

## **THE IMPORTANCE OF QUALITY APPRENTICESHIPS FOR RELEVANT WORK COMPETENCIES IN THE FUTURE WORLD OF WORK IN LATIN AMERICAN AND THE CARIBBEAN**

Rodrigo Filgueira and Michael Axmann  
ILO CINTERFOR<sup>1</sup>

### *Abstract*

According to ILO research in Latin American and the Caribbean (ILO 2016) the unemployment rate in Latin America and the Caribbean reached 8.1 per cent in 2016, the highest level in a decade, amid an economic contraction that has also affected the quality of employment.

*“Even though there are significant differences between countries and sub-regions, 2016 was the worst year in a decade in terms of economic growth, unemployment rates and sluggish productivity improvements”,* says ILO Regional Director Jose Manuel Salazar-Xirinachs.

This negative development also raised the youth unemployment rate to 18.3 per cent, the highest in a decade in Latin America and the Caribbean (LAC). The unemployment for young people is more than 3 times higher than that of adults over age 25 and has far surpassed critical levels in 2016, for example in Argentina 18.9 per cent, in Brazil 27.1 per cent, in Chile 16 %, in Costa Rica 22.8 per cent, and in Uruguay 22.5 per cent (ILO CINTERFOR 2017),

So in a way, with different combinations and degrees of urgencies, the countries of Latin America and the Caribbean face a dual challenge: on the one hand to design short-term responses to mitigate the negative social and labour impacts of the deceleration and the return to an employment-led growth paths and on the other hand to take actions to address the structural problems of low productivity and the lack of productive diversification.

This article will look at the possibility of transforming the long-term perspectives of these challenges by focussing on the importance of quality apprenticeships for developing relevant work competencies for the future world of work in Latin American and the Caribbean.

---

<sup>1</sup> The authors Rodrigo Filgueira, Oficial Nacional de Tecnologías Aplicadas a la Formación, and Michael Axmann, Especialista Senior en Empresas para el Desarrollo de la Formación Profesional y la Transformación Productiva, are with ILO CINTERFOR (the Inter-American Centre for Knowledge Development in Vocational Training) in Montevideo, Uruguay

In the first chapter it will be clarified what QAs are, in the second chapter there will be an in-depth look at how these work competencies need to look like, in the third chapter new forms of teaching and training will be addressed in the light of these challenges and in the fourth chapter, a framework for how to design and how to build quality apprenticeships for Latin America and the Caribbean will be provided.

*De acuerdo a investigaciones de la OIT (OIT 2016), la tasa de desempleo en Latinoamérica y el Caribe alcanzó un 8.1% en 2016, el nivel mas alto en una década en medio de una situación de contracción económica que también ha afectado la calidad de empleo.*

*“Aunque existen diferencias significativas entre regiones y subregiones, 2016 fue el peor año de la década en términos de crecimiento económico, de índices de desempleo y de crecimiento de la productividad” como señala el Director Regional José Manuel Salazar-Xirinachis*

*Este desarrollo económico negativo también elevó la tasa de desempleo juvenil al 18.3%, índice mas alto en una década en Latinoamérica y el Caribe (LAC). El desempleo de los jóvenes es tres veces mayor que aquel correspondiente a los adultos mayores de 25 años, y ha sobrepasado ampliamente niveles críticos en 2016, por ejemplo, en Argentina 18.9%, en Brazil 27.1%, en Chile 16%, en Costa Rica un 22.8% y en Uruguay 22.5% (ILO CINTERFOR 2017).*

*Así, con diferentes combinaciones y grados de urgencia, los países de Latinoamérica y el Caribe enfrentan un doble desafío: De un lado diseñar respuestas de corto plazo para mitigar el impacto negativo, social y laboral de la desaceleración y el retorno a un camino de crecimiento impulsado por el empleo; y de otra parte, ejecutar acciones para enfrentar el problema estructural de la baja productividad y la falta de diversificación productiva.*

*Este artículo examina la posibilidad de transformar las perspectivas de largo plazo de estos desafíos, concentrándose en la importancia de los contratos de formación de calidad – Quality Apprenticeship (QA) para desarrollar competencias laborales relevantes para el futuro del trabajo en Latinoamérica y el Caribe.*

*En el primer capítulo se clarifica qué son los contratos de formación de calidad – Quality Apprenticeship (QA), el segundo se presenta una visión detallada respecto a cómo deben ser las competencias laborales que se desarrollan en el marco de éstos, el tercer capítulo se dedica a las nuevas formas de enseñanza y formación a la luz de esos desafíos, y en el cuarto, se ofrece un marco para diseñar y construir contratos de formación de calidad-Quality apprenticeships, para Latinoamérica y el Caribe*

*Título: La importancia de los contratos de formación de calidad para competencias laborales relevantes en el futuro del trabajo en Latinoamérica y el Caribe*

Key words: contratos de formación de calidad, competencias laborales, desempleo, jóvenes, mercado del trabajo, nuevas formas de enseñanza, futuro del trabajo

*Palabras clave: quality apprenticeship, work competencies, unemployment, youth, labor market, new forms of teaching and training, future of work*

IUSLabor 3/2017, p. 313-335, ISSN 1699-2938

### ***Summary***

1. What are we talking about?
  - 1.1. Benefits of apprenticeships
2. How do we know which work competencies are relevant for the future world of work in lac?
3. The relevance of new forms of teaching and learning for the development of work competencies
  - 3.1. Why change?
  - 3.2. Are there theoretical bases for these changes?
4. ILO CINTERFOR: Building blocks for quality apprenticeship systems in LAC
  - 4.1. Building block 1: Social dialogue
  - 4.2. Building block 2: Clear roles and responsibilities
  - 4.3. Building block 3: Sound legal framework
  - 4.4. Building block 4: Shared financing
5. Conclusion
6. References

## 1. What are we talking about? –Definition and benefits of quality apprenticeships (QA)

Quality Apprenticeships can be defined as a unique form of vocational education/training, combining on-the-job training and school-based learning, for specifically defined competencies and work processes. QAs are regulated by law and based on a written employment contract with a compensatory payment and standard social protection coverage. A formal assessment and a recognized certification come at the completion of a clearly defined period of training. Apprenticeships combine: (a) gaining professional experiences that are directly applicable at workplaces; and (b) learning applied knowledge and skills that enable apprentices to understand the logic behind the job s/he is tasked with, cope with unpredictable situations, and acquire higher level and transferable skills.

Other work-based programmes have some but not all of the characteristics of apprenticeships, notably duration, assessment and certification (See Table 1).

**Table 1. Attributes of Quality Apprenticeship (QA) and other Workplace-Based Training**

	Wage	Legislative framework	Program me of learning	Off-the-job training	Social Security	Formal assessment	Recognized certification	Duration
<b>Traineeship</b>	Maybe	No	No	No	Yes	No	No	12-24 months
<b>Internship</b>	Maybe	No	No	No*	No	No	No	3-6 months
<b>Informal apprenticeship</b>	Pocket money/ in kind	No	No	No	No	No	No	Variable
<b>Industry attachment</b>	Yes	Maybe	Maybe	No	Maybe	No	No	
<b>QAs</b>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Fixed 1-4 years

Source: Adapted from ILO (2012 a)

\* Some interns are studying at universities/graduate schools while doing an internship.

Despite the clear advantages of the attributes of quality apprenticeships – as shown in the above table, which we believe makes them the “Gold Standard” in vocational education and training – there is still resentment against apprenticeships, which can be summarized in the following three points of mistrust in quality apprenticeships:

**Box 1. 3 Myths about apprenticeships****Myth 1: Apprenticeships are only for advanced economies**

Austria, Denmark, Germany, Switzerland, and some other European countries as well as Australia are known for well-established traditions of apprenticeships. This might give rise to an impression that only advanced economies can implement apprenticeship schemes. Of course, this is not true, as can be seen clearly from building blocks of quality apprenticeships in the fourth chapter of this article. In fact, many middle-income countries in LAC promote apprenticeships (e.g. Brazil, Costa Rica, Jamaica, and Mexico). ILO CINTERFOR supports those in their efforts to do so, as well as low-income countries in the region (e.g. the Dominican Republic) where tri-partite constituents commit to quality apprenticeships and are currently requesting technical assistance from the ILO.

**Myth 2: Apprenticeships are only for men**

This perception may be because many people associate apprenticeships with traditionally male-dominated trades (e.g. technicians, carpenters and plumbers). In reality, apprenticeships are offered in a wide range of fields such as agriculture, manufacturing, finance, business administration and law, media and healthcare. In fact, many young women participate in apprenticeship programs. Statistics shows that about a half of apprentices in Denmark and the UK are female. The share of female apprentices is over 40 per cent in Germany, Indonesia, Italy and Switzerland (ILO 2012 a). It is an important task of policymakers and social partners to promote gender equality in apprenticeships by breaking down gender stereotypes and occupational segregation, as well as by assuring equal training and employment opportunities for both women and men. It is important to note that every effort will be made in CINTERFOR's work in LAC to increase the participation rate of women in apprenticeships.

**Myth 3: Only large companies can offer formal and quality apprenticeships**

Although it might be true that large companies have higher capacity (e.g. more staff members who can mentor apprentices, more budget for training, more modern equipment) to offer apprenticeship positions, small and medium-sized enterprises (SMEs) do not shy away from offering apprenticeship programs. In fact, the vast majority of apprenticeship programs are offered by SMEs, for instance in Austria, Germany and Switzerland. SMEs join forces with local schools and take in apprentices.

Policy support for SMEs is important. Efforts are currently being made by ILO CINTERFOR to increase the outreach of apprenticeship programs to SMEs, currently particularly in the Dominican Republic.

### *1.1. Benefits of apprenticeships*

Thus, the benefits of apprenticeships are multi-fold and they accrue to all stakeholders:

#### *a. Facilitate school-to-work transition*

Securing the first job can present real challenges to young people. On the one hand, employers, not only in LAC, are reluctant to hire young people whose productivity is unknown. It is difficult for employers to fully apprehend technical and soft skills of young jobseekers during a recruitment process. As a result, they hesitate to hire fresh graduates or rely on the reputation of the education/training institution in making hiring decisions.

Apprenticeship programmes allow employers to train the workers their enterprise needs while apprentices have the opportunity to demonstrate his/her productivity potential to employers as well as making well informed choices about education and training. There is still enormous potential to reach apprenticeship levels of 20 or more per cent, since in most of the countries of LAC, the national vocational training providers and members of CINTERFOR do not reach much more than a 1-3 per cent participation rate with the exception of Colombia and SENA, where almost 15 per cent of the youth undertake apprenticeship programmes.

### **Box 2. ANIMA's innovative apprenticeship experience in Uruguay**

Facilitating school-to-work transition through apprenticeship programs is something that ANIMA, a new educational center in Montevideo, Uruguay, which started in February 2016 with an innovative approach for the second cycle of secondary education, is doing through the so-called “Bachillerato Tecnico” (ANIMA 2017). It offers two orientations of technical vocational training in administration and information technology. In order to do this ANIMA uses elements of apprenticeship components, for example:

- Carrying out skills needs analyses in sectors with growth and job potential;
- Responding to the existing skills gap in the private sector through training needs analyses;

- Taking into account the needs and interests of young people in new technologies;
- Participating companies pay salaries to the students for the two-year programs;
- Constructing a link between learning in schools and working in companies (80 % of the apprenticeship program take place in the ANIMA school, 20 % take place in companies).

The work competence profile of young people was built through demand studies of companies in the ICT sector that show the skills that young people would have to develop in order to have a good job placement. These include "soft skills ", such as responsibility, teamwork, punctuality, commitment, communication, language skills and frustration management. On the other hand, the more "technical" competencies are mobile and web development, technical support and other IT related subjects. The profile in the administration area is an apprentice, who can enter the labour market in any company. The first almost 100 graduates graduate in 2017 and will hopefully all make the transition from school to work.

*b. Promote coordination between education and industry and reduce skills mismatch*

Apprenticeship schemes are a systematic means of forging collaboration between vocational education and training (VET) providers and industry. Employers are often critical of the skills of job-seekers, ascribing it to a mismatch between education and their needs. In order to help ensure that new recruits are “job ready”, companies need to be much more actively involved in training, ideally through collaboration with local education/training institutions in the design and delivery of curriculum/training modules. A quality apprenticeship is a mechanism that systematically brings education and training institutions and industry closer, thereby reducing skills mismatches and skills gaps. This openness for collaboration goes both ways and not only includes employers and VET providers, but also sectoral trade unions.

*c. Apprenticeship makes good business sense*

Companies invest in apprenticeships because it is sound business; a skilled workforce enhances productivity and there are many studies that prove that. The benefits amassed to businesses far outweigh the initial challenges of new apprentices who require more supervision and coaching. Companies recover the training costs and accrue net benefits as apprentices learn the trade and become productive. In fact, many studies corroborate this point (see Box 3). Importantly, companies can also save recruitment costs since apprentices have lower turn-over rates.

Therefore, in many countries the lion's share of the costs of apprenticeships are born by companies. Companies get the costs of apprenticeships back and benefit from a higher skilled workforce, as can be seen in Box 3:

**Box 3. Apprenticeship pays off for host companies in India and in El Salvador**

An empirical cost-benefit analysis of apprenticeship programs offered by five Indian SMEs reveals that benefits surpass the costs of offering training if apprentices are retained (ILO 2014). According to the study, cost recovery occurs during the course of the apprenticeship and in some cases within a year from the start of the programme. While the number of SMEs covered under the study is small; nevertheless, this research offers empirical evidence that apprenticeship makes business sense for SMEs in lower middle-income country.

The same logic applies to apprenticeships in El Salvador, another lower middle-income country, where the national VET provider INSAFORP has documented the same effects in working on apprenticeships in the plastic sector in San Salvador (INSAFORP 2017). The share of apprenticeships in INSAFORP's portfolio of vocational education and training delivery accounts for 3 per cent of the overall programme which is more than 3 times higher than in the other Central American countries, such as Panama, Nicaragua, Costa Rica, Guatemala, and Honduras.

*d. Cost effective delivery of vocational training*

Finally, the costs and effort required for education/training institutions to catch up with fast-changing technologies and ever-changing skills demand in the labour market are substantial. Anticipating future skill needs, equipping vocational schools and training centres with the latest facilities and tools, updating curricula and training modules, and re-training teachers and instructors easily inflate the costs. And this is not a one-off investment.

If the government brokers a partnership between education/training institution and industry, the former can tap into resources of companies (e.g. equipment and facility, accumulated know-how) and the latter can also benefit from the partnership as discussed above. The government ministries/agencies in charge of vocational education and training may wish to explore opportunities to utilize existing resources before embarking on costly reforms of the VET sectors in Latin America.



Much more thought needs to be put into forging a partnership between education/training and industry permitting to tap into existing resources and know-how of the industry, and allowing cost-effective delivery of quality apprenticeship systems. In many countries in LAC the government should play a stronger catalytic role in establishing apprenticeships, however the employers should always be in the driving seat and the trade unions should be a default part in the design, implementation and evaluation of quality apprenticeship programs as well.

## **2. How do we know which work competencies are relevant for the future world of work in LAC?**

As we have already discussed in the previous chapter if enterprise and society as a whole are to benefit from QA, it is expected that these programmes deliver the skills demanded by enterprises in order to boost productivity and workers' employability. Making this expectation a reality is also a must if we are to convince enterprises to risk participating in QA programmes.

Latin America and the Caribbean is a region where productivity has been low and stagnated for a long time now and where employability has been a serious challenge since the early 80s.

Recent research by the OECD (OECD 2016) indicates that the labour market in Latin America and the Caribbean exhibit the widest gaps between skills supply and demand. This finding is supported not only by reports from other think tanks, consultancy firms and multilateral agencies, but from research carried out by governments and public institutions from the region. (OIT/Cinterfor 2017).

Since the region has traditionally been an importer of technology and production processes we could be tempted to think this gap mostly consist of technical skills related to specific machinery, materials, or tools. Although this assumption is not much off the mark, it is nonetheless a bit outdated.

It happens that the set of skills presently in demand by employers which workers in the region seem to be lacking has shifted from technical ones towards what soft skills. A recent study INA (INA 2016) carried out in Costa Rica asked employers to identify the skills they would want their employees to be able to deploy; among others, their answers included team work, assertive communication, lifelong learning, autonomy, adaptability and conflict resolution.

Another example can be found in a report by Chilevalora and SENCE which reflects the results of research funded by SENCE and aimed at creating a catalogue of skills for employability. This report lists Communication, Team Work, Problem Solving, Lifelong Learning, and Autonomy among others. This report was prepared in close collaboration with the chamber of production and commerce as well as with the Central Workers Union.

There are many factors which help explain this shift but most are linked to the impact technological change is having on the nature of work.

For example, the changes the Japanese auto industry went through from the mid-70s to the early 80s helps explain this phenomenon. During this period a series of innovative management practices were successfully introduced into the Japanese auto industry. Innovations included a more demand driven production where customers were more frequently asked about their preferences; it also included flattening enterprise pyramidal structures and organizing workers as teams and not as individuals in order to support a more flexible production processes and improve productivity. Team autonomy was promoted as a base for solving production problems on the spot. Team work across divisions was also promoted with the same aim (Cambridge University 1993).

The new organization of work in these factories, could not be sustained by workers who would and wait for assistance whenever a problem arose. Workers were expected to gather information about the problem, discuss it with peers and collaborate in order to solve it. These were not the characteristics of the typical assembly line worker and thus a new kind of worker was in demand.

Thirty years later, the process of poking customers to find out their preferences as a base for driving production decisions has become mainstream. Enterprises in Latin America and the Caribbean are also adopting these practices (HBR 2015) at a faster pace in competitive sectors but also in the rest of the economy.

It is a trend that requires enterprises to be creative in the search to develop new products or adapt the ones already being produced. These new ideas will lead to new problems which will in turn need to be addressed by teams, not individuals alone.

Take for example the need to design, prototype and produce a new kind of sofa. This process will require the marketing department to be able to convey the characteristics of what customers are expecting to the design area. Design will also have to deliver ideas which marketing can assess with potential customers.

During that process, designers may face situations where their creative ideas face a potential production block. Materials required could be too expensive, or their processing could take too long. It could happen that two different materials look great on design but are difficult to stitch together. All these are examples of problems which involve not only marketing, design and production but also people in charge of sourcing, logistics, etc.

To get this specific sofa to the market, all units will have to cooperate, communicate, research and find creative ways of tackling these problems. Internally at the team level, but also between areas. It will require some staff to exhibit leadership and all staff to be able to commit and adapt to different situations and problems. All will also need to exhibit some level of empathizing with the other teams to understand the challenges they are facing. To do this, workers will also need to have an understanding of the whole process, from marketing to production.

The workshops in charge of actually producing this new sofa will also have to be able to work with materials, timing and styles which frequently change. This will require the ability to solve new problems arising from these ever-changing products. This means that the production process will also require these soft skills, which clearly need to be transferrable.

From the example above it is clear why enterprises are starting to demand workers which can deploy these skills and why it is that they link some of their productivity problems to the lack of workers lacking them. (WEF 2015)

On top of the productivity issue there are other reasons why enterprises demand these soft skills. It happens that even in the presence of solid technical skills, lack of soft skills increase costs linked to hiring, supervision, technical support, conflict management and product quality. In the service industry, poor interpersonal skills may lead to disenchanted customers. Lack of lifelong learning skills will increase the need for more hours of training leading to higher costs of training and more lost hours of work.

In 2016 ILO/CINTERFOR carried out a study where, among other objectives, we aimed to identify the skills required for the future of work. During this process, reports from IDB, WEF, OCDE, The Economist Intelligence Unit and the partnership for the XXIst century learning were analysed and systematized.

The study identified a set of about 40 different skills, many of which showed up in more than one report. In fact five of these skills, communication, collaboration, creativity, critical thinking and problem solving showed up in all the reports analysed.

At a first glance we could think there is a certain mismatch between these five skills and the ones identified by INA; a more thorough look though, provides a simple explanation to this apparent mismatch. The five skill set identified by the study enables the development of more specific attitudinal skills.

It is plain for all that assertive communication requires communication as a base skill. Teamwork requires team members to exhibit collaboration skills and being lifelong learning relies on critical thinking. Leadership cannot be attained without good communication and negotiation skills.

So with regard to the skills employers demand and TVET systems are to help develop, we will concentrate on this already relevant set which is composed of Creativity, Communication, Collaboration, Critical Thinking and Problem Solving (4C+P).

The challenge to develop this set of skills is also particularly relevant in our region. Many of the TVET target groups come from backgrounds where neither the formal schooling nor the socioeconomic environment promote this kind of skill development.

Let us note before we round up this section that we do not deem the remaining soft skills irrelevant. Nonetheless, these will not be well internalized if the base ones are not solidly developed first.

Most TVET systems in the world as well as many tertiary education systems put little effort in the development of these skills. This happens for many reasons but mostly because it has proved very difficult to engage educational systems in introducing some long known pedagogical innovations into curriculum development, teacher training and training delivery.

### **3. The relevance of new forms of teaching and learning for the development of work competencies**

At its heart QA is a learning process and must be based on pedagogical theory which will in turn be the basis for the selection of learning methods. Although this title refers to new ways of teaching and learning, most of what we are going to share refers to theories and methods that have been around for a long time but experienced by few.

Latin America and the Caribbean being the most unequal region in the world it is not surprising that access to quality education has remained largely a benefit for the few. Even after a recent period where the number of students attending school, primary and

secondary has seen a dramatic increase, impact on learning outcomes on the other side has been sluggish. (IDB 2016)

To this day, most instructional design follows traditional models where teacher and content remain the centre of instruction. Lecturing and assessment of the ability of students to remember facts are still widespread practice. Even in vocational training, most learning design splits theory and practice and partition reality and context into non-connected modules making it difficult for students to develop an integrated understanding of their future work environment, structure and processes.

### *3.1. Why change?*

It is nonetheless valid to question why these designs should need to change. After all, they've been applied time and again with apparently great success in almost every corner of the world. The short answer is that these methods, which did provide well for a certain labour market is failing the needs of the 21st century labour market.

Labour market changed and new skills are demanded. Traditional methods are not being able to cope. These traditional learning designs have educated generations of workers who now learn they lack these soft skills.

There are many other variables that can influence this situation. Factors like socioeconomic status are known to play a significant role in educational achievement. What is telling, is that those who have performed well under the traditional models also exhibit this lack of soft skills. It seems to follow that the kind of education which yesterday helped develop successful adults for the labour market is not offering the same opportunity to the younger generations.

Evidence supporting the use of new learning methodologies are mounting. On the one hand, PISA tests carried out by OCDE in more than XXX countries aims at assessing learner's skills for problem resolution, have found Finland at the top positions. This success has been attributed in part to the use of new teaching methods.

On the other hand there is empirical evidence of inquiry based learning (IBL), being more effective at developing soft skills, in particular critical thinking. Although there is little formal research before the 90s and its quality is very heterogeneous, its results support the thesis of IBL being more effective at the development of soft skills (Thomas, J. W. 2000).

More solid evidence regarding effectiveness comes from research which confirms that active and meaningful learning is more effective than the traditional theoretical-practical approach via lecturing. (Prince, M. 2004)

### *3.2. Are there theoretical bases for these changes?*

The theory of Constructivism and social constructivism applied to learning moved the focus from content and teacher to the learner. Before that time, cognitivist approaches had already taken steps towards teaching methods that consider and assume certain brain structures and processes.

Constructivism brought us to the understanding that brains were not empty; that whatever was already there before starting the formal learning process was relevant for better learning outcomes and even more important, that knowledge could only be constructed by the learner himself. In order for this to happen constructivist based methods take into account learner's preconceived ideas, social interaction and context, promote inquiry, assessing and building knowledge.

One such method is called "Project based Learning" (PBL) and falls into the IBL category of learning methods (A. Arabacıoğlu 2014). This method promotes learning by going through the process of carrying out projects aimed at solving real world problems. It dates from the beginning of the XX century but only gained momentum during the 70s in northern and central European countries (Knoll, Michael 1997).

In our region these developments are more recent but very intense. SENAC, the Brazilian VTI for Commerce and services started to introduce PBL only in 2014. It now delivers training using PBL to more than 60% of their students in around 80% of their training offer.

The project based method can be seen as formal tool to put into practice many of the ideas constructivism has to offer. Recent learning theorists in the United States have also aligned themselves with the main principles of working via projects. (Merrill 2002, Jonassen 1999, Kolb 2000)

Although it is difficult to give only one definition of what project based learning means, we can get closer by looking at its main characteristics, which are:

- Learners are challenged via a driving problem for which they must find a solution.
- The problem at hand must be realistic and require a realistic response.
- Learners must carry out research to understand the problem and to build solutions.

- Learners organize and schedule their own activities up to a certain degree.

Other threads of PBL have added quite consistently the following characteristics:

- Projects are to be carried out by groups of learners and not by individuals alone.
- In courses and programmes linked to trades and careers projects should follow stages and methods used by that industry.
- Projects should be assessed regularly by people outside the learning process and experienced in the different subjects or trades.

We have decided to focus on PBL because this particular method brings us closer to what a good pedagogical design for QA could look like. For example, SENA the national VTI in Colombia, started designing all training programmes with PBL around 2007. This has had a positive effect where students start developing projects in partnership with enterprises. This is more frequent in some areas in particular like software development or fashion where work organization already revolves around projects. Up to now we have established that traditional learning design falls short when aiming at soft skills development. We have also seen that there is a great body of research, theory and experience regarding methods which promise better learning outcomes. But one issue remains at large. How are these methods better than traditional designs at developing soft skills? How does this happen?

These methods will not spontaneously develop the required soft skills unless they are included as a learning outcome and activities to exercise them are included in the course development. The method will also fail if teachers remain traditional teachers and do not become facilitators able to sustain the methodology. In a word, we cannot say it will work, unless all these components are included in the learning experience.

But, this is a method where research has to be sustained and carried out by students giving facilitators the didactic opportunity to develop critical thinking. Opportunities also arise for the development of communication, collaboration and creativity skills when teams of students are to develop solutions for problems. On top of all these opportunities carrying out a project to be assessed by real world experts, using industry specific management tools to solve a real challenge also offers the opportunity to develop integral knowledge around the sector and world of work as a whole.

Again, if all these opportunities are not seized the development of these soft skills by students will not take place.

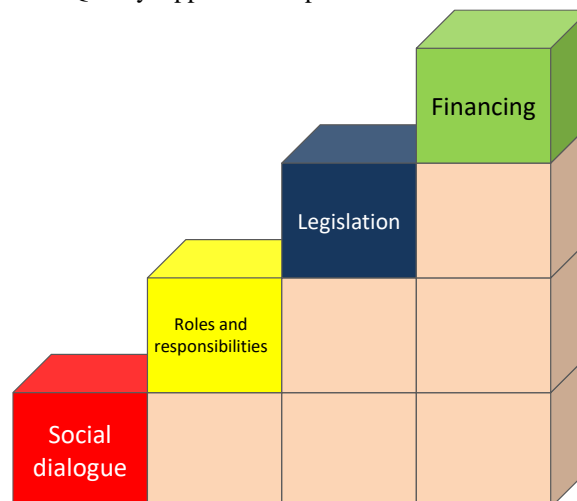
As for the relation between PBL and QA, we believe that since apprenticeship programmes have yet limited penetration in the region and most of TVET is taking place in training centres PBL brings us the closest to the benefits of QA. For example, SENATI in Peru which is one of the institutions developing more apprenticeship programmes in the region, is also introducing PBL in non-DUAL and DUAL training programmes.

In a scenario where QA is being pursued by many countries in the region, it is also important to note that PBL can be a relevant methodology on which to base QA learning design. Otherwise, learning may become limited to specific technologies or processes thus emulating traditional learning.

#### 4. ILO CINTERFOR: Building blocks for quality apprenticeship systems in LAC

While there are multiple and varied approaches to offer young women and men a combination of education and work experience, successful apprenticeship systems share several features. ILO CINTERFOR's 'quality apprenticeship' approach is based on four building blocks: (i) social dialogue, (ii) clear definition of roles and responsibilities, (iii) legal framework and (iv) shared financing arrangement. However, there is no single standardized "one-fits-all" model of apprenticeships. Apprenticeship programmes must be tailored to fit the country contexts in Latin American and the Caribbean, as much as everywhere in the world.

Figure 1. Building blocks for a Quality Apprenticeship



##### 4.1 Building block 1: Social dialogue

*“When you look at apprenticeship systems around the world, the most important success factor is practically always social dialogue. Apprenticeships work because they link classroom and workplace training and because they tap the knowledge of both employers*



*and workers on what training is needed and how to deliver it.”* (ILO Director General Guy Ryder, 2013).

Commitment, active participation and collaboration of the government, employers’ and workers’ organizations, as well as training institutions through the design, implementation and monitoring of apprenticeship schemes are essential. Social dialogue is the engine of any apprenticeship system and the collaboration of stakeholders is an essential factor for successful apprenticeships.

It requires a shared vision and a clear perspective for the long run of training and employment. The role of social dialogue as a mechanism for democratic governance and the development of shared visions in quality apprenticeships is more important than ever for LAC now at the end of 2017, but it will require special efforts to re-establish trust among different actors and in different sectors.

The difficult thing here is that social dialogue should not focus on short-term problems, but on long-term strategies for quality apprenticeships in LAC that will have the strength to go for three birds with one stone: improve productivity issues in companies, improve the national youth employment situation and tackle the lack of productive diversification in national economies. A good example of what social dialogue in early stages of quality apprenticeship design can do, is shown in:

#### **Box 4. Brazil’s “National Professional Apprenticeship Forum”**

Like in many countries in Latin America, social dialogue on quality apprenticeships in Brazil is still very weak and needs to be strengthened substantially in order to develop a quality apprenticeship system in Brazil. However, Brazil has a so-called National Professional Apprenticeships Forum, a group of experts with different experience in government, employers and workers organizations and civil society and ILO CINTERFOR together with the ILO Brazil on reviving and promoting social dialogue as an important part of the planned apprenticeship reform in Brazil.

Following that work with ILO CINTERFOR, the National Professional Apprenticeship Forum agreed on 10 main key subjects to focus on in the next year and to have more topical discussions with government and social partners. These 10 areas are assessing of training practices (tripartite consultations) on national and state levels; carrying out sectoral labor market analysis to determine key occupations; building sectoral tripartite committee(s) or other coordination mechanisms; carrying out joint skills/ training needs analysis for selecting relevant skills; training of the vocational teachers and in-

company trainers of apprentices; shaping effective curricula with relevant work skill; designing of cost-sharing financing schemes; negotiating jointly basic and flexible legal frameworks; tracking skills, testing and certification; and measuring of impact.

#### *4.2. Building block 2: Clear roles and responsibilities*

The division of labour between schools/training centres and industry must be clear. Enterprises must be in the driving seat, and the education/training providers work closely with enterprises in order to avoid a break between schooling and company-based training. Employers may take a leading role in the governance of apprenticeship programmes in their design and implementation. Chambers of commerce or associations of small business owners may help small enterprises by sharing knowledge (e.g. mentoring, training modules) and training workshops (e.g. apprentices receive practical training in several workshops). Trade unions should also play a strong role, for instance, in safeguarding the rights, wages, working conditions, the welfare and occupational safety and health of apprentices. Workers' and employers' organizations also engage in the governance of apprenticeship systems. Employment services can play an important role in linking the different partners and matching apprenticeship positions and interested young people.

#### **Box 5. Governance of apprenticeships – the Case of the Dominican Republic**

The national VET provider in the Dominican Republic, INFOTEP, has begun its Apprenticeship Programs in 1988 and more than 8000 apprentices have graduated from this programme in 42 occupations. During the last 10 years the average annual number of graduates has been around 400 participants and about 330 companies are participating in the programme. Various employers' organizations (CONEP and COPARDOM) and workers' organisations (CASC, CNUS and CNTD) have been involved in the governance of the Dominican apprenticeship systems (ILO 2017).

Despite being an apprenticeship programme with positive feedback from the social partners, the government and the apprentices themselves, it still faces significant challenges in terms of outreach to different sectors with growth and job potential and to numbers of participating companies and students.

ILO CINTERFOR and the Decent Work Team and Country Office for Central America, Haiti, Panama and the Dominican Republic of the ILO in Costa Rica are working closely and jointly with INFOTEP and the IaDB to help strengthen their

apprenticeship programs and to significantly increase their coverage, both sectorally and regionally (IaDB 2016).

#### *4.3. Building block 3: Sound legal framework*

Apprenticeships are firstly work placements and apprentices are therefore considered as workers, not as students, and given an employment contract. Formal laws, regulations and collective agreements ensure decent working conditions (e.g. wages, working hours, occupational safety and health) for apprentices, and avert exploitation. Employment law and contracts governing apprenticeships should cover all aspects of working conditions including wages, education/training at school, and social protection coverage. Assessment at the end of apprenticeship should be tripartite and certification of successful completion of apprenticeship should be recognized nationally.

#### **Box 6. Costa Rica's experiences with the law for the Apprenticeship Reform**

As one of the many countries in LAC that have started focusing on apprenticeships as a means to tackle youth unemployment, low productivity and insufficient work competencies, Costa Rica is a good example of starting the reform with the third step in the building blocks, namely providing a sound national legal framework for apprenticeships.

In 2015, the Government of Costa Rica did so with the focus on consolidating efforts for promoting youth employment with a special focus on apprenticeships. However, the apprenticeship discussion in Costa Rica has since then almost entirely focused on the legislative debate for the new legal framework for apprenticeships in the country (Costa Rica 2016).

This debate would have been a good and important one after the country would have undergone the first two building blocks first, social dialogue and creating ownership for apprenticeships and secondly dividing up the roles and responsibilities among the Government of Costa Rica, INA, the national vocational training provider and the social partners in Costa Rica.

At the end of 2017, this debate is still going on, but by starting with the legal aspects of the apprenticeship reform, it has certainly alienated the key partners in an apprenticeship reform in Costa Rica and much more efforts need to be made now to bring back the social partners to the bargaining table and to make the necessary changes to that bill that will reform apprenticeships in Costa Rica.

#### 4.4. *Building block 4: Shared financing*

Costs, as well as benefits, of implementing apprenticeships should be shared between firms, apprentices and the government. Typically, companies finance the biggest share (e.g. costs of in-company training and the apprentices' salaries), while the government runs vocational schools and covers the teachers' salaries. To support companies that offer apprenticeship positions, apprenticeship funds are established in many countries. For instance, all employers are required to pay into the fund and the host companies receive funds per apprentice they take on. The government may also introduce tax incentives or work with apprenticeship funds for host companies (see Box 4). However, it is clear that full public funding of apprenticeship can and should not be the option in the long run – shared financing is necessary to ensure ownership and sustainability of QAs.

#### **Box 7. Funding mechanism of quality apprenticeship in Denmark**

Employers and the government co-finance apprenticeship system in Denmark. The Ministry of Education provides subsidies to institutions that offer theoretical and practical education as part of apprenticeship programs in proportion to predetermined unit costs and the number of students (taximeter system). Both public and private employers annually contribute a fixed amount per employee to the Employers' Reimbursement Fund (Denmark 2016). The fund reimburses the wages paid by companies while apprentices are at school.

## 5. Conclusion

A good 5 years ago, in October 2012, when the G 20 approached the ILO with the request to provide some background research on what quality apprenticeships could do in the context of world-wide high youth unemployment, sluggish productivity improvements in many parts of the world, especially in Latin America and the Caribbean and not sufficient and relevant work competencies in the world of work, the recommendations for the so-called Key Elements for Quality Apprenticeships were very strong (ILO 2012b). These recommendations were not only carried by the G 20 ministries of labour, but also by IOE and ITUC and they claimed the main objectives of quality apprenticeships to be the following:

- Provide workers with knowledge, skills and qualifications needed in a changing future work environment.
- Avoid skill shortages, tackle skills mismatch and foster lifelong learning.
- Help employers raise the level of the workforce skills according to the particular needs of companies.
- Provide young people with qualifications facilitating their access to labour market and increasing labour market mobility.
- Reduce the incidence and duration of unemployment.
- Promote faster and more efficient school-to-work transitions.
- Help countries raise school enrolment rate and avoid school drop-outs.
- Support economic growth, competitiveness and productivity.
- Use quality apprenticeships as a stepping stone to satisfying rewarding careers.

## 6. References<sup>2</sup>

AMBRUS M., MUSSO M. Latin America, the Caribbean and PISA: The long road ahead. Available at: <https://blogs.iadb.org/ideasmatter/2016/12/13/latin-america-the-caribbean-and-pisa-the-long-road-ahead/>

ANIMA. ¿Qué es ANIMA?. Available at: <http://anima.edu.uy/>

ARABACIOĞLU, S., OGUZ-UNVER, A “A comparison of inquiry-based learning (IBL), problem-based learning (PBL) and project-based learning (PJBL) in science education. Acad. J. Educ”. Res. 2(7): 120-128. *Academia Journal of Educational Research*, 2(July), 120–128. 2014. Available at: <https://doi.org/10.15413/ajer.2014.0129>

CALVO SANTANA, A., COTO CALDERÓN, J. A., & VARGAS JIMÉNEZ, L. Capacidades actitudinales por incorporar en la formación profesional basada en competencias laborales del INA. San José: Instituto Nacional de Aprendizaje, 2016

COSTA RICA Regulation for new Apprenticeship Law in Costa Rica. 2016 Available at: <http://www.aselex.cr/boletines/Proyecto-20075.pdf>

FAZIO M.V, FERNANDEZ COTO R, RIPANI L. Apprenticeships for the XXI Century: A Model for Latin America and the Caribbean? Washington 2016 <https://publications.iadb.org/handle/11319/7855>

---

<sup>2</sup> All links were last visited on 23 November 2017

ILO. A Overview of Apprenticeship systems and Issues, ILO Contribution to the G20 Task Force on Employment. Geneva, 2012. Available at [https://www.researchgate.net/publication/235953859\\_OVERVIEW\\_OF\\_APPRENTICESHIP\\_SYSTEMS\\_AND\\_ISSUES\\_ILO\\_Contribution\\_to\\_theG20\\_Task\\_Force\\_on\\_Employment\\_November\\_2012](https://www.researchgate.net/publication/235953859_OVERVIEW_OF_APPRENTICESHIP_SYSTEMS_AND_ISSUES_ILO_Contribution_to_theG20_Task_Force_on_Employment_November_2012)

ILO Key Elements of Quality Apprenticeships. Geneva, 2012. Geneva. Available at [http://www.ilo.org/wcmsp5/groups/publiced\\_emp/ifp\\_skills/documents/publication/wcms\\_218209.pdf](http://www.ilo.org/wcmsp5/groups/publiced_emp/ifp_skills/documents/publication/wcms_218209.pdf)

ILO. Apprenticeship Systems – what do we know?. Geneva, 2013. Available at [http://www.ilo.org/beirut/media-centre/fs/WCMS\\_214722/lang--en/index.htm](http://www.ilo.org/beirut/media-centre/fs/WCMS_214722/lang--en/index.htm)

ILO Using Benefit Cost Calculations to Assess Returns from Apprenticeship Investment in India: Selected SME Case studies. *Working Paper Series*. Bangkok. ILO Asia-Pacific, 2014. Available at: [http://www.ilo.org/wcmsp5/groups/public/---asia/---ro-bangkok/---sro\\_new\\_delhi/documents/publication/wcms\\_332263.pdf](http://www.ilo.org/wcmsp5/groups/public/---asia/---ro-bangkok/---sro_new_delhi/documents/publication/wcms_332263.pdf)

ILO. Panorama Laboral. Labour Overview of Latin America and the Caribbean. 2016 Available at: <http://www.ilo.org/americas/publicaciones/panorama-laboral/lang--es/index.htm>

ILO. The Future of Vocational Training in Latin America and the Caribbean: Overview and Strengthening Guidelines. ILO Cinterfor. Montevideo. Uruguay, 2017 Available at [http://www.oitcinterfor.org/en/publications/future\\_vt](http://www.oitcinterfor.org/en/publications/future_vt)

INSAFORP. *Objetivo y descripción del programa de aprendizaje*. Available at: <https://www.insaforp.org.sv/index.php/formacion-dual/244-objetivo-y-descripcion-del-programa>

JONASSEN, D. *Designing Constructivist Learning Environments. Instructional-Design Theories and Models*, Volume II, 215–239, 1999

KELLY N. How marketing is evolving in Latin America. Available at <https://hbr.org/2015/06/how-marketing-is-evolving-in-latin-america>

KNOLL, M. The Project Method: Its Vocational Education Origin and International Development. In: *Journal of Industrial Teacher Education* (Normal, Ill.) 34 (Spring 1997), no. 3, pp. 59-80.

MELGUIZO, Á. AND J. PEREA. "Mind the skills gap! Regional and industry patterns in emerging economies", *Working Papers*, No. 329, OECD Publishing, Paris, 2016. Available at: <http://dx.doi.org/10.1787/5jm5hkp7v145-en>

MERRILL, M. D. "First Principles of instruction. Educational Technology Research and development" 50(3), 43–59, 2002. Available at: <https://doi.org/10.1007/BF02505024>

MINISTRY FOR CHILDREN, EDUCATION AND GENDER EQUALITY OF DENMARK. "Fact sheet on Initial Vocational education and training programs" Copenhagen, 2017. Available at: <http://eng.uvm.dk/upper-secondary-education/about-upper-secondaryeducation>

PRINCE, M. "Does Active Learning Work? A Review of the Research. Journal of Engineering Education" 93(3), 223–231. 2004. Available at: <https://doi.org/10.1002/j.2168-9830.2004.tb00809.x>

THOMAS, J. W. "A review of research on project-based learning, 94903"(April), 1982. Available at: <https://doi.org/10.1007/s11528-009-0302-x>

ULRICH J., THOMAS M., KNUTH D. *Breaking from Taylorism: Changing Forms of Work in the Automobile Industry*. Cambridge University Press, 1993

VARGAS, F. & CARZOGGIO, L. *La brecha de habilidades en América Latina. Desencuentros y hallazgos*. OIT/CINTERFOR, 2017

WORLD ECONOMIC FORUM.. Bridging the skills and innovation gap to boost productivity in Latin America. The Competitiveness Lab : A World Economic Forum Initiative. Available at [http://www3.weforum.org/docs/WEF\\_Competitiveness\\_Lab\\_Latin\\_America\\_15.pdf](http://www3.weforum.org/docs/WEF_Competitiveness_Lab_Latin_America_15.pdf)