

Dual apprenticeship in Benin: Between theory and practice

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ABSTRACT

This paper discusses the effect of the dual apprenticeship or Certificate of Professional Qualification (CQP) program on the CQP students and graduates in Benin. The study sought to understand how dual apprenticeship was introduced in formal TVET system and how the dual training is provided in Benin context. This research was conducted on the descriptive qualitative method through three techniques. First, literature analysis was used to review the existing literature on Benin dual apprenticeship. Secondly, individual semi structured interviews were conducted to collect data from actors of the public and private institutions. Third, direct observation data were collected through on-site visits in the training centres. In total, 30 persons were interviewed using purposive and snowball samplings. The social constructivism theory, learning theory and the nested layer approach were used to analyze data. Results show that the Develop A Curriculum method was used to develop 13 craft occupations in which Benin dual apprenticeship is offered. CQP apprentices show positive effects on the skills acquisition. However, the CQP training does not follow the requirements regarding the principle of duality. The lack of the collaboration between training providers does not increase the commitment and the participation of the master craftsmen/women. The assessment plan does not evaluate the skills achieved in the master workshops. Although Benin dual apprenticeship builds the social cognitive capacities of the apprentices, the skills achievement of the CQP apprentices is not sustainable due to the intensive method used to train apprentices and because of the lack of materials and work equipment in the master workshops.

Keywords: Technical vocational education and training, dual apprenticeship, certificate of professional qualification (CQP), learning achievement, capacity and competency, Benin.

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INTRODUCTION

Informal apprenticeship in Benin provides significant work-based competencies to young people. According to a study, only 7 percent of the students entering formal education system complete the level 2 of the secondary education in Benin (MEA, 2014). In this regard, informal apprenticeship remains the alternative option to most students who dropout (early leaving) from school. This informal or traditional apprenticeship which consists of learning by doing in the workshops or firms, prepares young people for work. In 2010, the number of the apprentices who are trained in the informal sector was assessed to be 200,000 (UNESCO-BIT, 2013). According to the national standards classification of crafts, Benin business sector involves 311 occupations. In order to improve the pedagogical approach of the informal

apprenticeship system, Beninese government introduced reforms in TVET sector through the decree No. 117/2005 consolidated by the decree No. 641/2010. These reforms offer two TVET programs in crafts sector: dual apprenticeship or certificate of professional qualification (CQP) program and the upgrading informal apprenticeship. CQP program combines vocational training in TVET schools and apprenticeship in craftsmen workshops or firms. The upgrading informal apprenticeship program is provided through a national evaluation after completing the informal learning with a master craftsman. Between both programs, dual apprenticeship or CQP program offers improved learning conditions to the apprentices with vocational education based and the update materials in TVET schools.

As per the existing literature on Benin apprenticeship system, few studies present the reforms undertaken by Beninese government and analyze the management of the TVET sector. In his study, Davodoun (2007) provides the institutional and organizational framework of the apprenticeship system in Benin. Through his both books, Davodoun (2011a; 2011b) describes the informal apprenticeship system and reviews the introduction of the dual apprenticeship in Benin. The same author (Davodoun, 2015) made a comparative analysis of the informal apprenticeship and the dual apprenticeship. Some studies on Benin dual apprenticeship (Atindehou, 2013; David-Gnahoui and Akouété-Hounsino, 2015; David-Gnahoui and Ahouangnivo, 2017; Ferland, 2016) state that the funding of the program is more supported by foreign donors than the annual budget allocated and the share of the apprentices' contribution. Walther (2008) found that Benin dual apprenticeship involves two categories of actors. The first category of CQP actors gathers apprentices, trainers and master craftsmen/women. The second category is parents, employers, trade unions and officials from public sector. All these studies did not focus on the students' achievement through the implementation of this program.

This paper focuses on the effects of the dual apprenticeship or CQP program Benin TVET sector. The objective of this research is to describe Benin dual apprenticeship and to analyze the effects on the skills acquisition by the learners. The research assumption states that the introduction of the dual apprenticeship in Benin has developed the social cognitive factors of the apprentices.

The social cognitive development approach and learning theory are two approaches that have emerged to analyze the achievement of knowledge in learning situation. The social cognitive approach of Perret-Clermont and Nicolet (2001) illustrates that the development of cognitive capacities in children can be understood through the processes of *social interactions* and *social cognitive conflict*. First, the *social interactions* process in children consists of sharing primary experience with the family members, other children in community and with teacher or trainer at school. This process requires individual cognitive capacities. Secondly, the *social cognitive conflict* process states that children can build their own cognition by performing skills they have achieved.

The learning theory developed by Illeris (2009) contributes to the in-depth conceptual understanding of the learning process. Illeris (2009) built his theory on two basics processes and three dimensions of learning. First, the *external interaction process* is the stage in which learners collaborate with their social, cultural, and material environment. Secondly, the *internal interaction process* explores the self-development of the cognitive process of learning. The author asserts that the join of both basics processes (external and internal) is only one condition to study the skills development in human being

(Figure 1).

Learning theory by Illeris (2009) provides conceptual framework for in-depth analysis of the learning environment in children. The social interaction of the CQP students is analyzed based on the social, cultural and material conditions provided for the implementation of Benin dual apprenticeship. By reviewing the social cognitive conflict in children, according to Perret-Clermont and Nicolet (2001), this paper studied the self-development of cognitive capacity of the CQP students. (Figure 2).

METHODS

To conduct this research, data were collected through qualitative descriptive method. First, research highly used desk-based research by the literature analysis. This technique has provided important information on the existing literature about the dual apprenticeship program in Benin. Secondly, the direct observation was used during our visits in the master craftsmen firms and in vocational training centres¹ (VTC) in metallic construction, electricity building, plumbing and hairdresser. By visiting the training centres, I observed equipment and materials training providers use in VTC and master craftsmen workshops/ or firms. Third, semi-structured interviews were made with 30 actors, staffs of Swisscontact, Department of TVET (D-TVET), practitioners, master craftsmen and CQP graduates and apprentices. Purposive sampling was used to choose actors from TVET institutions and snowball sampling was applied to select training providers and practitioners. These interviews were conducted to collect information on the context of CQP program, its implementation and the performance of the CQP students/apprentices. I analyzed data with content analysis.

RESULTS

In this section, I evaluate the results of the research along the social cognitive and the learning approaches presented in Figure 1 by using the Benin dual apprenticeship analysis framework.

Dual apprenticeship in Benin: Background and trajectory

Dual apprenticeship was introduced in West Africa in the late 1980s and early 1990s (ILO, 2007; Walther, 2008). The introduction of the dual apprenticeship in Benin was based on the initiative of the Hanns Seidel Foundation (German Development Corporation) in 1993 jointly with Republic of Togo (Walther, 2008). Both countries had

¹ Centre de métiers or centres de formation professionnelle

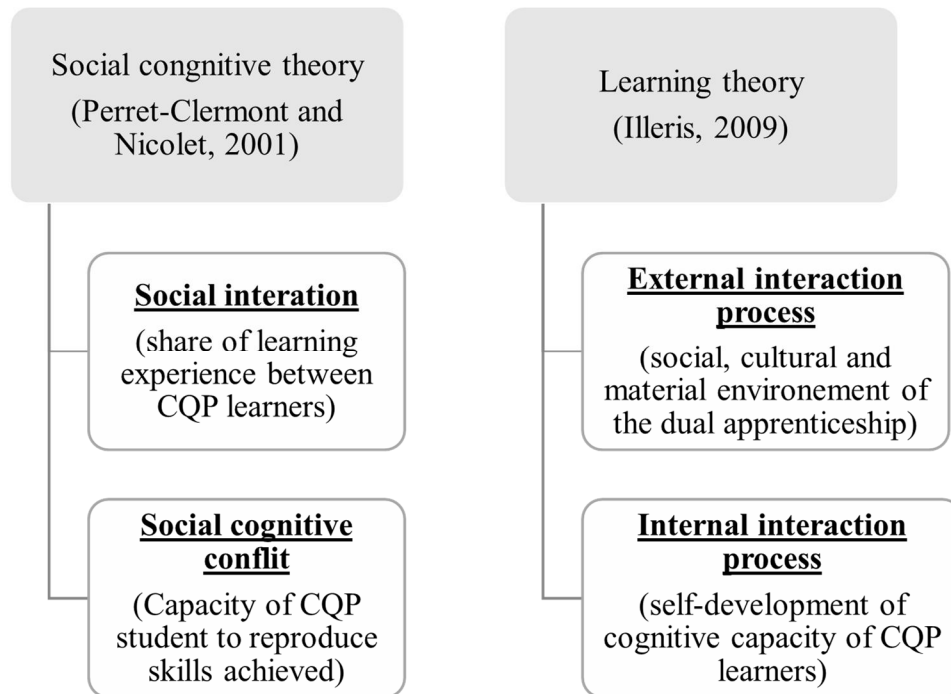


Figure 1. Theoretical analysis of the dual apprenticeship.

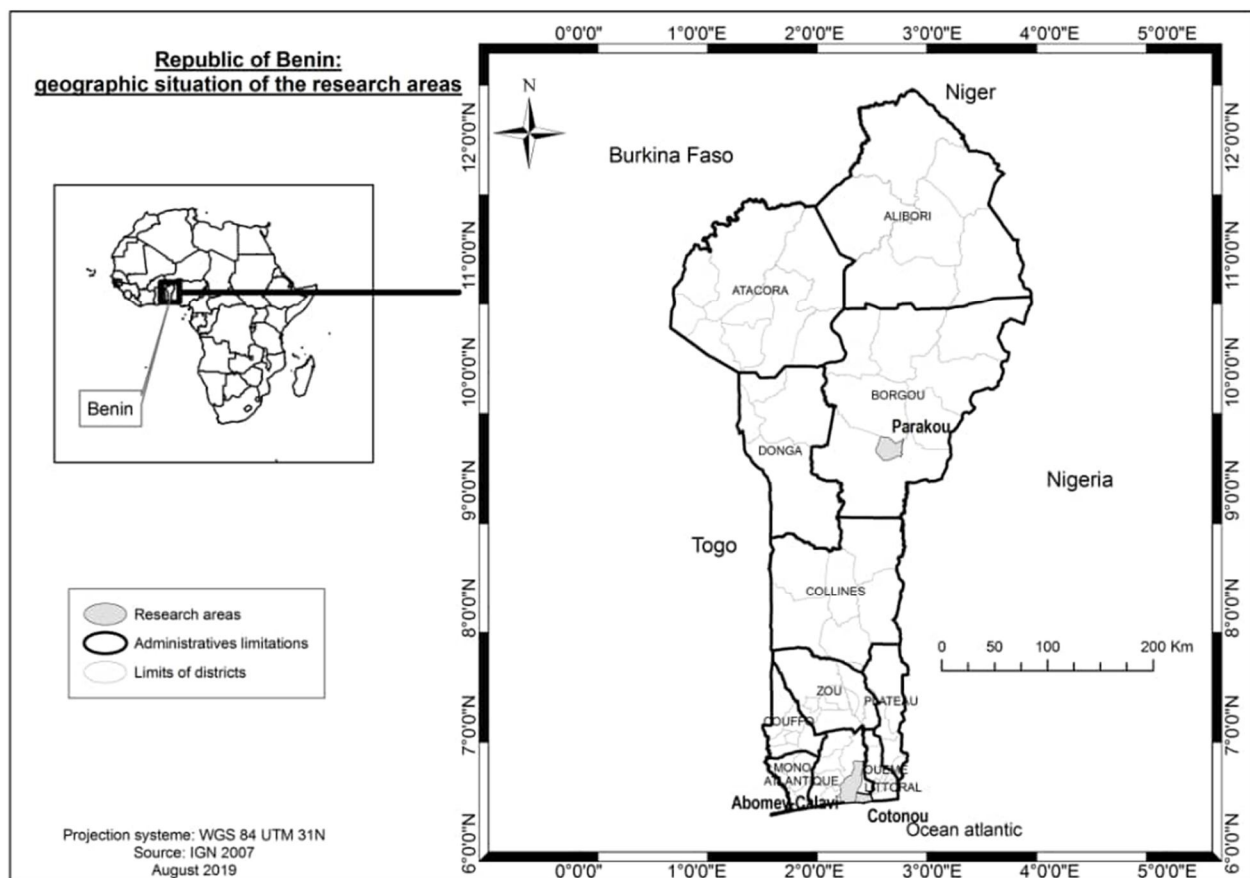


Figure 2. Geographic situation of Benin.

implemented dual apprenticeship in vocational training centres. In this introduction phase of the dual apprenticeship in Benin, Hanns Seidel foundation built a vocational training centre in Abomey (southern Benin) in collaboration with the trade union which played core role to bring awareness master craftsmen. This experiment phase of the dual apprenticeship in Benin had led to develop four occupations (car mechanic, motorcycle mechanic, mechanic construction and wood carpentry) and offered training on capacity building to the trainers in 1999 (Walther, 2008).

In 2001, Beninese government looked for donor agencies that can offer practical work experience in the dual apprenticeship system. Swisscontact, an international nongovernmental organization, was identified and has shared its experience for the implementation of CQP program. Many other donors have supported the implementation of this dual system by technical and financial supports: Danish Development Agency, Swiss Development Corporation, French Development Agency, World Bank, and so forth. Swisscontact intervention has implemented the dual apprenticeship by developing 13 craft occupations: Hairdresser², Metallic Construction³, Sewing cut⁴, Electricity⁵, Cold and Air Conditioning⁶, Masonry⁷, Car Mechanic⁸, Motorcycle Mechanic⁹, Wood Carpentry¹⁰, Photography¹¹, Plumbing¹², Coating¹³ and Weaving¹⁴ (Ferland, 2016).

Figure 3 shows the progress of the introduction of the 13 occupations in the dual apprenticeship in Benin. The training started in 2003 with three occupations: motorcycle mechanic, hairdresser and sewing cut. In 2004, two occupations were respectively introduced: cold and air conditioning and wood carpentry. Only weaving was developed in 2005. In 2006, four occupations were involved: metallic construction, masonry, electricity and coating. Photography and car mechanic were developed in 2007. And in 2008, the plumbing has been introduced for additional occupation.

Developing occupations through DACUM method

The development of the 13 craft occupations has been done by Swisscontact by applying the Develop A Curriculum method (DACUM). This method is promoted

² *Coiffure*

³ *Construction métallique*

⁴ *Coupe couture*

⁵ *Electricité*

⁶ *Froid et Climatisation*

⁷ *Maçonnerie*

⁸ *Mécanique auto*

⁹ *Mécanique deux roues*

¹⁰ *Menuiserie*

¹¹ *Photographie*

¹² *Plomberie*

¹³ *Revêtement*

¹⁴ *Tissage*

by a Canadian association for TVET. It is a performance-based training (PBT) that consists of the specific « duties » to develop competencies for a job/occupation (Norton, 1997). The method was improved by an international team of facilitators of the Center on Education and Training for Employment (Ohio State University). The DACUM method is structured in five main phases by Norton (1997): curriculum analysis, curriculum design, instructional development, training implementation and program evaluation.

Curriculum analysis: This phase consists of job analysis by identifying training needs and by the definition of the standards based on the selection of tasks.

Curriculum design: After selecting tasks training needs, the second phase is to establish an approach for organizing training objectives per task and to prepare a training plan.

Instructional development: This phase is essentially based on the development of competency profile, guides or modules for the training, guide for curriculum and the lesson plans. It ends by a pilot-test which helps to improve or revise materials. According to Norton (1997), pilot-testing and curriculum materials revision are very important and require time and financial investment because of their function in the learning achievement.

Training implementation: This phase deals with the training delivery. It includes the planning of the training activities and requires related resources (equipment, trainers, trainees, facilities, and so forth) and formative evaluation.

Program evaluation: The fifth phase involves summative evaluation, follow-up on trainings and the impact evaluation of the training program on labor market outcomes. Results of this evaluation phase are used to improve the program.

Phases 2 and 3 of DACUM method are somewhere combined into unique phase. Hence, some experts state that four major phases are involved in the curriculum development follows: curriculum analysis, curriculum design, curriculum application and program evaluation.

In Benin context, the development of craft occupations by DACUM method was made in two steps through a pilot testing. The first step involved three craft occupations: motorcycle mechanic, hairdresser and sewing cut. This first step was implemented in four regions: Cotonou, Parakou, Porto-Novo and Abomey-Bohicon. In the second step, Swisscontact trained five experts DACUM facilitators in craft analysis and skills development¹⁵. These experts were selected from Fund

¹⁵ <https://drive.google.com/file/d/1yeNEupOcwF4EWMWfksNcB6Kjm02SU7un/view>

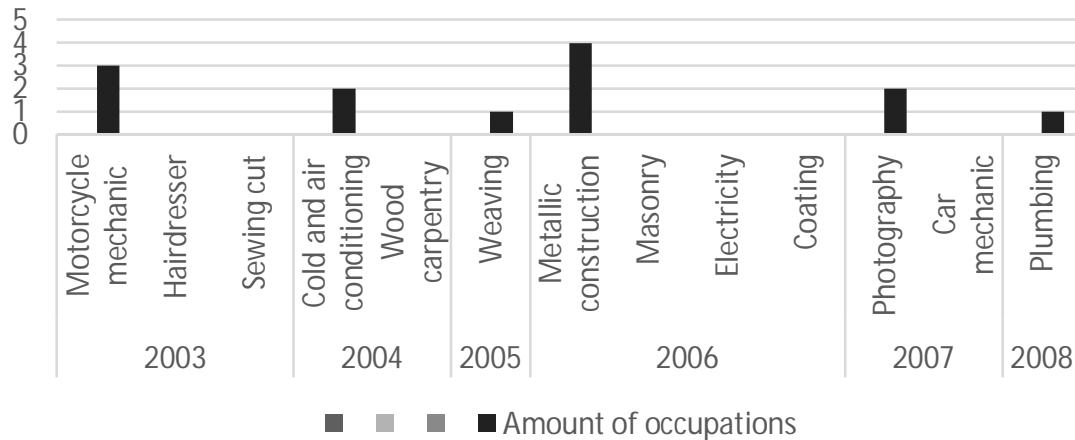


Figure 3. Craft occupation involved in the dual apprenticeship. **Source:** Own depiction from David-Gnahoui and Ahouangnivo (2017) and Swisscontact (2017).

for the Development of Continuing Vocational Education and Apprenticeship (FODEFCA¹⁶), Swisscontact, *Bureau d'Appui aux Artisans* (BAA) and *Cabinet Africain d'Ingénierie de Formation* (CAIF). They participate to the curriculum development for the implementation of the dual apprenticeship. Under the coordination of Swisscontact, the 13 occupations were developed for charts of competencies, standards of the training, training guidelines, and so on. Swisscontact and D-TVET have implemented dual apprenticeships in VTC and with the cooperation of the CQP master craftsmen. Hence, VTC and CQP master craftsmen provide training based on the standards of the training.

Requirements for the training contract to VTC and masters' firms

The first determinant of the VTC recruitment is the accreditation by the Ministry in charge of TVET. As mentioned previously, there are five categories of VTC in the dual apprenticeship: public, private, confessional, association and NGO. Before the selection of VTC, the training centres must be accredited. In the evaluation report by David-Gnahoui and Ahouangnivo (2017), it is noticed that many VTC train apprentices without receiving the accreditation. Therefore, the Ministry in charge of TVET has set the accreditation as the first requirement to get training contract from FODEFCA.

Secondly, VTC must prove environmental sanitation of the training centres, that they have the required infrastructure, equipment and materials. The infrastructure must be easy to access to and should be adequate space for the training sessions. For the infrastructure, VTC must have a specific place for each

part of the training. In addition, they must provide administrative offices for the staff and a bathroom usable for all. They must also ensure the instructional materials and equipment according to the occupations in which apprentices are trained.

Third, master craftsmen involved in the dual apprenticeship should be well qualified, must have a minimum work experience and guarantee minimal working conditions. This is important for the training in workshops or firms.

CQP students' enrollment in dual apprenticeship program

Apprentices must fulfill four conditions to access to dual apprenticeship. First, the program is intended especially to young people who are at least 14 years of age, according to the article 12 of the decree No. 64/2010. In 2014, the West African Economic and Monetary Union (WAEMU)¹⁷ defined 15 years of age to enter in the apprenticeship system (art. 19 of the regulation No. 01/2014). Secondly, apprentices must be in apprenticeship or production centre at least six months. Third, the applicant must complete at least the fifth grade of primary school. However, the fourth and decisive condition is to pass with success the entrance test which leads apprentices to be eligible for the scholarship by FODEFCA (UNESCO-BIT, 2013; MPDEPP-CAG, 2010; Atindehou; 2013).

The process of the enrollment is planned to be organized in March and April. According to Davoudou (2015) this is not regularly done. For example, from 2016 to October 2018, there was no CQP entrance test. In April 2016, Benin government suspended the CQP enrollment in order to evaluate FODEFCA through an

¹⁶ Fonds de Développement de la Formation Continue et de l'Apprentissage (FODEFCA)

¹⁷ Union Economique et Monétaire Ouest-Africaine (UEMOA)

institutional and organizational audit. After the audit, the entrance test was organized in November 2018.

The registration process starts with a call for application. This first step of the enrollment phase involves professional associations from national, district and local levels. The National Confederation of Craftsmen (CNAB)¹⁸ plays core role to bring awareness master craftsmen/women in order to apply as many apprentices as possible for the entrance test. A nationwide awareness campaign through TV and radio sessions, meetings with professional association at local level, are organized. According to the regulation acts, this step must also involve the participation of the National Chamber of Skilled Crafts (UCIMB)¹⁹. However, the role of chambers is not specified in the apprenticeship acts. Hence, it is observed that chambers and their national institution (UCIMB) do not play any role so far in the process.

After the registration step, apprentices who applied for the entrance test are required to dossier submission. The documents include an application form by D-TVET, ID photo, birth certificate and an evidence of apprenticeship at least six months in a master craftsman workshop. D-TVET in cooperation with professional association at national level and with the Department of Pedagogical Inspection, Innovation and Quality (DIPIQ)²⁰ organizes the entrance test. This test includes French and Mathematics in unique form for 2 hours: The main objective of this entrance test is to assess the literacy level of the apprentices to an easier and successful participation to the training sessions.

According to D-TVET, more than 10,000 apprentices took the CQP entrance test in November 2018. During this test at Lycee Coulibaly in Cotonou, it is remarked that 45 out of 544 apprentices who took the test did not apply. They submitted their application documents on the test day. Moreover, participants older than 25 years of age also took the entrance test because the regulation acts did not define the maximum age limit. There are also fake test-takers participate to the test for other people in order to have a good score for the scholarship. Therefore, some apprentices obtain their scholarship with a low literacy level. This depends on the scholarship available for each occupation. In the regard of fake test-takers, one of the resource persons from FODEFCA articulated the following:

There are so many fake practices in the entrance test. Globally, it is remarked that some people take the entrance test for apprentices without required literacy level. Many apprentices dropped out from school three or five years before entering in the apprenticeship system.

Due to the lack of practice, they do not have a good literacy level. Hence, for the CQP entrance test, they pay for fake exam takers (Mr M., 38 years, resource person, September 2019).

This quote illustrates the evidence of fake practices during the entrance test. Many staffs from VTC found that the fifth class of primary school required by the legislation texts for Benin dual apprenticeship does not match the literacy of most of the CQP applicants.

The enrollment phase also includes the selection of the apprentices who have at least the average score which is 10 out of 20. Applicants who get the best score are those who are selected to receive scholarship from FODEFCA. The selection of the apprentices depends on the fund available to FODEFCA and the priority occupations by the Ministry in charge of TVET. The other problem in this enrollment phase is that some occupations (e.g. metallic construction and mechanics) are considered as "dirty occupations" and many apprentices are interested in these occupations any more. Because of the lack of the applicants in these "dirty occupations", FODEFCA can select some apprentices who get below the average score. After selecting the CQP apprentices, they are matched in VTC according to their occupations and in region where they are currently trained. Nevertheless, research revealed that in the CQP cohort 2018 in metallic construction, some apprentices work in mechanic domain instead. This mismatch problem was observed in Bohicon and Abomey (Southern Benin) during a survey I participated. This survey was conducted from July to August 2019, jointly with NADEL Institute of ETH-Zürich (Switzerland) and the Faculty of Agricultural Sciences of the University of Abomey-Calavi (Benin), to evaluate "the effectiveness of dual training in microenterprises in Benin".

Training sessions for the dual apprenticeship program

Benin dual apprenticeship is a program which consists of the theoretical sessions in the vocational training centres (VTC) and on-the-job training in the master craftsmen's workshops or firms. At the end of each cohort of dual training, a summative evaluation is organized at the national level and involves craftsmen/women and trainers of the vocational training centres. The evaluation process is offered by the Department of evaluation and test. Graduate students receive the certificate of professional qualification (CQP certificate)²¹.

Training sessions in VTC

The training session in VTC is structured in three levels

¹⁸ Confédération Nationale des Artisans du Bénin (CNAB)

¹⁹ Union des Chambres Interdépartementales des Métiers du Bénin (UCIMB)

²⁰ Direction de l'Inspection Pédagogique de l'Innovation et de la Qualité (DIPIQ)

²¹ Certificat de Qualification Professionnelle (CQP)

of 32 weeks per level. Globally, most of the training providers are private actors in VTC as well as in firms. In the report of their study, David-Gnahoui and Ahouangnivo (2017) have amounted 102 VTC that provide training. Among them, only 24 are from the public sector. The remaining VTC are 60 from the private actors, 5 from confessional, 2 from associations and 11 from NGOs. It is not specified in legislation texts any training schedule for each CQP cohort. Globally, it is remarked that the training does not start in the same period. For example, the CQP cohort 2018 has started their first level in August 2019 in some VTC, in September and October 2019 in other VTC. Legally, apprentices receive theoretical sessions one day per week and work four or five days in their masters' workshops or firms. According to many sources, apprentices are trained in intensive training. In the regions where apprentices are far from the VTC, apprentices are gathered for two or three weeks of intensive training (Mrs L. A., Swisscontact, September 2018).

According to another respondent:

The decision which consists of gathering apprentices for intensive training was made together between department in charge of TVET, donors, Swisscontact and training providers. In 2014, apprentices in some regions such as Borgou were delayed regarding the training planning. In this period, it was necessary to state on the solution to lead apprentices to take their final evaluation. Therefore, we agree with the strategy of gathering apprentices for intensive training in VTC (M. M., Resource person from FDEFCA, October 2019).

VTC proceed by this method when the cohort of the CQP students is delayed in the execution of the training program. In contrast, it is noticeable that apprentices do not have the same literacy level to achieve knowledge in that condition. Some apprentices unable to keep their basic literacy level because they dropped from school many years before their entry in the program.

VTC provide training depending on each occupation. However, the general topics in theory are about "technology"²², "drawing skills"²³ and "design patterns"²⁴. CQP students or apprentices are trained in practical sessions with specific materials used in their occupation (Figures 4, 5, 6 and 7). Therefore, VTC must ensure textbooks and materials and equipment for this specific training. Vocational training centres must follow the instruction by the chart of competencies in the provision of training. This requires private training centres be accredited by the Ministry in charge of TVET and



Figure 4. Journeymen perform tasks in a wood carpentry.



Figure 5. Materials for practical session in Electricity.



Figure 6. Trainers in electricity and one researcher in a VTC.

²² Technologie

²³ Dessin

²⁴ Schéma

FODEFCA before receiving CQP students.

FODEFCA and DIPIQ is charged of the supervision and follow up of the training in VTC. However, this activity



Figure 7. Electric sander for wood.

is not frequently done because of the lack of financial resources.

On-the-job training in the master craftsmen' firms

Dual apprenticeship requires the collaboration between training providers: the school and companies or industries who train apprentices. In German and Swiss TVET system, the dual system consists in general education in school and vocational training in companies (Gessler, 2017). The two main principles of dual training are the duality of the training and the primacy of the craft occupation (Davodoun, 2011b). Hence, apprentices must receive both education and training to achieve competencies. The specificity of dual system in Benin is that general and technology education are provided by VTC with a limited amount of technical high schools²⁵. Master craftsmen ensure work-based training, accordingly to the craft occupations in the program.

In Benin, most master craftsmen work small and household enterprises in the informal sector. In the process of the dual apprenticeship, apprentices are trained in the masters' firms or workshops during the three levels of CQP sessions. Masters' firms must follow the instruction provided by the chart of competencies. Master craftsmen and advanced learners²⁶ train apprentices based on their skills and the labor market situation. The process of the training in the firm or workshop follows three phases: observation phase; skills acquisition phase by following instruction and performing phase. By observing, apprentices learn from their masters and the other advanced learners. In the second

phase, apprentices learn the tools of work and how to use them. The third phase consists of performing or reproducing tasks independently. This process is informal because it is a non-prescriptive approach of learning. The training is delivered six days from Monday to Saturday and apprentices must work in the firm depending on the craft occupation and the master craftsman. Apprentice must attend the workshop at 8:00 a.m. and can leave after the firm or workshop completes the daily tasks.

Cost and financing of the dual apprenticeship

The cost of Benin dual apprenticeship can be structured in two separate components: the first component is the apprenticeship fees; and the second component is the dual training cost in VTC.

Before their enrollment in dual apprenticeship, apprentices must start work-based training in a master craftsman's firm or workshop. To attend this training, apprentices with their parents agree with an apprenticeship contract. The contract can be either oral or written. It includes the entrance fees, tools box fees, apprenticeship fees and probably the graduation event which parents and relatives are responsible to pay. Each of the required conditions varies across occupations and the master craftsmen. The entrance ceremony is estimated at \$ 37.5, i.e. XOF 25,000 (interview, July 2019). In electricity building, the tools box is estimated at \$ 30 (XOF 20,000). According to (Davodoun, 2011a) the apprenticeship fees can cost \$ 300 (XOF 200,000). Some interviews with master craftsmen show that the apprenticeship fees can vary from \$ 120 (XOF 80,000) to \$ 450 (XOF 300,000). Even though the graduation ceremony is prohibited by the legislation acts, it remains a widespread in the informal apprenticeship. It is a celebration that involves the participation of the whole community which provides the legitimacy of the graduation of the apprentices. It is difficult to estimate the cost of this celebration due to its social and economic dimensions. Among these fees, the apprenticeship fees are very important for master craftsmen. In Benin, most apprentices live in disadvantage backgrounds. Therefore, some parents do not pay the training fees to the master craftsmen. In order to pay to them the apprenticeship fees, master craftsmen prefer apprentices work for them for one additional year after completing the training. This additional time in the firm or workshop is also dedicated for work experience to the apprentices.

Regarding the dual training cost for VTC, this varies from each level of the apprenticeship. Benin government bears 90% of the cost through FODEFCA scholarships and apprentices with their parents pay 10%. According to Swisscontact this parental contribution dropped from 5 to 3% in the period of 2003 to 2011 (Davodoun, 2015; David-Gnahoui and Ahouangnivo, 2017). The share of training cost paid by the FODEFCA per an apprentice ranges from €160 to 400, i.e. XOF 108,000 to 252,000

²⁵ Lycées techniques

²⁶ Sous-patron

per level (UNESCO-BIT, 2013; David-Gnahoui and Akouété-Hounsinou, 2015). Hence, for the three levels, the estimated cost would range from € 480 to 1200 i.e. XOF 324,000 to 756,000. The 10% paid by the apprentice is estimated at € 30 per level, i.e. € 90 for the three level (XOF 20,000 and XOF 60,000).

The financial resources used by FODEFCA are provided by the annual budget of the government, supports from foreign donors and NGOs contributions. According to many sources, donors have born a large part of the dual training costs to VTC (David-Gnahoui and Akouété-Hounsinou, 2015; Ferland, 2016). Among donors, there are Danish Development Corporation (DANIDA), Swiss Department for Development Corporation (SCD), Swisscontact and French Development Fund (AFD) and the World Bank. Results of the institutional and organizational audit of FODEFCA showed that the management of the financial resources was efficient (Ferland, 2016). Consequently, FODEFCA does not have not more financial resources to provide scholarships to many apprentices from the entrance test of 2018. Only 830 apprentices are selected to receive scholarship from FODEFCA: 593 supported through the national budget and 237 apprentices supported by AFD through AFPIJE²⁷ project.

Final evaluation of CQP students and certification

The final exam is part of the certification process. This evaluation is planned to be organized once a year in December by the department of evaluation and tests (DEC)²⁸ of the Ministry in charge of TVET. However, DEC is frequently delayed to organize the final evaluation. In the evaluation process, many committees are regularly established (i) to prepare the evaluation, (ii) to supervise the CQP summative evaluation and (iii) to provide the post evaluation services through the formal certification.

According to the legislation acts (art. 10 of the Decision No. 0012/2006), the summative evaluation of the CQP apprentices includes 10 percent of the theoretical phase and 30 percent practical test of the total grade. The rest of the evaluation is the in-process evaluations provided during the class sessions. The in-process evaluation of the theoretical session is 20 percent and the practical session is 40 percent (Davodoun, 2011b; Davodoun, 2015; David-Gnahoui and Ahouangnivo, 2017). Based on this grading scale, it is remarked that the in-process evaluations take 60 percent of the total grade whereas apprentices stay 4 or 5 days in the master craftsmen firms or workshops and one day in VTC. Although master craftsmen participate in grading apprentices, it is observed that there is low collaboration between trainers from VTC and master craftsmen. The training provided in the firms or workshops is not evaluated.

ANALYSIS AND DISCUSSION

Benin dual apprenticeship provides a specific training to young people who have a basic literacy level. In order to underline the focus of this innovation in TVET sector, this research first, reviews the skills achievement of the CQP students or apprentices based on the duality principle and the role played by business sector. Secondly, by using empirical data, the paper analyzed the implementation of dual training in Benin context.

As mentioned above through Davodoun (2011b), the first principle of Benin dual apprenticeship is the duality of the training. In countries with successful dual apprenticeship such as Germany, Switzerland and Australia, the duality consists of two weekdays of the training in public vocational schools for general subjects with practical sessions and the rest of week in the workplace (Acemoglu and Pischke, 1999; Tremblay and Le Bot, 2003; Gessler, 2017). In context of Benin, the government does not have resources to build enough vocational schools and to provide equipment for the training. Instead, Benin government had created VTC in early 1990s with the support of Hanns Seidel Foundation (Walther, 2008). In the introduction phase of dual system, VTC were used as public vocational schools. Through Benin education acts, private actors are allowed to participate to the national education (art. 15 of the law No. 17/2003). Therefore, private actors, confessionals and associations receive accreditations from the Ministry in charge of TVET to support the dual system. These VTC are qualified to train apprentices for one weekday of the training during 32 weeks per level. This is related to the external interaction process according to the learning theory (Illeris, 2009). The pilot experiment and the implementation phases of Benin dual system showed that apprentices receive in-depth skills which their masters did not receive in the informal apprenticeship. The following quote from a staff of Swisscontact illustrate the effect of the training: "the direct effect of this training is that apprentices achieve more skills and efficiently use them in workplaces or firms [...]" (Mrs. D. C., expert of Swisscontact, October 2018).

In social cognitive approach by Perret-Clermont and Nicolet (2001), it is stated that learners are able to develop cognitive capacities by sharing work experience: this is social cognitive conflict. In Benin dual apprenticeship, apprentices who receive training frequently in VTC are proud to participate in the program. A CQP graduate asserts the following statement: "In VTC, we found and used tools which are not available in our master's workshop. I was very funny because we had this great opportunity to use them" (Mr. V. CQP graduate, hairdresser, October 2018).

Through the general subjects and practical sessions received in VTC, apprentices learn about technology in the respective occupation. Therefore, the dual training provides the updated skills to apprentices during the training sessions. Studies of Davodoun (2011b), David-

²⁷ Appui à la Formation Professionnelle et à l'Insertion des Jeunes (AFPIJE)

²⁸ Direction des Examens et Concours (DEC)

Gnahoui and Ahouangnivo (2017) and Swisscontact (2017) have found the same result regarding the performance of the CQP graduates. The study of Swisscontact (2017) on the labor market entrance of 46 CQP graduates showed that CQP graduates in disadvantaged backgrounds have hard labor market entry.

The dual training implementation encounters many difficulties. First, the literacy level of most apprentices is very low to favor their skills acquisition. In addition, the practice of intensive training sessions has negative effect on the skills acquisition of many apprentices. Intensive training in VTC for three weeks is a strategy which does not foster a positive impact on the apprentices with low literacy level. The skills performing also require more practice. Apprentices who are not able to practice any more the skills achieved during the dual training sessions cannot sustainably develop cognitive capacities. Hence, self-development of social cognitive capacity Illeris (2009) and social cognitive conflict Perret-Clermont and Nicolet (2001) are not sustainable in the case of Benin dual apprenticeship.

Regarding the principle of primacy of occupation, dual apprenticeship requires collaboration between VTC and master craftsmen (Gessler, 2017). In Benin dual system, there are three categories of trainers: lead trainers²⁹, local trainers/instructors³⁰ and educational supervisor³¹. Moreover, it was established a communication notebook between staffs of VTC and master craftsmen. This partnership frame should provide opportunities for craftsmen to collaborate with VTC in order to update their skills. However, it is remarked that master craftsmen are not motivated any more to collaborate with VTC and no communication notebook works. This finding is parallel to a study conducted by Minghat and Mustakim (2017). Hence, the social environment of Benin dual system is not efficient. In a feasibility study of the dual VET system in Romania (EACEA, 2015), it is found very relevant the participation of social partners in the debate on the organization and functioning of the dual system. In Benin case, Swisscontact has developed 13 occupations in collaboration with CNAB and the participation of some craftsmen. The selection of these professionals was determined by their competence and work experience. However, it is noticed that the methodology of the introduction of this dual system has not involved a global consultation of social partners, especially companies. In the success factors of the dual VET system, it is found that "Ownership by companies and social partners" governance and financing are involved in the first factor (Bliem et al., 2015). As recommendations to improve the quality of TVET in Sub Saharan African countries, Serumu (2019) suggests stakeholders should work collectively to establish more TVET institutions, to

organize training and retraining programs for teachers and instructors, to address the mismatch in the labor market and industries, to develop linkages between TVET institutions and industries.

CONCLUSION

This paper focuses on Benin dual apprenticeship by describing the program and analyzing the skills acquisition of the learners. Based on a qualitative descriptive method, research found that Benin dual system is a specific program which involves vocational training centres and masters' workshops or firms. The program has led to develop craft occupations through performance-based training using DACUM method. Nevertheless, the program is not implemented on an executor framework. Moreover, there is less involvement of the social partners in the conception, especially craftsmen who work in informal sector. Hence the program has not received a global consultation the craftsmen and community for its acceptance. Therefore, in the implementation of the program, apprentices develop cognitive capacities through the training receive in the VTC with modern equipment, tools and materials. However, the adoption of many practices, such as low literacy level, the intensive training sessions, low collaboration between training providers (VTC and companies), and the expensive cost of the dual training, do not favor the sustainability of the self-development of the apprentices and graduates.

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REFERENCES

- Acemoglu, D., and Pischke, J. S. (1999).** Training in imperfect labour markets. *The Economic Journal*, 109(453): F112-F142.
- Atindehou, G. O. (2013).** La formation professionnelle par apprentissage de type dual au Benin : Le dispositif, les acteurs et le financement : Quel bilan ? Mémoire de formation. Dakar: CESAG.
- Bliem, W., Petanovitsch, A., and Schmid, K. (2015).** Success factors for the dual VET system. Wien: ibw-Forschungsbericht.
- David-Gnahoui, M. E., and Ahouangnivo, T. (2017).** Etude diagnostique participative et approfondie du dispositif de la formation

²⁹ Formateur principal

³⁰ Formateur endogène

³¹ Formateur de suivi

- professionnelle de type dual. Cotonou: Rapport final.
- David-Gnahoui, M. E., and Akouété-Hounsinou, M. F. (2015).** Le financement comme défi à l'efficacité de la formation professionnelle par apprentissage de type dual au Bénin. Les Cahiers Centre Béninois de la Recherche Scientifique et Technique, 007, 755-776.
- Davodoun, C. C. (2007).** Artisanat au Bénin: Texte législatifs et réglementaires. Cotonou: Ruisseaux d'Afrique.
- Davodoun, C. C. (2011a).** L'apprentissage traditionnel dans l'artisanat au Bénin. Cotonou: Ruisseaux d'Afrique.
- Davodoun, C. C. (2011b).** L'apprentissage de type dual dans l'artisanat au Bénin. Cotonou. Cotonou: Ruisseaux d'Afrique.
- Davodoun, C. C. (2015).** Certification dans l'apprentissage au Bénin. Cotonou: Ruisseaux d'Afrique.
- EACEA (2015).** Development of Apprenticeship Learning in IVET in Romania (DALIVET). Bucharest: National Centre for Technical and Vocational Education and Training Development.
- Ferland, M. (2016).** Audit institutionnel et organisationnel du FODEFCA. Cotonou: version définitive.
- Gessler, M. (2017).** The lack of collaboration between companies and schools in the German dual apprenticeship system: Historical background and recent data. *International Journal for Research in Vocational Education and Training*, 4(2): 164-195.
- Illeris, K. (2009).** Contemporary of theories of learning. London and New-York: Routledge.
- ILO (2007).** Apprenticeship in the informal economy in Africa. Geneva: Skills and Employability Department.
- MEA (2014).** Rapport d'état du système éducatif. Dakar: IPE-UNICEF.
- MPDEPP-CAG (2010).** Evaluation de la politique mise en œuvre dans le domaine de l'enseignement technique et de la formation professionnelle: Etat des lieux. Cotonou: GECA PROSPECTIVE
- Minghat, A. D., and Mustakim, S. S. (2017).** Government-link companies in the National Dual Training System Programme; an analysis of perception, factors constraints, and resolution. *Advances in Social Science, Education and Humanities Research*, 102: 301-305.
- Norton, R. (1997).** DACUM Handbook. Columbus: Center on Education and Training for Employment.
- Perret-Clermont, A.-N., and Nicolet, M. (2001).** Interagir et connaître: Enjeux et régulations sociales dans le développement cognitif. Paris: L'Harmattan.
- Serumu, I. (2019).** The roles of stakeholders in building the right environment for quality technical vocational education and training (TVET) in sub Saharan Africa: Implication for sustainable livelihood and development. *International Journal of Vocational Education and Training*, 25(1): 74-83.
- Swisscontact (2017).** L'évolution de la formation professionnelle artisanale au Bénin. Cotonou: Swisscontact.
- Tremblay, D. G., and Le Bot, I. (2003).** The German dual apprenticeship system: Analysis its evolution and present challenges. Québec: Télé-université.
- UNESCO-BIT (2013).** Revue de politique de formation technique et professionnelle au Bénin. Dakar: UNESCO.
- Walther, R. (2008).** Nouvelles formes d'apprentissage en Afrique de l'Ouest : Vers une meilleure insertion professionnelle des jeunes. Paris: AFD.

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