OECD Reviews of Vocational Education and Training

A Skills beyond School Review of Costa Rica

José-Luis Álvarez-Galván

OECD

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BETTER POLICIES FOR BETTER LIVES

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Executive summary

There are two main vocational routes in Costa Rica. First, technical vocational education is offered by the Ministry of Public Education (MPE), as part of secondary education. Second, training is provided by the National Learning Institute (INA). To a lesser extent technical vocational education and training is also provided by private schools, companies and organisations. The assessment of the vocational education and training (VET) system set out in this review rests mainly on the two background reports prepared by Costa Rica (MEP, 2014; INA, 2014) and the findings of the OECD mission to the country. The context is the analysis of vocational education and training systems developed by the OECD in both the *Learning for Jobs* exercise and the more recent *Skills beyond School* exercise (see Box 1).

Box 1. OECD Reviews of Vocational Education and Training

In a sequence of more than 40 country studies, the OECD has been reviewing vocational education systems around the world since 2007. Thirty-five country studies have been published, and two major reports drawing together the policy lessons from this very large range of international experience – these are *Learning for Jobs,* published in 2010, and *Skills beyond School* published in 2014.

The country studies cover Australia, Austria, Belgium (Flanders), Canada, Chile, China, Costa Rica, the Czech Republic, Denmark, Egypt, Germany, Hungary, Iceland, Ireland, Israel, Kazakhstan, Korea, Mexico, the Netherlands, Norway, Romania, Slovakia, Spain, Sweden, South Africa, Switzerland, the United Kingdom, and the United States.

For more information please see:

OECD (2010), *Learning for Jobs*, *OECD Reviews of Vocational Education and Training*, OECD Publishing, Paris, DOI: http://dx.doi.org/10.1787/9789264087460-en

OECD (2014), *Skills beyond School: Synthesis Report*, OECD Reviews of Vocational Education and Training, OECD Publishing, Paris, DOI: http://dx.doi.org/10.1787/9789264214682-en, See also: www.oecd.org/education/vet

Strengths

VET is prominent in the policy agenda

In Costa Rica, technical education is recognised as a key contributor to both economic development and social cohesion. There is a consensus among stakeholders that more skilled technicians are required by industry while these jobs are attractive and may enhance social mobility and cohesion. Also, an adequately skilled labour force supports the attraction of foreign direct investment (FDI), while it improves the level of productivity and competitiveness of the country.

Some programmes have a work-based learning component

In Costa Rica, students in technical and vocational schools can opt to spend 320 hours in the workplace at the end of their studies as a graduation requirement. A very large majority of students select this option while the remainder opt for a graduation project, mainly a desk research exercise. This is very positive given that work-based learning offers multiple benefits to students. In addition both MEP and INA offer internship programmes for their students.

Recognition of prior learning is present and reinforced by INA

In Costa Rica, any person can apply for certification of their skills through INA and thousands are certified at INA centres or in the workplace. This represents an enormous benefit for people giving their skills visibility and improving recognition in the labour market.

Funding is currently adequate

At the moment, funding is not the main challenge for the Costa Rican VET system as the levy scheme seems to provide secure funding every year. However the question remains whether this will be enough to face challenges related to the expansion and upgrading of the system.

Equity issues are addressed

As in many public institutions in Costa Rica, equity is a key requirement for VET. For example, INA offers courses to the entire population aged 15 years and over; there are a number of programmes to tackle the specific needs of disadvantaged groups; and there is a strong commitment to promote gender equality within schools and at the workplace.

VET seems to have good status

Upper-secondary VET seems to have a relatively good reputation among the population, especially as an option for students from vulnerable groups to find work in combination with pursuing higher education after completing their technical degrees. It is estimated that 20% of the cohort in upper-secondary education attend VET schools in Costa Rica and they tend to perform slightly better than students in the academic track.

Challenges and recommendations

Ensuring that the mix of provision reflects labour market needs (Chapter 2)

Both employers and government sources in Costa Rica argue that there are insufficient graduates in technical specialties of increasing labour market demand. Employers in Costa Rica say that medium level technicians are the most difficult jobs to fill. MEP and INA pursue consultation with stakeholders but these seem to be insufficient to make the mix of provision more responsive to labour market needs. Also, many MEP and INA programmes and courses are not sufficiently flexible for individual technical and vocational schools and training units to adapt them to the needs of particular regions and employers. Moreover, workplace learning is not mandatory for all MEP and INA technical students. Finally, there is no adequate guarantee that employers offering a placement for VET students are genuinely interested in using and developing students' skills.

Recommendation: Improve the labour market responsiveness of the system

- Make workplace learning mandatory and quality assured for both MEP and INA provision.
- Allow MEP technical and vocational schools and INA training units more flexibility to adapt programmes to local needs.
- Ensure a mix of provision that reflects the needs of the labour market and is also balanced with student preferences.

Developing an apprenticeship system (Chapter 3)

A proposal for the implementation of a dual system in VET is currently before the Costa Rican parliament but such an initiative is not clear about the exact proportion of workplace learning to be implemented in dual programmes and

responsibilities assigned to employers remain insufficient. A "dual" education system typically combines apprenticeships in a company (where students should spend most of the programme time) with vocational education at a vocational school in one programme. The initiative is promising in terms of enhancing workplace learning in VET. However, it might also be used to develop an apprenticeship system.

Recommendation: Develop an apprenticeship system

- Costa Rica should use new legislation to pilot and develop an apprenticeship system, developing it carefully to take account of international experience and the need to fully involve and engage the social partners.

Strengthening the quality of vocational teaching (Chapter 4)

One of the main bottlenecks in the supply of skills is the size and qualifications of the teaching workforce. Not all MEP technical teaching staff have adequate pedagogical training and despite recruitment efforts and increasing demand the number of teaching positions at INA has experienced little growth. The preparation of teachers in Vocational Technical Schools of MEP is still too dominated by academic education. MEP and INA teaching qualification requirements are not equivalent making it difficult to share teaching resources to address supply constraints. Finally, teachers do not have enough access to workplace learning and it is not easy for industry practitioners to teach in VET.

Recommendation: Enhance the quality and effectiveness of VET teaching

- Improve the professional development of VET teachers, with attention to the updating of industry knowledge and experience as well as pedagogical training.

- Harmonise MEP and INA teacher qualification requirements to facilitate interchange and tackle supply constraints.

- Develop partnerships for teachers to spend time in industry and for industry practitioners to teach in VET.

Better co-ordination (Chapter 5)

The VET system in Costa Rica offers a number of student pathways and linked institutional options making co-ordination particularly important. While *ad-hoc* co-ordination between individual institutions (e.g. between MEP and INA) is

common there are many areas where there is not enough co-ordination, resulting in the duplication of efforts and responsibility gaps. This lack of co-ordination creates substantial challenges, for example there is no harmonisation between MEP and INA technical degrees and there is weak articulation with higher education.

Recommendation: Improve co-ordination in the system

- Engage social partners more fully, and improve co-ordination through a national body with overall responsibility for the vocational system.
- Explore the creation of a National Qualifications Framework to clarify study paths and qualification levels.
- Through these two measures, and in other ways, substantially improve articulation between vocational programmes and tertiary education.

References

Ministry of Public Education of Costa Rica (MEP) (2014), *Skills beyond School Review of Costa Rica Background Report*.

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OECD (2010), *Learning for Jobs*, *OECD Reviews of Vocational Education and Training*, OECD Publishing, Paris, doi: http://dx.doi.org/10.1787/9789264087460-en.

Chapter 1

Introduction and initial assessment

This chapter describes the OECD policy study of vocational education and training (VET), summarises the main features of Costa Rica's vocational system and provides an assessment of its particular strengths. The chapter also includes a brief presentation of the challenges faced while policy recommendations will be the substance of subsequent chapters.

The review of Costa Rica and its place in the wider OECD study

This review is one of a series of OECD country studies of vocational education and training (see Box 1.1).

Box 1.1 OECD Reviews of Vocational Education and Training

In a sequence of more than 40 country studies, the OECD has been reviewing vocational education systems around the world since 2007. Thirty-five country studies have been published, and two major reports drawing together the policy lessons from this very large range of international experience – these are *Learning for Jobs,* published in 2010, and *Skills beyond School* published in 2014.

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This review outlines the main features of Costa Rica upper-secondary vocational education and training system, provides an assessment of its main comparative strengths, the policy challenges and advances an argued sequence of policy recommendations. This review was prepared using a standard methodology. Firstly, Costa Rican authorities provided two background reports, and following the preliminary analysis, an OECD team made a visit to Costa Rica on 1-10 September 2014. During the visit the team discussed issues arising with a range of policy makers, stakeholders and staff and students in training institutions.

The background: Education, training and the labour market in Costa Rica

The labour market

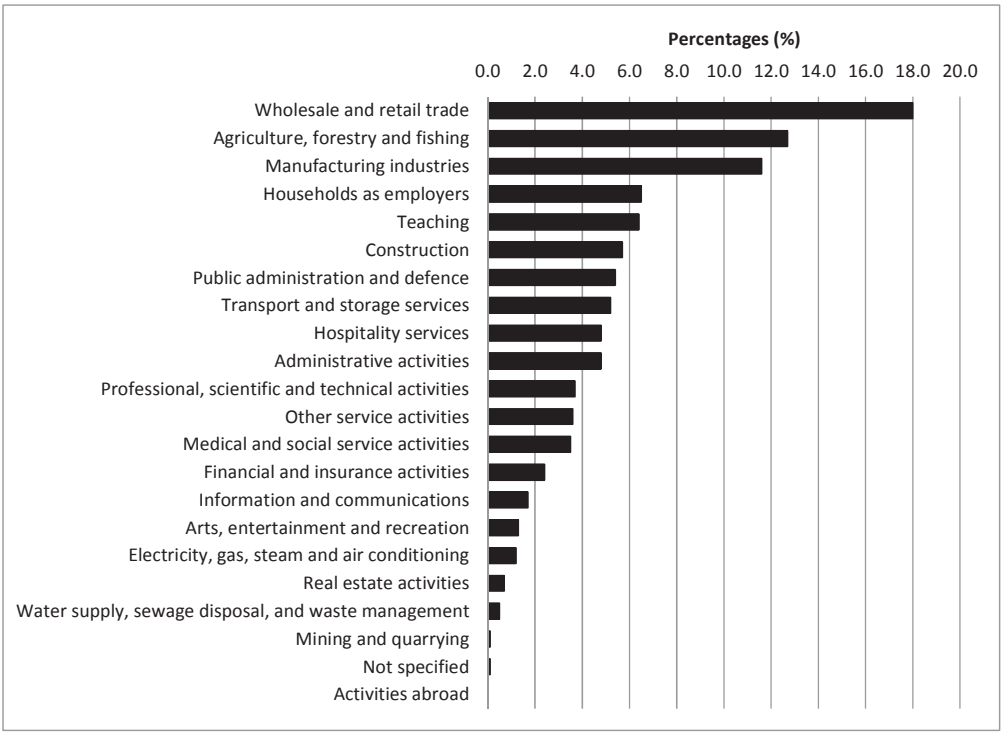
Lower levels of educational attainment are associated with unemployment

About two-thirds (64%) of the unemployed people in the country have "unfinished" secondary education as their highest educational attainment (INEC, 2014); 22% have completed secondary education and 9% of the unemployed hold a university degree (INEC, 2014).

Services are the main source of employment

Grouping all together, services absorb about 70% of total employment in the country. Still, agriculture (13%); manufacturing (12%), and construction (6%) remain important employers (Figure 1.1).

Figure 1.1 Costa Rica: Employment distribution by economic activity (2013)

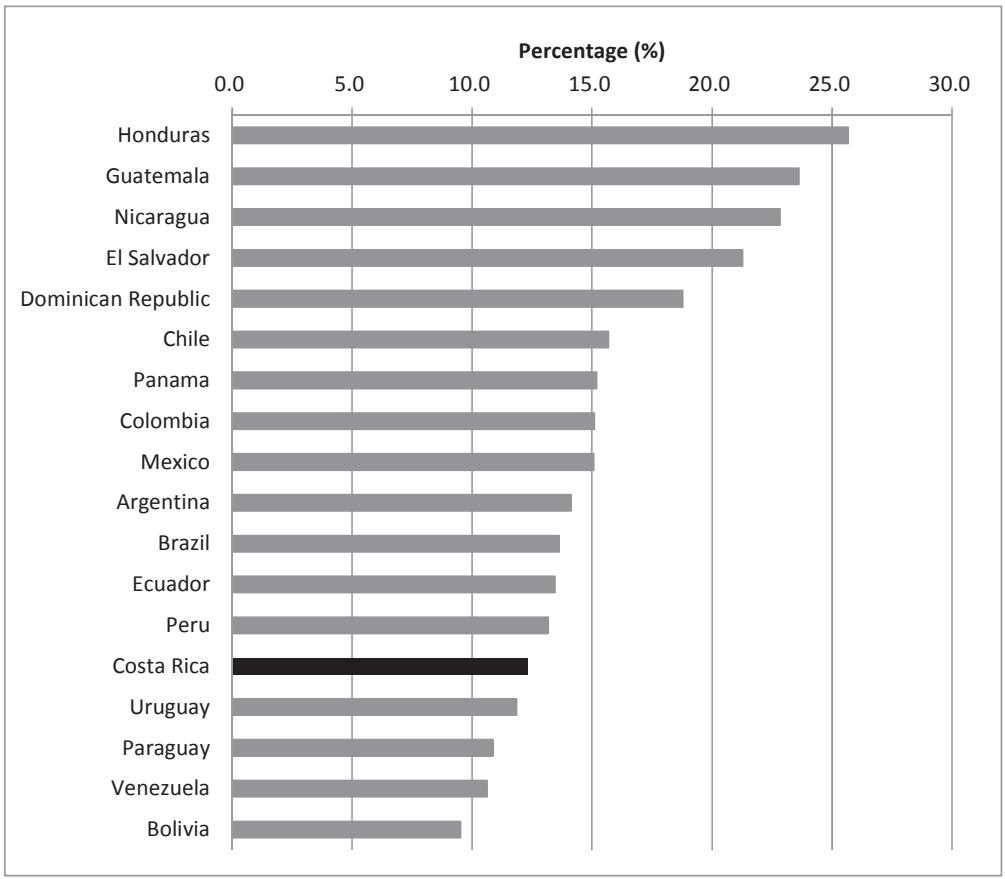


Source: Author's calculations based on data from Instituto Nacional de Estadística y Censos de Costa Rica, (INEC) (2014), INEC website www.inec.go.cr, accessed on 29 September 2014.

The NEET population is smaller than in many other Latin American countries

Effective school-to-work transition is critical in both developed and emerging economies. In Costa Rica, the proportion of youth not in education, employment or training (NEET) is one of the lowest among Latin American countries. In recent years, the NEET proportion was 12%, far below the highest number (26% in Honduras) and similar to that experienced in Uruguay (12%) or Peru (13%) (Figure 1.2).

Figure 1.2 NEETs in Latin American Countries 2009-2013



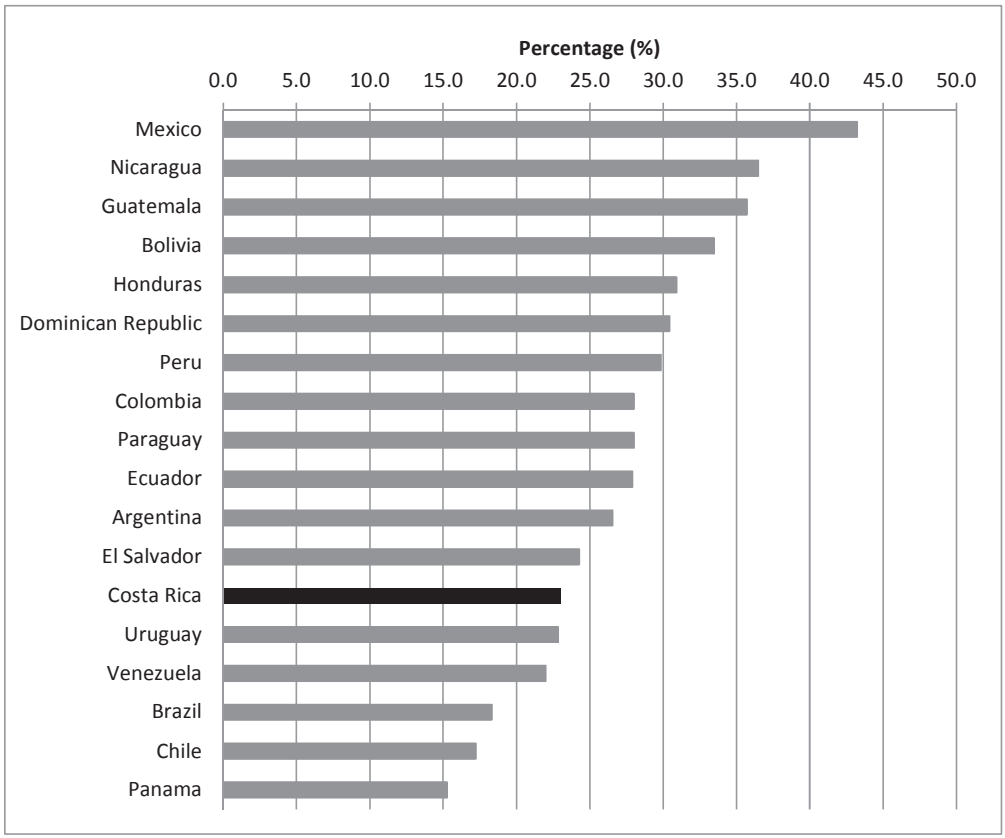
Notes: Data for Argentina, Dominican Republic, Paraguay, and Uruguay are from 2013; data for Costa Rica, Mexico, Peru are from 2012; data for Bolivia, Brazil, Chile, Ecuador, Guatemala, Honduras and Venezuela are from 2011; data for Colombia, El Salvador, and Panama are from 2010; data for Nicaragua are from 2009.

Source: Author's calculations based on data from Sistema de Información de Tendencias Educativas en América Latina, (SITEAL) (2014), SITEAL website www.siteal.iipe-oei.org accessed on 29 September 2014.

The informal economy is smaller than in other countries in the region

Informality is often an obstacle to decent labour standards and adequate training in the workplace. The size of the informal sector in the Costa Rican economy is not small (23%), but still one of the smallest in the region, compared with Mexico (43%) or Nicaragua (37%) and similar to Uruguay (23%) (Figure 1.3).

Figure 1.3 The size of the informal economy in Latin American countries



Notes: Data for Argentina, Dominican Republic, Paraguay and Uruguay are from 2013; data for Costa Rica, Mexico and Peru are from 2012; data from Bolivia, Brazil, Chile, Ecuador, Guatemala, Honduras, Panama and Venezuela are from 2011; data from Colombia and El Salvador are from 2010; data for Nicaragua are from 2005.

Source: Author's calculations based on data from Sistema de Información de Tendencias Educativas en América Latina, (SITEAL) (2014), SITEAL website www.siteal.iipe-oei.org accessed on 29 September 2014.

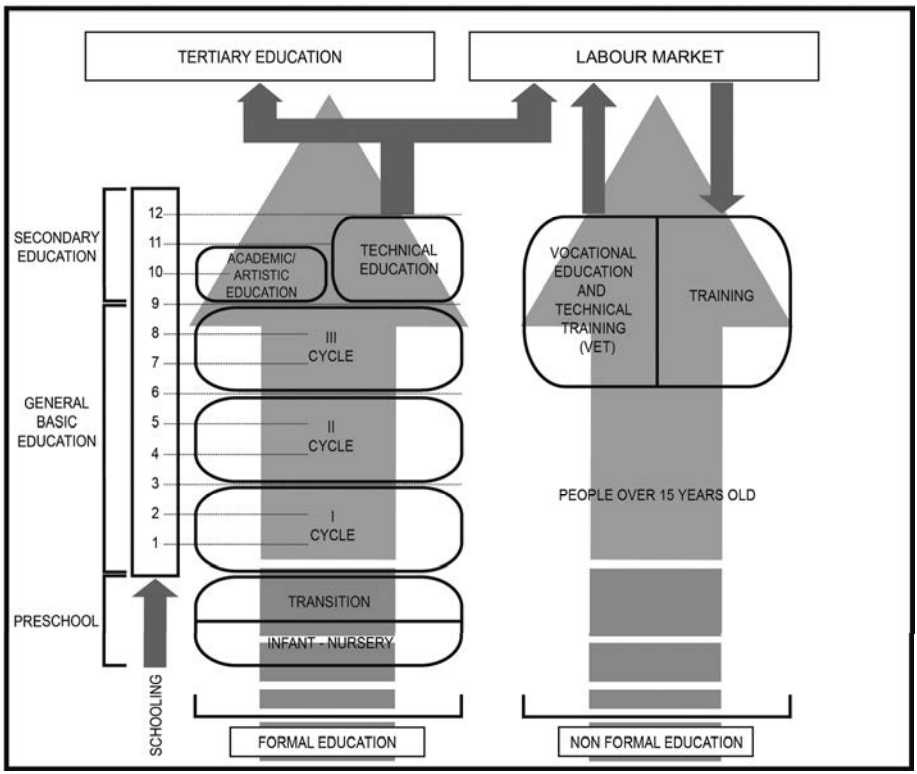
The education system

Costa Rica sees its education system as a system that fosters the acquisition of skills, abilities, knowledge, values, attitudes and behaviours that encourage a person's integral development as well as social transformation. Also, Costa Rica understands education as a human right that allows people to actively participate in civil society and economic life. In Costa Rica, the educational system favours technical education and training aiming at responding to the demands of the productive sector. Additionally, this system fosters the development of the skills people need, whether for people already in a job or for those unemployed people trying reinsertion into the labour market (MEP, 2014).

The education of technicians in Costa Rica takes place in two ways. The first is the Technical Vocational Education offered by the Ministry of Public Education (MEP), which forms part of the process to obtain the diploma in secondary education and includes theoretical and practical training in a technical field. Graduates of this programme obtain a diploma as a middle level technician. The second way is the so-called non-formal training option, which is provided by the National Learning Institute (INA) and to a lesser extent by private companies and organisations. The diagram below illustrates the way in which formal education and non-formal education coexist in parallel in Costa Rica.

The technical training offered by INA is aimed at people who have not finished the general basic education (EGB) and require of skills to be able to participate in the labour market. Moreover, this training also provides options to people who are already working and require the acquisition of new skills.

Figure 1.4 Formal and non-formal education in Costa Rica



Source: Ministry of Public Education of Costa Rica (MEP) (2014), *Skills beyond School Review of Costa Rica Background Report*; National Learning Institute (INA) (2014), *Skills beyond School Review of Costa Rica Background Report*.

The education system is organised into four cycles

The education system has four cycles: preschool, primary education, secondary education, and tertiary education:

- *Preschool education* includes: a first part covers childcare from birth until entry to "transition". A second part, "transition" or pre-school education is for children aged at least five years old and is mandatory (UNESCO, 2011).

- *Compulsory primary education* (divided in Cycle I and II) goes from 1st to 6th grade and it is also part of general basic education. To enter primary education

children should be aged at least six years and three months old on the last day of February (UNESCO, 2011).

- *Secondary education* from 7th to 9th grade is also part of compulsory general basic education and covers the third cycle of medium level education. Post-compulsory education, also free, includes the cycle denominated as "diversified education" (from 10th to 12th grade), whose duration is two years (academic or arts track) and three years (technical track). The academic track concludes with the *bachiller* certificate offering access to higher education. Students in the technical track can sit the *bachillerato* exam at 12th grade or receive the certificate of mid-level technician without passing the *bachillerato* exam[1] (UNESCO, 2011).

- *Higher education* is offered at universities, university colleges and higher education institutes. The non-university sector offers professional diplomas lasting from two to three years and involving between 60 and 90 credits.[2] A bachelor's degree requires a four-year programme (120 to 144 credits). The programmes of *licenciatura* last five years (30 to 36 credits in addition to the university *bachillerato*) and six years in the case of medicine and surgery. Masters degrees' (going beyond university *bachillerato* or *licenciaturas*) last two years. Doctoral academic programmes last at least three and a half years (UNESCO, 2011).

Table 1.1 The formal education system in Costa Rica

Educational Level	Preschool		General Basic Education									Secondary Education			Tertiary Education
Ages	5*	6	7	8	9	10	11	12	13	14	15	16	17	+18	
Grades			1	2	3	4	5	6	7	8	9	10	11	12	
Cycles	Pre-kindergarten	Kindergarten	I Cycle			II Cycle			III Cycle			IV Cycle			Community Colleges
												Academic track			Public Universities
												Artistic track			
												Technical track			Private universities

Note: * The child population in Costa Rica is divided into different age-range groups. The first three are operated by a centre called CEN-CINAI that belongs to the Ministry of Health and works with the following groups: "Babies" from 4 to 12 months old; "Maternal" from 1 to 3 years old; and "Interactivo I" from 3 and a half to 4 and a half years old. The second age-range group is managed directly by the Ministry of Public Education, they are "Interactivo II", where the range is from 4 and a quarter to 5 and a quarter years old, and finally the group called "Transition" from 5 and a quarter years old upwards.*Source*: Ministry of Public Education of Costa Rica (MEP) (2014), *Skills beyond School Review of Costa Rica Background Report.*

Vocational education and training[3]

There are two main vocational routes. First, technical vocational education is offered by the Ministry of Public Education, as part of secondary education as described above. Second, training is provided by the National Learning Institute (INA) and to a lesser extent by private companies and organisations. INA offers professional/occupational training to people 15 years and older, regardless of their academic level (MEP, 2014; INA; 2014).

VET offered by MEP can be found at two levels

The MEP subsystem is delivered through technical and vocational schools and operates at two levels: through the career exploration workshops[4] located in the third cycle of general basic education and in technical programmes at secondary level (fourth cycle).

There are MEP and INA programmes in diverse fields of study

MEP offers 56 technical study programmes: seven in agriculture, twenty-four in industry, and twenty-five in trade and services. The education of middle level technicians is carried out mainly through the technical vocational schools.[5] MEP technical programmes offer both day-time and evening schedules. Additionally, technical schools provide a two-year programme for graduates of secondary education who wish to obtain a diploma of middle level technicians (MEP, 2014). To complete their programmes students opt in most cases for 320 hours of professional practice or (in a minority of cases) for a professional project, mainly a desk-based exercise.[6]

In 2014, INA offered 246 programmes in the broader areas of industry; farming and livestock; and commerce and services with qualifications as skilled worker, technician and specialised technician. About 28% of INA programmes include supervised training practice and 2% dual training. Most INA programmes lack work-based learning as part of their curricula (INA, 2014).

Vocational institutions include MEP technical vocational schools and INA units and training centres

There are 135 technical vocational schools, 133 of which have day-time schedules (83 also offer evening schedules) and two that only offer evening schedules. INA has 54 training centres distributed in nine regional units across the country where occupational training takes place while INA also has 12 technical "units", representative of all economic sectors that are responsible for designing the training programmes and co-operating with social partners. (INA, 2014).

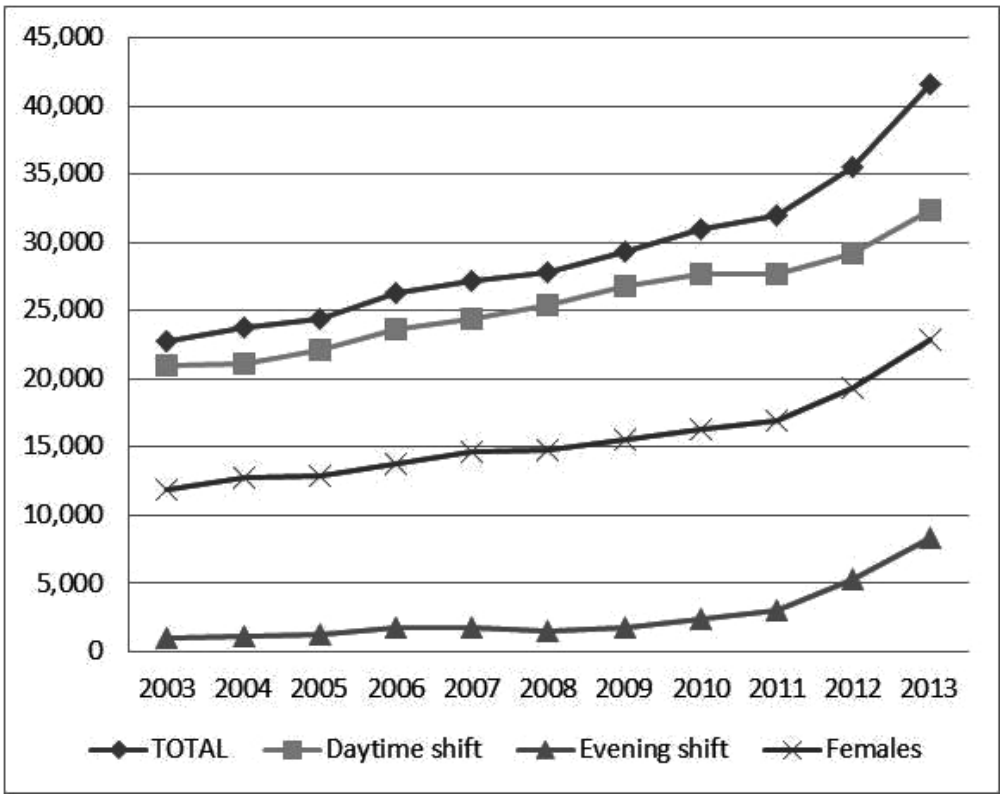
Students at VET institutions

One-fifth of young people choose the vocational track

About 20% of the cohort in secondary education attends technical vocational schools. However, since 2003 enrolments have increased from 23 to almost 42

thousand students (the largest part of such increase has been since 2011). Increasing female enrolments and the expansion of the evening shift explain most of the increase[7] (MEP, 2014). In the case of occupational training, almost 70 thousand people were registered in the system in 2014 (INA, 2014).

Figure 1.5 Initial enrolment in VET schools in Costa Rica (2003-2013)



Source: Adapted from Ministry of Public Education of Costa Rica (MEP) (2014), *Skills beyond School Review of Costa Rica Background Report*.

Dropouts have distinctive characteristics

Dropout rates are higher at the 10th grade in technical and vocational schools for both shifts. However, dropout rates are falling for the morning shift while increasing for the evening shift, and the latter reach almost 36% in 2012 for students in the 10th grade (Table 1.2) (MEP, 2014). In the case of INA, between 2010 and 2013, dropout rates have been falling (Figure 1.5) (INA, 2014).

Table 1.2 Intra-annual dropout in VET Schools: 2002-2012*

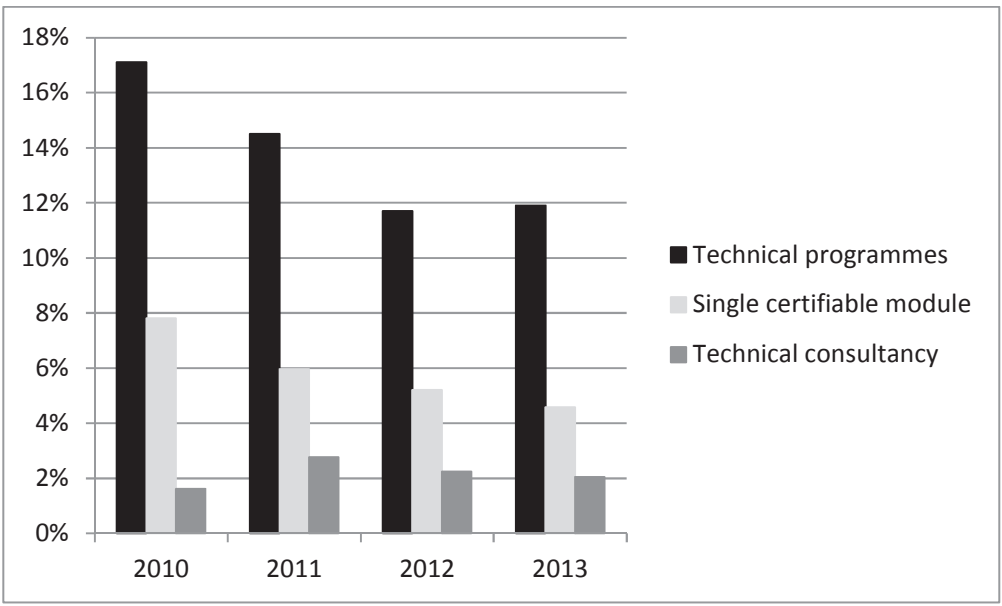
(Percentages)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Daytime shift											
10°	9.9	9.0	9.3	8.6	9.2	7.5	8.7	8.0	8.1	7.7	7.1
11°	4.7	4.9	5.2	3.9	5.2	3.7	4.6	3.7	5.6	4.4	4.3
12°	3.9	5.4	4.8	1.7	1.1	0.8	1.9	0.1	0.8	-0.5	0.5
Evening shift											
10°	20.9	22.1	31.1	30.8	35.3	32.3	28.6	27.2	25.1	35.3	35.7
11°	8.3	15.7	13.6	9.7	17.6	18.8	6.9	11.5	17.6	22.4	13.3
12°	0.8	10.0	6.0	3.2	5.6	2.9	7.2	5.1	6.6	7.5	6.3

Note: * Numbers calculated with regards to the initial enrolment each year.

Source: Based on data from Ministry of Public Education of Costa Rica (MEP) (2014), *Skills beyond School Review of Costa Rica Background Report*.

Figure 1.6 INA dropouts by type of course 2010-2013



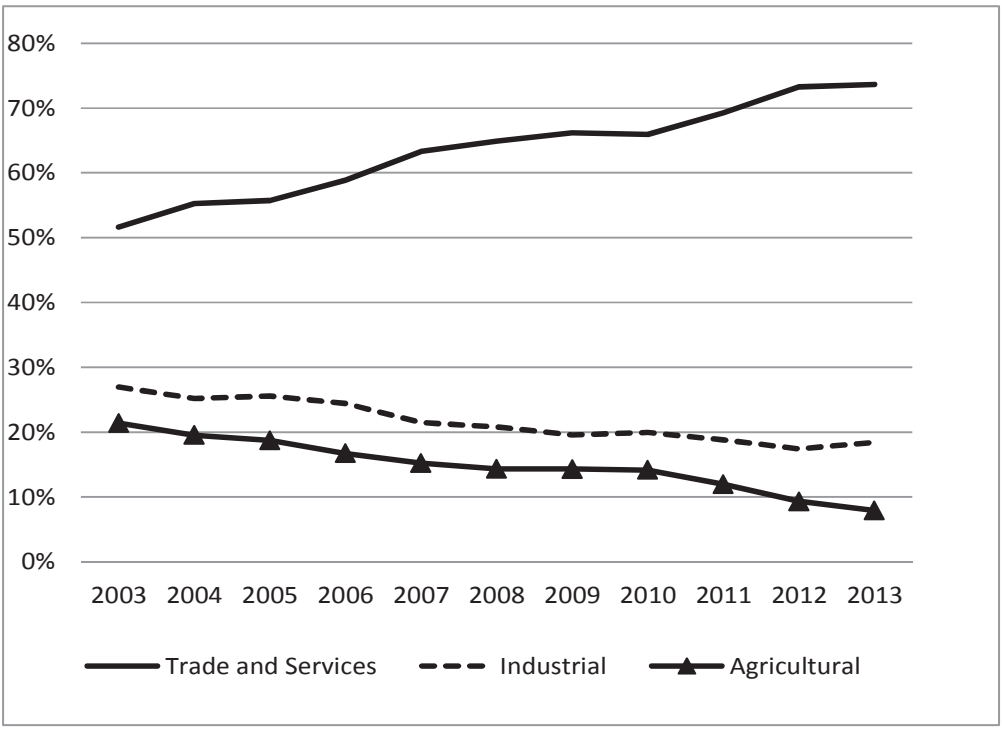
Source: Adapted from National Learning Institute (INA) (2014), *Skills beyond School Review of Costa Rica Background Report*.

Trade and services are the most popular fields of study

In 2013 in VET schools, 74% of students were in trade and services; 18% in industrial; and 8% in agricultural (Figure 1.7). In the case of INA programmes, trade and services are the most demanded, followed by food industry, agriculture and tourism (INA, 2014).

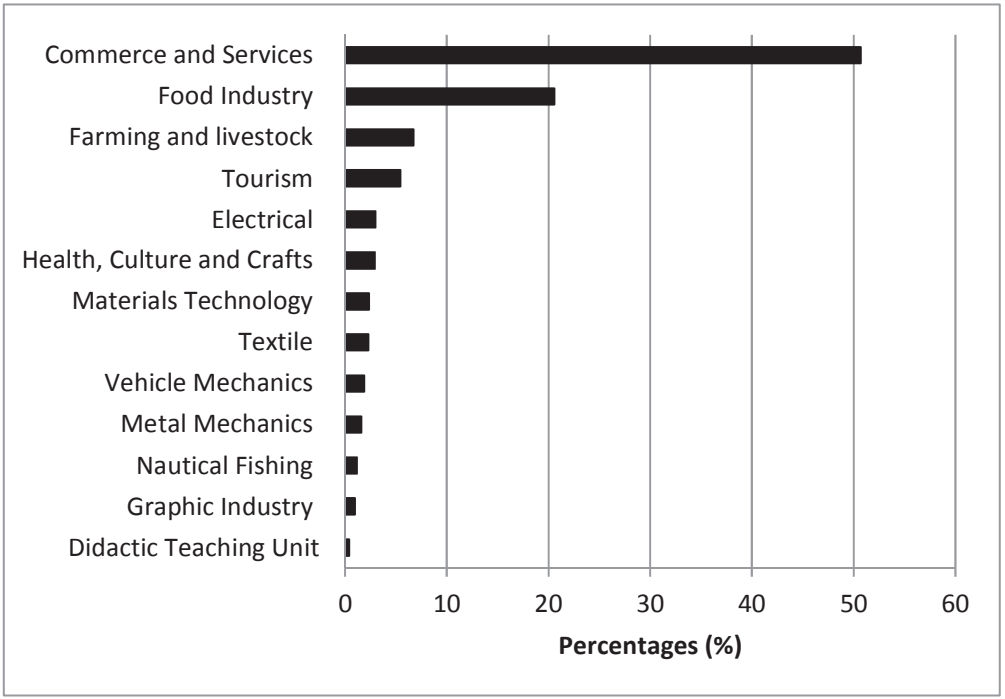
Figure 1.7 Participation of major speciality areas in Costa Rica VET Schools

2003-2013 (Percentages)



Source: Based on Ministry of Public Education of Costa Rica (MEP) (2014), *Skills beyond School Review of Costa Rica Background Report.*

Figure 1.8 Enrolment in INA major specialties 2013



Source: Author's calculations based on data from Instituto Nacional de Estadística y Censos de Costa Rica (INEC) (2014), INEC website www.inec.go.cr, accessed on 29 September 2014.

Previous OECD analysis and recommendations

OECD work on Costa Rica has been focused on investment policies

Recent relevant OECD work on Costa Rica includes two reports: *Attracting Knowledge-Intensive FDI to Costa Rica: Challenges and Policy Options* (OECD, 2012) and the *OECD Investment Policy Review of Costa Rica* (OECD, 2013).

Increasing the supply of skilled labour would support knowledge-intensive FDI

The OECD (2012) report recognises that Costa Rica has one of the best educational systems in the region but notes a mismatch between the supply of graduates by area of specialisation and the skills required by industry. For example, although the number of PhDs in technology-related disciplines has increased Costa Rica does not yet offer PhDs in engineering and computer sciences (OECD, 2012).

Human resource development is fundamental

The *OECD Investment Policy Review of Costa Rica* commends high investments in education and health that have supported good public services and the growth of skills-intensive industries in these fields. However, the report also points out that the lack of qualified workers in some high-tech industries is becoming a challenge. Stronger partnerships are needed between the government, universities, R&D centres and the private sector to develop appropriate skills for a knowledge-intensive economy (OECD, 2013).

Initial assessment of strengths and challenges of the VET system in Costa Rica

The assessment set out here rests on the two background reports prepared by Costa Rica for this review (MEP, 2014; INA, 2014) and the findings of the OECD mission to the country. The context is the analysis of vocational education and training systems developed by both the *Learning for Jobs* exercise and the more recent *Skills beyond School* exercise (Box 1.1). A detailed discussion of the challenges identified in the Costa Rican system and the policy recommendations to address them are presented in subsequent chapters of this review.

Strengths

VET is prominent in the policy agenda

The economies of many countries need specific occupational skills - in professional, managerial and technical jobs, in expanding fields such as health care, as well as in traditional trades like electricians. Vocational education and training (VET) systems, which supply these skills, are now under intensive scrutiny to determine if they can deliver the skills required, and ensure that they adapt to fast-changing needs.

In Costa Rica, technical education is recognised as a key contributor to both economic development and social cohesion. There is a consensus among stakeholders that more skilled technicians are required by the industry while these jobs are attractive and may enhance social mobility and cohesion. Also, an adequate skilled labour force supports foreign direct investment (FDI), while it improves productivity and competitiveness.[8]

Some programmes have a work-based learning component

Around the world it is necessary, but surprisingly difficult, to make vocational education and training fit the needs of the workplace. One of the best ways of doing so is to bring learning into the workplace. Unfortunately, this does not happen as much, or as effectively as would be desirable, and work-based learning is sometimes only weakly attached to vocational programmes in many countries. Work-based learning should be fully integrated into programmes as a credit-bearing and quality assured element. Such an approach would powerfully promote partnership between employers and training providers (OECD, 2014).

In Costa Rica, students in technical and vocational schools can opt to spend 320hrs in the workplace at the end of their studies as a graduation requirement. A very large majority of students select this option. This is very positive given that work-based learning offers multiple benefits to students. In addition both MEP and INA offer internship programmes for their students.

Recognition of prior learning is present and reinforced by INA.

Across many countries, the recognition of prior learning – a process of certifying pre-existing skills and knowledge is used to make skills visible to other actors, such as employers and education and training institutions. This has numerous potential benefits: *i)* through course exemptions it reduces the direct and opportunity costs of formal learning; *ii)* it improves the efficiency of the labour market, by making acquired skills transparent; *iii)* it helps adults with limited formal education to re-enter education and advance their careers; and *iv)* it rewards and therefore encourages learning in informal settings (Field et al., 2012).

In Costa Rica any person can apply for certification of their skills through INA and thousands are certified through INA centres or in the workplace. This represents an enormous advantage for people in order to give their skills visibility and recognition in the labour market.

Funding is currently adequate

Around the world, an economic downturn has put pressure on public spending. The problem is somehow more relevant for technical education as it is usually more expensive, per capita, than academic education.

At the moment, funding is not the main challenge in Costa Rica as the levy scheme seems to provide secure funding for the system each year. However the

question remains if this will be enough to provide for the expansion and upgrading of the system.

Equity issues are addressed.

Around the world, VET systems serve diverse purposes for different client groups. They can provide initial vocational training of course, but also higher level job-specific training for young upper secondary graduates; up-skilling for working adults in mid-career; "second chances" for working adults who dropped out of earlier education or training programmes; and opportunities for career shifts or to support a return to the labour market. An effective system should be able to meet all of these quite diverse needs.

As in many public institutions in Costa Rica, equity is a key requirement for VET. For example, INA offers courses to the entire population aged 15 years and over; there are a number of programmes to tackle the specific needs of disadvantaged groups; and there is a strong commitment to promote gender equality within schools and in the workplace.

VET seems to have good status.

Across many countries, VET systems face the challenge of ensuring that they remain a quality educational option for students and that graduates of the initial VET system have access to further learning opportunities. Such opportunities are desirable because growing technological complexity is increasing the demand for higher level skills, including improving the proficiency in the English language, because students themselves are aspiring to higher level qualifications and because the absence of such opportunities would leave initial VET pathways as low status dead ends.

Upper-secondary VET seems to have a relative good reputation among the population, especially as an option for students from vulnerable groups to find work in combination with higher education after completing their technical degrees. About 20% of the cohort in upper-secondary education attend VET schools in Costa Rica and they tend to perform slightly better than students in the academic track.

Challenges

Ensuring that the mix of provision reflects labour market needs

Both employers and government sources in Costa Rica estimate that there are insufficient graduates in technical specialties of increasing labour market demand.

Employers in Costa Rica argue that medium level technicians are the most difficult jobs to fill in. MEP and INA undertake several consultation processes with stakeholders but these seem to be insufficient to make the mix of provision more responsive to labour market needs. Also, many MEP and INA programmes and courses are not sufficiently flexible for individual technical and vocational schools and training units to adapt them to the needs of particular regions and employers. Moreover, workplace learning is not mandatory for all MEP and INA technical students. Finally, there is no adequate guarantee that employers offering a placement for VET students are genuinely interested in using and developing further students' skills.

Developing an apprenticeship system

A proposal for the implementation of a dual system in VET is currently before the Costa Rican parliament but such an initiative is not clear about the exact proportion of workplace learning to be implemented in dual programmes and responsibilities assigned to employers remain insufficient. A "dual" education system combines apprenticeships in a company (where students should spend most of the programme time) with vocational education at a vocational school in one programme. The initiative is promising in terms of enhancing workplace learning in VET and it could be considered only as such. But if Costa Rica wants to establish a dual system for VET the creation of an apprenticeship system should be considered.

Strengthening the quality of vocational teaching

One of the main obstacles to closing the gap between VET provision and labour market needs is the size and qualifications of the teaching workforce. Not all MEP technical teaching staff have the adequate pedagogical training and there is also a shortage of staff in INA occupational training. Despite recruitment efforts and increasing demand the number of teaching positions at INA has experienced little growth. The preparation of VET teachers in the MEP subsystem is still dominated by academic education. MEP and INA teaching profiles are not similar making it difficult the sharing of teaching resources to address supply constraints. Finally, teachers do not have enough access to workplace learning and it is not easy for industry practitioners to teach in VET.

Better co-ordination

The VET system in Costa Rica offers a number of student pathways and linked institutional options making co-ordination particularly important. While *ad-hoc* co-ordination between individual institutions (e.g. between MEP and INA) is

common there are many areas where there is not enough co-ordination, duplication of efforts and responsibility gaps. This lack of co-ordination creates substantial challenges such as: high dropout in the evening shift of MEP technical and vocational schools; there is no harmonisation between MEP and INA technical degrees and there is weak articulation with higher education.

NOTES

1. In the event that the students obtain the certificate of mid-level technician, but do not pass the *Bachillerato* Exam, this does not guarantee access to higher education.

2. Universities also offer programmes of two or three years for diplomas. For example, university programmes for the teaching certificate require three years (60 to 90 credits) (UNESCO, 2011).

3. For more detailed information about the Vocational Educational and Training system please check the background reports prepared by the Ministry of Public Education (MEP, 2014) and the National Learning Institute (INA, 2014). Full bibliographic references can be consulted at the end of this chapter.

4. VET in the III Cycle has an exploratory character with four functions: *i)* to broaden educational horizons serving as an introduction to the world of work through practical experience; *ii)* to orient vocationally those students with interest on VET; *iii)* to serve as a second chance to students who drop out of general basic education; iv) to determine student's skills and attitudes in order to guide her choice of technical programme (MPE, 2014).

5. Other providers but of smaller size are the Professional Community Education Institutes (*Institutos Profesionales de Educación Comunitaria* - IPEC) and the Integrated Adult Education Centres (*Centros Integrales de Educación de Adultos* - CINDEAS) (MEP, 2014).

6. In addition, there are nine bilingual technical programmes in the technical education in Costa Rica: Networking, IT Support, Computer Science in Software Development, Bilingual Secretary, Accounting, Executive Service Centers (Call Centers), Logistics Administration and Distribution (Supply Chain), Quality and Productivity and the new Design and Digital Development.

7. This expansion has been also reflected in the participation of the sector in the global educational system: in 2002, 2.3% of the enrolments were registered in VET while in 2013 this proportion reached 3.9% (MEP, 2014).

8. There have been many efforts in technical education to support the teaching and learning English processes such as: 4-hour weekly workshops in 7, 8 and 9 grade and technical English in technical high schools (ESOL, ESP) depending of the study programme from (2 to 12 hours weekly); English courses for technical teachers, English courses through scholarships for students from private companies, internships for students and teachers.

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Chapter 2

Improving labour market responsiveness

This chapter discusses the need to improve the labour market responsiveness of vocational education and training (VET) in Costa Rica. It argues that workplace learning should become mandatory and quality assured in order to realise its full benefits. The willingness of employers to offer workplace learning can be seen as an indicator of the labour market relevance of the programme of study; it also helps to ease the transition between school and work; and might help to deal with supply constraints in the classroom segment, among other benefits. At the same time, it is argued that technical and vocational schools as well as training units need more flexibility to adapt their programmes to local needs and such flexibility should enhance the attractiveness of VET for social partners, employers included. Finally, this chapter argues that the mix of provision should reflect labour market needs better as well as the preferences of students.

Challenge: Ensuring that the mix of provision reflects labour market needs

There are insufficient technicians to meet demand

Both employers and government sources in Costa Rica say that there are insufficient graduates in the technical specialties where demand is increasing, particularly as a result of foreign direct investment. One estimate is that there is currently a deficit of 1 800 technicians while 17 thousand additional technicians will be needed in the coming years (COMEX/CINDE/MICIT, 2012). About half the employers in Costa Rica say that medium level technicians are the most difficult jobs to fill (CONARE, 2011). Also, only 13% of university graduates gain engineering degrees despite growing demand (INCAE/CINDE, 2012).

MEP undertakes a consultation process with social partners that should be strengthened and systematised

Within the Ministry of Public Education of Costa Rica (MEP),1 the Directorate of Technical Vocational Education and Entrepreneurial Skills consults employers to ensure the relevance of MEP programmes in technical and vocational schools to labour market needs. It also submits VET programmes to the Higher Council of Education. The design and development of curricula in technical programmes is undertaken by the curriculum advisors of the Directorate (MEP, 2014) but there are no regular consultation mechanisms with other institutions (like INA) or the social partners. Formally, the main consultative mechanisms are the Regional Enterprise and Community Liaison Councils (CORVECs). Less formally, the MEP is in regular contact with the Costa Rican Investment Promotion Agency (CINDE), the National Council of University Deans (CONARE), chambers and other public entities that might provide relevant information to define the mix of provision (MEP, 2014). Since 2013 the Stakeholder Consultation for Technical Education (CAET) initiative, designed to align provision with labour market needs,2 has been in operation (MEP, 2014). But such processes may not be adequate to guide the mix of provision.

INA follows a very formal procedure to define its mix of provision

INA's "Curricular Model for Occupational Training" involves: *i) assessment of labour market needs and requirements for occupational training*. This implies the gathering and processing of information on occupational training needs; *ii) specific offer design* to meet *ad-hoc* requests from employers; *iii) ordinary offer design* to identify the skills a person should have to carry out different jobs; and *iv) review and*

adjustment under which INA distributes provision across different locations. Decisions are made through working meetings between the technical and technological units (in charge of design), and the regional branches (in charge of implementation) (INA, 2014:17). While the system is impressively systematic employer engagement varies significantly across sectors.

Work-based learning should be mandatory and quality assured

Although it is very positive that most students in technical and vocational schools opt for 320 hours of professional practice at the end of their programmes, this experience needs to be of real value for them. There is no adequate guarantee that employers offering a placement for VET students are genuinely interested in using and developing further students' skills. Also, this work placement is not mandatory.[3]

New proposals for work-based learning look promising

Currently many INA courses do not include workplace learning. Under a new proposal, covering mainly INA-provided training, employers and students will be assigned specific responsibilities to make it sure that workplace learning is undertaken to good standards. The details of this proposal will be discussed in Chapter 3.

Recommendation: Improve the labour market responsiveness of the system

- Make workplace learning mandatory and quality assured for both MEP and INA provision.
- Allow MEP technical and vocational schools and INA training units more flexibility to adapt programmes to local needs.
- Ensure a mix of provision that reflects the needs of the labour market and balanced with student preferences.

Point 1: Make workplace learning mandatory and quality assured

Supporting arguments

Work-based learning offers benefits for different groups

Work-based learning encompasses a diversity of arrangements including apprenticeships, informal learning on the job, work placements that form part of

formal vocational qualifications, and internships of various types. Managed effectively, it delivers benefits for all participants and contributes to better labour market and economic outcomes. The OECD (2010) describes these as including:

- *For students*, *a strong learning environment*. Work-based learning offers realistic experience and makes it easier to acquire practical skills on up-to-date equipment and through colleagues and supervisors familiar with the most recent technologies and working methods. Soft skills such as dealing with customers are also more effectively learnt in workplaces than in classrooms and simulated work environments.

- *For both students and employers*, *an effective recruitment tool*. In the workplace, employers get to know and assess trainees, who in turn get to know the workplace and the employer, providing both parties with valuable information that may lead to recruitment, or alternatively may lead them to look elsewhere.

- *For employers, a productive benefit* through the work done by trainees. This is not only important for apprenticeships but also in more substantial work placements where trainees have the time to master productive skills.

- *For public authorities, value for money.* Delivering high-quality vocational programmes outside the workplace can be very expensive, particularly in fields where modern equipment is expensive and requires continuous updating, and where expert practitioners command substantial salaries.

The employer offer of work-based training is a powerful test of labour market relevance

However in addition to the listed benefits, the employer offer of work placements signals that a connected vocational programme is of labour market value. In systems where the offer of places in VET is tied to the availability of workplace training places, employers can influence the number and mix of places in VET through their willingness to offer such workplace training – for example in apprenticeships. Students thus have a choice between a range of programmes, but are limited to those in which workplace training is available. In Germany and Switzerland, for example, those who do not find an apprenticeship place cannot go on to obtain an apprenticeship qualification (OECD, 2010:56).

Partnerships between training providers and employers would have benefits

Workplace learning encourages training provision which is sensitive to labour market needs, familiarises employers with vocational programmes and qualifications, and helps teachers of vocational subjects to keep up-to-date with industrial practice. This approach can therefore help to build a new culture of partnership with employers in the delivery of vocational education and training, a culture which is found in the world's strongest skills systems (OECD, 2014).

Work-based learning is also needed to develop entrepreneurial capacities

At the moment, the MEP system offers either a workplace learning practice or a business project proposal as two separate options for students to complete their technical studies. The distinction between these two options may foster an unfortunate divide between those who are supposed to pursue a blue-collar career (and supposedly need more workplace learning) and those who would pursue a white-collar one (and supposedly need a more academic-theoretical option such as a project written from a classroom). Workplace learning can be easily adapted to the needs of those students aiming to develop their own businesses since it can be pursued in managerial areas or any other activities related to the creation and administration of a business.

Many countries have successfully implemented mandatory workplace learning

The proposition of workplace learning as a mandatory element of programmes often meets some resistance.[4] It is commonly argued that employers will not readily offer placements where this is already part of the working culture. However the international evidence overwhelmingly supports its feasibility. In Sweden, workplace training is obligatory in two-year professional programmes and represents one-quarter of the programme duration (Kuczera, 2013). In Belgium (Flanders) vocational programmes targeting the unemployed include obligatory work-based learning in a company that is alternated with periods in learning centres (OECD, 2010; Flemish Department of Education and Training, 2013). In Romania, all post-high school programmes include mandatory work placements (Musset, 2014). In Spain, all post-secondary (as well as upper secondary) VET programmes include a compulsory 10-20 week module of workplace training. During the work placement students receive guidance and support from a teacher at the VET institution they attend and from the person who supervises their work at the company (Spanish

Ministry of Education and Science, 2007; Spanish Ministry of Education, Culture and Sport, 2011) (OECD, 2014). A further example is offered in Box 2.1.

Box 2.1 Mandatory workplace learning in Denmark

Participation in workplace learning has been mandatory in all postsecondary VET programmes since 2009. The aim was to ensure that programmes are professionally oriented, and relevant to employers and students. In the majority of occupations vocational provision is limited to the availability of workplace learning opportunities – institutions cannot increase student intake if work placements are not available for additional students. In a small number of occupations (e.g. teachers, nurses) provision is regulated by government defined quotas. The duration of the work placement is three months in short-cycle (academy) programmes and six months in medium-cycle (professional bachelor) programmes and it can take place at one or several companies. VET institutions are responsible for ensuring that the work placement is adapted to the content of the programme. Although not required by law, many institutions prepare an agreement with the company that offers workplace learning, setting out the content of the work placement. At the end of their placement students are individually assessed to check that they have acquired the targeted competences.

Source: Danish Agency for Higher Education and Educational Support (2012), Skills beyond School: OECD Review of Post-Secondary Vocational Education and Training – National Background Report for Denmark, http://ufm.dk/en/publications/2012/oecd-review-skills-beyond-school-2013-national-background-report-for-denmark.

Quality assurance and a legal framework are necessary supports

Quality standards for workplace learning could help Costa Rica to avoid the allocation of students to unskilled tasks and ensure they acquire useful occupational skills. Such standards may cover the content and duration of training, the assessment of training outcomes and the competences of those who supervise trainees. A clear legal framework can be an important support for work-based learning – the lack of insurance against industrial accidents sometimes inhibits companies from taking on trainees (see Box 2.2).

Box 2.2 Legal framework for workplace learning: The case of Madrid

In **Spain**, participation in work-based learning is mandatory for all upper-secondary or post-secondary vocational students. Autonomous communities create their own legal framework for implementation. That of the Community of Madrid covers collaboration agreements signed by the company and the school's principal, setting out the participating students, the place of training, start and end dates, hours of work, and details of the training programme. Students are covered for workplace accidents under the regulations on insurance. The training plan specifies the set of training activities that the student will perform while in the company. The workplace training module is evaluated by the teacher who supervises the module on behalf of the school. The teacher has to visit the company at least every two weeks to interview the in-company supervisor of the student and observe the students.

Source: General Directorate for Secondary and Vocational Education, Community of Madrid, Spain (2009), *Instrucciones de la Dirección General de Educación Secundaria y Enseñanzas Profesionales, por las que se concertan, para los centros públicos, determinados aspectos relativos al módulo profesional de formación en centros de trabajo*, www.madrid.org, accessed December 2011.

However quality assurance requirements should not inhibit employer support

Quality control may need to take the form of supportive measures for employers, rather than a bureaucratic obstacle to firms wishing to undertake workplace training. Box 2.3 gives relevant examples (OECD, 2010:115).

Box 2.3 Quality assurance in workplace learning in Denmark and Switzerland

In **Switzerland**, quality in postsecondary Professional Education and Training (PET) is controlled at two levels. Host companies are responsible for checking the progress of students. To help companies improve quality, the Swiss Conference of VET/PET Agencies and employers', employees' and trade associations created the *QualiCarte* project. It provides a checklist of 28 quality criteria describing key aspects of workplace training (including the engagement of the company, particular aspects of the initial phase of the training and the subsequent training process). These criteria are used by companies for self-assessment. Cantonal authorities control the quality of workplace training by issuing licences, which host companies must obtain to provide workplace training to students. To acquire a licence, companies must meet technical and staff criteria, and demonstrate that their training programme complies with quality standards and the content of training matches the needs of the occupation.

Box 2.3 Quality assurance in workplace learning in Denmark and Switzerland *(continued)*

In **Denmark**, quality assurance mechanisms for workplace training in postsecondary programmes have three key features: *i)* The quality assurance process is built into the work placement arrangements: these are a decisive factor for the accreditation of new programmes by the Danish Evaluation Institute; *ii)* Attention is given to making these placements as useful as possible for both VET programmes and employers and the analysis of those links forms part of the accreditation process by the Danish Evaluation Institute; and *iii)* The work placement arrangements are designed to be closely linked to learning outcomes. Subsequently to their placement, students report back to their institutions and they are assessed to see if they have met their learning objectives. To ensure this, each student has a teacher or a supervisor for guidance.

Source: OPET (2008), *Vocational and Professional Education and Training in Switzerland, National report from Switzerland contributing to the OECD Review of VET, "Learning for Jobs";* Field, S., et al. (2012), *A Skills beyond School Review of Denmark,* OECD Reviews of Vocational Education and Training, OECD Publishing, Paris, DOI: http://dx.doi.org/10.1787/9789264173668-en.

Point 2: Allow flexibility to adapt programmes to local needs

Supporting arguments

A proportion of curricula should be locally negotiated with employers

In Costa Rica, as in many countries, most vocational qualifications are national. This has the advantage of national consistency and supports labour mobility, but it means that training providers cannot adapt curricula to local needs. Following the practice of other countries (see Box 2.4) a certain proportion of vocational curricula – perhaps around 20% - could usefully be placed in the hands of individual training providers, to be determined in consultation with local employers. For example, in exchange for programme adaptation to a particular employer need, a VET school or INA unit might obtain workplace training in that particular company for their students and perhaps for their teachers as well.

Box 2.4 Adapting curricula to local needs

Fachschule curricula in **Germany** are developed by each *Land* within the framework agreement established by the Standing Conference of Ministers of Education and Cultural Affairs of the *Länder* (*Kultusministerkonferenz)* allowing 20% of the syllabus to reflect local needs.

In **Romania**, while the qualifications and the content of the post-school curriculum are determined centrally, about 15% of the curriculum can be determined locally by the school. The school inspectorate approves the local component of the curriculum, developed by school representatives with the participation of social partners. This provides a frame for local partnerships with employers, and these arrangements balance the advantages of national consistency in qualifications with responsiveness to local employers' needs.

Source: Fazekas, M. and S. Field (2013), *A Skills beyond School Review of Germany*, OECD Reviews of Vocational Education and Training, OECD Publishing, Paris, doi: http://dx.doi.org/10.1787/9789264202146-en

Musset, P (2014), *A Skills beyond School Commentary on Romania*, OECD Reviews of Vocational Education and Training, OECD, www.oecd.org/edu/skills-beyond-school/ASkillsBeyondSchoolCommentaryOnRomania.pdf.

Point 3: Encourage a mix of provision that reflects the needs of the labour market as well as student preferences

Supporting arguments

Students' preferences are a powerful factor shaping the mix of provision

The preferences of individual students for their courses of study are important for three reasons. First, students are often good judges of their own skills and the characteristics that may make them better suited to one job than another – so taking account of their preferences might lead to higher productivity. Second, students know more about what they most enjoy doing, so that even when the labour market outcomes are weaker, they are compensated in terms of their well-being. Third, it is counterproductive to coerce students into careers they do not want – the very high proportion of VET graduates in nearly all countries who change occupations after only a few years probably reflects some misconceived career choices (OECD, 2010:52).

Employers' needs require careful assessment

Where the mix of vocational provision is planned, (rather than being driven by student preferences), it needs to rest, in part, on a systematic assessment of employer

needs. But if provision is determined exclusively on the basis of employers' views, some risks emerge. Employer interests are not the same as either student or societal interests. Employers may want very narrow skills in occupational niches, or skills for declining industries and for jobs which are unpleasant and badly paid, or they may want an oversupply of skills to drive down wages in the associated occupations. "Skills shortages" as perceived by employers might also be perceived as "low wage" or "unpleasant job" areas by potential employees or trainees. Industries in structural decline may also complain of skills shortages because they cannot attract workers into low wage positions with few obvious career prospects (OECD, 2010).

Unions have a role in securing a balanced mix of provision

In principle, unions will aim to ensure that VET provision does not result in an oversupply of skills (as this would drive down wages and create unemployment), and that sufficient transferable skills are developed to ensure that their members have the means to move to other related occupations, recognising that potential mobility improves their wage bargaining position. At the same time, unions may have an interest in limiting new entrants to a profession or occupation, so as to maintain high wages (OECD, 2010). Both employer and union views on VET and the level of their engagement in VET policy vary markedly among countries. They depend on many factors, among other things on the structure of the economy and education system, the organisation of bodies that represent employers and employees and the level of recognition of these bodies among those who they represent. In Costa Rica, many social partners are somehow involved in discussing educational policy but the participation of unions seems relatively weak.

Supply constraints are also essential to define the mix of provision

Supply constraints inevitably influence the mix of provision – MEP technical schools and INA units cannot immediately respond to rapidly changing demand, as new equipment is costly, teachers and trainers cannot be easily changed or retrained, and programmes take some time to complete. Even in the long run, cost considerations may constrain provision because some types of equipment are just too expensive for all VET institutions. In fast growing industrial sectors some skills may be so prized that it is difficult to find someone with the relevant skills willing to work as a trainer (OECD, 2010); this situation can be relatively frequent in Costa Rica where they pursue the attraction of investment in high technology industries.

All main stakeholders need to have clear rights and responsibilities

Given that the benefits of VET are realised both by students and employers, an effective VET system needs to reflect both employers demand and students' preferences. The optimal balance would depend on factors such as:

- *Who pays:* If students pay most or all of the cost of VET courses then the mix should be equivalently dominated by (informed) students' preferences. At any level, if employers wish to influence the mix of provision, they should be willing to contribute to the training, typically through the provision of workplace training and experience.

- *Student age:* Younger, school-age students may be less able to make longer-term career decisions, so student preferences for certain vocational programmes should be balanced by attention to labour market outcomes, particularly where provision is free of charge to the student.

- *Breadth and orientation of programme:* Programmes with a large element of general skills, often designed to prepare students for the next level of education, as well as direct labour market entry, need not be constrained so tightly by employer demand. Conversely, in programmes that are designed for direct labour market entry, that contain much occupation-specific content and that rarely lead to further studies, employability should be a major factor determining provision.

- *Predictability:* In some sectors, like education and health care, labour force requirements may be more predictable than in some others. In these areas it may be more reasonable to match provision closely to expected requirements (OECD, 2010:55).

Countries use different options to reach a balance between all shareholders needs and preferences

Based on international experience, Costa Rica might want to explore three main types of approaches used: first, provision can be regulated through the availability of workplace training, this is perhaps the most effective and less complex mechanism (as discussed in Point 1 of this chapter's recommendations); second, VET authorities can initiate an assessment of skills needs, which then informs the mix of VET provision. Third, career guidance can be used to inform students about changing labour market requirements, aligning student preferences more closely with employer needs. In practice, these approaches are often blended together with more or less weight given to one or the other (OECD, 2010:56).

NOTES

1. In order to fulfil its mission, the MEP distributes its functions into four levels of activity and responsibility: political level, advisory level, director level and executing level. The director level is responsible for planning, developing, co-ordinating, managing, monitoring and evaluating the strategic processes that sustain the operation of the MEP and the provision of public education services at all levels, cycles and types, in accordance with the guidelines issued at the Political Level. The executing level is responsible for implementing strategies, plans, policies, programmes and projects listed in each of the strategic processes of the Director level, both in the academic as in the administrative area (MEP, 2014:37).
2. Nowadays, there are CAETs in the North Zone of the country, the Caribbean, and Guanacaste areas (MEP, 2014).
3. Students can also opt for a business project proposal, mainly a desk exercise, to complete their studies.
4. It is truth that almost all students in MEP technical and vocational schools opt for a professional practice at the end of their studies but this requirement should be made mandatory.

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Chapter 3

Developing an apprenticeship system

This chapter responds to current discussions taking place in Costa Rica about the implementation of a dual system in vocational education and training (VET) and makes recommendations. It argues that the current proposal is a strong and promising step to enhance workplace learning in VET but it diverges from the traditional concept of dual system. This chapter argues that Costa Rica should use new legislation to pilot an apprenticeship system, developing it carefully to take account of international experience and the need to fully involve and engage the social partners.

Challenge: Developing new legislation

A new proposal is now being discussed in parliament

At the time of writing (at the end of 2014) a new bill of law was being discussed in special commissions in the parliament. It proposes a framework for individual bilateral agreements between educational institutions and employers to pursue a "dual" system of vocational education and training. The bill of law includes the creation of a National Commission for the Promotion of Dual Education and Training governed by the Ministry of Education, the Ministry of Labour and Social Security and the National Learning Institute (see Box 3.1).

Box 3.1 A proposal for a new law on VET in Costa Rica

On 11 February 2014, the bill of law "Law for the Regulation of Education or Professional-Technical Training in the Dual Mode in Costa Rica" (*Ley para la Regulación de la Educación o Formación Profesional-Técnica en la Modalidad Dual en Costa Rica)* No. 19.019 was submitted to the Costa Rican Parliament. The content of the proposal can be divided in three parts: *i)* about requirements for participants; *ii)* about the stages of the initiative; and *iii)* about the responsibilities from each participant.

I. Requirements for participants

To participate in dual education and training this Law suggests the following requirements:

Employers need to: *i)* have the relevant qualified staff for the training programmes; *ii)* have the adequate facilities (to be verified by its educational institution partner); *iii)* have the corresponding insurance protection for students; *iv)* submit an annual report detailing the training provided to students.

Educational institutions need to: *i)* have the relevant qualified teaching staff in the area of the programme offered*; ii)* have the facilities and resources needed to adequately deliver the programmes offered; *iii)* have the insurance protection needed for students; *iv)* submit an annual report to the National Commission indicating the training provided.

II. Stages of the initiative

The law suggests the system should follow these stages:

a. *Adaptation*. Each educational institution interested in the dual system should adapt its programmes to fit a dual mode;

b. *Time allocation.* The educational institution will also determine which proportion of the programme is delivered at school and which one at the workplace.

c. *Companies selection.* The educational institutions will be responsible for choosing

Box 3.1 A proposal for a new law on VET in Costa Rica *(continued)*

d. *Training of trainers.* Each educational institution will be responsible for preparing pedagogically those who will be in charge of training students in the workplace.

e. *Student selection.* Schools will also run the selection process of students.

f. *Preparatory stage.* The educational institution will prepare students for the dual experience (i.e. information sessions).

g. *Equity.* Before starting the workplace practice, each educational institution should guarantee that all students receive the adequate support based on their needs, are grouped into their appropriate skills levels and that all of them will get the same benefit from workplace learning.

h. *Implementation.* Stage where the programme takes place.

III. About the responsibilities for each participant.

1. The educational institution will: *i)* monitor student and trainer performance; *ii)* make sure that students receive quality training and develop their activities in an optimal environment; *iii)* provide the student with all the necessary means to undertake the programme adequately; *iv)* prepare the examinations for the student both at the educational institution and the workplace; *v)* supervise the quality of the training in the workplace; *vi)* give an insurance to students in the programme; vii) give the necessary funding support to those who need it; *viii)* issue certificates to graduates; *ix)* comply with any additional responsibility established in the agreement.

2. The employer will: *i)* deliver training in accordance with the programme subscribed; *ii)* provide the student with the facilities and means to undertake the workplace training as subscribed; *iii)* make sure that the student is exposed to real work conditions; *iv)* assign a monitor to the student in the workplace; *v)* have a weekly control of the activities of the student, done by the monitor; *vi)* allow staff of the educational institution to visit the workplace to develop learning activities with the student and the trainer in the workplace, previous agreement with the company; *vii)* be responsive to the recommendations made by the educational institution; *viii)* report any problem to the educational institution; ix) assign the student only to those activities relevant to the training programme; and *ix)* comply with any additional responsibility established in the agreement.

3. The student will: *i)* carry out the activities of the programme; *ii)* attend punctually to all the activities of the programme at both the workplace and the educational institution; *iii)* follow the security procedures and standards of the company during the workplace stage; iv) undertake the evaluations of the programme; *v)* respect the personnel of the company and the educational institution; *vi)* comply with the rules of both the educational institution and the company; *vii)* comply with any additional responsibility established in the agreement.

Source: ALRCR (Asamblea Legislativa de la República de Costa Rica) (2014) *Ley para la Regulación de la Educación o Formación Profesional Técnica en la Modalidad Dual en Costa Rica.* Poder Ejecutivo, Expediente No. 19.019. Departamento de Servicios Parlamentarios.

"Apprenticeship" and "dual" systems are typically dominated by work-based learning

In the current bill of law the time allocation between workplace and classroom learning is left to the consideration of each individual school. This time allocation is critical as there is wide difference between a school-based vocational programme with a modest component of work-based learning, and a full "dual" or "apprenticeship" system, dominated by work-based learning and with a central role for employers. One outcome of the current initiative could be an enhanced element of work-based learning within a largely school-based vocational system. With some minor amendments the current proposal could offer a good ground to reinforce workplace learning practices in the current school-based system and could be promoted as such. This option could be developed within the set of institutions and programmes that already exists. While that outcome would be positive in many ways, it would stop short of a full apprenticeship or dual system, which would have significant additional advantages.

Apprenticeship systems are associated with a number of positive outcomes

Positive outcomes from the dual system include: low rates of youth unemployment, a highly skilled workforce and a strong input for industrial competitiveness (Busemeyer, 2012; Sager, 2008; Lehmann, 2005; Juul and Jorgensen, 2011). Germany's dual system of vocational education is often discussed as a successful model where employers have a relatively high level of commitment to apprenticeship training, unions are involved at all levels, and a national network of career counselling and employment centres provides relevant linkages into the labour market (Lehmann, 2005:108; Thelen, 2007). Also in Denmark it is linked to a number of positive effects. According to Jull and Jorgensen (2011) the Danish apprenticeship stream is of better value and quality than that of school-based programmes with better employment outcomes.[1]

However apprenticeship systems also face challenges

Paradoxically, one of the most vulnerable points of the dual system is its strong connection with economic cycles: the number of places offered for apprenticeships tends to go hand in hand with employment levels (Thelen, 2007; Sager, 2008; Juul and Jorgensen, 2011). In Germany, for example, the number of youth apprenticeship applicants started overtaking the number of training places offered by firms in the 1980s, and this mismatch has intensified over the years (Busemeyer, 2012). According to Busemeyer (2012) the official figure of rejected apprenticeship applicants remained quite low, but it severely underestimated the true lack of

training places because many unsuccessful applicants enter the so-called "transition system" (*Übergangssystem)*.[2]

Apprenticeship systems usually involve 50-80% of study time at the workplace

Across countries, one may distinguish between different forms of apprenticeship, in which most time is spent in on-the-job training with employers – often for example in the classical "dual" system countries like Germany around four days a week, with one day a week in the vocational school. However, apprenticeships in different countries have all kinds of different arrangements for alternating school and work-based learning – in Norway for example, two years of school are typically followed by two years on-the-job training. Such apprenticeships may be distinguished from school or college based vocational training, where most of the time is spent in school or college, but including a minority proportion of work-based learning. Sometimes, as in the Netherlands, the two systems sit side by side (see Box 3.2).

Box 3.2 Workplace learning in Dutch school-based VET and apprenticeships

In The Netherlands, the upper secondary vocational system (MBO) consists of two parallel structures: an apprenticeship track (*Beroepsbegeleidende Leerweg* or *BBL*) and a school-based track (*Beroepsopleidende Leerweg* or *BOL*). Both tracks combine learning and working. In the apprenticeship track at least 60% of the learning takes place in the workplace. In practice, most apprenticeship programmes have one day of formal schooling and four days of workplace training. The school-based track includes at least 20% of workplace training although in practice this is typically around 30% (Vrieze, van Kuijk and de Loo, 2009).

The Netherlands greatly benefits from its well-developed work-based learning system. As learning goals at the workplace are aligned with school curricula and a strong quality assurance framework is in place, work-based learning contributes substantially to training quality. High quality work-based learning allows for the acquisition of soft skills highly valued by employers such as conflict management skills, entrepreneurship, or team working. Furthermore, learning from trainers working in enterprises using the most up-to-date equipment and organisational structures allows for skills not always available at VET schools to be acquired.

Source: Fazekas, M. and I. Litjens (2014), *A Skills beyond School Review of the Netherlands*, OECD Reviews of Vocational Education and Training, OECD Publishing, Paris, doi: http://dx.doi.org/10.1787/9789264221840-en.

The current proposal does not give a central place to employers in workplace learning

The current proposal in Costa Rica is that schools, as the key actors, should: adapt their programmes, select the companies for the partnership, select the students, prepare the trainers in the workplace, cover the insurance of the students in the workplace, monitor workplace practice, design the examinations for workplace learning and issue the certificates of that practice. Therefore, educational institutions would remain the dominant players and regulators of the system, with employers having a lesser role. In the classical dual system, an apprenticeship starts with an apprentice signs a contract with a company not when it is selected from the school. In those countries with strong dual systems the state offers support but relies on private sector sponsorship of training.

If a dual system is implemented all major stakeholders should be actively involved

The current proposal was elaborated mainly by INA and UCCAEP (the Costa Rican Chambers of Private Enterprise Associations) and consulted with other major players in the sector (such as MEP). However, more involvement from other relevant actors in the system is needed, including the Ministry of Public Education, the Ministry of Labour and Social Security, unions, and other public and private entities that should be facing and dealing with the impact of the proposal.

Recommendation: Developing an apprenticeship system

- Costa Rica should use the new legislation to pilot and develop an apprenticeship system, developing it carefully to take account of international experience and the need to fully involve and engage the social partners.

Supporting arguments

Implementing an apprenticeship system

No single apprenticeship system should be copied without reflection

Introducing an apprenticeship system would not be easy. Big changes are often needed to accommodate an apprenticeship training system in the educational, economic, fiscal and legal framework. Without the necessary structural reforms, companies are likely to be reluctant to offer apprenticeship training posts, the

selection of students may be sub-optimal and the programmes may be of insufficient quality. There is no single apprenticeship training system that can or should be copied without careful prior analysis. Many features are country-specific and Costa Rica would have to decide how to adapt them to achieve a coherent system. In this section we look at the issues involved in developing and implementing an apprenticeship system. It draws on a range of OECD work, but particularly on Kuczera et al. (2008).

Apprenticeship systems depend on a number of supporting factors

A study comparing apprenticeship systems in five European countries (Germany, Austria, Denmark, Ireland and the United Kingdom) concludes that a VET system requires a strong institutional component to guarantee high quality of training in firms, to prevent employers from free-riding on the training efforts of others and offering little training because of apprentices' high payroll costs (Ryan, 2003). The same study lists elements of the apprenticeship system that have an impact on quality, such as the legal framework of apprenticeship, the existence of a national body to advise the responsible authority (e.g. Ireland's National Apprenticeship Advisory Committee), and mid-level committees that determine many aspects of VET, with mandatory representation of social partners.

A decision is needed on who takes responsibility for apprentices

In Germany, Austria and Switzerland employers hire their apprentices, so there should be no mismatch between employers' needs and apprenticeship training posts in the short run. Also in Denmark it is the employer who hires trainees. VET schools (VET colleges) help students to find a company through their network, and through various activities such as visits to companies. But it is then the responsibility of the trainee to find an employer and to sign a contract. Responsibility for apprenticeship training systems may be shared (schools and companies or many companies together sharing the same apprentices). In some countries a third partner is created. Training companies, e.g. in Switzerland, train apprentices on behalf of a pool of companies by selecting apprentices and paying their salary. Their profit comes from lending the apprentices to member companies, which pay the training company an annual fee for the number of apprentices they wish to employ during the training phase.[3]

The question of responsibility is important for at least three other reasons

These are:

- If companies are responsible for apprentices, they also act as the intermediary between the parents and the apprentices, because apprentices are generally under the age at which they can legally sign a labour and training contract. This means that parents are legally bound to fulfil certain obligations *vis-à-vis* the employer on behalf of their children and generally assume greater responsibility for their child's training and work obligations.

- An employer who chooses and recruits the apprentices also has more responsibility and interest in a successful apprenticeship.

- Given that apprentices undertake work akin to that of regular employees, it is logical for them to receive a salary, and this can improve motivation. In some countries, labour laws are too restrictive to make hiring an apprentice interesting for a company. Whether or not it is advisable to pay apprentices a salary therefore depends very much on how well labour laws fit the needs of apprenticeship contracts.

Given that Costa Rica today has an almost exclusively school-based system and most employers have no experience with apprenticeship training, a variant of the Swiss arrangement of professional training companies would be easier to introduce than the Germanic apprenticeship training systems in which firms are entirely responsible for apprentices.

There need to be adequate incentives for employers to offer apprenticeships

The willingness of companies to provide training opportunities depends on the expected economic benefits. Research shows that – depending on the framework of the apprenticeship training system and on labour market regulations – a company providing training may sometimes expect benefits that exceed the cost of their expenses (for an overview of the literature and empirical results, see Wolter et al., 2006). The benefits to firms are of two types:

- The productive contribution of the apprentice. This depends on the time the apprentice spends in the company, on the training obligations and regulations, and on the apprentice's ability. The benefits also depend very much on how the company organises its work processes. Research shows that in Switzerland

in two-thirds of cases the in-work benefits are already sufficient to pay all training expenses and the apprentices' salaries (Wolter and Schweri, 2002), but in Germany this is not the case (Beicht et al., 2004). One reason is that Swiss apprentices tend to undertake more productive work than in Germany.

- Apprenticeship represents a "low-cost" opportunity to train future workers in job-specific skills while learning about their ability to perform well in the company (Autor, 2001). The productivity of good workers may not be obvious to other employers, so an employer taking on apprentices may obtain their services cheaply (Acemoglu and Pischke, 1998, 1999; Bassanini and Brunello, 2008; or for an overview, Leuven, 2005). These benefits depend on labour market regulations and transparency.

Financial incentives for companies may initially be necessary

Not all of these benefits will be immediately evident to employers. Financial incentives for companies willing to engage in apprenticeship training in Costa Rica might initially be necessary but this should eventually be economically sustainable without subsidies.

On and off-the-job components may be pursued in parallel or sequentially

Classic continuous dual apprenticeship training involves one or two days of schooling in the vocational school and three or four days of training and working in the company throughout the three or four years of apprenticeship training. Some professions require substantial theoretical and practical training before an apprentice is able to do meaningful work. Many different models have therefore emerged, with apprentices spending months or even up to two years in school or in specialised training centres before working in a company. The more the apprentice has to acquire prior knowledge before being able to perform productive work, the costlier the training is for the company (see Wolter and Schweri, 2004, for simulations), unless this part of the training takes place prior to the actual apprenticeship.

International experience can be summarised in three points

First, there does not seem to be a "one-size-fits-all" solution to the organisation of the learning and training sequences during apprenticeship training. This means that the most effective systems offer professions and firms the flexibility to choose the system best adapted to their needs. Second, flexibility regarding the duration of apprenticeship training is important for both employers and apprentices. The typical duration of training is in the range two to four years. Third, when prior theoretical knowledge has to be acquired, the government may organise this in vocational

schools at public expense. However it is important to consider whether company organised and company-paid ways of doing this would be more effective and efficient.

Clear learning goals for apprentices have to be set and monitored

The government has to decide who is in charge, first of defining the overall vocational profile and standards, second, of monitoring and evaluating apprentices' progress, and third of grading and granting credits and diplomas. A successful apprenticeship system requires the involvement of social partners in all aspects of the process, particularly through sectoral, professional and employers' organisations. This entails reducing the power of vocational schools to define content, as this would partly be delegated to companies and professional associations. Potential problems arise when the vocational content is too narrowly defined (too profession- and firm-specific), as this would reduce apprentices' future intra- and inter-professional mobility. As indicated above, Costa Rica needs stronger partnership bodies to address this issue.

Apprenticeships need to be attractive initially to employers, but allow for evolution

In the first instance, apprenticeships need to serve the short-term economic interests of companies since this will ensure a sufficient supply of training posts and allow apprentices a smooth transition to the labour market without lengthy additional profession-specific learning. In the long run, however, it is in the interest of former apprentices and the government, and to a lesser extent in that of individual companies, for the acquired knowledge to allow mobility throughout an entire working life. Balancing short and long-term interests and adjusting content to developments in professions and on the labour market requires constant adaptation of training regulations. In many countries, experience shows that keeping an apprenticeship system up to date is one of the most difficult tasks.

Company supervisors and trainers need preparation

In an apprenticeship system, more of the teaching and training activity becomes the responsibility of trainers and tutors in companies. Although formal training requirements for tutors in companies are costly, they improve quality, underpin the common standards which support apprentices' mobility after training and raise the status of tutors and trainers in companies. It would be wise to introduce formal training for tutors gradually as schools may resent the competition created by the introduction of apprenticeship training. This could help to limit the resistance of "formal" vocational school teachers to competition from professionally trained tutors in companies. Teacher training institutions, with their tradition of training

school teachers, may not be able to create the appropriate programmes and it might be preferable to create a specific institution, as was done in Switzerland with the creation of the Federal Institute for Vocational Education and Training (www.ehb-schweiz.ch/en/Pages/default.aspx). This institute trains VET teachers and VET company trainers, while teachers for general and academic schools are trained in teacher training universities.

Diversity in workplace training needs to be managed within a common framework

Although apprenticeship systems have many advantages, learning opportunities are not the same for all apprentices, since companies, even in the same sector, differ in terms of products, markets, clients and technology. If all vocational subjects were exclusively taught in companies, the outcomes for apprentices would often be too heterogeneous to ensure inter-company mobility after training. Therefore, where apprenticeship training exists, vocational subjects are not exclusively taught in companies and not everything the apprentice needs to know is learned "on the job". The question is where the additional learning should best take place. It has traditionally been the school, where vocational subjects are taught in parallel with the learning that takes place in companies.

Teaching in schools may be preferable in three circumstances

First, learning in school helps to prepare apprentices for new tasks in companies, where they can apply their more theoretical knowledge. Second, some types of group teaching may be more effective than individual tutoring and therefore better carried out in schools. Third, some VET teaching in schools is evaluative and assesses whether the company-based learning has led to the desired outcomes. This also helps to check whether the distribution of learning outcomes is unevenly distributed because of different learning opportunities in companies. If this is the case, schools can provide extra assistance to apprentices whose learning opportunities have been less favourable.

"Third party" training organisations have some advantages

All these functions of vocational schools could, in principle, be transferred elsewhere. In many cases, industries or professional associations have taken over some of these functions and offer extra courses or tutoring for all apprentices in their profession or sector. In many countries this is widespread and thus considered as the "third"[4] place of learning. Compared to courses in schools, inter-industry courses have the advantage of relying on the most up-to-date technologies and equipment available to companies and the personnel able to handle them. Although Costa Rica has a well-established infrastructure of upper secondary schools in vocational

education, it would also be advisable to promote the "third" learning place in collaboration with the social partners.

The current proposal requires more participation from other actors

INA and UCCAEP (the major employer chamber in Costa Rica) have made a great effort in putting together a dual system proposal but more active involvement from other actors is also needed. The Ministry of Public Education, the Ministry of Labour and Social Security, the Ministry of Foreign Trade, other industry associations (like CINDE), and unions are just some of the institutions and social partners that should be playing a more prominent role in discussing and building this proposal. As will be argued in Chapter 5, Costa Rican VET needs to improve its co-ordination mechanisms in a way that fully engages employers. The aim should be to have a strong and coherent sector that is able to respond co-ordinately to student demand, labour market needs and supply constraints. In the current situation, a body like SINETEC should take the lead in re-organising the discussion and assessment of the current proposal for the implementation of dual system in Costa Rica.

To secure the participation of other social actors the current proposal should assign specific roles

To engage actors they require real responsibilities. In Costa Rica, like in many other countries, the VET system is basically government-driven while social partners (especially employers) play a consultative role. As described in other parts of this review, in Costa Rica there are multiple consultation mechanisms with employers and other social partners but these efforts are not yet translated into stronger engagement. To incentivise the participation of social partners they should be given real responsibilities in the system.

NOTES

1. The same authors found that finding a training place in a company entails a social selection of students in Denmark: the group of students who end up in a school-based programme have parents with a weaker connection to the labour market and a lower average income than parents of students in apprenticeships (Juul and Jorgensen, 2011: 297).

2. Busemeyer (2012) indicates that such a "transition system" is a complex arrangement of more or less co-ordinated training and labour market instruments whose only commonality is that they do *not* lead to certified vocational qualifications.

3. First empirical results on this type of apprenticeship training (see Walther et al., 2005) show that these companies achieve high-quality training owing to their professional knowledge. However, although economies of scale are possible (owing to the large number of apprentices), the training comes at a rather high price. The participating companies profit not only from the work apprentices do when they are at the worksite, but also by the opportunity to select the best future employees. Results also show that the number of apprentices, who remain with the company they work for during the apprenticeship training is rather high, even compared with the traditional form of dual apprenticeship training.

4. Apprenticeship training is also called dual education because there are two learning sites (school and company). In the past years some experts speak of "triad" education because three learning sites have emerged (school, company and inter-industry courses).

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Chapter 4

Strengthening the quality of vocational teaching

This chapter discusses the need for measures to improve the quality and effectiveness of teaching. To address this issue this chapter argues that professional development for vocational education and training (VET) teachers should be improved and qualification requirements for MEP and INA teaching staff harmonised in order to facilitate their mobility. These two measures should be also helpful to tackle the teaching shortage experienced in the system. Connections between the workplace and teaching should be fostered through partnerships between companies and schools to allow teachers to spend time in the industry and for industry practitioners to teach in VET.

Challenge: Skills gaps in vocational teaching

There are not enough qualified vocational teachers

A shortage of technically qualified teachers is one of the main bottlenecks in the supply of technical skills. Despite recruitment efforts the number of teaching positions at INA has experienced little growth (INA, 2014). Although teaching hours per teacher have increased, some demand is not met (INA, 2014). As for MEP staff, the Public Civil Service is responsible for determining the number of staff teaching positions at INA and only a limited number of additional positions have been granted to the institute in recent years. In addition, wages offered to technicians for teaching activities are lower than those offered in the productive sector (INA, 2014).

Better technical and pedagogical competences among teachers in MEP technical and vocational schools

Pedagogical requirements for teachers in MEP technical and vocational schools do not seem to be enforced. Not all teaching staff have the prescribed pedagogical training: about two-thirds of those in agricultural, trades and services specialties have such training; but only about 40% in industrial specialties (VT 5-6 professional levels). There are particular shortages of qualified teachers in bilingual (Spanish-English) programmes; electro-mechanics; electronic telecommunications; auto-mechanics; precision mechanics; refrigeration and air conditioning; industrial maintenance; logistics, administration and distribution; productivity and quality; aircraft maintenance; and naval mechanics (MEP, 2014).

Many teachers lack relevant workplace experience

Universities prepare professionals in the areas taught at MEP technical and vocational schools through bachelor's and postgraduate degrees. These professionals are also required to have pedagogical training to enable their salary category to rise to a higher level (MEP, 2014). Nonetheless MEP has few incentives to encourage industry experience among their VET teachers. For INA teachers, current contractual regulations do not facilitate much interchange of staff between schools and industry. It was previously possible for INA units to hire the services of industry professionals to teach and cover unexpected demand, but the mechanism was abandoned because of legal obstacles to subcontracting.

The qualification requirements of MEP and INA teachers are different

While sharing teaching resources between MEP and INA could be a helpful means of dealing with supply constraints, the divergence of employment criteria restricts mobility (see Box 4.1). While MEP puts emphasis on the academic preparation of teachers, INA gives more weight to work experience of candidates

because, if selected, they will receive pedagogical training through an internal programme.[1]

Box 4.1 MEP and INA teaching staff categories

The MEP teachers' scale is divided into two categories: VAU 1-2 and VT 1-6. The first group refers to staff without post-secondary/tertiary education who have graduated from a technical college and holding complementary pedagogical preparation. The VT categories refer to those with different levels of post-secondary or higher education complemented with pedagogical preparation: *i)* the lower numbers are assigned to people who have a degree to be elementary school teachers or have graduated from a college university that offers a technical certificate; *ii)* VT3 encompasses people who have a university degree, but have not followed any substantial pedagogical training; *iii)* VT4 and VT5 are composed of people who have a teacher degree from an institution of higher education, whether or not they are certified in the field of study; and *iv)* VT6 refers to those who have a PhD, graduate degree, engineering degree or equivalent and who have also pursued the pedagogical studies required to teach at high school level, regardless of whether their training is on technical subjects or in other fields (MEP, 2014).

In the case of INA, for occupational training purposes, instructors are referred to as Technical Trainers, categorised in accordance with INA's Class and Position's Manual as follows: *i)* Technical Trainer 1A. A graduate from either the INA or a vocational/technical secondary school in a given field of study. He/she must have two to three years of work experience in his/her own specialty; *ii)* Technical Trainer 1B. A person who holds a diploma in a higher education career with eighteen to twenty four months of experience in his/her specialty; *iii)* Technical Trainer 1C. A professional who holds a Bachelor's university degree with twelve to eighteen months of work experience in their own specialty; and iv) Technical Trainer 1D. A professional who holds a Master's degree with up to twelve months of experience in own specialty.

Source: Ministry of Public Education of Costa Rica (MEP) (2014), *Skills beyond School Review of Costa Rica, Background Report Questionnaire*. San José; National Learning Institute (INA) (2014), *Skills beyond School Review of Costa Rica Background Report.*

Recommendation: Enhance the quality and effectiveness of VET teaching

- Improve the professional development of VET teachers, with attention to the updating of industry knowledge and experience as well as pedagogical training.
- Harmonise MEP and INA teacher qualification requirements to facilitate interchange and tackle supply constraints.
- Develop partnerships for teachers to spend time in industry and for industry practitioners to teach in VET.

Point 1: Improve the professional development of VET teachers

Supporting arguments

Many countries find it hard to prepare VET teachers adequately

Vocational teachers and lecturers have jobs that in many ways are more demanding than those of academic teachers. They not only need to have knowledge and experience of the diverse package of skills required in particular professions, they also need to know how to convey those skills to others. On top of this, they need to continuously update their knowledge in response to rapid changes in technology and working practices. In many countries, teacher training qualifications are very general, without any differentiation between the teaching of academic and vocational subjects. Programmes designed to teach how to go about conveying practical and vocational skills are less common, and the scope to update skills by spending time in industry is often limited. In some countries rigid qualification requirements make it hard for people with valuable industry experience to contribute to vocational training (OECD, 2014a).

Much attention has been given to the professional development of academic teachers

Several studies correlate sustained professional development for academic teachers with significant learning gains for students (Yoon et. al., 2007). Also, with more teachers entering the profession through alternative pathways the need for relevant and accessible professional development is increasingly imperative (Clotfelter, Ladd and Vigdor, 2007; Mueller, 2012; Headden, 2014). High-quality professional development also has a significant impact on teacher retention (Allensworth, Ponisciak and Mazzeo, 2009). With high staff turnover being a serious problem, particularly in schools serving marginalised communities (Ewing and Smith, 2003; Headden, 2014), adequate professional development can be seen as a key means to retain personnel (OECD, 2014b).

Some countries require vocational teachers to have relevant industry experience

Other countries plan to reform the way they prepare their VET teachers by putting more emphasis on practical industry experience, as well as pedagogical skills. For example, South Africa is planning a new qualification route for VET teachers with clearer progression routes alongside a reinforced industry experience component. It proposes: *i)* that vocational lecturers need to be competent in both the theoretical and practical aspects of the courses; *ii)* that a strong workplace

component must be built into lecturer qualification programmes; and *iii)* that curricula and qualifications need to adapt and respond to economic and technical change (DHET, 2012). At the same time, setting ideal qualifications is easier than ensuring that a teaching workforce actually possesses these qualifications, particularly, as in Costa Rica, in a context of teacher shortages, where there is a need to encourage entry to the profession.

A dedicated institute to prepare vocational teachers could be established

INA and MEP should co-ordinate to ensure that the VET workforce has a balanced mix of skills. One option would be a dedicated institute to prepare VET teachers and trainers (see Box 4.2). A similar institution might be considered for Costa Rica, perhaps under the umbrella of an overall steering body (see Chapter Five) and operated in co-ordination with the Institute for Professional Development. The National Council of University Deans (CONARE) in Costa Rica has also pointed out (in its *State of Education* volume, 2013) that a more detailed technical occupational profile should be developed for VET teachers and this should be adequately complemented with pedagogical training (CONARE, 2013).

Box 4.2 The Swiss Federal Institute for Vocational Education and Training

The Swiss Federal Institute for Vocational Education and Training (SFIVET) is the national competence centre for teaching and research in vocational/professional education and training. It provides training to those who want to teach in vocational schools and professional colleges. In addition, it also offers continuing education and training courses, which help existing teachers and trainers to upgrade their skills and support VET schools in developing their management. Finally, it conducts evaluations and research, which inform policy making in VET.

Source: Federal Office for Professional Education and Technology (2008), "Vocational and Professional Education and Training in Switzerland". National report from Switzerland contributing to the OECD's review of "Learning for Jobs" Federal Office for Professional Education and Technology, Bern.

Point 2: Harmonise MEP and INA teacher qualification requirements

Supporting arguments

Sharing resources would help to tackle supply constraints

There is no reason in principle why vocational teachers in MEP and INA should have different qualification requirements, since fundamentally the vocational training task is the same. Sharing resources between INA and MEP would also help VET provision to be more flexible and adaptable, and support career development for vocational teachers. Such a collaboration should include the sharing of teaching staff but also facilities if required. A single teaching workforce, with common qualification requirements, could help the system to be more responsive to both student demand and labour market needs. However the creation of a single teaching workforce is not easy. In pursuing this task, institutions might complement each other. For example, MEP teachers and facilities could be oriented to deliver the theoretical part of vocational programmes while INA teaching staff and facilities could be oriented to the provision of the practical subjects. For example, in Northern Ireland (United Kingdom), a single teaching qualification was designed to facilitate the mobility of teachers across the whole post-primary education sub-sector (Box 4.3).

Box 4.3 Development of VET teachers: Northern Ireland

In Northern Ireland, following an evaluation of the teacher education programme in further education in 2006, the Department for Employment and Learning revised the required teaching qualification in order to facilitate the transfer of teachers' skills across the post-primary education sector, among other things. This qualification is known as the Post-Graduate Certificate in Education (further education) and is delivered by the University of Ulster. The qualification is underpinned by the Lifelong Learning UK professional standards for teachers. With effect from September 2009, this has become a mandatory qualification for all new-entrant, permanent, full-time and associate lecturers who are not qualified teachers. The induction component must be completed within the first year of teaching and be followed within the next two years by the successful completion of the second year of the post-graduate certificate (DEL, 2009:2-3). In addition, the Department is currently piloting a short programme to allow part-time lecturers to develop the requisite pedagogical skills. The aim is ensure that qualification requirements do not become barriers for the incorporation of industry trainers hired on a part-time basis.

Source: Álvarez-Galván, J.-L. (2014), *A Skills beyond School Commentary on Northern Ireland*, OECD Reviews of Vocational Education and Training, www.oecd.org/edu/skills-beyond-school/ASkillsBeyondSchoolCommentaryOnNorthernIreland.pdf; Department for Employment and Learning (2009) *Qualifications Required to Teach in Institutions of Further and Higher Education.* 11 pp. Circular. Draft Version. Northern Ireland.

Allow MEP technical and vocational schools and INA training centres more freedom to hire their own staff

School leaders need to have tools to adapt their schools and training units to the requirements of their locality. Chapter 2 recommended the adaptation of VET programmes to be more responsive to the demands of local social partners. Similarly, more hiring freedom for MEP technical and vocational schools and training centres would help to reinforce the capacity for local responsiveness.

Point 3: Teachers might usefully spend time in industry while industry practitioners might teach in VET

Supporting arguments

Industry internships help teachers to update their understanding of modern workplaces

To sustain and update their industry knowledge and experience, VET teachers should be encouraged to spend time at the workplace. This might involve part-time teaching combined with part-time employment in industry, or short periods spent in industry for full-time teachers. Incentives are needed for MEP and INA institutions to support and encourage teachers to upgrade their skills. For example, teachers may need to be replaced during the period they spend in industry (Field et al., 2012). One option could be to include arrangements for technical skills updating in institutional evaluation criteria, or include them in development contracts concluded between each institution and the corresponding ministry. Once again, the consolidation of a single VET teaching workforce – alongside more freedom for schools and training centres to hire their own staff – might help to make these arrangements less complicated.

In other countries there are staff who work part-time as trainers and part-time in industry

Part-time arrangements to combine work as instructors in VET while continuing to work in the industry exist in Norway, where VET institutions and local employers often co-operate to ensure an adequate supply of vocational trainers. In countries where the status of the teaching profession is generally low and VET teaching positions attract few young people, partnerships between VET institutions and employers may help to increase the attractiveness of the profession and thus attract well-qualified and enthusiastic candidates (OECD, 2010). In Finland, the *Telkkä* programme allows teachers to spend two months on-the-job and brought a wide range of benefits to teachers (Box 4.4). One benefit of teacher-internships is

that teachers become more familiar with current workplace requirements, particularly those of the hosting employer, and teach these in their course. For the employer, this may ease the recruitment and training process for new workers.

Box 4.4 Teacher-worker pairing: Co-operation between VET and employers

The Telkkä programme in Finland was based on close co-operation between teachers and workplace trainers. It aims to improve the ability of VET to respond to the needs of working life. The programme included a two-month on-the-job period for teachers, during which teacher-worker pairs were formed. This offered an opportunity for teachers to update their professional skills and for workers who also work as workplace trainers to improve their pedagogical skills. The training period was preceded by a seminar (to clarify goals and expectations) and followed by feedback from teachers and workers and dissemination to the broader community.

Teachers reported a wide range of benefits, such as increased familiarity with recent work practices and requirements and the equipment used, easy access to firms for study visits, the contacts necessary to invite people from industry to give lectures at their VET institutions, increased confidence, respect from students, and self-motivation. The training period also allowed teachers and workers to discuss issues related to workplace training for students and improve training plans and assessment methods. Participants improve their skills and self-esteem, and disseminate knowledge to other colleagues. This exercise has been evaluated by the Economic Information Office in Finland as one of the best ways of developing teachers' professionalism.

Source: Cort, P., A. Härkönen and K. Volmari (2004), *PROFF – Professionalization of VET Teachers for the Future,* CEDEFOP, Thessaloniki.

The recruitment of teachers from industry can be encouraged

Part-time teaching staff that maintain their role in industry bring up-to-date practical experience into the teaching environment, benefitting not only students, but also fellow teachers (OECD, 2010). Professionals should be able to move into teaching, either full or part-time, without having to overcome too many regulatory obstacles. In England, a new programme has been launched to encourage industry experts to teach part-time in vocational programmes (Box 4.5). Typically part-time teachers require pedagogical training, but it is unrealistic and undesirable to impose the same demands on them as full-time teaching staff, as they will often compensate for their limited teaching experience by bringing up-to-date industry experience into their teaching and sharing it with their colleagues. The previous practice of INA in hiring industry professionals should now be revisited and contractual challenges resolved.

Box 4.5 "Teach Too": A programme in England to encourage industry experts to teach in vocational programmes

Teach Too aims to encourage occupational experts from industry to spend some time teaching their occupational expertise to others and contribute to curriculum development, while continuing to work, so keeping off-the-job vocational education and training as up-to-date as possible. The programme implements a recommendation by the Commission on Adult Vocational Teaching and Learning on the need for "vocational teachers and trainers to combine their occupational and pedagogical expertise, [and] build strong partnerships with employers."

The programme will be developed by: learning from existing good practice and disseminating these lessons, funding a range of developmental activity to encourage innovation; challenging employers; and training providers to propose solutions that work for their learners and businesses. Drawing on this knowledge and activity the intention is to develop a national Teach Too framework.

Source: The Education and Training Foundation (2014), *Teach Too*, http://et-foundation.co.uk/teach-too.html

The benefits for teachers of spending time in industry should be clear

A major benefit for receiving employers is that VET graduates will be better prepared for their jobs, if teachers are familiar with current workplace requirements and teach these in their course. Teachers can also help to improve and reduce the cost of hiring as they could be able to identify good job candidates among their students and/or tailor their teaching to the needs of specific local employers or industry. A positive social network effect can be beneficial for both employers and students when teachers spend time at work placements, so employer associations in Costa Rica should be active supporters.

Take advantage of the "Formador de formadores" programme

While pedagogical courses help prepare trainers for their work, too onerous requirements may discourage people in mid-career from becoming a vocational teacher or trainer. Allowing skilled workers to acquire their pedagogical competences in a flexible way (e.g. distance learning, recognition of prior learning), also helps to encourage skilled workers to practise as vocational teachers or trainers (OECD, 2010). In Costa Rica, there are already initiatives dealing with the pedagogical limitations of trainers in the workplace. Such initiatives should be scaled up. At the moment, INA is developing the *Formador de formadores* ("Trainer of trainers" or "Teacher of teachers") programme, with the aim of developing pedagogical skills in those who will be in charge of training and managing people in

the workplace. The programme has been conceived to be used by managers and supervisors inside companies but it can also be used to develop closer links with VET institutions. Workplace learning practices can be built and reinforced around those professionals already participating in the programme and therefore have the proper pedagogical skills.

NOTES

1. INA has developed a plan which aims to provide skills to the staff responsible of designing, implementing and monitoring INA's VET programmes ("INA's plan for vocational training"). This plan is made up of three programmes: a) VET planning; b) VET delivery; and c) VET delivery supervision. These programmes originate from the processes identified in the Technical Trainer Profile. Through the implementation of this training, it is intended that INA's teachers receive coaching in determining training requirements, designing VET, designing written training materials, and delivering and supervising VET. INA also schedules yearly technical training weeks. The purpose of this training is to increase and upgrade the teachers' skills according to market requirements for each technical field. This technical training week is organised by each productive subsector.

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Chapter 5

Co-ordination, qualification frameworks and articulation

This chapter argues that co-ordination should improve in Costa Rica's vocational education and training (VET) system in order to improve its effectiveness, reduce the duplication of efforts and close existing gaps. To this end this chapter suggests three initiatives: i) engage the social partners more fully, and improve co-ordination though a national body with overall responsibility for the vocational system; ii) explore the creation of a National Qualifications Framework to clarify study paths and qualification levels; and iii) through these two measures, and in other ways, substantially improve articulation between vocational programmes and tertiary education.

Challenge: Better co-ordination is needed to engage employers and improve efficiency

There is a need to increase employer engagement

One of the main challenges faced by the VET system in most countries, including Costa Rica, is to engage employers and trade unions more fully in the vocational system, since that engagement is fundamental to its effectiveness – in providing work-based learning and developing programmes relevant to labour market needs among other matters. This means having structures which can be used to communicate with employers and trade unions, and give them a voice in the planning of the system, as well as the delivery of programmes. A central body to achieve this is very important.

A diverse vocational education and training system requires co-ordination

Alongside the two major MEP and INA routes, there are smaller scale options such as the Professional Institutes of Community Education (IPEC), the Integrated Adult Education Centres (CINDEAS), a small number of private colleges, and "collaborative" centres run by social partners. The diversity of institutions makes co-ordination particularly important. There are examples of *ad-hoc* co-ordination between individual institutions (e.g. between MEP and INA), but there are many areas where there is not enough co-ordination, duplication of efforts and responsibility gaps. For example, there are several bodies managing the links with employers and collecting data on labour market skills needs but inadequate co-ordination between them: CORVECS (for MEP schools); Liaison Advisory Committees (for INA centres); the Labour Market Observatory (Ministry of Labour) and the intermediation job service (also run by the Ministry of Labour). Some major institutions have already identified this problem regarding the collection of statistics and have recommended the establishment of a centralised statistical institution (COMEX/CINDE/MICIT, 2012).

MEP and INA offer different qualifications and articulation with higher education is weak

At the end of MEP technical programmes students receive both a secondary education certificate allowing entry to higher education, and a middle-level technician certificate. INA offers skilled worker, technical worker and specialised technician qualifications (none of them offering access to academic higher education). MEP determines grades through subjects that are approved annually and INA does it by hours, making equivalence hard to determine. A few *ad-hoc* credit agreements have been negotiated between individual MEP technical and vocational

schools and the National Technical University of Costa Rica in order to validate technical subjects already taken by students. However there are many obstacles. INA graduates have rarely concluded high school, and this is normally a requirement for access to higher education. The Council of Higher Education prohibits the recognition of technical courses like the ones offered by INA at almost all universities with the exception of the National Technical University (INA, 2014).

A central co-ordination body exists on paper but is not in use

The National Integrated System of Technical Education for Competitiveness (SINETEC), created in 1998, is not in operation. SINETEC was conceived as a body within MEP designed to integrate the different aspects of technical education. SINETEC is, on paper, composed of educational institutions both from the public and private sectors along with the social partners. Its objectives are: to co-ordinate the activity of training institutions and meet the needs of the productive sector; to promote technical education; to collaborate in the attraction of high-tech investment; and to advise the government in the field of technical education (MEP, 2014:27). Some stakeholders have already suggested the revival of this institution (CONARE, 2011; UCCAEP, 2014).

Current initiatives to improve co-ordination are fragmented

With the aim of establishing, executing, and monitoring measures to align education with labour market needs, in August 2011, the Ministry of Foreign Trade (COMEX), alongside the Ministry of Science, Technology and Telecommunications and the Coalition of Initiatives for Development (CINDE), created an inter-institutional working group to look at human capital requirements for competitiveness. This also includes the Ministry of Employment and Social Security, the Ministry of Public Education, the National Learning Institute, the Technical Secretariat of the Presidential Council for Competitiveness, the Private Council for Competitiveness, the foundation "Bilingual Costa Rica", the National Council of University Deans (CONARE) and the National Commission of Loans for Education (WGHC, 2014). The aim of this body might appear to overlap significantly with that previously attributed to SINETEC.

Recommendation: Improve co-ordination in the system

- Engage the social partners more fully, and improve co-ordination through a national body with overall responsibility for the vocational system.
- Explore the creation of a National Qualifications Framework to clarify study paths and qualification levels.
- Through these two measures, and in other ways, substantially improve articulation between vocational programmes and tertiary education.

Point 1: Engage the social partners and improve co-ordination in the system

Supporting arguments

Better co-ordination would improve effectiveness

Clearly a framework is needed to engage the social partners in the vocational system, particularly in the context of new initiatives to establish an apprenticeship system. Adequate co-ordination would help to improve the allocation of resources, avoid duplication of efforts and secure complementarity and coherence between the efforts of different institutions. Strong co-ordination between these bodies could help to undertake skills development more comprehensively and, in turn, should facilitate the involvement of social partners. A national steering body would be of great help for this task.

The advantages of a national steering body

In principle, the National Integrated System of Technical Education for Competitiveness (SINETEC) already groups representatives of all relevant governmental sectors (i.e. education, labour, trade and industry), employers, organised labour and other relevant social partners. However this body is not in operation and other initiatives have emerged, like the inter-institutional working group about human capital for competitiveness whose aim resembles that one of SINETEC.

Other small countries wishing to attract FDI have created successful steering bodies for skills development

Countries also interested in attracting FDI might offer a valuable model. For example, it has been argued that, the success of the Singaporean Skills Development Model is closely related to its co-ordination mechanisms. An Economic Development Board (EDB) works as a link between economic development and skills formation; it exercises responsibilities in both areas; and is able to co-ordinate efforts across different institutions (Singapore Ministry of Manpower, 2014; Kuruvilla and Chua, 2000). Co-ordination bodies for the VET system can be found in many countries around the world (see Box 5.1).

Box 5.1 National strategic bodies steering VET policy: Switzerland and the United Kingdom

In ***Switzerland***, the involvement of professional organisations in VET policy making is required by law. The term "professional organisations" in Switzerland refers to trade associations, employer associations and trade unions, and includes both companies and business people. Professional organisations have the leading role in the content and examination process of both secondary and post-secondary VET programmes (in Switzerland post-secondary VET is referred to as "professional education and training", PET).

Professional organisations in post-secondary VET, as in secondary level VET, draft core curricula for PET college degree programmes, which are then approved by the Swiss authorities (Confederation). National examinations leading to a federal diploma are also led by professional organisations. They ensure those federal PET diplomas are relevant to the needs of the profession and the labour market. Professional organisations draft examination rules, which cover admission requirements, occupational profiles, the knowledge and skills to be acquired, qualification procedures and the legally protected title. They also conduct examinations. The role of Swiss authorities (at Confederation level) includes approving examination rules, supervising examinations and issuing federal diplomas.

In the ***United Kingdom***, the UK Commission for Employment and Skills (UKCES) was launched in April 2008 with the aim of increasing the employer voice in the United Kingdom's VET system and promoting investment in skills to drive enterprise, jobs and growth. It is led by commissioners from large and small employers, trade unions and the voluntary sector. It also includes representatives of further and higher education institutions and from the Devolved Administrations. Its strategic objectives are: *i)* to provide world-class labour market intelligence which helps businesses and people make the best choices for them; *ii)* to work with sectors and business leaders to develop and deliver the best solutions to generate greater employer investment in skills; *iii)* to maximise the impact of changed employment and skills policies and employer behaviour to help drive jobs, growth and an internationally competitive skills base. The UKCES works with government departments and agencies, as well as with researchers across the UK to develop an evidence base and pool expertise. The UKCES also funds and manages the Sector Skills Councils and oversees their relicensing process. As a UK-wide body, it helps ensure a strategic approach to skills development that covers all four nations (with devolved administrations for education and training policy) of the UK.

A recent shift in the approach to employer engagement encourages employers to own their skills agenda and develop their own initiatives, rather than relying on a policy agenda set by government with incentives for employers to join in. In 2011 the Prime Minister announced a fund of up to GBP 250 million to test out approaches that empower employers to take control of skills development. The UKCES is working closely with government to develop this approach.

Source: Fazekas, M. and S. Field (2013), *A Skills beyond School Review of Switzerland*, OECD Reviews of Vocational Education and Training, OECD Publishing, http://dx.doi.org/10.1787/9789264062665-en; UK Commission for Employment and Skills (UKCES) (2013), *OECD Review: Skills beyond School. Background Report for England. Briefing Paper February 2013.* www.ukces.org.uk/publications/oecd-skills-beyond-school-england

Point 2: Explore the creation of a National Qualifications Framework

Supporting arguments

Many countries have found qualifications frameworks helpful

In Europe, the creation of a European Qualifications Framework has encouraged the development of national frameworks (e.g. Hungary, Ireland, Spain, and the United Kingdom). Typically the frameworks cover both vocational and academic qualifications, but they have a particular importance in placing often a very diverse set of vocational qualifications in a common framework (Box 5.2).

Box 5.2 Qualifications frameworks and qualifications systems

A *qualifications framework* is a rank order of qualification levels, allowing each qualification to be assigned to a specific rank. It classifies qualifications according to a set of criteria for levels of learning achieved.

Qualifications systems include **all aspects** of a country's activity that result in the **recognition of learning,** and it is therefore a much wider concept. Qualifications systems may be more or less integrated and coherent. An explicit qualification framework, when it exists, is one aspect of a qualifications system.

Source: OECD (2007), *Qualifications Systems: Bridges to Lifelong Learning*, Education and Training Policy, OECD Publishing, Paris. DOI: http://dx.doi.org/10.1787/9789264013681-en

Costa Rica might expect some benefits from a qualifications framework

The introduction of a qualifications framework could help Costa Rica by: *i)* facilitating pathways of progression within the education system, by situating qualifications at different levels and clarifying how they relate to each other (particularly in respect of MEP and INA qualifications). Transparent progression pathways help to clarify the place of vocational qualifications and facilitate lifelong learning and articulation with higher education; *ii)* creating a forum for co-operation between the different stakeholders involved in the VET system (so the qualifications framework could be very helpful for the work of an overall steering body); *iii)* Improving quality assurance mechanisms by challenging individual qualifications to demonstrate that they deserve a given rank in the framework; and *iv)* Giving employers a clearer view on the level of competences which should be associated with different qualifications (OECD, 2010:142).

Box 5.3 Qualifications frameworks

In **Belgium (Flanders)**, the development of a qualifications framework since 2009 aims to make qualifications more transparent and comparable. The intention of the framework is to clarify which programmes lead to the same qualification level and to the same job, making qualifications equivalent regardless of where the students have been taught – in a centre for adult education, a university college, or a competence centre. It will also give more visibility to the different qualifications for both students and employers. In the case of new qualifications, creating a new professional qualification starts with an assessment of how the qualification will translate into an education programme and identifies providers best suited to deliver the programme. The fact that the qualifications are defined by competences should help to support recognition of prior learning.

Source: Musset, P., (2013), *A Skills beyond School Commentary on Flanders*, OECD Reviews of Vocational Education and Training, OECD, www.oecd.org/edu/skills-beyond-school/ASkillsBeyondSchoolCommentaryOnFlanders.pdf

South Africa implemented a national qualification framework in 1995. It is intended to: *i)* create an integrated national framework for learning achievements; *ii)* facilitate access to mobility and progression within education, training and career paths; *iii)* enhance the quality of education and training; and *iv)* accelerate the redress of past unfair discrimination.

Recent reforms in the framework aimed to simplify it and limit the proliferation of qualifications. It identifies ten levels of learning achievement, and includes three sub-frameworks covering: *i)* General and Further Education and Training Qualifications; *ii)* Higher Education Qualifications; and *iii)* Trades and Occupations Qualifications. It is expected that these reforms should help to improve articulation, and to support more effective career guidance and recognition of prior learning, while also improving co-ordination across the different institutions and shareholders involved in the educational system.

Source: Department of Higher Education and Training-Republic of South Africa (DHET) (2013), *White Paper for Post-School Education and Training*, Pretoria.

Costa Rica might choose among different types of qualifications frameworks

The design of qualifications frameworks involves a number of dimensions. Choices regarding each dimension depend on the national context. Table 5.1 below outlines some of the options (OECD, 2010:143).

Table 5.1 Main dimensions in the design of qualifications frameworks

Dimension		Potential benefits
Tight vs. loose	Tight	More prescriptive about qualification design and quality assurance, they typically have a strong regulatory function, applying common rules across all qualifications. Examples: United Kingdom, New Zealand, South Africa.
	Loose	Provide a map of qualifications with a "communicative" purpose. They are less prescriptive and allow room for differences in approach. Examples: Australia, Scotland.
Inclusive vs. partial	Inclusive	Covering all qualifications so can ensure coherence across all qualifications.
	Partial	Partial coverage, e.g. in terms of level, occupational sector. May be easier to implement, allow for piloting and staged development.

Source: OECD (2010), *Learning for Jobs*, *OECD Reviews of Vocational Education and Training*, OECD Publishing, Paris, DOI: http://dx.doi.org/10.1787/9789264087460-en; Coles, M. (2006), *A Review of International and National Developments in the Use of Qualifications Frameworks*, European Training Foundation www.etf.europa.eu/pubmgmt.nsf/%28getAttachment%29/4B4A9080175821D1C12571540054B4AF/$File/SCAO6NYL38.pdf; Tuck, R. (2007), *An Introductory Guide to National Qualifications Frameworks: Conceptual and Practical Issues for Policy Makers*, International Labour Office, Geneva; Young, M. (2005*), National Qualifications Frameworks: Their Feasibility for Effective Implementation in Developing Countries*, Skills Working Papers No. 22, International Labour Office, Geneva. http://ilo.org/wcmsp5/groups/public/---ed_emp/---ifp_skills/documents/publication/wcms_103626.pdf

However frameworks rely on effective assessments

Credibility requires a defensible methodology for locating individual programmes and courses within a qualifications framework –to demonstrate that one programme is indeed at level 3, for example, and is, by some objective test, superior to level 2. The methodology also needs to command the support of employers, preferably because it has been developed with their involvement, so that employers take the framework seriously (OECD, 2010:143). Transparent and consistent assessment frameworks ensure that clear standards are applied, benefit students by making it easier to prepare for the exams, and grant employers more confidence in the skills of qualification holders (OECD, 2014:80).

They cannot work in isolation

Allias (2010), in a comparative study of 16 countries regarding the introduction and operation of national qualifications frameworks finds that qualifications frameworks are most successful when developed as complementary to a broader institutional policy for skills development. She argues that strong professional associations and educational institutions are essential for building and using qualifications frameworks adequately. Qualifications frameworks should therefore be seen as a means to reinforce co-operation and co-ordination between stakeholders in the education and training system but not as a substitute. One of the main weaknesses in some qualifications frameworks is that they are sometimes built by qualifications authorities with little or no input from social partners resulting in frameworks that are poorly used or even ignored by stakeholders.

Point 3. Substantially improve articulation between vocational programmes and tertiary education

Supporting arguments

Articulation between higher education and upper-secondary VET would yield significant benefits

In many countries, including Costa Rica, one of the main challenges to the attractiveness of vocational education and training is the perception that upper-secondary VET qualifications do not allow students to pursue higher education afterwards. This situation should be rectified by at least three reasons:

- ***Visibility and reputation***. Good articulation between VET secondary programmes and higher education helps to meet the need for higher skills and challenges the idea of VET as a dead end.

- ***Up-skilling the labour force.*** Technical progress increases the demand for higher level skills so individuals should be ready to continue with higher education and training, especially given the importance of attracting investment to Costa Rica.

- ***A more responsible use of public resources.*** Weak articulation between upper-secondary technical education and higher education leads to the repetition of courses and consequently to the waste of resources by both individuals and institutions.[1]

NOTES

1. At the moment, only the National Technical University in Costa Rica allows for the recognition of INA courses as credit bearing for university level while many VET graduates from the MEP segment who apply for entry to higher education struggle to find a place. A clear national qualifications framework, supported by a more inclusive connection between educational institutions, should be of help to alleviate this situation in Costa Rica.

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Further reading

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