggregate results of the Nordic to Continental structures the observation stands out that the classic strong Continental dual apprenticeship systems in Germany, Austria and Switzerland are in fact combined with strongly tracked compulsory education structures, in contrast to comprehensive Nordic compulsory education, on that different VET structures are built. From these structural interrelations the question of causality arises, of whether a systemic tension between strong secondary vocational education (VET) including dual apprenticeship and comprehensive compulsory education might exist.

The purpose of this paper is to step back from this deeper questions, and to look more systematically at the criss-crossing outcomes of the two groups of countries: to which extent do Continental and Nordic countries succeed in reaching the aggregate goals of the other group? In terms of policy these research questions are related to the potential of the different structures to fulfil both goal dimensions, good transition to employment, and equitable results of education. A main political rhetoric proposes a criss-crossing transfer of the main elements of the contrasting structures, i.e. the comprehensive structure to the Continental countries, and dual apprenticeship to the Nordic

countries. The latter has already been undertaken in Denmark and Norway, in somewhat different versions than in the classic Continental apprenticeship countries.

These considerations can also support a more detailed look at the indicators by the individual countries, as compared to the group differences. Thus, the empirical question is, to which extent we find overlaps between countries of the different regions on the one hand, and outliers within the regions on the other.

2.2 METHODS

This chapter compares a set of Continental countries to the Nordic countries using conventional comparative indicators in an interpretive way to question how strongly the structural contrast proves at a closer look. The purpose with the empirical work is at the same time twofold, first to interpret the empirical findings, and second also to better understand the indicators from international and European data bases that are widely used by research. The indicators are graphically presented in a systematic way, to analyse the patterns of difference between the groups of selected countries, and the included individual countries also. This comparison is of course superficial; however, the strengths of this perspective lies first with the high attention to the used indicators in policy discourses, and second in the direct confrontation of the two main dimensions of political goals that are mostly analysed separately.

As a method a small N comparative study using the main indicators representing the two contrasting educational purposes is applied. The strength of the Continental systems is conventionally represented by low youth unemployment, and the

strength of the Nordic systems is represented by a low influence of social background of pupils on their educational achievement. Ten countries were selected for comparison, five Continental countries including the classical dual apprenticeship countries (Austria, Germany and Switzerland plus the Netherlands and Belgium), four Nordic countries (Denmark, Finland, Sweden and Norway); the UK was selected as a contrasting case of liberal capitalism. For comparison the averages for the Continental and Nordic countries have been complemented by a mixed group of Apprenticeship countries including Denmark in addition to the classical continental countries (Norway has also developed a kind of apprenticeship system, however, has been established rather recent and differs with its 2 plus 2 structure from the others). The main data are provided in Annex-tables 1-6.

To get a robust measure of youth unemployment, the average of the ten-years period 2006-16 has been calculated, using the EUROSTAT database. Three age groups are observed, the teens (15-19y) and twens (20-24y), and the overall age group of young people (15-24y). The analysis uses not only the conventional unemployment *rate* as the proportion of average numbers of unemployed young people to the *labour force* (as the persons seeking employment and ready to take up employment). This indicator is often confused in the political discourse with the second indicator applied, the unemployment *ratio*, as the percentage of unemployed people to the total *population* of young people. Since the OECD youth transition project (Bowers et al., 2000, Ryan, 1999) the *ratio*-indicator – that is intuitively more understandable – has been detected as better comparable internationally and eventually more valid than the rate, because of different proportions of school participation vs. the size of

the labour force in different countries. More recently the "Neither in Employment nor in Education and Training (NEETs)" rate is used as an additional indicator; however, this indicator is available for a shorter period only (Quintini et al., 2007, EUROSTAT, 2020). To get a valid comparative picture of youth unemployment two apects must be considered, first the international positioning of countries, and second the relationship beetween youth and total unemployment. The latter aspect provides a main argument for the international support of the German dual apprenticeship model (OECD, 2012).

As robust measures of the influence of social background on pupils' achievement average measures across the three domains (literacy, math, and science) in the available PISA waves 2003-2015 are utilised. Two indicators are specifically looked at, first the explaining power of the socio-economic status (SES) background indicator (see Avvisati, 2020, Rutkowski & Rutkowski 2013) for achievement for the period 2009-15, and second the inequality in achievement between pupils with low parents' educational background (compulsory education or less, ISCED 2) and pupils with high parents' educational background (higher education, ISCED 5/6) over all available waves and domains 2003-15. The relationship between pupils' social background and their achievement is conventionally used as measure of equity in the OECD-PISA reporting (see exemplary OECD 2019a, p.59-60)

As a third step, the two dimensions of success are related to each other, to show how the country groups and individual countries are located at both dimensions simultaneously.

3. ANALYSIS

The analysis follows three steps, first the indicators of youth unemployment are presented, second the social background indicators, based on PISA, and third these dimensions are confronted to each other. To make the utilised statistics more tangible, the main empirical relationships are illustrated by figures.

3.1 YOUTH UNEMPLOYMENT

The pattern of the two versions of youth unemployment is shown in figure 1 by age groups. As widely known, the Continental and Apprenticeship country groups show lower unemployment at both indicators, than the Nordic group; however, the Nordic countries show much more variation, with high youth unemployment in Sweden and Finland, similar to the UK and EU28, and lower youth unemployment similar to the Continental group in Denmark and Norway. The correlation between the unemployment rate and ratio is high in the 20-24-years age group, indicating similar proportions of the labour force in the selected countries. Belgium is an outlier in this pattern with a higher youth unemployment rate than continental countries, and a markedly higher unemployment ratio in the older age group, compared to the younger. Cockx (2013) has pointed to the tracked education structure and a strict barrier between school and work as main factors increasing youth unemployment.

The comparison between the two youth unemployment indicators illustrates that the proportion of unemployed youth to the population is much lower than the unemployment rate (which

is mainly an economic indicator), this difference is much bigger among the teens age group (EU28 ca. 25% to 5%), than among twens (EU28 ca. 20% to 10%). The correlation of unemployment by countries between the age groups (no figure shown) is high with the rate indicator (R^2=0,84), and lower with the ratio indicator (R^2=0,25). In Sweden, Belgium, Finland, and UK the unemployment rate of teens is very high (around 30%); however, among twens the rate is about half of that (around 15%). On the contrary the second indicator of the youth unemployment ratio is much higher in the older group in EU28 (ca. 12% vs. 6% among teens), whereas in the selected country groups this indicator is rather similar in both age groups.

During the observed period a tendency is visible that the rate indicator shows a decline in the older age group when unemployment is high among teens (e.g., Sweden, Finland, UK), whereas the ratio indicator rather increases in the older age group when it is low among teens (e.g., Germany, or the Continental and Apprenticeship country groups). The Nordic average is higher at all measures compared to the Continental and the Apprenticeship countries, and it is also higher than EU28 with the ratio among teens (8% vs. 5%).

Figure 1. Youth unemployment rate and ratio by age groups
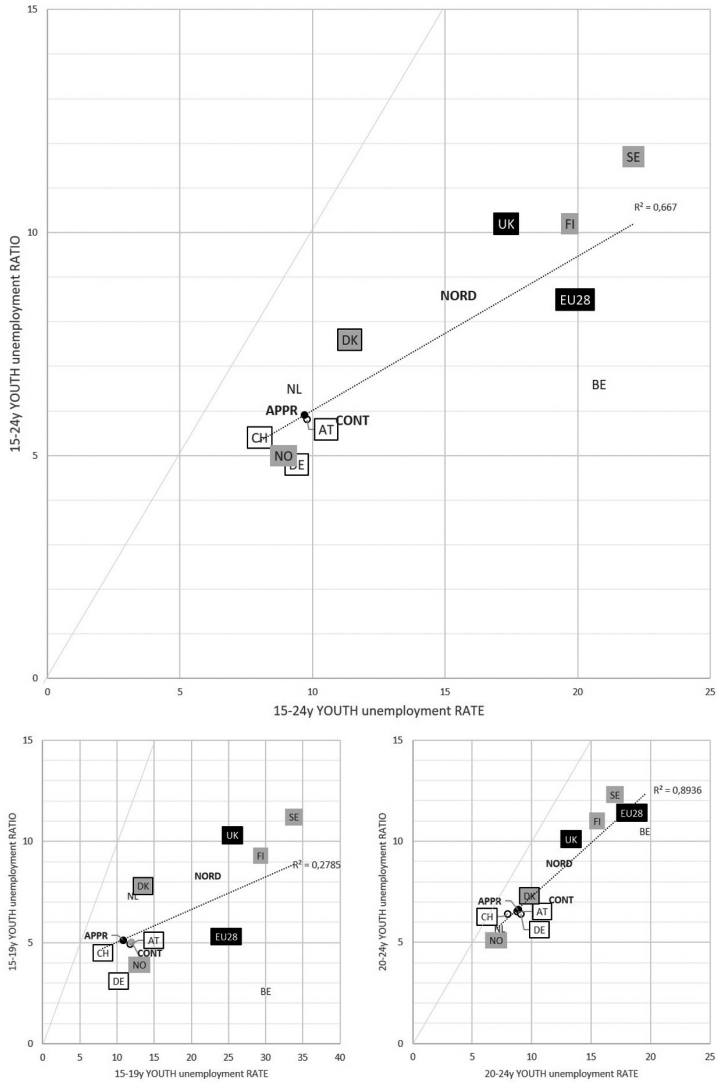
Legend: Position of labels represents data point, except in cases of overlaps, NORD = Nordic country group average, CONT = Continental, APPR = Apprenticeship. Source: Annex-table 1.

Comparing the ratio to the rate, it must be clear that the difference refers to the same numbers of unemployed, but to a different size of the labour force related to the population, the more the rate exceeds the ratio, the smaller is – relatively speaking – the labour force (and vice versa). At first sight, and in conventional interpretation, participation in education is a distinct state from employment and unemployment, thus increasing participation in education would reduce the size of the labour force, and relatively increase the unemployment rate compared to the ratio. However, as far as apprentices count as employed, and therefore as part of the labour force, school education would increase and apprenticeship education would reduce the unemployment rate relative to the ratio.

The empirical picture only partly fits to these expectations. First, among the overall youth age group 15-to-25-years the relationship between the rate and the ratio is quite similar in all regions in the twens group (between 1.3 and 1.4 index points, with only Belgium being an outlier), however in the teens group it varies strongly. Second, the difference between the two measures is much higher in the teens group (EU28: 4.6 index points), in which the index is lowest in the apprenticeship countries group (2.2), and higher in the Nordic region (2.7), with Denmark (1.7) showing a lower difference than the other Nordic countries (between 2.4-and-3.1 index points difference). Third, the Continental and Apprenticeship countries do not fit empirically to the expectations of a striking lowering of the rate in relation to the ratio because of an employment status of apprentices; a reason might be that the apprentices are differently distributed to the age groups in different countries (mainly among teens in Austria, about half and half to teens

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and twens in Germany, and in Switzerland in between more to the Austrian pattern).

The next step concerns the relationship between youth unemployment and total unemployment (figure 2). A strong relationship between these dimensions indicates the influence of the general economic conditions on youth unemployment rather than major impacts from different VET structures. Indeed, the correlation between total unemployment and the youth unemployment rate is high, with a steep trendline. In the EU28 and the UK as well as in Sweden and Finland the youth unemployment rate shows a high increase compared to general unemployment. In Denmark and Norway, as well as in the Continental group (except Belgium), the low youth unemployment rate corresponds to low total unemployment. The unemployment ratio shows a similar pattern with a much lower correlation (figure 2a).

The annual change of unemployment (figure 2b) shows an even stronger correlation between total unemployment and both youth unemployment measures. Here, Germany is a clear outlier with a marked decline of total and youth unemployment; this constellation creates difficulties to attribute youth unemployment to the dual apprenticeship system, and generalisation is also difficult from this case. At the other extreme unemployment has increased most in Denmark and the Netherlands during the observed period. The pattern of annual change is to some extent inverted compared to the level of unemployment. Unemployment has declined in some countries with the highest rates (Sweden, Belgium, UK).

Figure 2. Youth unemployment rate and ratio, and total unemployment

2a) percentage
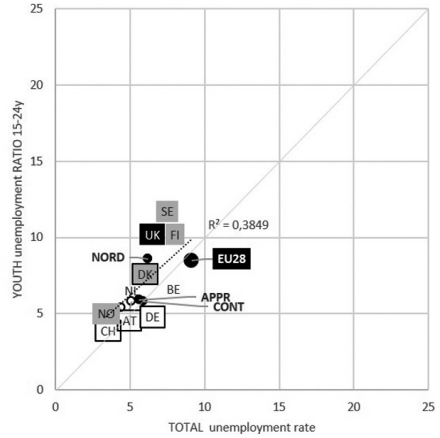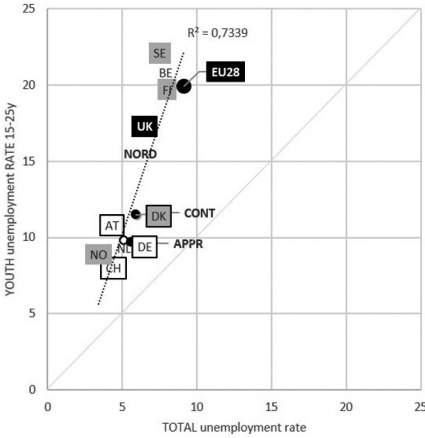
2b) annual change
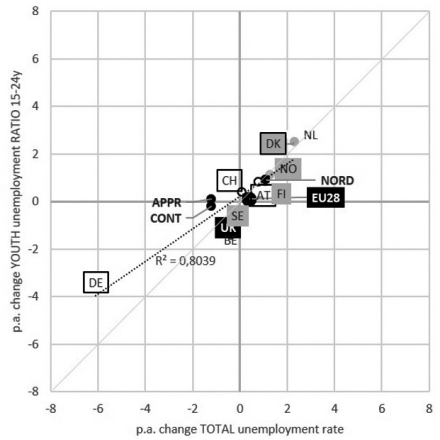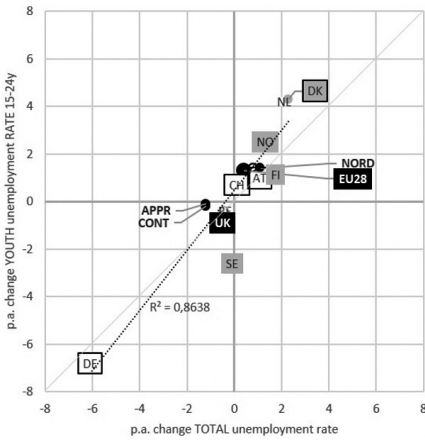
Legend: Position of labels represents data point, except in cases of overlaps, NORD = Nordic country group average, CONT = Continental, APPR = Apprenticeship. Source: Annex-table 1 and 2.

In figure 3 two more abstract indices of youth unemployment are related to each other, the *relative position of countries in EU28* and the level of *youth unemployment to total unemployment* within selected countries and country groups. Both relations might be seen as indications of successful structures and/or policies. This figure represents in this sense a summary picture of appraisal of the unemployment dimension.

Among selected countries only the youth unemployment rate of Sweden is above EU28, Belgium, Finland and the UK are near this level, the Nordic average is slightly below these countries because of the lower rates in Denmark and Norway. The latter are situated within the range of the Continental and Apprenticeship country groups (at a level of 0,4-to-0,6 of the EU28 index). If the ratio is considered the better measure, the ordering of the countries is similar; however, the differences between the countries are smaller.

The other dimension, youth unemployment in relation to total unemployment also shows a more blurred picture with the ratio indicator than with the rate. The relative level of youth unemployment is lowest in Germany (the youth unemployment ratio lies even below the total unemployment rate at an index value of 0,7, the rate at 1,5), the Nordic average amounts to 1,4 compared to 1,0 of Continental or Apprenticeship countries with the ratio, and to 2,5 compared to ca. 1,8 with the rate. Norway is an outlier, with a comparatively low youth unemployment level compared to EU28, but a comparatively high level in relation to total unemployment.

Figure 3. Youth unemployment rate and ratio in selected countries related to EU28 and to total unemployment.
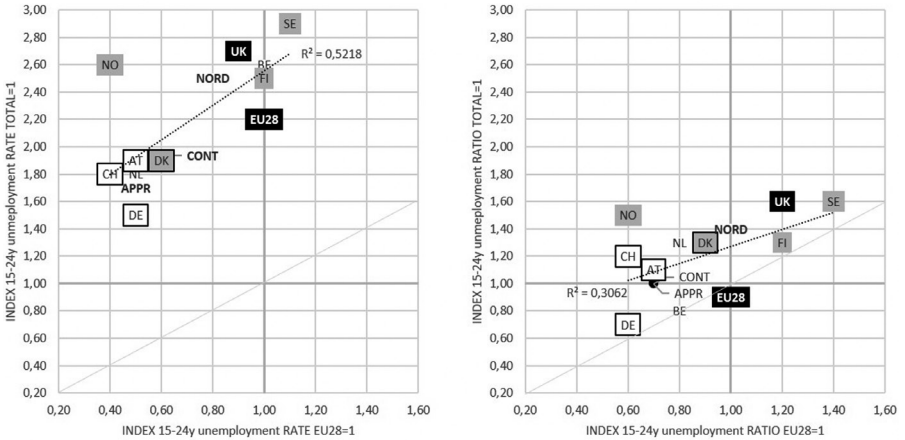
Legend: Position of labels represents data point, except in cases of overlaps, NORD = Nordic country group average, CONT = Continental, APPR = Apprenticeship. Source: Annex-tables 3 and 4.

3.2 SOCIAL BACKGROUND EFFECTS ON ACHIEVEMENT

The longer-term observation of PISA *achievement scores* shows an overlap of the countries' and country groups' averages. Finland is a slight outlier at the upper edge, the other Nordic countries are situated at the lower edge, the Continental and Apprenticeship countries range in between. The two indicators representing the social background effects on achievement show different relationships to the levels of achievement. The proportion of *achievement explained by the SES* is unrelated to the level of achievement, whereas the *inequality of achievement due to parents' education* is negatively related to the level of achievement: the larger the inequality of PISA-scores between parents'

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higher education (ISCED 5/6) and compulsory education or less (ISCED 2), the lower the aggregate PISA score in a country. Finland is an outlier at the one extreme, with the highest average achievement and (in common with the Netherlands) the lowest inequality of parents' education impact, and Austria at the other extreme, with lowest achievement and by far the highest inequality (figure 4).

Parents' educational background is related to big differences of their children's achievement (figure 5). The range of the scale for children with low educated parents ends at 500 score points, where it begins for children of highly educated parents. The average difference by country groups is a bit higher than the equivalent of one proficiency level in Continental and Apprenticeship countries (ca. 85-to-90 points), and a bit less in Nordic countries (ca. 65 points; see OECD 2019b). The crosstabulation of the achievement results according to parents' educational background (annex-table 6) shows rather similar results in the majority of selected countries and country group averages when parents' background is low education (the range of these main bulk of countries is ca. 20 score points between Norway and Switzerland). Only Austria on the negative end (20 points less), and Finland (30 points more), and less marked the Netherlands (20 points above the range), at the positive end are outliers in this picture; the overall range including the outliers amounts to ca. 70 points for this group of pupils. The average scores of children of highly educated parents are distributed within a range of ca. 50 points between Finland and Norway; in this group the Continental and Apprenticeship countries (except Denmark) score high slightly behind Finland, and the Nordic countries score at the medium-to-lower end. Thus, a tendency might exist

in the Nordic countries except Finland that the higher social equity of achievement is related to lower achievement scores in the better-off strata of society; Ammermüller (2004) has already shown such tendencies among complex and interesting differences in a contrasting analysis of the two extreme cases of Finland and Germany based on PISA 2000.

Figure 4. PISA achievement scores related to percentage of explanation by SES and inequality by parents' education.
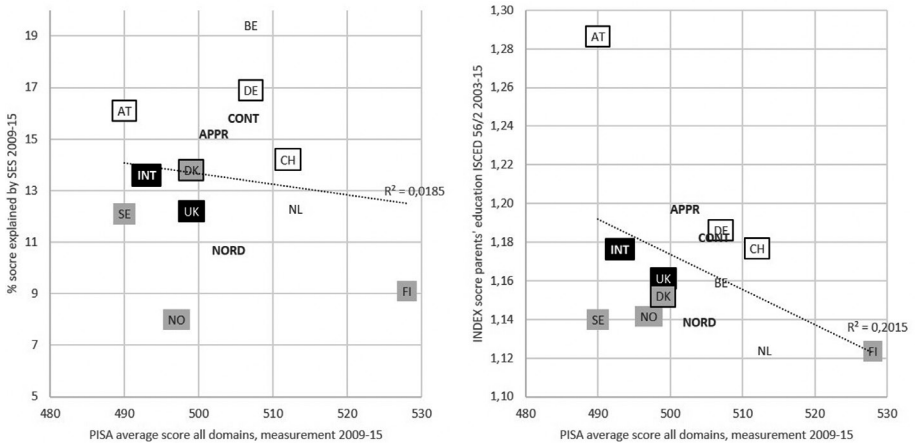
Legend: Position of labels represents data point, NORD = Nordic country group average, CONT = Continental, APPR = Apprenticeship.
Source: Annex-tables 5 and 6.

The cross-classification of the social background indicators (figure 5) gives a picture grossly according to the political expectations. The Nordic countries as a group show comparatively small inequality based on parents' educational background, and a comparatively small proportion of achievement is explained by the SES. However, looking at the country distribution, this

performance is all but exceptional. Only two countries, Norway and Finland, show at both indicators smaller values of social background influence. Sweden and Denmark are positioned near the UK, the Netherlands, Switzerland and the international average. The Continental and Apprenticeship countries show a higher degree of social reproduction, with Austria as an outlier with particular strong social influence on achievement at both indicators, and the Netherlands at the opposite end being situated near Sweden. Belgium is (again) another outlier scoring high with the explanation of achievement by SES, and low inequality effects of parents' education. Denmark as a Nordic apprenticeship country (but not Norway) is situated nearer to the Continental and Apprenticeship countries than the other Nordic countries at both indicators.

In sum, there is less overlap among country groups with the social background indicators than with youth unemployment, but still, there is substantial overlap.

Figure 5. PISA achievement scores by parents' educational back-
ground related to percentage of explanation by SES and inequality
by parents' education.
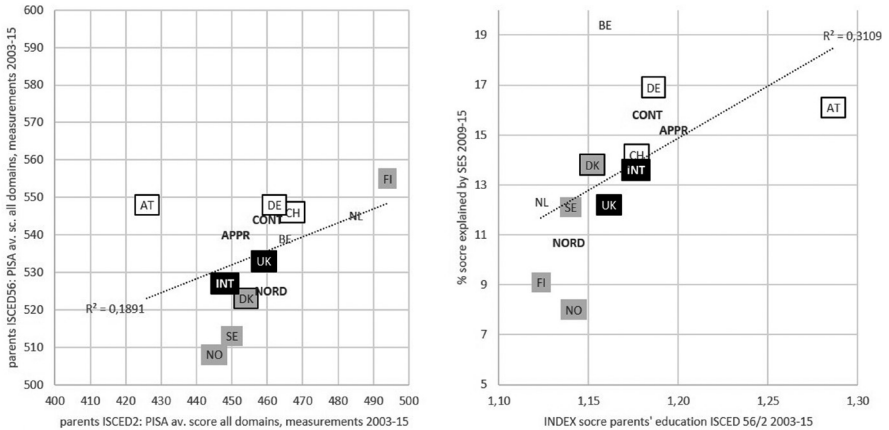
Legend: Position of labels represents data point, NORD = Nordic country
group average, CONT = Continental, APPR = Apprenticeship.
Source: Annex-tables 5 and 6.

3.3 CONFRONTING THE TWO DIMENSIONS OF YOUTH UNEMPLOYMENT AND SOCIAL BACKGROUND INFLUENCE

The final step of the analysis combines the two dimensions of success by selecting four indicators, and confronting them to each other. Figure 6 shows the results of this procedure.

At the success dimension of *reducing unemployment* first the positioning of the selected countries and country groups in relation to the European average (index EU28=1,00), and second the relationship of youth unemployment to total unemployment (index total unemployment=1,00) were selected, and both

aspects are presented in terms of the unemployment *rate* and the unemployment *ratio* measurement versions (the youth-to-total unemployment relationship could have also been shown by the more abstract measure of the index in relation to EU28; then the distribution at this variable would be more compressed and intuitively more difficult to grasp).

At the success dimension of *reducing the impact of social background on PISA achievement*, the first indicator of the percentage of explanation of the PISA score by the socio-economic status has been recalculated in relative terms as an index (international average=1,00), and the second indicator is the relative degree of inequality of PISA achievement between children of formally high and low educated parents (index of PISA score of pupils with ISCED 5/6 parents to ISCED 2 parents).

Figure 6. Relative youth unemployment indicators and PISA social background indicators compared

a) youth unemployment *rate* and % PISA achievement explained by SES
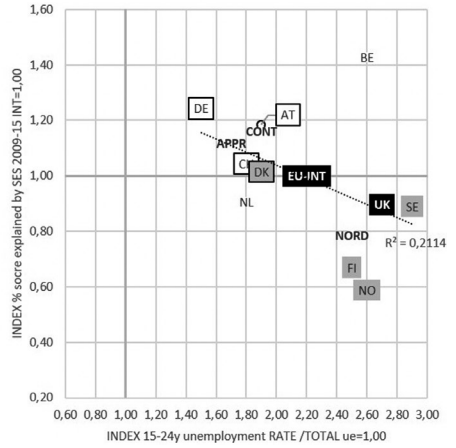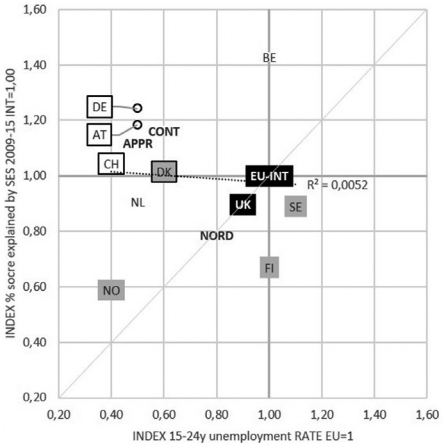
b) youth unemployment *ratio* and % PISA achievement explained by SES
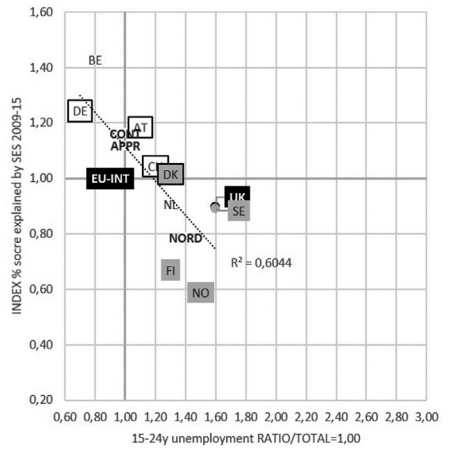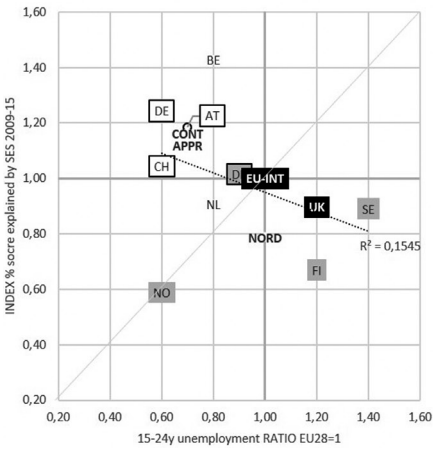
Figure 6. continued

c) youth unemployment *rate* and inequality of PISA achievement by parents' educational background
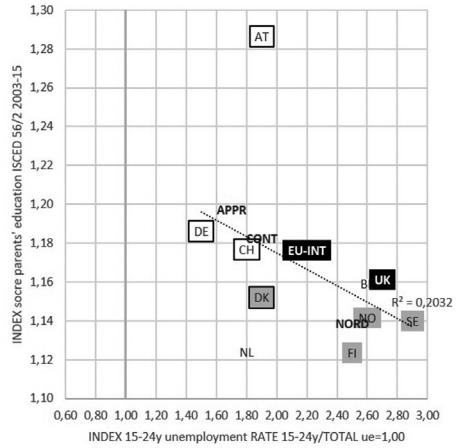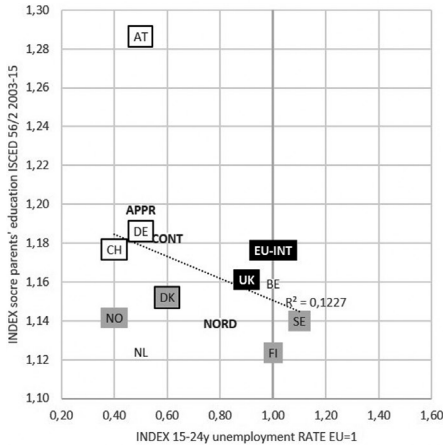
c) youth unemployment *ratio* and inequality of PISA achievement by parents' educational background
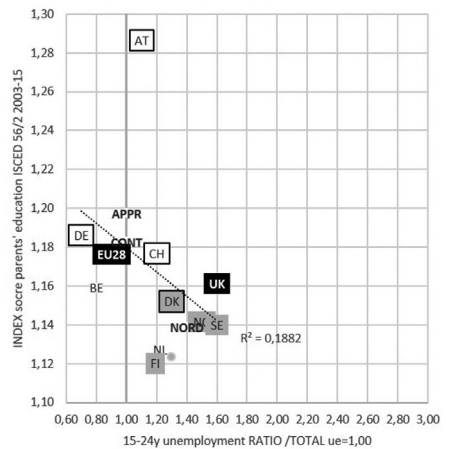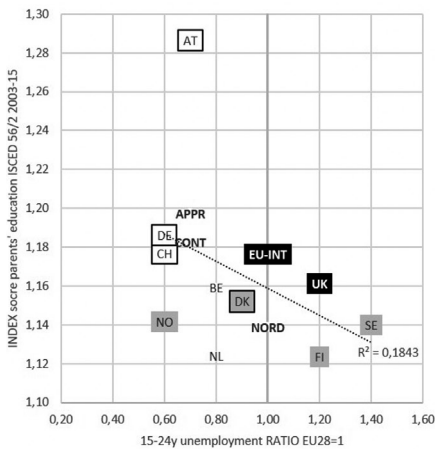
Legend: Position of labels represents data point, except in cases of overlaps, NORD = Nordic country group average, CONT = Continental, APPR = Apprenticeship. Source: Annex-table 3-to-6.

Figure 6a and b show the two versions of youth unemployment related to the degree of *explanation of PISA scores by the socio-economic status* (SES). The correlation between the two success dimensions is low in three versions ($R^2 = 0.01\text{-to-}0.21$), and amounts to $R^2=0.60$ in the cross-tabulation of the SES-explanation and the young/total unemployment ratio. In all four versions the Apprenticeship and Continental group averages are showing comparatively low unemployment and a high social background effect, whereas the Nordic group average shows the opposite. Looking at the averages alone, the policy expectations would be reinforced straightforwardly by the analysis.

However, looking at the individual countries also, the Continental and Apprenticeship countries group fairly together, with the exception of Belgium that shows a higher unemployment rate rather in the range of the Nordic countries, but not at the ratio indicator (this is one reason of the high correlation). The Nordic countries group together at the social background dimension, but not on the unemployment dimension. Two Nordic countries stand out: Denmark as an apprenticeship country groups commonly together with the Continental countries at both dimensions, lower unemployment and higher impact of social background. Norway, in contrast shows the best success on both dimensions if youth unemployment is compared to the European average, but youth unemployment is not low in this country compared to total unemployment.

The comparison of the youth unemployment rate and ratio shows generally a much less favourable pattern with the ratio than the rate. Compared to the *European average of youth unemployment* the Apprenticeship and Continental countries – with the exception of Belgium – have a much lower relative rate than

ratio, and from only one country with a rate above the EU28 (Sweden) this number increases to three selected countries (plus Finland and UK) with the ratio. In the comparison of *youth and total unemployment* the youth rate is between 1.5 (Germany) and almost 3 times (Sweden) higher than the total rate (ca. 2 times on the EU28 average), whereas the youth ratio varies between 0,6 (Germany) and only 1,6 (Sweden and UK). With the youth unemployment ratio compared to total national unemployment Germany shows a much more successful performance than the other Apprenticeship countries, and at this level of comparison the Nordic group moves together, so the groups segregate structurally also at the unemployment dimension. But at the same time the distance between groups becomes smaller, as Denmark moves into the Nordic group near Finland and Norway, but Switzerland and Austria also move near to Denmark. The big polemical contrast often made in the Austrian political discourse towards Finland, that the good PISA performance was contrasted by bad youth unemployment is not corroborated if the youth unemployment ratio is observed. Overall, the question of which measure is more valid, makes a difference in the assessment of success measures, as only Germany remains as an outstanding case of reducing youth unemployment if the ratio is used as the main valid measure.

In these comparisons Belgium is a complete exception as the only country with a substantially different position when using the ratio measure instead of the rate. As the number of unemployed is the same in both measures, the different position can only come from a relatively small measure of the labour force – this might have institutional reasons.

In figure 6c and d the other PISA success indicator of *inequality of competence level based on parents' educational background*

is displayed. Here the correlations are low (R^2 between 0,12 and 0,20), partly due to Austria as an outlier on the inequality measure.

The pattern with the unemployment measures is the same as above. The PISA inequality measure that is more direct than the SES explanation, shows a clearer separation of the Apprenticeship countries from the Nordic countries. Denmark is positioned nearest to the Apprenticeship countries, but with some distance, and the UK lying in between the groups. The Netherlands are in some sense the consistently best performing country in this classification.

4. DISCUSSION

The analysis has taken a closer look at youth unemployment in relation to educational structures. In most political discourses the unemployment *rate* is interpreted as the proportion of unemployed young people in the youth population. However, this is misleading, because the rate measures the proportion in relation to the *youth labour force*, which is only that part of the youth population, that formally seeks employment. Because of the spread of universal education, and because of institutional and behavioural reasons, a substantial part of the young population might not (formally) seek employment. Therefore, a second indicator has been established called unemployment *ratio* that indeed measures the proportion of young unemployed to the young population (this ratio is a part of the NEETs rate that also includes the inactive and excludes young people in education). The difference of the ratio to the rate is substantial, in EU28 the average rate is at 20%, the ratio at 9% in the observed

period. The two measures are both based on the same number of unemployed people, only the denominator differs by the difference between the population (ratio) and the labour force (rate).

In the political discourses, apprenticeship is presented as an instrument for fighting youth unemployment. Indeed, at first sight, a clear correlation between youth unemployment and provision of VET through apprenticeship seems to appear as the classical apprenticeship countries display lowest unemployment in European indicators. A closer look already shows a much more differentiated picture that is also emphasized by research. Asking how low youth unemployment can be caused through apprenticeship institutions compared to schools, two different mechanisms can be at work:

- one simply through the *existence of an (temporarily) established contact* (through formal employment or other institutional forms) of young people with enterprises that must be deliberately separated after completion (at schools such an institutionalized contact does not exist, and must only be established afterwards; this simple contact can be assumed to automatically reduce the probability of unemployment for apprentices as 'insiders' in the enterprises compared to 'outsiders' from school);
- the other mechanism works through the much more complex channels related to aspects of *the quality of training or education* (be it selecting the right people or learning the right things).

This distinction is important, as the two mechanisms are mostly confused in the discourse, and advocates of apprentice-

ship mostly point to the second one only and neglect the first one. However, if we assume two young people of identical quality, one through school and one through apprenticeship, the apprentice will have a higher probability of employment simply because of the previous contact with the firm. The magnitude of the (relative) difference in unemployment between youth and adults might give an indication for the quality mechanism: *relative lower youth unemployment compared to adults* might indicate incidence of the quality mechanism, similar unemployment levels would indicate that the youth labour market simply reflects the mainly economic factors that cause unemployment in general (however, this comparison is difficult because of the generally higher levels of youth than adult unemployment).

In the observed period the relationship of the general employment conditions to youth unemployment is difficult to assess, as the average level of unemployment is similar among the country groups during the observed decade, however, the change of unemployment has pointed to different directions: it decreased on average in the Continental and the Apprenticeship countries, whereas it increased in the Nordic region (with substantial individual country differences within regions; Germany and Sweden decrease, Netherlands and Denmark increase; in EU28 total unemployment slightly increased). Youth unemployment reflects the overall pattern in the twens' group, however, increases in the teens group in all regions at all measures; in the Nordic region the increase in this group is above the overall increase of unemployment. These different constellations of overall increase or decrease of unemployment, in relation to changes in youth unemployment pose questions about underlying mechanisms on the labour market and the corresponding

power of (educational) institutions and interventions for buffering against the labour market changes. Countervailing forces can be expected here:

- first, if the youth labour market is the most sensitive sector, increases and decreases of overall unemployment imply lags and multipliers;
- second, school education can work as anticyclical mechanism of increasing and decreasing participation;
- third, apprenticeship-based enterprise education implies rather a pro-cyclical pattern, implying different tendencies for school and apprenticeship;
- fourth, a closer relationship between apprenticeship and labour market policy interventions because of an implied employment relationship and corresponding political attention might again alleviate the pro-cyclical tendency;
- fifth, school participation might be differently linked to labour market policy interventions, potentially reinforcing the anticyclical mechanism (and possibly influencing the labour force by separating education and employment).

The weights of each of these forces might be difficult to obtain, more in-depth studies of the Austrian policies have shown that the low youth unemployment in this country must be rather attributed to labour market policy interventions than to the existence of apprenticeship (Lassnigg, 2016).

The empirical comparisons show that youth unemployment in the teens group is exceptionally high in the Nordic countries, indicating that youth unemployment appears as a specific issue compared to total unemployment in the Nordic region.

Another result is a systematic difference between the ratio measures and the rate measures, as unemployment is only positively influenced in the apprenticeship countries group if the unemployment rate is considered being the valid measure; the ratio indicates a more favourable picture than in the Nordic region, however, does not indicate a better relative situation in youth unemployment compared to total unemployment.

Comparing the two age groups of teens and twens, they are differently related to the educational structures and to transition into employment. We know that the transition process is under a long-term tendency to becoming more diverse and extended in time, meaning that the age pattern becomes more diversified. For the teens more or less a standard of universal education has emerged, that is recently transformed into the forms of youth guarantee. This group is related to upper secondary education, and thus to the school structure. The twens group is related to what is traditionally known as higher education, and more recently re-conceptualised as more differentiated tertiary education; in Denmark, Finland, and Norway higher education overlaps with VET, as the average age of completion of VET is even beyond the twens' group at 27-28 years (see Lassnigg and Vogtenhuber, 2017 for a deeper analysis of these structural patterns). Expectations about participation in education vs. employment in this group differ, and are also severely disputed in research and politics, at least in the Continental countries as indicated above by the rhetoric of academic delusion and academisation traps.

An aspect that deserves further discussion are overlaps between education, employment and unemployment. Apprenticeship means an institutional structure that combines employ-

ment and education or training in sophisticated and often complex ways. The purpose of the institution is to give some predictability and security for both components – employment and education – for the involved parties. However, the concepts about the minimal requirements and the shape of these institutions vary widely, from providing simply some (more or less loose) contact for learners with enterprises to the strong institutional frameworks established in the paradigmatic apprenticeship countries (see Lassnigg, 2015).

However, there has always been *another form of combination of education and employment* through any kinds of (informal) students work beside education, which is mostly neglected in the discourse about education and employment, and which has very often characteristics that are currently classified as precarious work. This work can be practiced in formal employment relations or not, and seeking for this kind of work can be registered at employment services or not. If more flexible and permeable education careers are considered, then a distinction between a full employment relation and a more transient student's work can be unclear. Albæk et al. (2015) have already shown the high amount of delayed studies for a post-compulsory qualification in the Nordic countries in the twens group and beyond. Thus, education can overlap with employment and with unemployment, and this overlap is invisible in indicators that document only one unilateral status.

Since some years the OECD Education at a Glance statistical compendium includes tables that document the overlaps of the different statuses (OECD 2020, Table A2.1., 64). This table gives the information needed for the NEETs classification, but does also expand the information about overlaps between edu-

cation and employment, and gives an additional picture about unemployment based on the ratio measure. On the employment side this table indicates different structures of the classical apprenticeship countries, and adds information about overlaps that are not classified as formal apprenticeship in the OECD data basis, which are particularly high in the Netherlands and in Denmark (showing similar or higher proportions compared to the most marked apprenticeship countries of Switzerland and Germany). On the unemployment side the information is even more instructive. It shows that the major part of unemployment in the Nordic countries is overlapping with education. This overlap is stronger in the teen's age group, and does almost not occur in the Continental region except the Netherlands, and neither in the classical apprenticeship countries. The remaining part of unemployment (including the out-of-labour-force status) is similar in the three types of regions. Belgium, that stood out with the relationship between the unemployment rate and ratio also stands out in this table as the only case without overlaps at both sides, and the highest unemployment among the twens.

The second goal dimension analysed of the social background effects on achievement related to the structures of educational tracking is causing fierce political fights since decades. More recently some converging discourses have arisen, potentially levelling the abstract opposition between comprehensive and tracked structures. In the Nordic structures societal changes and neoliberal policies might undermine the impact of comprehensive education more than expected (Blossing et al., 2014), and the basically divisive tracked structures in VET countries might provide mechanisms and practices for alleviating inequality (Brunello and Checchi, 2007). In addition, contradictory rela-

tionships between structures and practices might arise, as e.g., Schrodt (2014, pp.94-104) shows that Austrian teachers give their marks partly on social purposes rather than achievement resulting in substantial differences between marks and competence testing in this country. Still the political discourses around social justice, equality, or equity in the continental countries are very much influenced by the polarity between a tracked and comprehensive structure in terms of different institutions. However, they do often abstract from the more tricky questions of tracking by ability within comprehensive structures.

The PISA assessment has provided comparative empirical information on these various kinds of groupings prevalent at the grade of 15-years old pupils in the participating countries. This information shows that the simple polarity between openly tracked and organizationally comprehensive structures is misleading, and that comprehensive structures de facto include various versions of grouping to quite substantial degrees (figure 7 gives a stylised account of the amount of tracking indicated by streaming between classes within school, and these issues were more intensely analysed in Lassnigg & Vogtenhuber, 2014).

Figure 7. Streaming at age 15 indicated by PISA survey of principals (2009 and 2012)
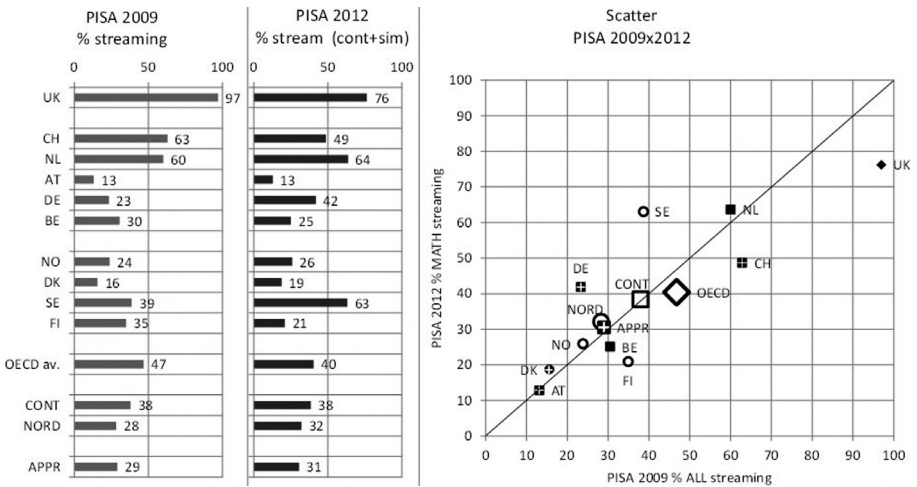
Legend: 2009 % pupils in streaming by all subjects; 2012 % pupils in MATH ability grouping between classes with different content plus classes with similar content (cont+sim) Source: own compilation and figure based on OECD-PISA 2009 and 2012.

A big surprise to the conservative position in the early waves of PISA was the coincidence that Finland with its high competence score also showed a high degree of equality in its results; this was perceived as proof that the two dimensions must be reconcilable. The positioning of the Continental countries in these assessments also contradicts the expectations of the supporters of tracking as well as those of opponents: in view of the supporters the score should be higher because tracking should drive up results, and in view of opponents, the increase inequality by tracking should be even higher.

The analysis of the social background indicators has shown a clearer distinction between the Nordic and the Apprentice-

ship countries than with the unemployment indicators. However, a look on the variation by individual countries and by the domains/years shows quite much differences and overlaps. Within the Nordic region Finland has higher scores than the others, and inequality is lower in Norway and Finland than in Sweden and Denmark; the latter overlap with the Netherlands and Switzerland from the Continental group. The scores in Continental countries except Austria are higher than in the majority of Nordic countries, and inequality is higher in Austria, Germany, and Belgium than in any Nordic country.

The comparison of the pupils groups by parents' low and high education shows an interesting pattern, as in Continental countries both pupils' groups score above the international averages to a similar degree (with only Austria as an exception of this pattern with highest inequality and pupils from ISCED 2 parents scoring 5 per cent below the international average), whereas in Nordic countries (again except Finland) the pupils from higher education parents' background score below the international average of this group, whereas the pupils from compulsory education background score at the average of this group. Thus, the higher equality might result from relatively lower scores of pupils from more advanced educational background of parents and the pupils from less advanced background also score on average less than this group in Continental countries. Finland also shows such a difference, however, both groups score above average; this pattern also occurs in the Netherlands. On the other end of the spectrum Austria shows the by far worst pattern with highest inequality and the relatively lowest performance of pupils from parents' compulsory education background.

In sum these simple but robust explorations show some advantage in Nordic countries in terms of equality, however, there is

also much overlap with Continental countries, and efficiency seems not to go so much hand in hand with equality as hoped for. The Apprenticeship countries show a similar picture with the continental ones, with some sign of slightly more inequality. The complex mechanisms in place need to be corroborated by more elaborate modelling and case studies.

5. CONCLUSIONS AND SUGGESTIONS FOR FURTHER RESEARCH

The analysis brought some key results about widely shared political beliefs that the different educational structures in the Nordic and the Apprenticeship countries would serve different goals, the former to provide equity, and the latter to provide good transitions from school to work.

One result is that only looking at the averages of the country groups would straightforwardly reinforce the political beliefs, however, considering the specific positioning of the individual countries shows much overlap and blurring across the different structures. Countries that are widely seen as typical successes for their structure come rather out as outliers in their groups, namely Finland with the high degree of equity and high achievement on one side, and Germany with its success at the youth labour market on the other.

Another result is that the overlap between structures is more pronounced at the dimension of reducing unemployment than at reducing social inequality. The Nordic countries show different success with respect to the unemployment indicators, with Denmark and partly Norway being more similar to the Continental and Apprenticeship countries. Denmark as an appren-

ticeship country lies in the range of the Continental countries with lower unemployment, but interestingly shows also consistently more social reproduction than the other Nordic countries, but less than the Continental and other Apprenticeship countries also.

Still another result is that the success of the Apprenticeship countries looks much better with the conventionally used – and often misinterpreted – unemployment rate than with the unemployment ratio (that resembles more to the more current NEETs rate but leaves out the inactive people). This result guides further questions about the use of those indicators in research and policy making. Does it make sense to ask which one is more valid, and should therefore be mainly used in political discourses? The unemployment rate is clearly part of economic reasoning and economic policy. How does this fit into broader research and political understandings?

Some concrete further questions concern what the changes in transition and educational participation imply for the shapes and expectations about unemployment, employment and labour force participation in the two age groups. How should the difference between the rate and the ratio be interpreted, in particular the high unemployment rates among the teens group? Which measure is more valid, 25% or 5% at the European level, respective 22% or 8% in the Nordic region, resp. 10% vs. 5% in Apprenticeship countries? What does it mean that the ratio increases with age, and the rate goes down? What does it mean that the two measures are mostly confused at the political level? To which extent is employment or education a remedy for youth unemployment, and how far can the two be combined in formal or informal ways? Should a difference be made between the two age groups in terms of remedies?

The information included in the OECD-EAG table about the overlaps of education, employment, and unemployment suggests taking a closer look in particular at the overlap of education and unemployment in the Nordic countries. In what kind of education do these young people participate, is this participation sustainable or only some short or occasional courses? And what kinds of employment do the young people seek, is it students' work or a full employment perspective? Depending on the answer, the substantially better position of apprenticeship countries could become seriously questioned. Maybe there is not so much to learn from continental countries in terms of reducing unemployment and improving transition as expected. The informal overlaps of education with employment or unemployment also might indicate tensions between the increasing tendency of educational participation and increasing qualification demands on the one hand, and an increasing demand and interest for productive work among young people on the other.

With respect to VET research and policy making further questions concern the degree of systemic coherence within the different structures. How much does the survival of strong dual apprenticeship structures depend on the tracked structures of compulsory education, on which they still build? Or, vice versa, does a comprehensive structure of compulsory education support equity but undermine an apprenticeship type structure at the post-compulsory level? And bringing these questions together, how are the prospects of a blurring of those different structures which has been to some degree proposed and charged politically already through decades, but has not succeeded so far?

The explorative analysis of the data can only give some hints about the comparative questions followed, and clearly needs to be extended by additional qualitative research.

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ANNEX-TABLES

Annex-table 1: Youth and total unemployment rate and ratio, by age groups 2006-16

	Youth ue RATE			Youth ue RATIO			TOTAL unemploy-ment
	15-24	15-19	20-24	15-24	15-19	20-24	15-74
UK United Kingdom	17,3	25,5	13,3	10,2	10,3	10,1	6,5
AT Austria	9,8	11,8	8,8	5,8	4,9	6,5	5,1
CH Switzerland	8,0	8,1	8,0	5,4	4,5	6,4	4,4
DE Germany	9,4	10,2	9,1	4,8	3,1	6,4	6,5
BE Belgium	20,8	30,0	19,5	6,6	2,6	10,5	7,9
NL Netherlands	9,3	12,1	7,3	6,5	7,3	5,7	5,1
DK Denmark	11,4	13,5	9,8	7,6	7,8	7,3	6,0
FI Finland	19,7	29,3	15,5	10,2	9,3	11,0	8,0
SE Sweden	22,1	33,8	17,0	11,7	11,2	12,3	7,5
NO Norway	8,9	12,0	7,0	5,0	5,0	5,1	3,4
EU28	19,9	24,7	18,4	8,5	5,3	11,4	9,1

CONTINENTAL	11,5	14,4	10,5	5,8	4,5	7,1	5,9
NORDIC	15,5	22,2	12,3	8,6	8,3	8,9	6,2
APPRENTICE-SHIP	9,7	10,9	8,9	5,9	5,1	6,6	5,6
STATISTICS							
Std dev CONT	4,712	7,922	4,515	0,672	1,674	1,737	1,242
Std dev NORD	5,513	9,535	4,084	2,551	2,263	2,872	1,798
Std dev APPR	1,212	2,020	0,639	1,038	1,724	0,388	0,791
Variation co-efficient CONT	0,410	0,548	0,429	0,115	0,374	0,245	0,210
Variation co-efficient NORD	0,355	0,430	0,331	0,296	0,271	0,323	0,289
Variation co-efficient APPR	0,125	0,185	0,072	0,176	0,340	0,059	0,140
APPRENTICE-SHIP group summary							
Std dev APPR	1,212	2,020	0,639	1,038	1,724	0,388	0,791
Variation co-efficient APPR	0,125	0,185	0,072	0,176	0,340	0,059	0,140
Average APPR	9,675	10,914	8,930	5,898	5,075	6,634	5,634

Source: Own calculations based on EUROSTAT data base

Annex-table 2: Change p.a. of youth and total unemployment rate and ratio 2006-16

	Youth ue RATE			Youth ue RATIO			TOTAL unemploy-ment
	15-24	15-19	20-24	15-24	15-19	20-24	15-74
UK United Kingdom	-0,9	0,4	-0,6	-1,1	-1,7	-0,6	-0,5
AT Austria	1,4	1,4	1,8	0,8	0,0	1,4	0,8
CH Switzerland	0,7	1,5	0,1	0,4	1,0	-0,2	0,1
DE Germany	-6,8	-6,5	-6,8	-3,4	-2,1	-5,0	-6,1
BE Belgium	-0,4	-1,1	-0,1	-1,4	-0,7	-2,3	-0,4
NL Netherlands	4,2	5,0	3,7	2,8	3,1	2,4	2,1
DK Denmark	4,3	5,2	4,0	2,5	2,6	2,6	2,3
FI Finland	1,4	2,8	1,0	0,8	1,1	0,5	1,1
SE Sweden	-2,6	1,5	-2,6	-0,6	0,4	-1,7	-0,1
NO Norway	2,5	4,6	1,5	1,1	1,3	0,8	1,3
EU28	1,3	1,3	1,5	0,1	-0,5	0,5	0,4
CONTINENTAL	-0,2	0,1	-0,3	-0,2	0,3	-0,7	-1,2
NORDIC	1,4	3,5	1,0	0,9	1,4	0,5	1,1
APPRENTICE-SHIP	-0,1	0,4	-0,2	0,1	0,4	-0,3	-1,2
STATISTICS							
Std dev CONT	3,642	3,812	3,545	2,099	1,742	2,658	2,841
Std dev NORD	2,531	1,465	2,356	1,101	0,795	1,527	0,838
Std dev APPR	4,097	4,268	4,040	2,156	1,703	2,890	3,214

Variation co-efficient CONT		63,531	13,636		6,700	3,591	
Variation co-efficient NORD	1,808	0,416	2,417	1,159	0,589	2,777	0,732
Variation co-efficient APPR		10,670	17,956	28,742	4,543		
APPRENTICE-SHIP group summary							
Std dev APPR	4,097	4,268	4,040	2,156	1,703	2,890	3,214
Variation co-efficient APPR		10,670		28,742	4,543		-
Average APPR	-0,100	0,400	-0,225	0,075	0,375	-0,300	-1,234

Source: Own calculations based on EUROSTAT data base

Annex-table 3: Youth unemployment in relation to total unemployment, and youth unemployment rate in relation to ratio (indices, total unemployment=1,00, ratio=1,00)

	Youth ue rate/ TOTAL ue			Youth ue ratio/ TOTAL ue			Youth ue RATE/ Youth ue RATIO		
	15-24	15-19	20-24	15-24	15-19	20-24	15-24	15-19	20-24
UK United Kingdom	2,67	3,93	2,05	1,58	1,6	1,56	1,70	2,40	1,35
AT Austria	1,91	2,3	1,71	1,12	0,96	1,27	1,69	2,46	1,32
CH Switzerland	1,82	1,83	1,82	1,23	1,01	1,44	1,48	1,81	1,26
DE Germany	1,45	1,58	1,41	0,74	0,48	0,98	1,96	3,3	1,43
BE Belgium	2,64	3,8	2,47	0,84	0,32	1,33	3,15	11,75	1,85
NL Netherlands	1,83	2,37	1,43	1,27	1,44	1,11	1,44	1,64	1,29
DK Denmark	1,92	2,27	1,64	1,27	1,31	1,22	1,51	1,73	1,34
FI Finland	2,46	3,66	1,94	1,27	1,17	1,37	1,94	3,14	1,41
SE Sweden	2,94	4,5	2,26	1,56	1,49	1,63	1,88	3,02	1,38
NO Norway	2,61	3,55	2,06	1,48	1,48	1,49	1,76	2,41	1,38
EU28	2,2	2,73	2,03	0,94	0,59	1,26	2,34	4,64	1,61
CONTINENTAL	1,94	2,44	1,78	0,98	0,76	1,19	1,97	3,23	1,49
NORDIC	2,5	3,57	1,98	1,39	1,34	1,43	1,80	2,66	1,39
APPRENTICE-SHIP	1,72	1,94	1,58	1,05	0,9	1,18	1,64	2,15	1,35

Source: Own calculations based on EUROSTAT data base

Annex table 4: Youth and total unemployment in relation to EU28 (index EU28=1,00)

	Youth ue rate			Youth ue ratio			Total unemployment
	15-24	15-19	20-24	15-24	15-19	20-24	15-74
UK United Kingdom	0,87	1,03	0,72	1,2	1,94	0,88	0,72
AT Austria	0,49	0,48	0,48	0,68	0,92	0,57	0,57
CH Switzerland	0,40	0,33	0,44	0,64	0,84	0,56	0,49
DE Germany	0,47	0,42	0,5	0,56	0,58	0,56	0,72
BE Belgium	1,05	1,22	1,06	0,78	0,48	0,92	0,87
NL Netherlands	0,47	0,49	0,4	0,76	1,38	0,49	0,56
DK Denmark	0,57	0,55	0,53	0,89	1,47	0,64	0,66
FI Finland	0,99	1,19	0,84	1,20	1,76	0,96	0,88
SE Sweden	1,11	1,37	0,92	1,38	2,1	1,07	0,83
NO Norway	0,44	0,49	0,38	0,59	0,94	0,44	0,37
EU28	1,00	1,00	1,00	1,00	1,00	1,00	1,00
CONTINENTAL	0,58	0,59	0,57	0,68	0,84	0,62	0,65
NORDIC	0,78	0,90	0,67	1,02	1,57	0,78	0,69
APPRENTICE-SHIP	0,49	0,44	0,49	0,69	0,95	0,58	0,62

Source: Own calculations based on EUROSTAT data base

Annex-table 5: PISA scores, average 2005-15 and per cent of score explained by SES, per domains and average across domains

	PISA scores 2009-15				% PISA scores explained by SES			
	READ '09	MATH '12	SCI' 15	AVERAGE	READ '09	MATH '12	SCI '15	AVERAGE
UK United Kingdom	494	494	509	499	13,7	12,5	10,5	12,2
AT Austria	470	506	495	490	16,6	15,8	15,9	16,1
CH Switzerland	501	531	506	512	14,1	12,8	15,6	14,2
DE Germany	497	514	509	507	17,9	16,9	15,8	16,9
BE Belgium	506	515	502	507	19,3	19,6	19,3	19,4
NL Netherlands	508	523	509	513	12,8	11,5	12,5	12,3
DK Denmark	495	500	502	499	14,5	16,5	10,4	13,8
FI Finland	536	519	531	528	7,8	9,4	10	9,1
SE Sweden	497	478	493	490	13,4	10,6	12,2	12,1
NO Norway	503	489	498	497	8,6	7,4	8,2	8,0
INTERNATIONAL	493	493	493	493	14,0	13,8	12,9	13,6
CONTINENTAL	496	517	504	506	16,1	15,3	15,8	15,8
NORDIC	508	497	506	504	11,1	11	10,2	10,7
APPRENTICE-SHIP	491	513	503	502	15,8	15,5	14,4	15,2

Source: Own calculations based on OECD PISA data base

Annex-table 6: PISA scores, average over all available waves 2003-15
and all domains, by parents low and high formal education

	PISA scores average 2003-15		INDEX PISA scores (INT=1,00)		INDEX scores
	ISCED 2	ISCED 56	ISCED 2	ISCED 56	ISCED 56/2
UK United Kingdom	459	533	1,02	1,01	1,16
AT Austria	426	548	0,95	1,04	1,29
CH Switzerland	464	546	1,04	1,04	1,18
DE Germany	462	548	1,03	1,04	1,19
BE Belgium	465	539	1,04	1,02	1,16
NL Netherlands	485	545	1,08	1,03	1,12
DK Denmark	454	523	1,01	0,99	1,15
FI Finland	494	555	1,10	1,05	1,12
SE Sweden	450	513	1,00	0,97	1,14
NO Norway	445	508	0,99	0,96	1,14
INTERNATIONAL	448	527	1,00	1,00	1,18
CONTINENTAL	460	544	1,03	1,03	1,18
NORDIC	461	525	1,03	1,00	1,14
APPRENTICE-SHIP	451	540	1,01	1,02	1,20

Source: Own calculations based on OECD PISA data base

Integration and appropriation of professional content. Current challenges of Cuban vocational technical education

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Abstract: Cuban Vocational Technical Education (VET) is in charge of training the qualified workforce necessary to stimulate the development of the national economy. To this end, a training process that favors teaching and learning centered on the integration of professional content is required, so that students, by appropriating them, train and develop the skills that allow them to solve problems in their profession. However, this process takes place within the framework of an (VET) model in which Vocational Training Institutions (VTIs) and companies share, almost with equal responsibilities, all training. VTI teachers and company instructors are in charge of directing the training process that takes place from the interrelation of the VTI scenarios and the work scenarios of the companies. These novel conditions pose challenges to the training process. The objective of this article is to make an approach to the challenges

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faced by the (VET) process related to the integration and appropriation by students of professional content during their training in VTIs and companies.

Keywords: Content integration, appropriation, professional content

1. INTRODUCTION

For years, students have stated criteria about the differences between work and classrooms settings. This issue has been approached by the prestigious professor and researcher in vocational technical pedagogy Liv Mjelde (2011) when studying Norwegian vocational training. In her study, she questions why learning experiences and the importance that students and apprentices assign to work settings (workshops, production areas of material goods and services, laboratories, etc.) differ so much from the VTIs8 and their classrooms Mjelde (2011).

It is indisputable that this question does not have a local character. The answers seem to be dissimilar, but they all have a common thread. Students' criteria on the importance of the general training received at school collected in a study carried out in different Cuban VET (Vocational Education and Training) specialties drew attention (Aguilar, 2019).

Of the 330 students interviewed, 67.5% (223) issued criteria such as: "I don't know what the theoretical content is for if I'm going to be a farmer", "I went to school because I want to work

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8   By using the concept of vocational training institutions we are referring to what in Cuba is known as VET schools.

fast as a mechanic", "Already I received those contents in previous grades and now I find them again in my training as a bricklayer, what for?", "The teachers at school do not give enough examples of the content applied to refrigeration", "I know that general knowledge is important to be able to study at the university, but I don't see much importance for my future work."

Similarly, when reviewing the students' grades, it was found that in 82.1% of the cases, the lowest marks coincided with the subjects: Mother Language, Mathematics, English Language, Physics and Chemistry (Aguilar, 2019).

On the other hand, when interviewing employers about the quality of the students who carry out their internships in their companies, 71 out of 82 interviewees (86.5%), stated that as regularity the students arrived at work practices with inadequacies in their general training, related to calculus, estimation, interpretation of technological documentation, logical reasoning, among other deficiencies (Aguilar, 2019).

Are these problems related? Is training in VTIs necessary or not? Is the company context superior to school as a setting for professional training?

The answers can be as diverse as their causes; but it is difficult to venture to offer explanations to this problem in a single investigation. However, finding these answers is essential for researchers of VET pedagogy, because during the last 15 years the conditions in which the VET process takes place in Cuba have changed. Currently, it is going through a new pedagogical model in which VTIs and companies share training (Mena & Mena, 2020). As a fundamental characteristic of the model, companies considerably increase (by more than 50%) their participation and responsibility in the training process of future professionals (Council of Secretaries, 2019).

According to this emerging model, the training and development of professional skills must take place in those scenarios in which better technological conditions exist (MINED, 2013). Under this conception, business scenarios and their instructors gain prominence. The production or service process is ideal so that students, guided by VTI teachers and company instructors, can appropriate and consolidate the specific contents of their respective professions, generally during the last two years of the study plan.

This training process, chaired by the VTIs, begins in schools where students must appropriate the general and basic professional contents that serve as prior training to subsequently access the stages of work and pre-professional practices in companies.

In the pedagogical scientific order, the model integrates two traditional approaches to vocational training: learning in action, whose greatest exponent is German dual training, and the applied science approach that characterizes school-based vocational training, which was globalized from the schooling of the VET (Mena, 2012; Acosta, 2012).

Combining these two models also requires recognizing the encounter between two different epistemological approaches to vocational training: one based on the academic training of VTIs where theory and practice are seen as two categories that are mutually exclusive and that it is necessary to integrate, and the another, based on practice in which theory is integrated (Mjelde, 2011).

Then, on the one hand, there is the pedagogical process of the VTIs in which the students receive theoretical contents of their profession, which they verify by applying them during the practical activities in the teaching workshops, which, in turn,

requires an interdisciplinary integration of all the contents of the curriculum (Ramírez, 1998). On the other, there is learning in the company's workshop, in which the confrontation and solution of professional problems occurs from a practice that must integrate the necessary theory (Hermés, 2000).

This is where finding answers to the initial questions becomes important. For students, the training and development of professional skills depends on the degree to which they can integrate the contents of their profession (Faath-Becker & Walker, 2020) learned from the beginning at VTI, when facing and solving the professional problems they will encounter during the internship stage in companies.

In this sense, that students appropriate professional content as a result of the shared VET process that takes place in VTIs and companies, is subordinated, to a large extent, to the degree to which they can integrate and mobilize that knowledge to provide a solution to the problems of the profession that they face during training (Mena, Moreno & Yturria, 2019). Achieving the integration and appropriation of professional content becomes an essential objective for teachers, business specialists and students, which entails significant challenges.

1.1 INTEGRATION, APPROPRIATION OF CONTENT: IMPORTANT CATEGORIES IN VOCATIONAL TRAINING

The relationship between *integration of professional content* and its *appropriation* by VET students is today an essential analogy of the professional training process. Its conditioning character is an important invariant as a fundamental expression of the wholesome character or competence of our graduates (Repilado, 2008).

Professionals, no matter their specialty, must learn to discern between the unified, totalizing and comprehensive nature of their area of performance and the incomplete, fragmented and historically conditioned character of the scientific knowledge apprehended to solve every day problems (Repilado, 2008; Mena & Mena, 2011). The acceptance of this postulate means the recognition of the necessary link between the *training of comprehensive thinking* in students and the *integration of the contents* of the profession as teaching and learning strategies for life.

In the teaching content, that part of the culture and the historical-social experience bequeathed by humanity that must be assimilated by the students is concentrated (Bermúdez, 2014). This is an important criterion, if one takes into account that the historical-cultural influence (Vygotsky, 1987) can determine the course of professional training and the logical, psychological and didactic character of the system of knowledge, skills and values. On that basis, we conceive professional content as:

That part of the historical, social, cultural, scientific, technical and technological experience that is significant and useful for the student; which allows them to have a comprehensive technical-professional preparation, and enables their successful performance in correspondence with social and labor interests (Mena, 2012, p.89).

The *professional content* (i.e. knowledge, skills and professional values) enables the development of the abilities of future workers and contributes to the performance of a variety of work functions, which guarantee their active interrelation with the profession (León, 2015). Based on this, the way in which the professional content is organized and developed is important. Here, it is seen in two essential contexts of the VET process: the VTIs and the company.

During the training process, the student must solve contextualized and representative professional problems, both in the VTI and in the company (Caballero, 2017). This renovating approach which places teaching in context, favors authentic or experiential learning of professional content and methods (Stalbrandt, 2019). Thus, we recognize the *appropriation of professional content* such as:

Those diverse forms and resources through which students, actively and creatively apprehend professional knowledge and skills required for their comprehensive technical-professional development, interrelated with teachers, classmates, and workers of the company, on the one hand. On the other hand, the forms and resources through which students turn into personal qualities the culture that characterizes the socio-labor environment in which they will work in the future, which generates a social, professional and personal commitment, while fostering their cultural roots or enculturation are also included (Mena, 2012, p. 92)

Specifically, the appropriation of professional content allows the future workers to achieve their wholesome character and identity while performing in the same scenarios in which they will do so in the future. Thus, for the students, appropriating these contents, as a process and a result, means *integrating knowledge, skills and values* that they receive in their initial training. These will be essential to achieve their integrality and demonstrate it during their professional performance, facing and resolving situations of their profession based on a holistic view of the world (Sivira, 2008).

However, the previous perspective is denied by the fragmented way in which curricula are currently organized. This is

rooted in the process of deepening and specializing the sciences. These experienced the necessary derivation towards scientific disciplines, "[...] each one with its corresponding conceptual framework that rarely reveals a common origin or an interrelation" (Peme, De Longhi & Barmat, 1984, p. 9).

Celebrities such as Dewey (1916); Marx (1955) and Piaget (1978), considered that sciences possess principles that energize their unity, therefore common efforts are needed to transcend their borders. Engels (1982) defined these encounters as "[...] growth points of science, which are the result of their interactions." (p. 134).

Following these criteria and in accordance with the results of studies carried out on the integration of content, at least two fundamental trends are revealed. On the one hand, the one that assumes this *integration as an essential foundation of the didactic model of science*; and on the other, the one that interprets that this is a *dimension within the theory of curriculum design* (Mena & Mena, 2019).

Fumagalli (1993), considers that the integration of the contents enriches the knowledge schemes of the students, which requires promoting "[...] a conceptual integration based on relationships of meaning" (p. 46). If what has been learned can be related and integrated with correctly possessed knowledge, it is possible to incorporate it into the existing knowledge structures, which facilitates the appropriation of the content and avoids rote learning.

For Sivira (2008), the integration of content gives the possibility of creating alternative and creative learning processes that requires updating the teacher to develop basic skills in students, fleeing from everyday life.

But it is necessary to increase the efficiency of training processes and avoid unnecessary repetitions in teaching and learning. This implies that professors at VTIs and specialists and tutors in companies guide and direct students so that they learn to discover the properties, regularities and essential links of the object of study (Leontiev, 1989), and can apply the concepts and categories learned.

An integrationist teacher is distinguished by the mastery of the regularities, laws, principles and didactic procedures with which he or she intervenes during the teaching and learning process and by his or her relationship with the regularities, laws and principles of the world of work, marked by permanent technological change. An integrationist teacher guarantees his or her professionalism as a result of the systematic approach to the conceptual progress of science didactics, the development of his or her science and the rigors and demands of the profession, sources from which he or she draws to enrich his or her modes of action and those of the students.

From a second glance, Beane (2005) ensures the integration of content as a theory of curriculum design that deals with improving the possibilities of personal and social integration through the organization of the curriculum without taking into consideration the separation by subjects. Díaz (2005), considers that the integration of contents has to do with the way of shaping the curriculum as a consistent and coherent whole, which includes its constituent elements in a coordinated and interdependent manner.

In this line of thought, Rosell, Dovale & González (2004), consider that integration should be interpreted as "[...] the grouping of the fundamental contents of various disciplines,

which interrelate and lose their individuality to form a new unit of interdisciplinary synthesis with a greater degree of generalization" (p. 43).

But it is difficult to conceive an integrated curriculum under the precepts of a parceled education (Mena, 2012). Teaching and learning precede technical and professional development and for this, the integration of content must begin by integrating the teachers who take part in the teaching and learning process of VET.

In practice, pedagogical models increasingly tend to fragment knowledge, so that teachers go (as Von Clausewitz would say in his unfinished work "Of the war", 1999) achieving *victory after victory* in each one of their subjects independently, until finally obtaining the defeat, materialized in a non-competent professional, with limitations to integrate the contents during his or her professional performance.

The integration of content is then recognized as the professionalizing[9] and systemic process generated by the integrated teaching and learning of sciences that allows students the progressive transition from their disciplinary knowledge to their integrated knowledge, until transferring knowledge to the object of the profession. This process favors the appropriation of contents that guarantee sufficient skills for effective performance to in training professionals.

In other words, to integrate the professional content for its appropriation by the students requires the combination of the epistemological approaches seen above. Thus, the process goes through the teaching and learning of the logic of science to the

9   Science related to the profession.

logic of the profession. In other words, it means to apply science to solve the professional problems that the students will gradually face during their internships in companies (Estellés, 2018).

However, for teachers, teaching to integrate content continues to be a big problem. It poses a great *challenge* translated into the need to ensure that those contents are meaningful for students as a condition for their appropriation, in the search of a professional training ideally suited to accomplish the social task assigned.

The purpose of this article is to approach the challenges that VET faces related to the integration of the professional content which should be appropriated by the students, during their training in VTIs and companies.

2. METHODOLOGY AND MATERIALS

The research followed a qualitative approach based on a bibliographic review study, structured through methods of documentary analysis, reflection workshops and consultation with specialists, that allowed the examination, comparison and interpretation of the literature on the subject. The results of the instruments applied allowed to carry out a *multiple triangulation of sequential data* related to the integration of the contents and its influence on students´ appropriation.

The *documents studied* included 14 doctorate theses from the period 2010-2020 about the integration of content, interdisciplinary relationships and the learning process of VET students. After regrouping the information obtained, a *reflection workshop* was held with 27 teachers with more than 10 years of experience in professional training, which made possible the analysis and

subsequent synthesis of the information presented, which facilitated a greater precision of the data. Finally, the information obtained was presented to 11 experts in General Didactics and Didactics of VET selected in advance, who helped to gather the resultant information.

3. RESULTS AND DISCUSSION

The study showed two main results. First, two trends of VET were identified: *inadequacies in interdisciplinary relationships* and *insufficient relationships between the logic of science of each subject and the logic of the profession* during the teaching learning process. There is consensus that these elements have influenced the ways teachers teach students to integrate professional content, an issue that affects their appropriation as a significant element in the training of competencies. Secondly, five challenges that VET teachers face to integrate the contents that typify each profession were recognized. Discussion of each is presented below:

First challenge.
The conception of the VTE training process

The social task given to the Cuban VET is aimed at training professionals of intermediate, comprehensive level, committed to the new socioeconomic model. That is, active and creative professionals, with producer minds, love for work and mastery of the professional skills required to perform successfully the tasks inherent to the profession (Bermúdez, 2014; MINED, 2016). All this coming from the integration of the VTIs with the com-

panies, given that "With this union something that we need in the organic functioning of the country is achieved" (Díaz-Canell, 2020, p. 4).

However, the dependent nature of professional training on ever more accelerated socioeconomic and technological changes, requires permanent transformation from the VET. This statement reminds us of the excellent Latin American and Uruguayan writer and poet Mario Benedetti who prophesied *"When we thought we had all the answers, they changed us all the questions"*. In other words, the conception of the VET training process has to answer in an almost permanent way to the changing questions and demands that the labor market makes us.

Although the VTIs offer the possibility of putting the academic knowledge, systematized and produced through research and work at the service of confronting and solving professional problems, it will always be necessary to ask ourselves some questions such as:

· Are traditional classroom settings suitable for learning professional content?
· Can companies be excluded from the current training of competent professionals?
· Is a totally academic professional training model acceptable today?

Questions and answers make up an indispensable dialectical pair for managers, teachers and students that today cannot be posed only from the classroom; It is necessary to incorporate new pedagogical scenarios and new teachers to strengthen our teaching staff. Undoubtedly, one of the greatest challenges is to

achieve the conception of the process from the integration with the company sector (Aguilar, 2019).

The efficiency of the professional training process must be evaluated by its ability to translate the VTIs-company integration into a harmonious, systemic and comprehensive pedagogical conception of ideas, measures, initiatives, procedures and concrete facts (Mena, Aguilar & Mena, 2019).This is possible from a shared process conception, in which both institutions participate with equal responsibilities throughout the professional's training. Currently, the heritage of research results is not only owned by academia, it is also owned by the company sector (Núñez, Montalvo & Pérez, 2007).

For Martí (2015) it was evident that the essential drama of education today "[...] is that of having to foresee and face constant adaptation and re-adaptation [...] in the face of the continuous changes of the social environment, originated and favored by the accelerated progress of the technique" (p. 21).

The training of professionals has a great dialectical contradiction showed between the growing needs of society and the labor market and the growing and changing development of science, with the emergence of new technological paradigms that produce new professional contents in all spheres. In this regard, Brunner (2000) recognizes that, although disciplinary-based knowledge took 1750 years to double for the first time in the first 18 centuries (A.D.), it is estimated that by 2020 it will double every 50 days.

Regarding the scientific-investigative nature, in Cuba there are already results linked to the experiences in the use of the business context for the development of certain practical teaching modalities. However, most of the well-known investigations (Acosta,

2012; Aguilar, 2015; Jiménez, 2017; Sosa, García, & Bueno, 2017; Aguilar, 2019 and Castaño, Mena, Díaz & Díaz, 2019) focus on labor practices in companies related to specific vocational training. It is necessary to work on the rest of the components that intervene in the pedagogical process and that are basic to be able to reach the specific contents. Companies and the experiences of specialists who, together with teachers, must conceive the pedagogical process in order to achieve the integration and appropriation of professional content are also required.

As a synthesis of this challenge, the integration of VTIs-companies is considered as an invariant of current professional training. This harmonious and systemic process has a pedagogical nature and is manifested in both entities. The coherent and mediating actions of teachers, specialists and tutors, in the direction of academic, labor, research and extension activities throughout the training process allow the appropriation of the contents and professional methods in the world of work by students, as a significant contribution to sustainable local socio-economic development.

Second challenge.
The methodological work according to professional training, from the guiding nature of the teaching department

Another challenge identified in the integration and appropriation of professional content is related to the **methodological conception of the process**. Everything in the educational institution, mainly the work of all teachers, must be organized in order to achieve **professional training according to the**

model designed in the curriculum, in response to the social task assigned.

The methodological work is seen as the preparation that the teacher needs and performs in order to improve the planning, organization, execution and evaluation of the pedagogical process (MINED, 2016), in all areas and departments. This work has to start from the study, analysis and reflection of the professional model as a guiding document that drives change in the organization of teaching.

This work guides all teachers so that their training actions progressively approach from the object of science to the object of the profession, their own discipline (Castaño, Mena, Díaz & Díaz, 2019). This is the starting point to make professional content meaningful and achieve the integration of the contents of their science to the object of the profession. In relation to this previous idea, important guidelines are identified, such as:

- Conscious and systematic participation of all teachers of the academic year in all sequenced actions of the teaching and learning process.
- Overcoming the concept of teachers who provide services to specialties by teachers with skills and competencies to understand their science and profession.
- Planning of learning situations in real productive contexts.
- Systematic and integrated monitoring of all teachers who participate in professional training (general and technical subjects), among others.

The conscious and systemic incorporation of the sequenced actions of the work algorithm to the teaching-learning process

cannot be the responsibility only of the professors of the profession; there must be participation of all teachers. Only in this way are the necessary conditions for integration created and the student can appropriate the contents (Abreu, León & Menéndez, 2014). The technical area is the main responsible for the modeling of the professional. Specialists, technical and technological work teams are concentrated in this area and the main activities to be developed are designed in a shared way.

The academic and classroom context can lead to the reproductive assimilation of skills associated with student learning (Aguilar, 2015). However, when this learning situation takes place, as a result of the methodological projection, in real productive contexts, the students can experience each phenomenon or process derived from it, use tools to obtain a product or offer a service, make decisions, be right or wrong and estimate the consequences for themselves, for the group and for society (Jiménez, 2017).

On the other hand, companies require students to know how to do and how to behave in professional situations, in tangible problems, which require urgent solutions. During the productive-pedagogical process they have to learn to act using integrated knowledge. This is only possible if teachers from school teach to integrate the contents from an integrated methodological work.

The teaching-learning process in the company is conditioned by the logic of the activity and the production process itself, it takes place 24 hours a day and every day of a year. For example, it is not common to expect a Veterinary or Agronomy student to take deep appropriation of the natural life cycle of a cow, its milking and feeding system using only computer simulations.

The integration and appropriation of these professional content requires the use of dairy farms and a teaching-productive schedule that begins in the late hours of the morning, as is the usual practice of livestock workers. The methodological work must guarantee that the pedagogical process takes place in scenarios that each day resemble the conditions in which future professionals will work.

Third challenge.
The conception of the comprehensive technical and professional development of the student from the academic year

The academic year constitutes the least studied stage of the training process, being a school period of essential importance for the comprehensive technical and professional development of the student. Although this development constitutes the process of gradual and progressive approach of the student to the demands of the professional model, the degree and progress occurs in stages (Bermúdez, 2014). The appropriation of professional content at this stage requires high cooperation between students and educators; the latter, bearers of a system of conscious technical and professional educational influences aimed at the training of the comprehensive character that typifies the professional model.

In the didactic order, achieving comprehensive technical and professional development requires the precise structuring of professional objectives and content, which are also gradual in each academic year. Although the degree of integrality and competencies in the professionals is given to the extent that they can

face and solve professional problems effectively. Once they graduate, this performance is gradually built, until it gets complex forms. For this, a grading of professional problems by degree of complexity from simple, intermediate up to high complexity is required. Thus, the student will face higher level complexity activities in each academic year, both, in the VTIs and in the company (Acosta, 2012).

Students need to integrate content to face problems. Educators, for their part, evaluate the degree to which this integrated knowledge was used effectively in solving each professional problem. The comprehensive and gradual development that occurs in the students should not be measured through an evaluation only on a theoretical level (Aguilar, 2015).

This is where the academic year becomes important. Organizing this stage of the process requires the determination of all the components according to the stage. Thus, it can be clearly discerned from the teaching department of the technical area (Cabot, 2017).

This organization makes it possible to systematically regulate and evaluate how cultures are being integrated into the professional, these are general and basic, political, technological, economic and productive that ensure the professional's competence. Thus, the integration of content is specified in the professional profile of the student at the academic year level, which can be a measure of their degree of approximation to the professional model.

Finally, the evaluation of the results of the integration of contents, expressed in the appropriation of these by the student, puts the teachers of the academic year, in a position to carry out an effective pedagogical delivery to the teachers of the follow-

ing academic year, in which they comprehensively show how the students have passed through the training stage (Bermúdez & Pérez, 2016).

Fourth challenge.
The discipline, subject or area of knowledge
teaching group

One of the important factors of professional training is the collective work of the disciplines, subjects or areas of knowledge. However, this work loses objectivity when the professional model is unknown and, as a consequence, the contribution of each area of knowledge to the specialty, ending up parceling out and decontextualizing teaching (Abreu & Soler, 2015).

The professional model must be a compass when designing the discipline. Thus, the activities developed in a cooperative manner by educators and students, in the context of shared training, are methodologically coordinated (Mena & Mena, 2020).

So, the professionalizing function is closely related to the interdisciplinary nature that the process must have, in relation to the integration of subjects as a criterion for selecting the contents and the school and business settings, which is the essence of the basic principle of structuring the pedagogical process.

The combination that is achieved between the humanistic, exact, natural sciences and the rest of the technical sciences is what allows us to have a special sensitivity to social problems (Caballero, 2017).

The mechanical engineer who is not aware of the main findings of microbiology and does not understand the meaning of

genetic engineering; and the biologist who, in turn, ignores the findings of microelectronics and the principles of computer science that he uses, will not only be incomplete technicians, but will also be less useful workers (Rodríguez, 1984, p. 33).

In an integrated curriculum, the disciplines, subjects or areas of knowledge must be conceived as areas of knowledge that designate an organized (not closed) system whose components, coinciding with their totality, reflect the logic of the science that gives rise to them and enrich, from its singularity, the logic of the profession.

These reasonings require that each discipline and subject be made up of a system of didactic components integrated for itself (inwardly) as an essential condition to become, firstly, areas of potentially integrable knowledge among themselves (natural sciences, humanities) and later with the area of technical and professional knowledge (towards the profession). These stages are conditions for the integration of content.

Content integration reaches its highest level of development when the conditions are created for students to integrate what they have learned from disciplines and subjects into the profession. In this stage, teachers of science, humanities, of the main integrating academic year subject and students converge, facing together situations that come from the professional context.

Let's take an example, related to the training of a concept from the integration of contents. It is important to observe how the assimilation process of everyday, intellectual or general and scientific or professional technical concepts takes place. When talking about properties such as hardness and resistance in metals (disciplines and subjects of Chemistry and Physics), any student can associate it, by experience or previous knowl-

edge, with metals such as iron and steel. The definitions of these metals have an intellectual connotation first, which becomes scientific as the students' information increases (Materials Science course). Thus, theoretically and through the iron-carbon diagram, they know their differences, their composition, their physical and chemical properties and ways of obtaining them and even, at certain times, they could differentiate them with the naked eye.

However, the students can truly appropriate this content when in the practical lesson developed in the workshop, they work with these metals, select them for mechanical elaboration, select the tools, transform them into articles and check their real behavior according to the specific properties regarding the different cutting regimes. they appropriate the concept when it has reached the scientific or technical-professional level, when they have experienced it in practice

The appropriation of the concept for the students take place when, from the integration of contents of the aforementioned areas of knowledge, an everyday concept has transited to states in which the students have experienced real situations. In other words, the understanding of the technical-professional speech or language is only completed when the students experience it in professional practice. As Mjelde (2011) would say "Separating academic thinking from practice is as damaging as separating practice from academic matters" (p.208).

Even more, if the practical activity is economic, ecological and productivity oriented, which is important for the adequate selection of the most suitable material for the manufacture of the part, if its costs and the profitability of its production are analyzed, then the significance of the content is increased by

the students' understanding of the economic and social contribution they make. In addition to the meaning of the concept, a significance and added value is being given to the specialty (Castaño, Mena, Díaz & Díaz, 2019),

Achieving this purpose requires designing teaching activities that motivate students to learn in an integrated way, self-discovering the significance of each learning (Abreu and Soler, 2015). It is necessary to convert the components and categories of the pedagogical process of each discipline and subject into essential elements that respond directly and explicitly to the object of the profession (Mena & Mena, 2020).

The class must "be and seem" a professional training context in which, while they learn science, understand its application, respond to the "why" they need such professional contents and methods, and how they transfer them during professional problem solving (professionalization). The socio-scientific and socio-professional experiences that are worked on in teaching activities must be conceived as fundamental contents integrated at the service of the profession, and are the result of methodological work at the level of academic year, department, discipline and subject (the fundamentals according to the profession). Teachers must know that the content, as a practical need, is not exhausted within the frameworks of the subject, but rather requires interdisciplinary study, systematized for the solution of problems related to the object of the profession, with the training of the logic of the professional thinking (systematization). Then, the student moves from the training of skills to the training of competencies as stable, durable and functional behavioral modes as a result of integrative learning.

Fifth challenge.
Diagnosis as a scientific-pedagogical tool

Content integration requires a great deal of information about students, teachers, and context in order to keep the professional development process objective. All the above challenges must take into account the diagnosis of the students' socio-scientific and socio-professional needs as a scientific and pedagogical tool (Bermúdez & Pérez, 2016).

Conceiving each teaching activity requires a comprehensive understanding of the students: the way they learn, their previous or basic knowledge (theoretical and practical), their problems, their interests and motivations, their life projects, plans, goals and hopes, so that they can be adequately oriented (Bermúdez & Pérez, 2016).

The diagnosis takes place before, during and through all the activities that the student performs. Each contributes to its shaping and continuous feedback. All those involved are responsible for the gradual development of the student (Arriaga, 2015). The diagnosis allows knowing and evaluating the degree to which the systematic results of the process are close to the demands of the socially constructed professional model, while allowing the gradual elaboration of the professional's profile (Aguilar, 2015).

It is also important to diagnose teachers, the state of their preparation: technical and technological, psycho-pedagogical and didactic; the degree of involvement in the process; the level at which the content they teach meets the needs of the profession. Teachers must know how to diagnose and predict, plan and organize, apply, execute and control the entire process (actions that are commonly ignored unconsciously), as they are procedures in the resolution of professional problems.

Another decisive element in the diagnosis is the context, in which each training activity takes place (MINED, 2013).What will be the best scenario for the development of professional content, the VTI or the company? It is necessary to consider the necessary and sufficient conditions to conceive the activity; the professional problems to be worked on, classified by degree of complexity to draw on the development of each student; the characteristics of the group of workers; jobs, among other elements. The selection of each context of pedagogical development must consider the real possibility of integrating the academic, labor, research and extension components in each activity. To think of each one separately is to not understand the integration process (Ferreira, Mena, Acosta & Mena, 2019).

The information originating from the diagnosis makes it possible to evaluate the development of the process, which affects the regulation, both of the integration of professional content and of the training process in general. The systematic, partial and final control becomes a permanent examination that allows to validate and correct the inadequacies of the activities carried out, individually and as a whole. In the same way, it offers the required information that allows making the necessary corrections at the right time, and thus re-evaluating the planning of tasks and the design of other activities if necessary (Aguilar, 2015).

This aspect is noticeable from the reorganization of the pedagogical process, the use of simulated and real means, the rethinking of professional problems, the reorientation of attention to the student using other specialists from the workforce. In the same way, the data obtained allow reorienting the attention to students based on diversity and their educational needs. The relationship between students takes on a different magnitude

when the relationship between those who have reached the highest levels of performance and those who still remain at basic levels can be established (Aguilar, 2019).

Although we have specified in five major challenges the process of integration and appropriation of content in the training of Cuban professionals, we do not consider the problem exhausted. There are other challenges to consider in order to ensure that the integration of content is guaranteed in the professional training process so that students can appropriate them. It is necessary that they be identified, as the integration and appropriation of professional content, as we meant at the beginning, acquire relevant importance in the training of future workers. Among them we can point out:

· The work and preparation of teachers,
· The didactics of work in companies,
· The work of specialist commissions,
· The demand-training relationship, among others.

4. CONCLUSIONS

Vocational training is coordinated and structured. It occurs in a succession of activities led by teachers, specialist instructors and tutors based on a logic and a specific organization, conceived indistinctly in school and business contexts. This gives an extremely complex character to this process.

It is necessary to understand this complexity from the dialectical conception of a professional pedagogical process multi-determined by various causes and multi-influenced by various factors that, by not developing in a linear order, is fraught with

transformations, gradual changes, involutions, advances, developments and challenges that are generated by the internal movement of the same process.

The pedagogical group achieves the integrative quality to the extent that it achieves the materialization of the integrative and systemic character of the didactic components of the teaching-learning process that they direct. The successes will depend on the preparation of the teachers to guarantee the appropriation of content in the students, which enhances the value of the methodological work as a concretion of the movement and bilateral integration of the modes of action of the students and the teachers to achieve the common objectives.

Taking these challenges into account, and directing the process based on them is complex, but not achieving it is decisive in the integration and appropriation of the profession's contents, as learning is facilitated when knowledge is developed in its natural context and in an integrated way, as a whole (Vygotsky, 1987). Only if learning has a true meaning, the student integrates it, appropriates it and is able to solve the problems and situations of his profession as a competent professional.

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Difficulties, challenges and problems in the ongoing process of Dual VET implementation in Spain: a systematic review of the scientific literature.

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Abstract: Some European countries, including Spain, encouraged by the EU, have undertaken the reform of their Vocational Training systems so as to promote dual apprenticeship. The Germanic model of duality is considered the most successful model due to the effective integration of its graduates into the labour market and the low rates of youth unemployment where it operates. Nevertheless, the problem lies in the difficulty of a direct transfer of policies and models because the contexts of application differ in terms of political, cultural and economic organisation.

This Systematic Literature Review (SLR) has systematised the challenges, difficulties and constraints faced in the implementation and extension of a dual vocational education system. The analysis process was developed through Qualitative Data Analysis Software (QDAS), specifically Nvivo 12 Plus.

The results show that the direct transfer or the reinterpretation of the model present multiple challenges and difficulties

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corresponding to three categories: public sector, private sector and public-private challenges.

Keywords: Vocational education and training, dual apprenticeships, work-based learning, dual VET.

1. INTRODUCTION

Over the last twenty years, considerable attention has been paid to so-called dual apprenticeship, i.e., the combination job activity and professional apprenticeship in the system of vocational training, in response to the changes occurring in the workplace, the high rates of youth unemployment, the mobility of the work force, and the challenges of the new economy (OECD, 2010).

Together with the international promotion of dual apprenticeship, increasing attention is being paid to how educational systems can transfer, adopt and implement the dual model (Stockmann, 2014; Euler, 2015), mainly in association with the Germanic tradition of dual vocational training, considered a successful model (Martín-Artiles et al., 2019; Zimmermann, 2017).

While some research has seen difficulties in the transfer of the model (Euler, 2015), others have analysed the conditions, challenges and limitations appearing during its implementation, especially after 2013, when the European Alliance for Apprenticeships (EAfA) was created under the auspices of the European Union, in order to increase the quantity and quality of training posts offered by member states.

Given this context, the present chapter aims to undertake a systematic review of the scientific literature (RSL) in order to specify the difficulties, challenges and problems caused by the introduction of the dual vocational training model, with particular attention on the case of Spain.

2. THEORY AND METHODS

2.1 Theory

Dual vocational training systems have been introduced into several countries thanks to the encouragement of several international organizations, including the OECD and the European Union, who have attempted to transfer the model traditionally developed by the Germanic countries. According to Eichhorst et al. (2015), dual apprenticeship schemes in countries such as Austria, Germany or Switzerland share key institutional elements, such as: a) a high degree of formalisation, in other words, they provide training in centrally accredited professional qualifications; likewise, the contents of the training are continuously adapted to the changing requirements of the job market; b) heavy involvement of social actors in both the development and maintenance of the curricula at governmental and federal level, as well as in application and supervision at regional level; c) vocational colleges provide the part of dual apprenticeship taught at school, which covers both general education and specific training concerning skills, and this training is financed by the government; d) businesses must fulfil certain technical standards in order to offer apprenticeships and they bear the financial costs of in-house training.

The direct transfer of the dual apprenticeship system has been questioned on the basis that Germanic institutional, cultural and contextual conditions restrict an effective implementation of the dual forms of VET (Euler, 2015; Rauner & Wittig, 2010). For this reason, instead of directly transferring the dual system of VET, most of the efforts of the countries introducing this model are directed to the gradual application of elements of

the dual system according to the specific characteristics of those countries (Valiente & Scandurra, 2017). To be specific, Spain, for example, designed the legal framework for the application of dual vocational training by Royal Decree 1529 (November 8, 2012), which regulates the contract for training and apprenticeship, and sets out the foundations for dual vocational training. Development of the Decree has not been without problems and dilemmas, as shown by a variety of research (Echevarría, 2016; Marhuenda-Fluixá et al., 2017; Martín-Artiles et al., 2020; Sanz, 2017), concerning the Spanish preponderance of theoretical over practical training, the involvement of businesses in receiving and training apprentices, and collaboration between businesses and training colleges, which are all fundamental characteristics of the dual training system.

In this case, our review of the literature aims to contribute to the debate on the problems and challenges in the introduction of dual vocational training in those countries that have decided to adopt it, including research carried out in Spain. This review considers both the transfer of the Germanic VET system, and also research on the application of any scheme related to dual apprenticeship involving, according to Ryan (2001), the following institutional requirements: a) The VET programme is divided into two components: one school-based and the other in the workplace; b) it is a programme of initial VET that leads to the acquisition of a formal qualification; c) qualification levels within the European context are equivalent to upper secondary or tertiary education; d) the programme includes compensation in the form of a salary/ benefit to the learner; e) the direct costs of training apprentices in the workplace are sponsored by the employer; f) there is a formal contract or relationship between

the learner and the employer that protects both parties; g) activity in the workplace is mainly aimed at training the apprentice; h) there are actors within the company with the responsibility of defining training programmes, tutoring and/or evaluation.

2.2 METHODS

We have not written this contribution as a conventional review of scientific literature on major questions of the research project we are at present conducting on the reform of VET in Spain by the implementation of the dual training system. We believe that what is traditionally known as a literature review is, in fact, an *outline process* of one's own research inasmuch as it acts as a mechanism for integration and transformation of ideas and, at the same time, as a sequencing mechanism for those ideas with a view to designing a research plan. The outline thus becomes a sort of map of what one aims to research, questioning it so as to develop it, in order to carry out the research itself (Machi & McEvoy, 2009).

As such, a research outline is based on systematic reviews of the literature which, in themselves, are research projects rigorously and transparently examining source evidence in order to solve a previously conceptualised problem (Valiente & Scandurra, 2017). Their goal is to achieve a more comprehensive and trustworthy image of a subject than would be possible if we only used individual research (Gough et al., 2012). Moreover, systematic reviews of literature are fundamental instruments to draw conclusions from large sets of research and thus permit scientific theory to progress (Harari et al., 2020), as well as to facilitate decision making at political and professional levels,

for they are a basic resource for operation based on evidence (Gough & Thomas, 2016).

The main questions guiding our systematic review are as follows. What challenges, difficulties and problems do we find in the introduction of dual VET programmes? What are the aspects of this implementation showing highest efficacy? In short, we aim to achieve a broad understanding of the processes involved in the implementation of dual VET in those countries that have opted to introduce it. In this sense, our study completes the previous systematic review by Valiente & Scandurra (2017) on the challenges and dilemmas facing the governments of OECD countries during the introduction of these dual programmes because, in this case, the scope of our research includes the studies and research published in Spanish and English since the year 2000 and included in Web of Science-Core Collection, Scopus and ProQuest databases, but excluding Ph.D. theses and abstracts. The search process was divided into two stages. The first consisted in a search of the three aforementioned databases for combinations of the terms "dual vet", "fp dual", "dual vocational and training", "formación professional dual", "dual education system", "dual education model", "dual apprenticeship" and "formación dual." Initially 268 documents were located, later reduced to 171 by elimination of duplicates. Exclusion criteria were then applied, based on relevance for the theme under study, leading to a final selection of 134 documents.

Figure 1: Flow chart
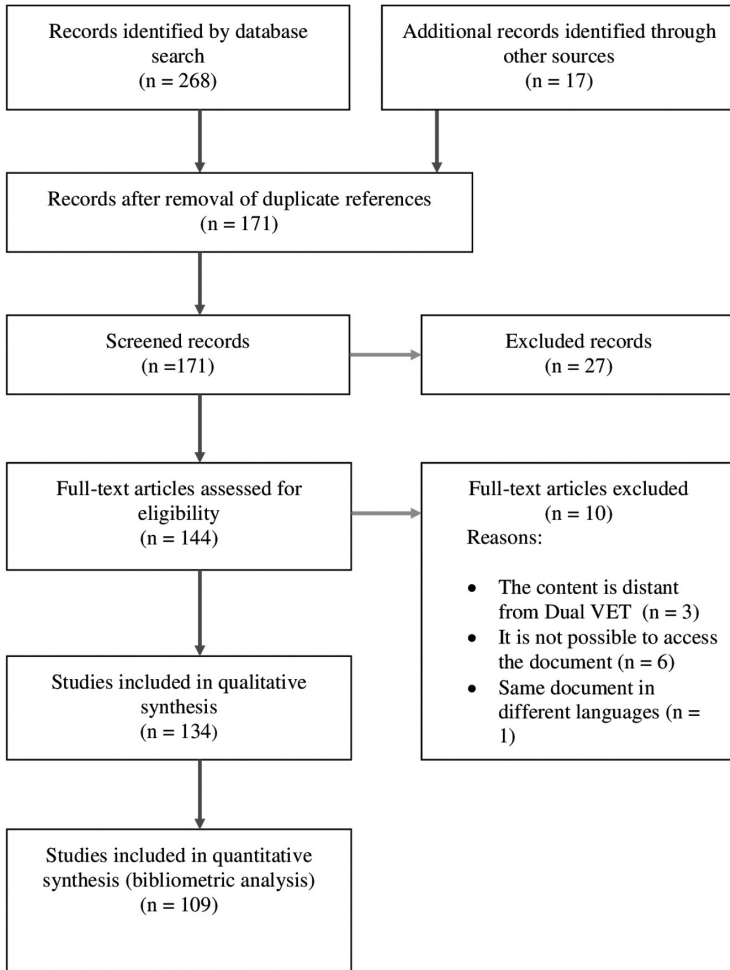
Source: Prepared by the authors

Having extracted the data, we then proceeded to analyse them following a deductive theoretical approach, allowing us to determine the themes and categories resulting from the data, and then to establish the relations between the different categories. Analysis was carried out using Qualitative Data Analysis Software (QDAS), specifically, Nvivo version 12 Plus, because it facilitates the creation of relations, visualisation of same and the identification of areas where the research volume is smaller (O'Neill et al., 2018). This represents an advantage over manual methods, as it guarantees greater flexibility and transparency (Kaefer et al., 2015).

3. RESULTS

One of the most important challenges for the successful introduction and development of a dual VET programme consists in the cooperation between the different actors involved in its governance (basically, public institutions), the business world and trade unions. Indeed, much research (Bolli et al., 2018; O'Higgins, 2001; INAP, 2013; Mongkhonavit, 2017; Lange, 2012; Coletti, 2019; Deissinger, 2015) has pointed out the need to develop the capacity for organisation, involvement and cooperation among all the agents concerned in order to attend to the relation between demand and supply of skills in the job market (Eichhorst et al., 2015).

In the case of Spain, a low level of confidence was found between social interlocutors, the Autonomous Communities and the central government (Echeverría & Martínez, 2018), as well as little unity and cooperation between the different actors (Cebrián, 2018). Also, the implementation of dual edu-

cational programmes in Spain has been carried out without the dialogue and agreement necessary between social and educational agents (Martín-Artiles et al., 2019; Marhuenda-Fluixá et al., 2017; Sanz, 2017).

3.1. CHALLENGES FOR THE PUBLIC SECTOR

A specific challenge facing policy makers is to analyse whether or not it is convenient to introduce such as scheme in their respective contexts, as well as the need to undertake prior planning. Before reforming a vocational training system it is essential to analyse the existing business and educational culture in order to detect which elements require change and which measures successful in other countries can serve as proposals (Rego et al., 2015). To this we must add the unavoidable need to count on a sociological analysis of the function of vocational training in society (Cebrián, 2018). An effort must be made by the public sector to understand the different requirements and demands of each sector and to analyse where dual programmes could contribute or not to the improvement of the education system and the productive system (Marhuenda-Fluixá et al., 2019; Molina, 2016). This would avoid the regional diversity of each country leading to imbalance between the productive sector in each region and its vocational training system (Deissinger & Gonon, 2016).

In the case of Spain, this challenge has not been given the relevance and importance it should have during the process of introduction. Indeed, competition between Autonomous Communities to be the first to introduce dual programmes caused a lack of reflection, planning and monitoring of the process

(Marhuenda-Fluixá et al., 2019). This lack of study and prior planning created confusion within the system, putting pressure on the other actors involved, and even leading to inequality among the students (Marhuenda-Fluixá et al., 2019). This lack of organization in the regional governments has meant that the different vocational training colleges have had to promote dual programmes and cooperation with the businesses in their surrounding area, which in turn meant an exponential increase in their workload without any real recognition (Martín-Artiles et al., 2020; Pineda-Herrero et al., 2018).

Together with the need for prior planning of supply and demand according to territorial diversity, the public sector faces the challenge of managing and leading coordination between regions and ministries. In fact, in Germany there is a single legal framework at federal level resulting from the basic political consensus, allowing coordination between the federal State and the different Länder (Alemán-Falcón, 2015). In Germany, strategic competences belong to the federal government, while operative competences belong to regional and local authorities (Rauner & Wittig, 2010), which is forms the backbone of that country's system (Kuhlee, 2015). Apart from cooperation between regions, it is fundamental to have coordination of the educational, social and employment strategies in order to achieve common objectives (Grollmann, 2018; Mongkhonvanit, 2017).

The little research carried out in the Spanish context (Martín-Artiles et al., 2019; Echeverría Martínez, 2018; Rego et al., 2015) found a lack of institutional coordination at all levels, as well as fragmentation of legislation due to the absence of basic national legislation defining the key criteria of a single system of dual learning (Echeverría, 2016; Sanz, 2017). This lack of coordi-

nation is also associated with a high degree of bureaucratisation that restricts and limits the dynamism of the system, reducing its attraction for the other actors, in particular the business sector (Martín-Artiles et al., 2020; Pin et al., 2014).

By contrast, comparative international research on the subject shows that participation of the business sector is critical – without businesses, dual learning is not possible. Another challenge for the public sector, therefore, is the search for businesses to participate in the dual system (Carvajal et al., 2017; Eichhorst et al., 2015), as well as the granting of benefits, such as fiscal or labour incentives and grants (Asghar et al., 2016; Bosch & Charest, 2008; Jansen & Pineda-Herrero, 2019; Mongkhonvanit, 2017; Muehlemann, 2016; Muehlemann & Wolter, 2017; Rivera, 2016; Smits & Zwick, 2004).

Related to the foregoing, another challenge for the public sector is how to finance the system. The State must not only bear the costs arising from incentives for businesses, but also those caused by training at school, including the adaptation and maintenance of material resources and the continuous training and upgrading of teaching staff. In the case of Spain, some research (Echeverría & Martínez, 2018; Pineda-Herrero et al., 2018; Rego et al., 2015) has criticised the lack of public funding for dual vocational training.

3.2. CHALLENGES FOR THE BUSINESS SECTOR

The participation and commitment of the business and productive sector is another of the institutional requirements for dual training and, therefore, an essential pillar (Eichhorst et al., 2015). This is so because this sector is responsible for provid-

ing apprenticeships, the definition of professional profiles and funding for apprentices (Echeverría & Martínez, 2018). Its first challenge, therefore, is to determine and define its responsibility and competences within a complex system of governance. In the German system of dual vocational training, businesses take part via the Chambers of Commerce (Handeslkammern), which are responsible for harmonizing the relations between the different productive sectors and determining professional demands and qualifications (Bosch & Charest, 2008); advising, monitoring and accompanying businesses offering apprenticeships (Manzur-Quiroga et al., 2019); ensuring the fulfilment of rules and supervising the quality of training in the business (Alemán-Falcón, 2015; Wiemann & Fuchs, 2018); auditing the fulfilment of training contracts and, therefore, of timetables, qualifications and salaries (INAP, 2013; Martín-Artiles et al., 2020; Martín-Artiles et al., 2019; Remington, 2017); and evaluating quality and suitability of training to the changes in the productive sector (Alemán-Falcón, 2015; Diessinger & Hellwig, 2005).

In the case of Spain, although Chambers of Commerce have long been in existence, their role in dual vocational training has yet to be developed, and they must become institutions capable of managing and evaluating training in the workplace (Echeverría, 2016; Rego et al., 2015). In a state-regulated system of vocational training, this would involve overcoming scepticism regarding the importance of professional qualifications in the business world (Homs, 2016; Rego et al., 2015) and increasing the commitment and social responsibility of businesses.

Finally, some research (Deissinger & Breuing, 2014) has indicated the challenge of demographic change resulting from the inversion of the population pyramid. Because of this change,

businesses are finding difficulties in maintaining the professional qualifications of their veteran employees while guaranteeing the training of younger professionals. Indeed, Deissinger & Breuing (2014) analyse the special qualification programmes under the concept of Intergenerational Qualification (IQ) that the German multinational motor manufacturer Daimler has introduced to train both veteran employees and young apprentices in the new trends of the mechanical and automotive sector.

3.2. PUBLIC-PRIVATE CHALLENGES

While we have analysed the challenges for the public and private sectors independently in the preceding sections, here we consider the challenges resulting from the collaboration and participation of both sectors, which is fundamental in a model of corporative governance characteristic of the dual system of vocational training. Because of its particularity, the collaboration between public and private involves more numerous challenges.

a) *Access.* Making the model of dual vocational training attractive to students is a key element in its development. Apprentices and their families should view this system as a solid alternative (Eichhorst et al., 2015), with good internal conditions and guarantees of future employability (Scepanovic & Martín-Artiles, 2020), guaranteeing a high standard of general and specific training (Deissinger & Gonon, 2016; Muehlemann, 2016; Pleshakova, 2019; Remington, 2017), unlike conceptions identifying such programmes as dead ends (Deissinger & Hellwig, 2006; Echeverría & Martínez, 2018; Rodríguez-Planas, 2015). Countries such as Germany, Denmark or Switzerland are making efforts

to attract students by presenting as advantages of such dual programmes the proximity of training to the workplace or the ease of transition from school to employment. In this sense, the salary paid during training to the apprentice as student-worker constitutes one of the main attractions (Pleshakova, 2019). If the relation between salary and dual training decreases, its attraction for future candidates is likewise reduced (Rivera, 2016). Indeed, some industrial sectors in Denmark have difficulty recruiting apprentices because the average salary they are paid is lower than in other sectors (Bosch & Charest, 2008). All these benefits associated with the promotion of the advantafes of dual training require media support to help increase the attraction for both families, young people and businesses (Ebbinghaus, 2019; Mongkhonvanit, 2017; Pin et al., 2014).

b) *Integration of disadvantaged collectives.* One of the challenges found by research into dual training programmes is the need to provide for disadvantaged collectives, whether because of their socio-economic situation or because of their lower academic performance. Without access to training, these young people are at risk of unemployment and the gradual mechanisation of unqualified work (Ebner, 2015). One limitation mentioned is the paucity of places offered by businesses, which at times do not meet the requirements of demand. This limitation mainly affects candidates with lesser qualifications and lower socio-economic level (Baethge & Wolter, 2015; Bonoli & Wilson, 2019; Deissinger & Gonon, 2016; Protsch & Solga, 2016; Solga & Kohlrausch, 2013), and with special educational needs (Granato et al., 2015). Immigrants also find themselves in an unfavourable situation when applying for positions as appren-

tices because of language difficulties, the complex system of recognition of academic qualifications, and the lack of educational orientation (Beicht & Walden, 2019; Pleshakova, 2020). If they are awarded apprenticeships, they are often some of the lowest paid, or have even been rejected previously by more advantaged collectives (Granato et al., 2015).

The public sector serves as a refuge for these collectives by way of the offer of training in public enterprises (Wilson, 2019). However, most of the measures set in place for inclusion must count on the involvement of the business sector (Bonoli & Wilson, 2019), for which their reticence must be overcome with arguments concerning adaptation to the needs of the productive sector and the culture of personal effort (Granato et al., 2015). The efforts different countries have made to integrate these collectives vary according to their economic tradition, however, integration must be part of any model of dual learning and be developed by internal and external measures (Bonoli & Wilson, 2019). Some of the measures studied are the preparatory schools, where students gain prior qualifications that increase their chances of being selected by a business and facilitate the transition system (Granato et al., 2015; Grebe & Ekert, 2017; Protsch & Solga, 2016). Other methods include public training workshops, which take the place of training in business (Graf et al., 2012; Granato et al., 2015) or even individual actions, such as academic and professional orientation, coaching or individualised plans designed to increase employability (Bonoli & Wilson, 2019; Solga & Kohlrausch, 2013; Wilson, 2019).

Support for SEMs and flexibility in fulfilling legal requirements are also part of the inclusion measure facilitating the recruitment of socio-economically or academically disadvan-

taged students, as well as making the system attractive for students with high expectations (Baumeler & Lamamra, 2019). Finally, providing more transparency and public auditing in the process of recruiting apprentices helps to avoid arbitrary discrimination (Protsch, 2017).

Apart from socio-economic background or academic situation, gender represents another factor of academic and labour exclusion. Some research (Flores-Sánchez y Vigier, 2020; Lamamra, 2017; Protsch, 2017) has identified gender inequality in both access and academic development of apprentices.

c) *Networked cooperation.* Dual learning is based on the coordination of all the agents involved in the governance of the system. Networked cooperation allows the best use of the resources available to each agent and also increases internal efficiency by boosting intra- and intersectorial dialogue (Coletti, 2009; Savchenkov, 2017). Such cooperation requires a mediating and supervisory institution (Remington, 2018), in charge of the coordination of the whole system (INAP, 2013) and overseeing the organisation, training, quality and employability of the system (Mongkhonvanit, 2017). It also requires the creation of a reliable statistical database allowing planning and foresight in the short, medium and long term (Manzur-Quiroga et al., 2019). The Spanish context lacks a collaborative culture (Cebrián, 2018) and, therefore, the development of these institutions is more difficult.

d) *Economic crisis and recession.* Successive economic crises and recessions represent a challenge for a dual vocational training model depending on the productive sector (Cebrián, 2018;

Deissinger, 2015). Recent economic crises have been analysed in economic research, which has shown the consequences for availability of openings offered by businesses (Alemán-Falcón, 2015; Baldi et al., 2014; Bosch & Charest, 2008; Muehlemann et al., 2009). Such circumstances also reduce public funding and extraordinary investment meant for vocational training and I+D (Ajuria et al., 2018; Alemán-Falcón, 2015). Indeed, Muehlemann et al. (2009) found that a 1% increase in unemployment levels in Germany led to a 0.6% decrease in apprenticeships offered by the private sector.

e) *Regulatory framework*. The development of dual training programmes requires a coherent, consistent regulatory framework ensuring the efficacy of the system and defining the rights and responsibilities of the agents involved (Echeverría & Martínez, 2018; Pleshakova, 2020; Pleshakova, 2019; Rauner & Wittig, 2010). This framework is the cornerstone of corporative governance (Grollmann, 2018; INAP, 2013). In the Spanish context, the existing national legislation does not consider key aspects such as monitoring and control of implementation, evaluation, or the creation and assessment of training or innovation programmes (Echeverría, 2016), and, moreover, coexists with a lack of coordination between legislation of the education system and of the job market, most dissimilar to the German system of dual vocational training.

The challenges associated to the regulatory framework are related with the flexibility and coherence necessary to respond to the modification and updating of the curriculum to include the needs of each productive sector, or even of each region (Gessler & Howe, 2015; Rego et al., 2015; Rivera, 2016; Rodríguez-

Planas, 2015). This guarantees its transferability (Scepanovic & Martín-Artiles, 2020), as well as the response to the demands of technological and economic change (Eiriksdottir, 2018). The regulatory framework must also determine the duration of programmes and their frequency of alternation, as any change alters the balance between the educational aims and the economic goals of the business (Eiriksdottir, 2018). In Germany, most of the dual training programmes last from three to four years, unlike the two years of other traditional models (Muehlemann & Wolter, 2017). In any case, these changes in the duration of alternation should not be a unilateral imposition, but should result from negotiation between the education and business agents.

Another of the challenges for curricular policy concerns the inclusion of the debate on competences and their modular organisation (this is by the way a complex question that cannot be characterized here, but the concept of competences, an already too hackneyed *fuzzy concept*, is usually not sufficiently problematized, neither in the VET research nor in general in others fields; however increasingly better analytical and empirically assessed research is lately appearing in most scientifically contrasted publications) (e.g. Tahirsylaj & Sundberg, 2020).

The tension between general and specific competences, or, more exactly, skills , is one of the key elements of dual training. The job market requires a labour force with general skills, such as the ability to work as part of a team and to solve unforeseen difficulties, rather than just the capacity to repeat a series of specific tasks that can be carried our following pre-established processes (Valiente & Scandurra, 2017). An example of these changes in the VET system is modularisation. Here, Germany has already set up a programme of skill-oriented training modules (Ausbil-

dungsbausteine) to increase the transparency of training results (Grebe & Ekert, 2017). The new modular structure foresees broader basic training at first, with more specialised training in the later stages. This new structure could improve the attraction of training by providing broader qualifications and future opportunities to accumulate more specialised modules (Graf et al., 2012). However, criticism has been raised regarding the splitting up of professional skills into abstract, independent, self-contained elements preventing the creation of a professional identity (INAP, 2013).

Likewise, a challenge related to curricular policy is the creation of rigorous, transparent systems of evaluation and accreditation (Heinemann & Deitmer, 2009). These vary from the German model of final evaluation and accreditation by three-party organisms with the collaboration of tutors from business and college (Homs, 2016; Mongkhonvanit, 2017) and models such as those of Denmark and Switzerland, where plans for continuous evaluation are being developed with the aim of providing feedback for apprentices through their training (Rauner & Wittig, 2010).

The regulation of training for business trainers also involves challenges for the quality of dual learning programmes (Falyakhov, 2018). Such training varies considerably among countries with a long tradition of dual VET, including the Germanic countries, and those introducing it recently. In Switzerland, for example, the pedagogical aspect of teacher training is very limited (Filliettaz, 2011), whereas in Germany trainers must pass an access test evaluating their professional and pedagogical skills (Alemán-Falcón, 2015). In the Spanish context, the regulation of trainers in business and the contents of their training require

greater development and foresight (Echeverría & Martínez, 2018; Pineda-Herrero et al., 2018).

In addition to the regulation of business trainers, any dual training programme must regulate the contracts and salaries of apprentices. Several dilemmas arise for shared regulation of the figure of the apprentice regardless of productive sector, as well as determination of a minimum salary (Muehlemann & Wolter, 2017), or a regulation based on collective negotiation between trade unions, business associations and professional associations in each sector (Eichhorst et al., 2015).

f) *Tension between training and production*. The involvement of businesses and their participation in training apprentices depends on a cost-benefit relationship, i.e., the businesses will become involved in dual training only if the cost of training an apprentice is lower than the benefits produced during the time said apprentice spends in the business and/or the investment made in training compensates the additional cost of selecting the best trained candidates directly in the job market. In this case, the training costs can be compensated by setting up measures to guarantee the apprentice keeps a certain amount of fidelity to the business where he or she is trained (Muehlemann, 2016; Muehlemann & Wolter, 2011; Zwick, 2007); by the development of supervisory committees to avoid educational failure or premature abandonment of the training (Greilinger & Scander, 2018); the establishment of a subsidy system to share business training costs (Leemann & Imdorf, 2015; Martín-Artiles et al., 2019; Rodríguez-Planas, 2015), funded not only with public finance but also by the productive sector, in a manner similar to the Danish system which has a common fund financed by the

productive sector and managed by social agents to compensate the costs of the training businesses (Bosch & Charest, 2008); the creation of cross-company or cooperative structures that allow small and medium enterprises to exchange resources, experiences and training capacity (Rivera, 2016; Leemann & Imdorf, 2015) or collaboration among businesses allowing joint training.

In Germany, networks of businesses have been set up specialised in training in general and specific skills, where apprentices attend in turn (Il'yashenko et al., 2018; Wiemann & Fuchs, 2018). Finally, in Spain the creation of support infrastructure is being considered to overcome bureaucratic barriers, and to plan and supervise training in business (Echeverría & Martínez, 2018; Jansen & Pineda-Herrero, 2019; Muehlemann & Wolter, 2017; Pineda-Herrero et al., 2018).

4. CONCLUSIONS

Throughout this systematic review of the literature we have synthesised the scientific evidence of the challenges, problems and difficulties facing countries setting up dual training programmes, in some case considering the Germanic model as successful. We have grouped the challenges into three categories – challenges for the public sector, challenges for the business sector and others affecting corporative governance and, therefore the relations between public and private sectors. This last category is the most numerous.

The challenges facing the public sector concern its central, leading role in launching the process of reflection, study and planning prior to any educational and labour reform, as well as guaranteeing coordination between regions and between

ministries, facilitating involvement of businesses and funding development.

The challenges for the private sector concern the guaranteeing of its capacity for participation and involvement in training apprentices, which implies a change in their organisational culture, as well as a commitment to funding the reform.

Finally, the different actors involved in cooperative governance must respond to a larger number of challenges related to access to the programmes. This means making them attractive by overcoming some of the obstacles to vocational training, especially in southern European countries, such as training aimed at students with low performance or dead-end vocational programmes. We can emphasize the increase in employability guaranteeing more, better integration into the job market, an improvement in transition between school and work, and an improvement in vocational training linked with proximity to the workplace.

These challenges also require the setting up of a regulatory framework for the basic aspects affecting the educational system and the labour market which is, at the same time, sufficiently flexible to facilitate adaptation to the changing needs of the productive sector. This should be undertaken both for curricular policy, and also for collective negotiation between business owners and social agents regarding the labour conditions of apprentices.

In all of these cases, the success of any reform depends on the design of interaction with the social and economic context in which it is to take place, as well as the degree of agreement and dialogue achieved between government and social actors. Clear, systematic consideration should therefore be given to the

question of whether the Germanic model of dual training could be transferred directly to other countries, without first analysing the specific challenges and difficulties of each context.

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The Importance of Industrial Collaborations in Developing Future Malaysian Vocational Training Institutions

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Abstract: Collaboration between training institutions and industries for skills development through education and training is very critical. However, miscommunication and misconception about the collaboration between these parties can lead to a failed partnership. Thus, this preliminary study has been done to analyze the importance of collaboration between Malaysian vocational training institutions and the industry. A quantitative approach using survey research design has been chosen for this study involving 92 respondents consisting industry players, vocational training institutions staff, and vocational training institutions alumni. The findings have emphasized the importance of collaboration between industry and vocational training institutions to improve vocational training institutions graduate to meet the industry criteria and standard. The finding also shares the factors and barriers that influence the collaboration

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between industry and vocational training institutions. These factors and barriers need to be looked into to ensure a successful partnership between industry and vocational training institutions. Furthermore, the findings also suggested that the government plays a vital role in ensuring the collaboration between vocational training institutions and industry is a success. It is hoped that the findings will give an insight to the stakeholders in planning a successful partnership between vocational training institutions and the industry.

Keywords: industrial collaboration, skill development, industry needs, and industry-led institution

INTRODUCTION

The TVET sector workforce's demand is expected to increase by 2021 after the introduction of the National Key Economic Area (NKEA). The NKEA needs up to 3.3 million workforces by 2020, of which 1.3 million from that number are TVET graduates. It is suggested that this number can be achieved through the 11th Malaysia Plan, in which the Malaysian government has allocated approximately 1 billion Ringgit to the TVET Development Fund (Abdul Razak, M. N. 2015). Through this program, TVET graduates have the opportunity to be employed with high income as the country's economic driving force. The government believes that TVET's empowerment plan, together with smart partnerships from industry players, will be a strategic direction for the National TVET. To realize this, smart collaboration between the industry and TVET institutions need to be enhanced in producing quality products and more efficient services.

Strong cooperation between the industry and TVET institutions is very significant in ensuring the workforce's demand and supply to be met. This will help local TVET institutions to create and offer high-tech industry-based courses founded on industry needs. Skills development through institutions and industries collaboration can be achieved through innovation and technology transfer and entrepreneurship promotion (start-ups and spin-offs) (Guimón, 2013). A study done by Yadav & Shrivastava (2015) shows that industry-institution collaboration will facilitate the formation of knowledge from the industry experts in developing enthusiastic graduates. A partnership between stakeholders can also strengthen their networks, promoting the capabilities necessary to successfully translate market opportunities and manage human capital (Roshani, Lehoux & Frayret, 2015). This collaboration can create a high knowledgeable workforce with spillover effects that will encourage economic and technological growth in agriculture, construction, health, services, and other sectors. Therefore, this research has been carried out to analyze the importance of the collaboration between Malaysian vocational training institutions and industry.

COLLABORATION BETWEEN INSTITUTIONS AND INDUSTRY

Collaboration between institutions and industries for skills development is very important through education and training, adoption of knowledge (innovation and technology transfer), and the promotion of entrepreneurship (start-ups and spin-offs) (Guimón, 2013). The study by Yadav & Shrivastava (2015) shows this collaboration will facilitate the formation of knowl-

edge with the support of experts and experienced persons in the industry that can give the right direction to the enthusiastic, intelligent students and making them experts of the future. Furthermore, industry and institutions need to highlight the emerging skill needs within industries requirements and incentives to industries involved in training collaboration for encouragement (Sohimi et al, 2019)

Also, a collaboration between firms can strengthen their networks, helping to promote the capabilities necessary to successfully translate market opportunities, and managing the human capital (Roshani, Lehoux, & Frayret, 2015).

METHODOLOGY

This study employed a quantitative approach which uses a survey method. A questionnaire survey was developed and consisted of 3 sections: demography, the importance of vocational training institutions-industry collaboration, and the collaboration between vocational training institutions and industry. There are a total of 8 constructs from the two main sections of the questionnaire survey. The questionnaire survey has been validated and tested for its reliability using the value of Cronbach Alpha in the Rasch Measurement Model. Table 1 shows the result of questionnaire reliability

Table 1: Analysis of Questionnaire Reliability

Based on the Rasch Measurement Model result in Table 1, the reliability analysis shows the Cronbach's Alpha value is excellent (.981), and the instrument can proceed to the real data collection stage.

This research employs a simple random sampling technique. A total of 92 respondents from the industry player, vocational training institutions alumni, and vocational training institutions staff participated in this study. The data collected from this research is analyzed using the Rasch measurement model designed explicitly for the survey rating scale. The Rasch analysis was used to determine the data measure order for this study.

RESULT AND DISCUSSION

Measure order table presents a visual representation of item distributions using an order to display the item response patterns. The element that is easiest to endorse falls towards the bottom

of the hierarchy. In contrast, the most challenging aspect to endorse is represented at the top of the item hierarchy (Bond. & Fox., 2015). In this paper, the results for the all the construct is presented in a measure order table.

PART A: DEMOGRAPHY OF THE RESPONDENT

Based on Table 2, it is found that there are 20 alumni from the vocational training institutions responses to this study which represent 21.7 percent. Their involvement in this study can provide an overview of the changes needed by the stakeholders. Majority of the respondent is from the industry which represent more than 60 percent and the balance 15 percent is from the staff of vocational training institutions.

Table 2: Respondent's background

	Frequency	Percentage (%)
Industry	58	63.0
Staff of Vocational Training Institutions	14	15.2
Alumni of Vocational Training Institutions	20	21.7
Total	92	100.0

PART B: THE IMPORTANCE OF COLLABORATION BETWEEN VOCATIONAL TRAINING INSTITUTIONS AND INDUSTRY

I. THE AIMS OF INDUSTRY AND VOCATIONAL TRAINING INSTITUTIONS COLLABORATION

Technical and vocational education and training aim to provide graduates with practical knowledge and skills required at the workplace (Brew & Dadzie, 2016). Thus, industry-institutional collaboration is an opportunity for technical and vocational institutions to achieve their desired objectives (Brew & Dadzie, 2016). Table 3 shows the aims of industry and vocational training institutions collaboration.

Table 3: The Aims of the Industry and Vocational Training Institutions Collaboration

```
TABLE 13.1 construct 1.sav                     ZOU951WS.TXT  Dec 15 2019 16:57
INPUT: 92 PERSON  7 ITEM  REPORTED: 92 PERSON  7 ITEM  4 CATS    WINSTEPS 4.3.4
-------------------------------------------------------------------------------
PERSON: REAL SEP.: 1.48  REL.: .69 ... ITEM: REAL SEP.: .64  REL.: .29

          ITEM STATISTICS:  MEASURE ORDER

-------------------------------------------------------------------------------
|ENTRY   TOTAL  TOTAL          MODEL|  INFIT  |  OUTFIT  |PTMEASUR-AL|EXACT MATCH|         |
|NUMBER  SCORE  COUNT  MEASURE  S.E. |MNSQ  ZSTD|MNSQ  ZSTD|CORR.  EXP.| OBS%  EXP%| ITEM    |
|------------------------------------+----------+----------+-----------+-----------+---------|
|    6    406     92    .73     .26|1.84  4.05|1.88  4.00|  .61   .77| 55.9  71.9| V20_A    |
|    5    414     92    .18     .26| .80 -1.26| .82  -.99|  .80   .74| 83.8  71.1| V19_A    |
|    3    418     92   -.10     .27| .56 -3.30| .48 -3.42|  .84   .73| 80.9  71.0| V17_A    |
|    4    418     92   -.10     .27| .81 -1.27| .70 -1.74|  .78   .73| 80.9  71.0| V18_A    |
|    1    419     92   -.17     .27| .75 -1.68| .70 -1.74|  .77   .72| 70.6  70.9| B_MATLAM |
|    2    419     92   -.17     .27|1.06   .44| .88  -.58|  .72   .72| 66.2  70.9| V16_A    |
|    7    422     92   -.39     .27|1.14   .89|1.33  1.57|  .65   .71| 63.2  71.4| V21_A    |
|------------------------------------+----------+----------+-----------+-----------+---------|
| MEAN  416.6   92.0    .00     .27| .99  -.3| .97  -.4|           | 71.6  71.2|         |
| P.SD    4.8     .0    .34     .00| .39  2.2| .45  2.3|           |  9.8   .3|         |
-------------------------------------------------------------------------------
```

Table 3 shows the measure order result for the aims of industry and vocational training institutions collaboration. Based on the measure order result, five collaboration aims are the respondents' most comfortable endorse items (below logit 0). The partner-

ship aims to provide training and entrepreneurship experience to the student, give the student job opportunities, and coordinate the teaching program based on industrial needs. This is because, through collaboration, the industry can also strengthen their networks, helping to promote the capabilities necessary to successfully translate market opportunities and manage human capital (Roshani, Lehoux & Frayret 2015). Other aims from this collaboration are to improve the development and technological use in line with the industry and also to improve the knowledge based on industrial needs.

II. THE BENEFITS OF COLLABORATION WITH THE INDUSTRY TO THE VOCATIONAL TRAINING INSTITUTIONS

Based on the result in table 4, the findings show nine benefits from the Industry collaboration towards the vocational training institutions. The first benefit is given access to professional specialists from the industry. Secondly, is to increase vocational training institutions' awareness of the importance and the need of the industry. Thirdly is to strengthen the vocational training institutions curriculum following industrial markets. Thus, designing an appropriate curriculum is essential for providing such skills and knowledge to the graduates (Khan & Law, 2015). Fourthly, increasing students' confidence in vocational training institutions and giving them a better career prospect. Fifthly, the benefit of this industry-institutional collaboration also allows vocational training institutions to access the industry's teaching and learning facilities, collaborate with industries to improve teaching, access to funding, reputation enhancement, and access to empirical data from the industry.

```
TABLE 13.1 construct 2.sav                    ZOU860WS.TXT  Dec 15 2019 17: 4
INPUT: 92 PERSON  16 ITEM  REPORTED: 92 PERSON  16 ITEM  6 CATS   WINSTEPS 4.3.4
--------------------------------------------------------------------------------
PERSON: REAL SEP.: 2.30  REL.: .84 ... ITEM: REAL SEP.: 1.67  REL.: .74

          ITEM STATISTICS:  MEASURE ORDER

--------------------------------------------------------------------------------
|ENTRY   TOTAL  TOTAL         MODEL|   INFIT  |  OUTFIT  |PTMEASUR-AL|EXACT MATCH|        |
|NUMBER  SCORE  COUNT  MEASURE  S.E. |MNSQ  ZSTD|MNSQ  ZSTD|CORR.  EXP.| OBS%  EXP%| ITEM   |
|------+------+------+--------+------+----------+----------+-----------+-----------+--------|
|    6    391     92    .80     .23|1.55  2.29|1.70  3.28| .66   .75| 58.9  69.1| V20_A   |
|    8    395     92    .59     .23|1.02   .16|1.09   .52| .74   .75| 72.6  70.6| V22_A   |
|   15    395     92    .59     .23|1.12   .59|1.14   .77| .75   .75| 68.5  70.6| V29_A   |
|   16    395     92    .59     .23|1.17   .83|1.20  1.08| .73   .75| 71.2  70.6| V30_A   |
|    1    396     92    .53     .23|1.24  1.11|1.29  1.51| .68   .75| 65.8  70.7| B_MANFAA|
|    7    400     92    .31     .24|1.39  1.73|1.37  1.81| .70   .74| 82.2  71.2| V21_A   |
|   14    405     92    .01     .25| .67 -1.90| .64 -2.03| .79   .72| 83.6  71.5| V28_A   |
|    2    407     92   -.11     .25| .96  -.14|1.08   .46| .68   .71| 69.9  71.5| V16_A   |
|    4    407     92   -.11     .25| .78 -1.22| .83  -.80| .75   .71| 76.7  71.5| V18_A   |
|   13    407     92   -.11     .25|1.05   .35|1.13   .68| .72   .71| 69.9  71.5| V27_A   |
|   10    408     92   -.17     .25| .89  -.57| .80  -.98| .74   .71| 72.6  71.5| V24_A   |
|    3    412     92   -.42     .25| .75 -1.47| .81  -.89| .73   .69| 79.5  71.5| V17_A   |
|   11    413     92   -.48     .25| .91  -.50| .93  -.26| .71   .69| 83.6  71.7| V25_A   |
|   12    414     92   -.54     .25| .67 -2.09| .61 -2.04| .76   .68| 80.8  71.8| V26_A   |
|    5    415     92   -.61     .25| .85  -.88| .76 -1.09| .71   .68| 79.5  71.9| V19_A   |
|    9    419     92   -.87     .26| .82 -1.12| .72 -1.23| .69   .66| 74.0  72.2| V23_A   |
|------+------+------+--------+------+----------+----------+-----------+-----------+--------|
| MEAN  404.9   92.0    .00     .24| .99   -.2|1.01    .1|           | 74.3  71.2|        |
| P.SD    8.3    .0     .50     .01| .25  1.2| .29   1.4|           |  6.8    .7|        |
--------------------------------------------------------------------------------
```

Meanwhile, industries' motivations to collaborate with universities or institutions may embrace gaining access to complementary technological knowledge and providing training to existing or future employees (Guimon, 2013). The other benefits are vocational training institutions instructors can obtain working experience in industry and job experience for the student in industry. Moreover, the benefit from the industry-institution collaboration allows the student to do industrial attachments. This will help fresh graduates to meet the evolving requirements of the Industry (KPM, 2013). Lastly, the benefit from the industry-institutional collaboration gives a better teaching and learning program for TVET institutions.

III. THE BENEFITS OF COLLABORATION WITH VOCATIONAL TRAINING INSTITUTIONS TO THE INDUSTRY

Table 5 shows that there are two benefits identified from the collaboration between industry and vocational training institutions to the industry. The industry's benefits from this collaboration are to increase the industry's reputation. The industry's benefits can be derived primarily in the form of business or economic development, market impact, human capital development, and even political leveraging (Liew, Tengku Shahdan & Lim 2013). Secondly is the improvement and adjustment of up-skilling training in the industry. The collaboration between industry-institutions may embrace gaining access to complementary technological knowledge and providing training to existing or future employees (Guimon, 2013).

Table 5: The Benefits Collaborating with the Vocational Training Institutions to the Industry.

```
TABLE 13.1 construct 3.sav                 ZOU506WS.TXT  Dec 15 2019 19: 5
INPUT: 92 PERSON  4 ITEM  REPORTED: 92 PERSON  4 ITEM  4 CATS     WINSTEPS 4.3.4
--------------------------------------------------------------------------------
PERSON: REAL SEP.: 1.30  REL.: .63 ... ITEM: REAL SEP.: .00  REL.: .00

          ITEM STATISTICS:  MEASURE ORDER

-----------------------------------------------------------------------------------
|ENTRY   TOTAL  TOTAL          MODEL|  INFIT  |  OUTFIT |PTMEASUR-AL|EXACT MATCH|      |
|NUMBER  SCORE  COUNT  MEASURE  S.E. |MNSQ  ZSTD|MNSQ  ZSTD|CORR.  EXP.| OBS%  EXP%| ITEM |
|---------------------------------------+----------+----------+-----------+-----------+------|
|    1    402     92     .20     .30|1.14   .76|1.01   .11|  .78   .83| 76.2  76.5| B_MANFAA|
|    4    404     92     .02     .30|1.26  1.29|1.34  1.26|  .83   .83| 63.5  76.0| V18_A   |
|    2    405     92    -.07     .30| .90  -.44| .91  -.27|  .82   .83| 77.8  76.3| V16_A   |
|    3    406     92    -.16     .30| .67 -1.83| .50 -2.30|  .89   .83| 88.9  76.8| V17_A   |
|---------------------------------------+----------+----------+-----------+-----------+------|
| MEAN   404.3   92.0    .00     .30| .99   -.1| .94   -.3|           | 76.6  76.4|      |
| P.SD     1.5     .0    .13     .00| .23   1.2| .30   1.3|           |  9.0    .3|      |
-----------------------------------------------------------------------------------
```

PART C: THE COLLABORATION BETWEEN VOCATIONAL TRAINING INSTITUTIONS AND INDUSTRY

I. THE TYPES OF COLLABORATIONS THAT SHOULD BE CONDUCTED BETWEEN INDUSTRY AND VOCATIONAL TRAINING INSTITUTIONS

The need for collaboration between vocational institutions and industries has been widely discussed, mainly when issues on vocational graduates' mismatch competencies and industrial markets arised (Eko Supraptono et al. 2018). Many types of cooperation can be conducted depending on the vocational college's needs and the industry itself. Table 6 shows the types of collaborations that should be conducted between the industry and the vocational training institutions.

Table 6: Types of Collaborations Between Industry and Vocational Training Institutions

```
TABLE 13.1 construct 4.sav                    ZOU056WS.TXT  Dec 15 2019 17:11
INPUT: 92 PERSON  24 ITEM  REPORTED: 92 PERSON  24 ITEM  5 CATS   WINSTEPS 4.3.4
--------------------------------------------------------------------------------
PERSON: REAL SEP.: 4.32  REL.: .95 ... ITEM: REAL SEP.: 1.89  REL.: .78

          ITEM STATISTICS:  MEASURE ORDER
```

ENTRY NUMBER	TOTAL SCORE	TOTAL COUNT	MEASURE	MODEL S.E.	INFIT MNSQ	INFIT ZSTD	OUTFIT MNSQ	OUTFIT ZSTD	PTMEASUR-AL CORR.	PTMEASUR-AL EXP.	EXACT MATCH OBS%	EXACT MATCH EXP%	ITEM
11	281	92	.67	.16	.66	-2.52	.80	-1.30	.85	.83	65.1	54.0	V25_A
18	289	92	.47	.16	.91	-.57	.90	-.61	.84	.82	61.6	54.4	V32_A
19	292	92	.40	.16	.71	-2.12	.70	-2.09	.86	.82	73.3	54.3	V33_A
21	293	92	.37	.16	.68	-2.32	.71	-2.04	.86	.81	72.1	54.3	V35_A
5	294	92	.35	.16	.80	-1.36	.78	-1.49	.84	.81	67.4	54.5	V19_A
9	298	92	.25	.16	.75	-1.73	.73	-1.82	.84	.81	62.8	54.5	V23_A
22	301	92	.17	.16	.72	-2.00	.76	-1.65	.85	.81	66.3	54.8	V36_A
23	301	92	.17	.16	.89	-.69	.83	-1.10	.83	.81	67.4	54.8	V37_A
10	303	92	.12	.16	.86	-.92	.78	-1.49	.82	.80	70.9	54.7	V24_A
20	305	92	.07	.16	.72	-2.03	.70	-2.09	.84	.80	74.4	54.7	V34_A
24	297	90	.06	.16	.92	-.49	.90	-.60	.81	.80	63.1	54.3	V38_A
15	306	92	.05	.16	.95	-.29	.91	-.56	.80	.80	69.8	54.6	V29_A
7	307	92	.02	.16	.69	-2.27	.69	-2.15	.84	.80	69.8	54.6	V21_A
12	309	92	-.03	.16	1.55	3.15	1.48	2.69	.75	.80	48.8	55.1	V26_A
3	310	92	-.06	.16	.87	-.86	.95	-.29	.81	.80	60.5	55.2	V17_A
13	311	92	-.08	.16	1.10	.68	1.04	.33	.78	.79	54.7	55.3	V27_A
17	311	92	-.08	.16	1.02	.16	.97	-.13	.79	.79	62.8	55.3	V31_A
6	312	92	-.11	.16	.83	-1.12	.80	-1.30	.82	.79	67.4	55.4	V20_A
8	314	92	-.16	.16	.88	-.76	.81	-1.19	.80	.79	67.4	55.4	V22_A
4	315	92	-.18	.16	.95	-.29	.95	-.26	.80	.79	62.8	55.4	V18_A
16	319	92	-.28	.16	.97	-.12	.94	-.35	.79	.79	67.4	55.4	V30_A
14	324	92	-.41	.16	.99	.01	.92	-.46	.79	.78	66.3	55.3	V28_A
1	338	92	-.78	.16	2.33	6.45	2.38	5.88	.58	.76	52.3	54.9	C_KEKERA
2	346	92	-1.00	.17	2.13	5.65	2.14	4.83	.61	.75	51.2	55.2	V16_A
MEAN	307.3	91.9	.00	.16	1.00	-.3	.98	-.4			64.4	54.8	
P.SD	14.4	.4	.36	.00	.42	2.2	.42	2.0			6.7	.4	

The finding in Table 6 shows there are eleven common types of collaboration between industry and vocational training institutions, which are:

I.   Participation in a professional organization.
II.   Appoint industry as one of the Technical Advisory Committee in the vocational training institution.
III.   The student apprenticeship program at industry.
IV.   Co-organized meetings, conferences, and seminars.
V.   The industry as a joint committee in reviewing the vocational training institution's curriculum assessment.

VI.   Joint participation in exhibitions and competitions.

VII. Training program for lecturer and students.

VIII. Teaching and learning class from industry experts.

IX.   The student internship program at the industry.

X.   Industry representation in the vocational training institution administration organization.

XI.   Recruitment of vocational training institution's graduates as employees in the company.

II. STRATEGY IN INCREASING THE COLLABORATION BETWEEN INDUSTRY AND VOCATIONAL TRAINING INSTITUTIONS.

In achieving successful industry-institution collaboration, the strategic approach for both parties must be identified. Liew *et.al* (2012) also mentioned that, vocational institutions and the industry have the same reason to maintain the partnership for long term planning and it is essential that a strong foundation need to be build to support the initiatives. Table 7 shows the strategy for increasing the cooperation between vocational training institutions to the industry.

Table 7: Strategy to Increased the Collaboration Between Industry and Vocational Training Institution

```
TABLE 13.1 construct 6.sav                    ZOU222WS.TXT  Dec 15 2019 17:15
INPUT: 92 PERSON  13 ITEM  REPORTED: 92 PERSON  13 ITEM  6 CATS   WINSTEPS 4.3.4
--------------------------------------------------------------------------------
PERSON: REAL SEP.: 2.09  REL.: .81 ... ITEM: REAL SEP.: .96  REL.: .48

        ITEM STATISTICS:  MEASURE ORDER
```

ENTRY NUMBER	TOTAL SCORE	TOTAL COUNT	MEASURE	MODEL S.E.	INFIT MNSQ	INFIT ZSTD	OUTFIT MNSQ	OUTFIT ZSTD	PTMEASUR-AL CORR.	PTMEASUR-AL EXP.	EXACT OBS%	MATCH EXP%	ITEM
1	375	92	.70	.18	2.25	4.49	2.80	6.50	.54	.71	56.4	63.6	C_STRATE
11	384	92	.38	.19	1.15	.74	1.45	2.12	.65	.69	73.1	65.1	V25_A
3	388	92	.23	.20	.76	−1.19	.95	−.22	.72	.69	71.8	66.2	V17_A
5	390	92	.15	.20	.94	−.23	1.15	.79	.68	.68	70.5	66.2	V19_A
7	391	92	.11	.20	1.05	.29	1.20	1.05	.69	.68	69.2	66.4	V21_A
2	392	92	.06	.20	1.33	1.51	1.38	1.82	.62	.68	62.8	66.5	V16_A
6	395	92	−.06	.21	.67	−1.76	.88	−.58	.74	.67	75.6	66.6	V20_A
4	397	92	−.15	.21	.76	−1.23	.81	−.95	.70	.67	75.6	66.7	V18_A
12	397	92	−.15	.21	.83	−.81	.83	−.88	.72	.67	67.9	66.7	V26_A
10	399	92	−.24	.21	.70	−1.64	.69	−1.70	.73	.66	74.4	67.0	V24_A
9	400	92	−.28	.21	.57	−2.56	.54	−2.74	.78	.66	71.8	67.0	V23_A
8	402	92	−.37	.21	.71	−1.63	.68	−1.75	.72	.65	71.8	66.9	V22_A
13	402	92	−.37	.21	1.09	.52	.99	.04	.65	.65	65.4	66.9	V27_A
MEAN	393.2	92.0	.00	.20	.99	−.3	1.10	.3			69.7	66.3	
P.SD	7.5	.0	.30	.01	.42	1.8	.55	2.3			5.3	.9	

The findings in Table 7 shows seven strategies suggested for increasing the collaboration between industry and vocational training institutions. The first strategy is to improve the network and communication between bodies or entrepreneurship development organizations. This collaboration will give a chance to the vocational training institutions and industry to promote themself. Either the partnership was formal or informal, it will be a way forward for formal equity partnerships, contracts, research projects, patent licensing, and so on, to human capital mobility, publications, and interactions in conferences and expert groups, among others (Hagedoorn, Link & Vonortas 2000).

The next strategy was to adopt good governance policies to support collaboration between industry and vocational train-

ing institutions. The government should subsidize specific programs to stimulate the cooperation between industry and vocational training institutions. It is because the government plays an essential role in ensuring the successful collaboration between institutions and industry which is to provides monetary capital in supporting the partnership (Salleh & Omar, 2013). The announcement of the relationship program's status to the public is also as one of the strategies that will increase the collaboration between industry and vocational training institutions. Besides, the other approaches involved the alumni that become entrepreneurs in student entrepreneurship activities, set up a partnership coordinator with the industry and alumni, and establish particular policies in the relationship between industry and vocational training institution.

III. THE LEVEL OF SATISFACTION WITH THE EXISTING COLLABORATION BETWEEN INDUSTRY AND VOCATIONAL TRAINING INSTITUTIONS

The finding in Table 8 shows the level of satisfaction with the existing collaboration between industry and vocational training institutions. Based on the results, it has been found that currently, the companies still willing to work together with the vocational training institution. Both vocational training institutions and industry are satisfied with the company's roles towards industry and vocational training institutions collaboration and roles of professional associations in supporting collaboration between industry and vocational training institutions. The industry also satisfies with the performance of vocational training institutions staff for facilitating industry cooperation pro-

grams. Other findings suggest that the industry and vocational training institutions are satisfied with the college emphasis on collaborative relationships with industry, the government support towards the industry and vocational training institutions relationship, and enforcement on the regulation of cooperation activities between vocational training institutions and industry.

Table 8: The Level of Satisfaction with the Existing Collaboration Between Industry and Vocational Training Institutions

```
TABLE 13.1 construct 5.sav                    ZOU829WS.TXT  Dec 15 2019 17:13
INPUT: 92 PERSON  11 ITEM  REPORTED: 42 PERSON  11 ITEM  5 CATS   WINSTEPS 4.3.4
-------------------------------------------------------------------------------
PERSON: REAL SEP.: 4.89  REL.: .96 ... ITEM: REAL SEP.: .59  REL.: .26

         ITEM STATISTICS:  MEASURE ORDER

-------------------------------------------------------------------------------
|ENTRY   TOTAL  TOTAL           MODEL|  INFIT  |  OUTFIT  |PTMEASUR-AL|EXACT MATCH|        |
|NUMBER  SCORE  COUNT  MEASURE  S.E. |MNSQ  ZSTD|MNSQ  ZSTD|CORR.  EXP.| OBS%  EXP%| ITEM   |
|-----------------------------------+----------+----------+-----------+-----------+--------|
|   10    132    42     .90     .38|1.08   .37| .94  -.08| .88   .90| 80.0  78.5| V24_A   |
|   11    132    42     .90     .38|1.23   .90|1.11   .45| .90   .90| 80.0  78.5| V25_A   |
|    2    137    42     .14     .39| .29 -3.43| .20 -3.45| .97   .90| 95.0  79.4| V16_A   |
|    8    137    42     .14     .39| .72  -.99| .47 -1.76| .94   .90| 90.0  79.4| V22_A   |
|    3    138    42    -.01     .39| .28 -3.48| .19 -3.48| .97   .90| 97.5  79.7| V17_A   |
|    5    138    42    -.01     .39| .72  -.99| .61 -1.19| .93   .90| 82.5  79.7| V19_A   |
|    1    140    42    -.32     .39| .59 -1.59| .47 -1.84| .93   .90| 90.0  79.8| C_KEPUAS|
|    4    140    42    -.32     .39|2.23  3.31|1.65  1.71| .81   .90| 82.5  79.8| V18_A   |
|    7    140    42    -.32     .39| .98   .04| .70  -.85| .91   .90| 80.0  79.8| V21_A   |
|    9    140    42    -.32     .39|1.28  1.01| .83  -.42| .87   .90| 87.5  79.8| V23_A   |
|    6    143    42    -.77     .38|1.11   .47| .81  -.55| .88   .90| 95.0  79.1| V20_A   |
|-----------------------------------+----------+----------+-----------+-----------+--------|
| MEAN  137.9   42.0    .00     .39| .96   -.4| .73  -1.0|           | 87.3  79.4|        |
| P.SD    3.2    .0     .49     .01| .52  1.9| .40   1.5|           |  6.3   .5|        |
-------------------------------------------------------------------------------
```

IV. THE FACTORS INFLUENCING INDUSTRY AND VOCATIONAL TRAINING INSTITUTIONS COLLABORATION

The success of the industry-institution collaboration depends on the role played by both stakeholders (Liew, Tengku Shahdan & Lim 2012). Table 9 shows the factors influencing collaboration between industry and vocational training institutions.

Table 9: The Factors Influencing Industry and Vocational Training Institutions Collaboration

```
TABLE 13.1 construct 7.sav                      ZOU025WS.TXT  Dec 15 2019 17:17
INPUT: 92 PERSON  12 ITEM  REPORTED: 92 PERSON  12 ITEM  5 CATS   WINSTEPS 4.3.4
--------------------------------------------------------------------------------
PERSON: REAL SEP.: 2.48  REL.: .86 ... ITEM: REAL SEP.: .65  REL.: .30

          ITEM STATISTICS:  MEASURE ORDER

-------------------------------------------------------------------------------------
|ENTRY   TOTAL  TOTAL           MODEL|  INFIT  |  OUTFIT  |PTMEASUR-AL|EXACT MATCH|       |
|NUMBER  SCORE  COUNT  MEASURE  S.E. |MNSQ ZSTD|MNSQ ZSTD|CORR.  EXP.| OBS%  EXP%| ITEM  |
|-----------------------------------+---------+---------+-----------+-----------+-------|
|    6    380    92     .49     .21|1.11   .72|1.10  .65|  .78  .77| 70.0  65.7| V20_A |
|    7    383    92     .35     .22|1.03   .26|1.03  .26|  .77  .77| 66.3  66.3| V21_A |
|    8    384    92     .31     .22| .96  -.22| .97 -.15|  .76  .76| 71.3  66.7| V22_A |
|    4    388    92     .12     .22| .92  -.47| .91 -.49|  .78  .76| 72.5  67.4| V18_A |
|   10    389    92     .07     .22| .74 -1.71| .72 -1.88|  .81  .76| 71.3  67.5| V24_A |
|    5    390    92     .02     .22|1.11   .71|1.07  .45|  .72  .75| 76.3  67.5| V19_A |
|    3    393    92    -.12     .22|1.39  2.23|1.37 2.06|  .69  .75| 72.5  68.3| V17_A |
|    9    393    92    -.12     .22|1.05   .37|1.05  .36|  .73  .75| 70.0  68.3| V23_A |
|   11    393    92    -.12     .22| .65 -2.42| .66 -2.24|  .81  .75| 77.5  68.3| V25_A |
|    1    395    92    -.22     .22|1.36  2.07|1.47 2.52|  .68  .74| 60.0  68.6| C_FAKTOR|
|   12    397    92    -.32     .22| .57 -3.14| .54 -3.22|  .82  .74| 77.5  69.1| V26_A |
|    2    400    92    -.47     .23| .98  -.08|1.27 1.51|  .73  .73| 72.5  69.7| V16_A |
|-----------------------------------+---------+---------+-----------+-----------+-------|
| MEAN   390.4  92.0    .00     .22| .99   -.1|1.01   .0|           | 71.5  67.8|       |
| P.SD    5.7    .0     .27     .00| .24   1.6| .27  1.7|           |  4.7   1.1|       |
-------------------------------------------------------------------------------------
```

Table 9 has identified six factors that have an effect in influencing the industry and vocational training institution's collaboration initiatives. The first factor is company requirements for technology development. The company can also share new technology or equipment funded by the government in the vocational training institutions from this collaboration. Therefore, this collaboration can promote smart partnerships and establish a cooperative relationship to create a win-win situation (Sohimi et al. 2019). The second factor is the government's policy. The government is considered as an essential key player for developing a comprehensive policy to ensure the industry's participation in the education field. A holistic and balanced policy approach to employer engagement in education would likely articulate the economic, employment, educational, and sociocultural benefits

and resist short-term targeted strategies that are vulnerable to industry type, economic fluctuation, and funding availability. (James et al. 2016). The third is open communication between industry and vocational training institutions. Next is a reward system for the industry. This factor can influence the industry to collaborate with vocational training institutions or other institutions. Lastly, the element that influenced the collaboration between industry and vocational training institutions is company requirements for staff or workforce development.

V. BARRIERS THAT AFFECTED THE INDUSTRY AND VOCATIONAL TRAINING INSTITUTIONS COLLABORATION

There are limitations and issues with the industry-institution collaboration process, which will impact the collaboration aim and objective. Table 10 shows the barriers that affect industry and vocational training institutions collaboration.

Table 10: Barriers that Affected the Industry And Vocational Training Institutions Collaboration

```
TABLE 13.1 construct 8.sav                        ZOU270WS.TXT  Dec 15 2019 19:38
INPUT: 92 PERSON  20 ITEM  REPORTED: 92 PERSON  20 ITEM  5 CATS   WINSTEPS 4.3.4
--------------------------------------------------------------------------------
PERSON: REAL SEP.: 3.49  REL.: .92 ... ITEM: REAL SEP.: 1.33  REL.: .64

          ITEM STATISTICS:  MEASURE ORDER
```

ENTRY NUMBER	TOTAL SCORE	TOTAL COUNT	MEASURE	MODEL S.E.	INFIT MNSQ	ZSTD	OUTFIT MNSQ	ZSTD	PTMEASUR-AL CORR.	EXP.	EXACT OBS%	MATCH EXP%	ITEM
9	350	92	.42	.18	1.45	2.44	1.86	4.40	.68	.74	67.8	63.2	V23_A
17	354	92	.29	.19	.80	-1.23	.75	-1.64	.76	.74	69.0	63.4	V32_A
8	355	92	.25	.19	1.26	1.49	1.33	1.95	.72	.74	69.0	63.4	V22_A
13	355	92	.25	.19	.82	-1.08	.87	-.79	.74	.74	70.1	63.4	V28_A
19	355	92	.25	.19	.96	-.19	.99	.02	.74	.74	66.7	63.4	V34_A
11	356	92	.22	.19	.83	-1.07	.84	-1.05	.76	.74	70.1	63.3	V26_A
16	357	92	.19	.19	.76	-1.52	.71	-2.01	.81	.73	78.2	63.8	V31_A
18	357	92	.19	.19	.62	-2.59	.67	-2.32	.80	.73	74.7	63.8	V33_A
14	358	92	.15	.19	.76	-1.54	.74	-1.73	.78	.73	71.3	63.8	V29_A
20	358	92	.15	.19	.62	-2.60	.68	-2.24	.80	.73	79.3	63.8	V35_A
4	359	92	.12	.19	.91	-.52	.89	-.65	.75	.73	65.5	63.8	V18_A
6	361	92	.04	.19	1.38	2.12	1.37	2.17	.68	.73	63.2	63.7	V20_A
12	361	92	.04	.19	.66	-2.29	.69	-2.17	.79	.73	70.1	63.7	V27_A
10	362	92	.01	.19	.86	-.86	.87	-.79	.80	.73	62.1	63.8	V24_A
7	365	92	-.10	.19	1.09	.58	.92	-.44	.76	.73	74.7	64.0	V21_A
15	366	92	-.14	.19	.72	-1.86	.70	-2.12	.76	.72	73.6	64.1	V30_A
3	370	92	-.28	.19	.98	-.09	.95	-.30	.73	.72	66.7	64.0	V17_A
5	374	92	-.44	.20	1.18	1.12	1.12	.79	.70	.71	69.0	63.9	V19_A
1	383	92	-.79	.20	1.80	4.28	1.90	4.57	.49	.70	57.5	64.5	C_PENGHA
2	384	92	-.83	.20	1.40	2.36	1.37	2.14	.55	.70	60.9	64.6	V16_A
MEAN	362.0	92.0	.00	.19	.99	-.2	1.01	-.1			69.0	63.8	
P.SD	9.1	.0	.34	.00	.31	1.9	.36	2.1			5.4	.4	

The finding in Table 10 has determined six barriers that affect the industry and vocational training institution's collaboration. Firstly, is the lack of commitment between industry and vocational training institutions. Secondly, is the lack of communication between industry and vocational training institutions. The different cultures between industry and vocational training institutions also create a hurdle for the industry and vocational training institution's collaboration. The next barrier is incompetence and inconsistency in the collaboration management system. Lack of funding from the government to industry and vocational training institutions in conducting collaborations also contributed to the factor that hinders this collaboration.

Lastly, barriers that affect the partnership between industry and vocational training institutions are bureaucratic procedures in vocational training institutions.

CONCLUSIONS

The collaborations between vocational training institutions and industry play an essential role in developing future vocational training institutions' systems. These findings has highlighted with insight into bridging the gap between the vocational institution and the industry's supply and demand. In addition, the identifications of barriers and factors influencing the industry-institutional collaboration within this research can be a reference in revising the current collaboration procedure. It is suggested that the finding from this study can be used as a preliminary stage in planning for the improvement of the smart partnership between vocational institutions and industry. , it is believed that the government plays a vital role in ensuring the collaboration between vocational training institutions and industry is a success.

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Vocational Education and Training, the Contested Partner in Innovation Projects

Magdolna Benke[*]

Abstract: The Learning Region (LR) concepts primarily consider universities as innovation partners and ignore VET and secondary education in general. My research attempts to point to the role of VET institutions as potential innovation partners in local development processes. I search what circumstances support and what block the chance to build strong partnership with VET institutions in local level. I found that broader range of training institutions – as potential partners – can be found in those approaches where LR is interpreted as regional-based development coalition. Australian researchers highlight the contradictions between centralised VET policy and the regional view of local learning communities, and between the short term needs of VET market and the long term needs of trust which serves as vital force for communities. Based on an expert survey I assume that strengthening the relationship between VET institutions and local communities may hold a number of hidden, untapped reserves.
Keywords: VET, innovation, learning region, learning community, partnership

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1. THEORETICAL BACKGROUND

1.1 THE LEARNING REGION

From the 1980s onwards, based on a set of inter-directly or indirectly related disciplines, numerous conceptual elements had emerged and strengthened which were favourable for the birth of the multiple disciplines common set of "learning regions" concept. Among others, regional sciences (Rechnitzer, 1993), innovation theory (Lundvall, 1992), organization theory (Castells, 1996), management sciences (Bakacsi et al., 2004), direct democracy and bottom-up theory (Ray, 1999) paved the way for the creation of a *new concept*, which by adjusting the emphases of new scholarly approaches led to the birth of a new structure, using the same building blocks. The appreciation of local knowledge, the function of the local economy, grassroots initiatives, creativity and a broader interpretation of innovation, the importance of implicit knowledge in terms of competitiveness, the role of partnership in the development of a particular area, were already known before the learning region concept has emerged. By linking these elements and rearranging their emphases, the emerging learning region concept created a new quality (Benke, 2013, 2015).

Learning appears as a key building block in the connection system of those organizations which are capable of learning. In the course of evolving cooperation, learning processes take place in *network relations*. Knowledge transfer, knowledge sharing, creation of new knowledge happen along the strands of networks in the non-formal and informal learning processes. Connection points in the networks can be considered as birth places of the new knowledge (Erdei & Teperics, 2014).

Although, the learning region concept has generated several debates among the researchers for years (Hassink, 2007), however, all the challenges it has faced, both regarding theoretical debates and empirical experiences (Boekema et al., 2000) it offered very rich sources of information and knowledge, providing great support and solid basis for further research. To achieve and maintain the learning region, it is still a most focused target of policies influencing regional economic adaptability (Benke et al, 2018).

1.2 COMMON ELEMENTS AND DIFFERENT CONTEXTS; THE INTERPRETATION OF INNOVATION

All learning region concepts emphasize the importance of learning within and between organizations. This process is a learning partnership that will create added value for the participants. The learning region concepts have some common building blocks, as of dialogue, partnership, recognizing the importance of local knowledge, innovation processes launch, bottom-up initiatives, development and co-operation of networks (Florida, 1995, Asheim, 1996, Morgan, 1997, Putnam, 1993, Lundvall, 1996).

The learning region concept represents a serious promise for development policy in support of lifelong learning. The European Commission supported a number of projects and programs aimed at the creation of that learning regions (R3L + program, Telson, PENR3L, the Learning Regions Network in Germany).

Asheim draws attention to the different contexts of the "learning regions" concept (Asheim, 2007). It was introduced by economic geographers in the 1990s in order to illustrate and examine the importance of cooperation and collective learning

in networks for fostering innovative and competitive regional development strategies in the global learning economy (Florida, 1995, Asheim, 1996, Morgan, 1997). According to an other approach, "the idea of learning regions originates from the new evolutionary and institutional economic writings on the knowledge and learning based economy, where knowledge is considered the most fundamental resource and learning the most important process" (Asheim, 2007, p. 219). This ensures the learning capacity of an economy strategic importance for its innovativeness and competitiveness. In this context "innovation is understood as interactive learning in contrast to the previous hegemonic linear model of innovation" (Asheim, 2007, p. 219). The third approach conceptualizes "learning regions as regionally based development coalitions" (Asheim, 2007, p. 219) of intra- and inter-firm learning organizations based on broad participation out of the firm context.

As Hassink points out, "most scholars consider learning regions as a regional innovation strategy in which a wide range of innovation-related regional actors (politicians, policy-makers, chambers of commerce, trade unions, higher education institutes, public research establishments and companies) are strongly but flexibly connected with each other" (Hassink, 2010, p. 51). Emphasizing the importance of partnership and cooperation between stakeholders, the key role of universities as innovation partners, the utilization of local knowledge and the support of bottom-up activities, the concept of learning region easily became a flagship of the university-based regional/urban development activities, the lifelong learning movement and offered an appropriate environment for research projects targeting local development with a wide range of regional instruments (Benke, 2014).

There is a discrepancy between the concepts of the learning region on the interpretation of innovation and the role of universities and research institutes (Lorenz & Lundvall, 2006). In the North American approach, in a knowledge-based, high-tech economy, learning regions are linked to the importance of the quality of the knowledge infrastructure of leading universities and research institutes, producing, attracting and retaining highly skilled workers (such as the Silicon Valley) (Florida, 1995). According to the European interpretation, contrary to the above, the analysis of learning regions focuses on the contribution of social capital and trust in supporting dense networking between companies and the process of interactive learning (Wolfe, 2002).

1.3 APPEARANCE OF NON-MARKET AND NON-ECONOMIC FACTORS

Emphasizing interactive learning in the concept of learning region points to the importance of collaboration, and leads to the importance of non-market and non-economic factors (Putnam, 1993), to the role of social capital (eg. trust) in the economic performance of institutions, regions and nations. In the "New Economy" learning represents the key, and so it embodies a qualitatively different requirement compared to simple market transactions and exchanges. The fundamental difference is that knowledge creation and learning are essentially social rather than market processes. It includes the development and exchange of tacit, hidden and underdeveloped knowledge, for which there are no markets (Storper, 1993). Instead of non-existent markets, networks represent places where such learning takes place.

According to the latest approaches, learning regions can only develop in a way that is compatible with sustainable development. According to this, people and communities in the learning region learn together how to create economic recovery, social capital and ecological sustainability.

1.4 EDUCATION AND TRAINING INSTITUTIONS AS INNOVATION PARTNERS

Concerning education and training institutions, the learning region concepts primarily consider universities as innovation partners (Lorenz & Lundvall, 2006, Goddard & Chatterton, 1999), while vocational education and training and secondary education in general are ignored in the concepts. In this way, there is a contradiction in the concept between the 'advocacy' of bottom-up initiatives and 'ignoring' vocational education and training and so the 'non-inclusion' of a large group of people. Secondary VET institutions, as potential collaborating partners, are present in a much larger proportion of the regions and are available to larger groups of learners than higher education institutions. Ignoring them, especially in underdeveloped microregions, the power to utilize local knowledge in the development of the area is being reduced (Benke, 2013).

In the underdeveloped regions, the proportion of people with tertiary education is insignificant, so the importance of secondary education is relatively highly appreciated there. If it is important to involve local forces in local innovation processes, the involvement of those with the highest level of educational attainment at local level and considering them as potential partners in local innovation processes, can represent a mobilizing force towards the wider local community (Benke, 2019b).

The broader range of training institutions – as potential innovation partners – can be found in those approaches of the learning region where the term 'learning region' is interpreted as a regional-based development coalition (Asheim & Gertler, 2005); (Lundvall, 2008). This coalition includes a wider range of organizations and institutions that influence and support learning and innovation in a given region (Asheim, 1996); (Morgan, 1997). While at the level of theoretical concepts of the learning regions, secondary education and training do not play a prominent role, there are examples of development projects where the importance of secondary education appears. In the OECD Learning Region project, five participating European regions considered there and then the development of secondary education as the key to development (Németh, 2014); (OECD, 2001). One of CEDEFOP's publications examined the impact of the learning region concept on local development through case studies, highlighting the role of VET and secondary education and training (Gustavsen, Nyhan & Ennals (eds.), 2007).

1.5 THE LEARNING CITY

In spite of the fact, that the concept "learning region" was rather flexible since it's first appearance, the failure of some large development projects and the changing policy environment could not ensure a supporting atmosphere for learning region projects any longer, and required a new, more easily "digestible" and more concentrated spatial approach for the development works which led to the emergence of the "learning city" concepts. A very important policy issue contributed to this shift from the regional level to the city level. As the concept of regional

equalization has lost it's dominance in the regional development policy, large cities with strong university links – as regional poles – came into the focus of policy interests as the new targets of regional development, and as an evidence of this process, learning cities came in place of learning regions both in terms of policy and project level.

A number of international development projects address cities (Pallace, TELC, PASCAL Learning City in 2020) (Longworth and Osborne, 2010), which are intended – among other things – to develop the "learning performance" of cities. (Hungarian participation has been displayed in the learning city projects, as Pécs has been involved in the development activity of PASCAL (Németh, 2014).) The prominent role of universities in the learning city projects can be considered as one of the most important features of these projects (Gál, 2010).

1.6 THE LEARNING COMMUNITY

Along with the continuation of the discourse on learning regions and learning cities, growing attention is being paid to learning communities, as well (Benke 2014). According to the 'classic' vision of the learning community, it implies close co-operation of the local economy, local schools, colleges, universities, professional associations and local government to ensure that the community is a pleasant, livable place for members of the community in all aspects (Longworth, 2012).

Faris offers the interpretation of the generic term "learning communities" as a nested concept of social/cultural learning with an expanding scale of learning environments. He identifies the following learning communities: virtual global learning

communities, learning communities of place, learning organisations, academic learning communities, communities of practice and learning circles, virtually placed them in a nested 'Russian Egg' (Faris, 2006). Another concept, based on a system approach, starting from the controlled systems is reaching the alive learning systems, deals with the learning communities by considering the principle of sustainable development essential for the future (Clarke, 2009).

In accordance with one of the approaches of the European Union the last decade, the learning communities are evaluated on the basis of how the members of the communities work together and as they utilize the resources of the communities. Non-traditional, new, innovative partnerships have an important role in the formation of these learning communities. Regarding this approach of the EU, all kinds of learning – from the first steps to the highest standard, from the formal to non-formal and informal learning – is viewed as valuable and which enriches the community. Interest and capacity of citizens related to learning are considered the most valuable resources of the learning community (Gejel, 2012).

2. THE TARGET AND THE METHOD OF THE RESEARCH

My research attempts to point to the role of VET institutions as potential innovation partners in local development processes. I am planning to explain the reasons which lead to the fact that secondary VET is mostly ignored in the learning regions concepts. I search the differences in the interpretation of innovation concepts how they handle VET (Asheim, 1996). The main

research question is, what circumstances support and what block and reduce the chance to build strong partnership with the involvement of secondary VET institutions. Since despite the fact that the definition of secondary vocational education and training is in the process of being transformed (see Cedefop, 2015 and the new VET scenarios), in practice, there is still a strong tendency in many cases to interpret and use secondary VET as a means of responding quickly to the needs of the economy (particularly short-term). Becasue of this I try to find answer to the question if the higher pro-activity level and capability of VET gives a positive shift to become an innovation partner. In the first phase of the work the employed research methods are literature review and secondary processing of research outputs. It will be complemented by expert interviews in the second phase of the research. The research is planning to focus mostly on international research sources and on the available national outputs. Research is in progress.

3. PRELIMINARY FINDINGS

Australian researchers' outcomes highlight some factors that reduce building partnership with VET institutions. There are contradictions between centralised VET policy and the regional view of local learning communities, and between the short term needs of VET market and the long term needs of trust which serves as a vital force for communities. "In urban areas (and there are indications this applies to other areas as well), VET organisations are not playing pro-active roles in creating or developing learning communities... There is significant tension between the centralised policy frameworks within which VET has come to

operate and the focus on regional economic development and community building that is more often the focal point of learning communities... Any meaningful involvement in a community requires mutual trust. While the building of trust develops in the long-term, it has been damaged or at least jeopardised by the high level of uncertainty, change and instability experienced by many VET organisations in recent years... There is a significant tension between the commercial imperatives required of VET providers and the need for community involvement that provides no return that is measurable in the short-term" (Hawke & Kimberley & Melville, 2002, p. 5 – 6). Another study points out, that "The linking of learning to regional economic development will invoke a new organisational paradigm for education and training that is embedded more within the community, not in central policy agencies" (Kimberley, 2003, p.15). VET is beginning to be understood not so much as a structural sector of education and training, but as a form of knowledge and learning that is used by different types of education and training providers to meet the needs of a variety of learning needs (Malley 2001, Kimberley 2003). And, also Kimberley emphasizes the new challange VET meets in relation to the learning communities. "VET can meet the postmodern challenge to satisfy the paradox of simultaneously working from the bottom up (learning community enterprise) and the top down (policy imperatives)" (Kimberley, 2003, p.16). (Beyond the above some concrete European and German pilots, the works of Kämäräinen, Grollmann and Deitmer are interesting resources to be discussed, too.)

At the same time, prestige problems may arise with the management of secondary VET institutions as partners. The lower the

social status of the profession the school prepares, the lower the prestige of the preparatory school and the more vulnerable its students in the labor market. There is a close relationship between the knowledge conveyed by initial vocational education and training and the vulnerable social situation of young people leaving VET (Marhuenda-Fluixa, 2017). On the basis of national experience, the question arises as to how the process of centralization of VET, the behavior of companies and the "survival strategies" of VET schools can contribute to the emergence of real, meaningful partner roles. Partnerships can only be established between equal, independent, predictable and trustworthy parties. Centralization of the governance of VET, corporate behavior in the short term, and "survival strategies" in VET schools, however, are not conducive to real partner roles (Benke, 2018). Moreover, implementation of tasks arising from ad hoc market requirements leaves very little room for schools to develop meaningful, genuine partner roles (Benke, 2016). In recent developments in Hungary, the development of practical training has played a key role, ie the most important objective was to meet the needs of the ad-hoc labor market, quickly. At the same time, support for theoretical learning and the needs of LLL has been pushed into the background. The need for a closer partnership arises only in terms of understanding labor market demand and integrating it into vocational training. However, I assume that under more favorable conditions the knowledge coming from schools and workshop practices can make a meaningful contribution to VET schools' incremental innovation capacity (Griffiths & Guile, 2003).

I assume that a 'reactive', follow-up institution cannot be a meaningful innovation partner, and only pro-active institutions

are suitable for real partnership. The more pro-active the institution is, the more likely and successfully it is to be a meaningful innovation partner. This means that it can show alternative training paths, rather than short-term, interested in long-term development and is able to build a strong trust relationship with local society and the local economy. The question is whether secondary vocational education and training institutions can be involved in local participatory planning process. My assumption is that learning regions and learning communities can work successfully there and then if and when the local innovation process is actively supported by local education and training institutions. In underdeveloped areas, this is a task for secondary schools, especially for secondary vocational schools (Benke, 2020). Research is in progress.

4. OUTPUTS OF A LOCAL SURVEY

As part of the research an on-line survey was carried out in Hungary the beginning of January 2014, titled "Dialogue and Partnership in Secondary VET". The research aimed to explore how the different stakeholders involved in the Hungarian secondary vocational education and training system consider the role and the efficiency of dialogue and partnership related to the formation of secondary VET, particularly in respect of the development of local communities. The main research question focused on how local VET institutions can make a contribution to the development of local learning communities, in partnership with the different interestgroups. The target group consisted of the members of the former Hungarian Association of Vocational Education (MSZT), 596 members. MSZT as an NGO func-

tioned as a professional forum and provided information for different interest groups who were involved in vocational education and training in Hungary for 25 years. The Association as NGO was forced to cease in December 2013 and the membership was given the opportunity to join a larger civil society organization. A few weeks after the termination of the organization members of MSZT may have felt more important to deliver an opinion than a few months earlier. The questionnaire was completed by 156 people. The response rate (26 %) was much higher than my former expectations. The purpose of the questionnaire was to measure how former members of MSZT feel about the efficiency of partnership, the role of each stakeholder's group and the strength of the partnership related to VET. The questionnaire included a new topic, which has not been previously investigated: people were asked what they think about the relationship between VET and the local communities. The questionnaire consisted of multiple choice questions and Likert scale questions. One section of the questionnaire was directed to the main tensions of our VET system, and another was directed to the role of different interest groups in vocational education and training. The results can be considered to be of limited national significance, as nearly 40% of the respondents lived in Budapest, and nearly 50% had their job in the capital. The majority (83%) worked in the education sector, while one in four (26%) respondents were pensioners. Eighty per cent of them participated in vocational education and training as a teacher, most of them was teaching a professional subject.

As conclusion of the survey, respondents welcomed the new approach to the topic, searching the link between VET and local communities. The processing of the questionnaires showed the

following results. As we have seen in the Australian example above in the previous chapter, the often short-term labor market definition of VET contrasts with the long-term need for community building. We were curious as to how those concerned judged the "mission" of vocational training. The results show that nearly half of the respondents believe that the sole task of vocational education and training is to respond to short term labor market needs. 98% of respondents consider the development of partnerships in education and training important in local communities. This is a tremendous lack of sense in partnership. Nearly 90% of respondents agreed that VET institutions can play an important role in the development of local communities in the future. About 80% of respondents are willing to participate in dialogue and partnership in order to make a contribution to the development of local VET. Respondents' evaluation about their own role in the partnership related to local VET development varies depending on their membership in different interest groups. Nearly two-thirds of those completing the questionnaire believe that there is now a greater need for wide-ranging dialogue than 20 years ago. However, according to more than three-quarters of them, dialogue between the economic and social partners (companies, training institutions, social partners, municipalities, NGOs) is not effective in making decisions related to VET. 58% of respondents consider that VET schools are not prepared to play a meaningful role in shaping local VET policy. This uncertainty may be explained by the fact that, with the suggestion of a negative image, schools may become weaker. The resolution on preparing students is even more critical. 75% of respondents say that vocational training does not prepare students for dialogue at all or only at a low

level. While we found in the previous question that 58% of respondents to the questionnaire consider that schools are not sufficiently prepared to play a meaningful partnership role in shaping local VET policy, they still consider that local training institutions are the most appropriate catalyst for dialogue in solving local tasks related to VET. This may include a high proportion of teachers within the sample, but may also indicate determination about their future activity. In addition to local training institutions, local companies, local professional organizations, chambers and municipalities received the highest values (see Table 1.).

Table 1. The most appropriate catalysts of the dialogue helping to solve local VET-related tasks (The three most important markings.)

Local Training Institutions	126	27%
Local Companies	84	18%
Local Professional Bodies	63	13%
Municipalities	57	12%
Chambers	55	12%
NGOs	32	7%
Research and Development Inst.	29	6%
External Independent Expert Groups	15	3%
Social Partners	9	2%
Others	3	1%

Nearly three quarters of the respondents see that the lack of recognition of common interests, the lack of common goals and the lack of appropriate forums is a major obstacle to increasing the effectiveness of partnership in VET. When examining the

relationship between VET and local communities, these aspects should be further analyzed.

Overall, we can say, that VET institutions in some extent could play a meaningful role in the life of the local communities in addition to providing education and training. It is assumed that strengthening the relationship between VET institutions and local communities may hold a number of hidden, untapped reserves (Benke, 2016).

5. CONCLUSIONS

The terms learning region, learning city and learning community are often not clearly separated from each other in the literature. However, there are certain elements of the concepts which can be considered constant building blocks. All these concepts emphasize the importance of partnership, cooperation and interaction between stakeholders in a given spatial frame, the key role of universities as innovation partners, the utilization of local knowledge and the support of bottom-up activities in the regional development processes. Studying the context of learning regions and learning communities in the framework of the LeaRn project, an idea has emerged as a hypothesis, according to which learning communities may constitute the starting point in the formation of learning regions. Along similar lines, based on the study of different approaches to learning communities, it seems to be highly probable that the existence of learning communities may form necessary but not adequate condition for the birth of a learning region (Benke, 2015). It is supposed that each learning community types – depending on the type – may contribute – in varying degrees – to the formation of learning regions.

The learning region concept has a major positive impact on education, and especially on community learning (Forray & Kozma, 2014). It draws attention to the importance of inter- and multi-disciplinary approaches in research. The research on 'Learning Regions in Hungary' raised the possibility that not only universities can play a key role in eliminating serious differences in the level of regional development and in supporting the birth of learning regions, but also secondary education, particularly secondary vocational education (Benke, 2013, Kozma et al., 2015). Despite the critical voices (f.e. Kozma, 2014) around the concept because of its fuzziness, the "learning region" retains "its strength of being one of the few concepts stressing the institutional and policy side of regional economic adaptability" (Hassink, 2010, p. 52). In case of crisis, local innovation, local creativity, grassroots initiatives, collaboration of local actors and collective learning are gaining higher importance. Since these factors represent the development of learning regions, this means that the factors which belong to the learning regions, may assist the achievement of regional resilience as well. Given the close conceptual linkage between regional economic adaptability and resilience (Hassink, 2010), thus, it can be considered approved that learning regions own the required potency to serve to achieve regional resilience. Also, comparing the learning patterns of the Hungarian settlements with socio-economic indicators allows us to conclude that those regions which are more open to learning have better economic indicators and well-being indexes. (See details in Benke et al, 2018).

Based on the previously mentioned works of Australian researchers, the argument that a number of circumstances make it difficult for VET institutions to play a meaningful partnership

role is convincing. On the one hand, the time factor, the compulsion to meet ad-hoc, rapidly changing labor market needs, and on the other hand, top-down management have the effect of hindering VET from being an innovation partner. By reversing the logic chain, VET can become an innovation partner in shaping learning regions and learning communities where and when it can break free from the constraints of ad-hoc labor market needs and top-down governance, and if it can employ a bottom-up approach focusing on local community needs, and presenting a training structure that is constantly renewable and valid for a longer period of time, capable of enforcing the diverse needs not only of the economy but also of the local society (Benke, 2020). Yet VET, due to traditional school-company relationships, could probably be a community-building force in the case of strong local inclusive and participatory governance. The rethinking of connections, "quasi-partnerships", collaborations has already started in many cultural professional fields, which may serve as an example for vocational education and training (Benke, 2020). However, in national level, VET is being so deeply "embedded" and closed in the role of meeting short-term economic needs that I see very few signs of that it could break out of this role. Nevertheless, the result of a survey in which nearly 90% of VET experts answering the questions stated that VET institutions could play an important role in the life of local communities beyond teaching was thought-provoking (Benke, 2016). Outlining new VET scenarios at EU level, including the "pluralist VET" scenario, drafts some possible ways forward for the future of VET, with several elements that would represent a more flexible and open, new form of VET (Cedefop, 2020). Related to this, the question arises for the future as whether the

new VET scenarios (firstly "Pluralist VET") can open up new perspectives for secondary vocational education and training in connection with the development of local societies and learning communities?

Finally, the "capability approach" (Sen, 2003) assigns active role to those involved (including primarily local residents) rather than passive recipients. Expert and local (lay) knowledge are not substitutes for each other, but complement each other... In this way, the relationship and partnership between local VET and the local community can be examined in a new theoretical framework on the basis of the capability approach. This question has surpassed my research capabilities so far, but I find it an exciting research topic in the future.

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