



United Nations  
Educational, Scientific and  
Cultural Organization



International Institute  
for Educational Planning  
IIEP-UNESCO Dakar  
Africa Office



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pour l'éducation et la formation

# Competency-based approach to technical and vocational education and training in Africa

Study based on seven African countries:  
Benin, Ethiopia, Ghana, Morocco, Rwanda,  
Senegal, and South Africa.

Synthesis Report



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Financial support



**Published in 2020 by :**

**IIEP- UNESCO Dakar**

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**Attribution :**

Competency-based approach to technical and vocational education and training in Africa  
Study based on seven African countries: Benin, Ethiopia, Ghana, Morocco, Rwanda, Senegal, and South Africa.  
Synthesis report 2020.

ISBN : 978-92-803-1422-9



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# ACKNOWLEDGEMENTS

This study on the contextualisation and adaptation of the competency-based training (CBT) approach in technical and vocational education and training (TVET) in seven African countries was conducted by a team of experts from UNESCO's International Institute for Educational Planning Africa Office (IIEP-UNESCO Dakar) and the Francophonie Institute for Education and Training (IFEFF).

The editors for IIEP-UNESCO Dakar were: Mr Naceur Chraïti (Head of the Vocational Training Expertise Platform – PEFOP), Mr Khalil Bahloul (TVET training expert), Ms Sonia Michaud (consultant) and Mr Xavier Rosy (consultant). For IFEFF, the following editors were involved: Ms Barbara Murtin (Coordinator of the Youth Training and Employment program), Mr Éric HUBY (Vocational Training and Employment expert), and Ms Lena DIOP-WATT (Program Officer at the Youth Training and Employment program).

IIEP-UNESCO Dakar and IFEFF provided technical and financial support for this study and wish to express their heartfelt gratitude to all public and private sector stakeholders and technical and financial partners (TFPs) who took part in its preparation.

The focal points appointed by the vocational training ministries of all seven countries provided significant support in the organisation of various field trips in the framework of the study. These focal points include Ms Gerda Magnus, Acting Deputy Director General, TVET, Department of Higher Education and Training (DHET) in South Africa, Mr Bergin Toliton, Inspector General of Education at the Ministry of Secondary, Technical and Vocational Education and Training (MESTFP) in Benin, Dr Fred Asamaoh, Director of the Council for Technical and Vocational Education and Training (COTVET) in Ghana, Ms Imane Ikradine, Head of the Department of Primary and Secondary Sector Programs of the Secretariat of State for Vocational Training in Morocco, Mr Debebe Bizuneh of the Federal TVET Agency (FTA) in Ethiopia, Ms Valentine Uwamaliya, Deputy Vice-Chancellor in charge of Training – Department of Institutional Development and Research, Rwanda Polytechnic (RP), in Rwanda, and Mr Abdou Fall, Director of Vocational Training at the Ministry of Labour, Vocational Training and Crafts (MEFPA) in Senegal. We would like to commend the commitment and motivation shown by the various stakeholders met throughout the study process.

We would also like to express our gratitude to all the other national stakeholders from the organisations listed in Appendix 5 who took part in this study.

This work was supported by Mr Guillaume Husson (Head of the IIEP-UNESCO Dakar Office). Mr Jonathan Jourde, Communication and Knowledge Management Officer, and Ms Leonie Marin, Communication Expert, IIEP-UNESCO Dakar, oversaw preparations for the publication of the report.

# ABSTRACT

Seven francophone and non-francophone African countries (Benin, Ethiopia, Ghana, Morocco, Rwanda, Senegal and South Africa) were visited during this study in order to determine the status of implementation of the competency-based training (CBT) approach in each of these countries as well as good practices and challenges experienced. Below are some of the salient findings from each of the countries:

- In **Ethiopia**, CBT was introduced before the start of the 2000s and was intensively implemented from 2005-2006 onwards. The country established a strong public-private partnership at the development stage of its occupational competency standards (OCSs). Each trade has its own OCS.
- In **Senegal**, the first experiments with the CBT approach, which were conducted through various interventions by TFPs, date back to more than 15 years ago. In 2015, Senegalese legislation formally established that the CBT approach was the methodology to be used in the delivery of technical and vocational training. However, while some initiatives (formal and informal) have been set in place, the CBT approach is still at the experimental stage in this country.
- The CBT approach was introduced in **Ghana** in 2000. After completing a trial phase, Ghana has been developing public-private partnerships over the past decade with a view to designing occupational competency standards and implementing CBT.
- The CBT approach has been used in **Benin** for about twenty years. It was initially tested in the crafts sector via a simplified and customised CBT system (DACUM). This led to a partnership between representatives of craftspeople and the government to provide dual training for apprentices, which has made it possible to modernise apprenticeship training (upgraded apprenticeship).
- The CBT approach first was introduced in **Morocco** in 2003. Following a protracted experimental period, an approach was designed for application to all three existing vocational training modes - residential, dual, and apprenticeship. While all the programs were revised using the CBT approach, their application by trainers remained incomplete.
- CBT-based programs have existed in **Rwanda** for the past 12 years, where they were introduced from 2015 onwards. Since then, Rwanda has implemented and disseminated the CBT approach in its TVET framework using a public-private partnership approach for the first two stages of CBT: understanding job requirements and developing occupational competency standards.
- Finally, in **South Africa**, TVET featured a diverse range of types of training and apprenticeship that developed parallel to each other in the country's recent past. Only the two latest types of training, the Unit Standard Learnership and Dual System Pilot (with fairly limited roll-outs as yet), followed an effective CBT approach, and only since 2012.

With respect to good practices, these seven countries appeared to be making efforts to increase economic sector involvement and create public-private partnership momentum (which nonetheless remains limited), demonstrating a recognition of the essential nature of this collaboration. There were some interesting cases of local business involvement promoting close collaboration with training institutions (delegated management institutes [IGDs] in Morocco, Centres of Specialisation [CoS] in South Africa and Sectoral Centres in Senegal) and shared investments. Examples of the implementation of CBT models that are sustainable over time and affordable were also identified. These included the professionalisation of traditional apprenticeship in Benin and Ghana. Ethiopia had opted for strong private-sector involvement to ensure rapid development of OCSs to ensure responsiveness to training opportunities. Ghana had taken similar action for apprenticeship-related sectors.

In terms of their implementation strategies, Rwanda and Ethiopia in particular opted for clearly articulated strategic policies focused on broad implementation of CBT from the outset rather than using a “pilot project” approach, thus enabling them to move forward in a more consistent manner subsequently. The other five countries, on the other hand, opted for an experimental approach, which seemed to hamper the mainstreaming process. The study drew the conclusion that when countries chose to start with a pilot phase in a limited number of institutions, the fragmented nature of the initiatives subsequently impeded rapid and effective roll-out.

Regarding the difficulties observed in CBT implementation, the majority of the people interviewed seemed to share the opinion that the problem lied not in the CBT approach per se, but in the implementation strategies and methodology, which were not adequately suited to the often restrictive social and economic environments on the African continent. Disparities and deficiencies in infrastructure and equipment were observed in all the countries visited, affecting CBT implementation. However, despite limited learning conditions, trainers in training institutions working solely with the CBT approach prioritised an active approach to teaching. Barring a few rare exceptions, such as upgraded traditional apprenticeship in Benin, private sector presence was still limited and fell short of expectations.

Centralised management focused solely on a top-down approach seemed to create a feeling that the approach was imposed, thereby limiting genuine stakeholder commitment. Even in countries where the CBT approach was implemented nationwide, most training institutions were still centrally managed by government bodies. Sector-based monitoring (where it existed), engineering management (for example, in Ethiopia, Rwanda or Morocco, where it was still centralised) and learner certification management were also centralised, leaving little leeway to training institutions. Exceptions to the above findings included sectoral vocational training centres (construction, food processing, etc.) in Senegal, delegated management institutes and apprenticeship-based training centres in Morocco, and CoS (Centers of Specialisation) in South Africa, which operated independently in local areas. These examples involved the private sector, especially sectoral branches, in the management of institutions.

All seven study countries showed sluggishness in undertaking TVET system regulation (sector-based monitoring of jobs and monitoring of trainee integration). Despite efforts made in this area, the private sector was still only marginally involved, especially when it came to skills assessment.

Weak political leadership was another major obstacle to the definition of the CBT approach as a priority strategy for TVET development. It also hampered the establishment of a legal and regulatory framework (law, decree) and substantial funding. While the financial contribution of the TFPs was commendable, and the significance of their contribution to the implementation of the CBT approach must be recognised, their support can prove to be an obstacle to an implementation process properly tailored to the country's situation, owing to the project approach, which leaves governments with limited flexibility for action. In addition, reliance on TFPs has too often led to insufficient state funding for TVET. Lastly, inadequate adaptation of the CBT approach to the socioeconomic environment of the countries or to the cultural aspects inherent in the training process, combined with an underestimation of the changes entailed by its implementation (the time required for the production of occupational standards, a cumbersome production management process, production costs, etc.) were the final obstacles identified in the majority of the countries visited.

Based on these observations, various tipping points were identified. Collective awareness of the social and economic hardships faced by young people is necessary and must be combined with a genuine political will on the part of the country to implement the CBT approach throughout its territory. A clearly articulated, robust and strategic vision of a TFP-supported socio-economic development plan needs to be established, without underestimating the far-reaching nature of the fundamental changes generated by the CBT approach and taking into account the real expectations of the public and private sectors. Therefore, understanding the foundations and spirit of the approach, including its principles and values, is critical for deciding on the most appropriate implementation procedure (pre-testing or direct roll-out), i.e., the procedure best suited to the country's procedures and realities.

Recommendations are clustered around various themes: the government's vision of the importance of CBT implementation; TVET governance; procedures for implementing and contextualising the CBT approach; communication; awareness-raising and a participatory approach; and capacity building. It seems important to emphasise that certain recommendations or actions are interrelated, since the successful implementation of the CBT approach is a multifaceted process.

# 1. BACKGROUND

This study on the contextualisation and adaptation of the competency-based training (CBT) approach in technical and vocational education and training (TVET) in seven African countries follows an analysis of the findings of interviews, documentary research and consultations by a task force<sup>1</sup> comprising experts and consultants from the Francophonie Institute for Education and Training (IFEET) and UNESCO's International Institute for Educational Planning (IIEP), involved in CBT implementation.

The first part of this report presents a general outline of the study, its objectives, the rationale underlying the selection of the countries, and the methodology for its implementation.

The second part focuses more specifically on the implementation of the CBT approach in TVET by presenting the findings of the study, and taking stock of the status of implementation, the good practices observed, the constraints and obstacles encountered, as well as the tipping points identified while analysing the information collected.

The third part of the report proposes recommendations, lines of action and accompanying measures adopted by the authors of the study based on their analyses and observations.

## A. Study Objectives

The competency-based training movement, referred to by the acronym CBT, has gained currency in all spheres of technical and vocational training in Northern countries, such as Belgium, Switzerland and Canada (Quebec), as well as on the African continent. There is no universally accepted definition of the term "competency". Some define it as an end goal determined by a level of performance, while others view it as a process that includes a series of assessments. Training program design has grown increasingly formal in many countries, particularly English and German-speaking countries, and is explicitly or implicitly based on the philosophy and principles now associated with the CBT approach.

Since the 1990s, the approach has spread to countries in the Southern hemisphere, under the impetus of bi- and multi-lateral co-operation. Further details on the implementation of this new approach are presented in Section 2 of this report. It should be noted that, in 2009, the International Organisation of La Francophonie (OIF) published a compendium of six methodological guides to support the implementation of the CBT approach in vocational training<sup>2</sup>. These six guides describe each stage of training engineering based on the CBT approach: from sector analysis to the development of a comprehensive series of frameworks and support guides. The design of these reference materials, which involved several experts from the francophone world, including representatives from Africa, has enabled most francophone African countries to start reflecting on a possible transition from an outcome-based training (OBT) approach to a competency-based training (CBT) approach to learning.

1. The task force is identified in Appendix 4.

2. [http://mediatheque.francophonie.org/IMG/pdf/guide\\_presentation.pdf](http://mediatheque.francophonie.org/IMG/pdf/guide_presentation.pdf)

The concept of competency has many different definitions. In this study we use the concept of competency proposed by the OIF in 2009<sup>3</sup>, which defines the competency-based approach as “a genuine interface between the world of employment and the world of training. In this respect, it transcends the strict framework for developing educational material. In fact, this approach is based on three fundamental areas:

- a) identification and consideration of the reality of the labour market both generally (economic situation, job structure and trends) and specifically (description of a job’s characteristics and definition of competencies);
- b) development of teaching materials as such, including frames of reference for training and evaluation, and various supporting documents to assist local implementation and promote some degree of standardised training; and
- c) implementation, in each training institution, of a pedagogical approach focused on the capacity of each learner to harness their knowledge in the implementation of the skill set associated with the practice of the occupation they have chosen”.

Nearly a decade later (in early 2020), most of the francophone African countries that have embarked on a reform of their public vocational training policy have adopted the CBT approach as a teaching model. Some, like Morocco and Senegal, have developed their own methodological guides based on the CBT model, occasionally drawing inspiration from the guides published by the OIF, while others, such as Côte d’Ivoire, have directly adopted the methodology outlined in the OIF guides, with only minor adaptations. Certain countries, which were supported by other technical and financial partners (TFPs) such as the German Co-operation Agency (GIZ) in implementing their educational reform, were able to rely on a simplified CBA method, such as DACUM (Develop A CUrriculuM or Developing A CUrriculuM). This was the case in Togo, Mali and Burkina Faso. The DACUM method, which was originally designed and used as “a comprehensive system for developing and managing the learning process”, has evolved into an integrated skills management and development model<sup>4</sup>.

A number of non-francophone African countries have also undertaken reforms of their technical education and vocational training policy over the last two decades. Their choices of CBT methodologies were guided by the TFPs that supported the countries in their reflection process. This was notably the case in Rwanda, which also based its approach on the DACUM.

The basic principles are the same in both francophone and non-francophone countries irrespective of the methodology adopted. These principles are based on increasing the involvement of the economic sector in defining both the training provided and the competencies taught.

In view of the twenty-year history of implementation of the CBT approach in many African countries, the Dakar office of UNESCO’s International Institute for Educational Planning (IIEP-UNESCO Dakar) and the Institute for Education and Training (IFEFF) of the OIF have launched this joint study on CBT contextualisation

3. OIF, 2009, Les guides méthodologiques d’appui à la mise en œuvre de l’approche par compétences en formation professionnelle.

4. <https://cva-acfp.org/formation-et-ateliers/la-methode-dacum>

and implementation in seven African countries. It is worth reiterating that the IFEF is supporting numerous African countries in the implementation of training programs and the roll-out of their technical education and vocational training systems. It should also be noted that IIEP-UNESCO Dakar is supporting the analysis, planning, management and steering of vocational training policies and systems.

**The aim of the study is, firstly, to identify good practices and explore how these practices can be used in other contexts/countries to enhance the performance of the CBT approach in their TVET systems and, secondly, to identify the difficulties experienced during efforts to introduce and/or sustain the implementation of the CBT approach.** The identification of positive or negative tipping points (i.e., hinge moments/elements that advance or impede the CBT implementation process), is carefully considered in order to take stock of the lessons learned. Based on these findings, the study formulates recommendations aimed at helping to better adapt the CBT approach to the contexts and realities of African countries.

This study does not attempt to rank countries based on performance or comparisons, nor does it attempt to determine the success or failure of one country or another. It is intended to help countries analytically and strategically think through their implementation of the CBT approach, regardless of the level of integration. Finally, due to the contextual variables, start-up times, and heterogeneous levels of progress achieved in implementing the CBT approach in the seven selected countries, it is impossible and unadvisable to make comparisons between countries, or a ranking that would be quite irrelevant.

## B. Country Selection Process

Heterogeneity in the implementation of the CBT approach and diversity in the paradigm shifts it entailed were two key criteria for the selection of countries to be visited in the framework of this study. Some countries built their CBT approaches on the OIF's guides or on Anglo-Saxon or Germanic models, while others adjusted these guides and models to local specificities. In addition, some countries used a modular CBT model whose certification is validated by businesses, while others entrusted the private sector with full responsibility for certification. Considering that the introduction of the CBT approach on the African continent has been greatly influenced by support from TFPs, taking this variable into account is highly significant in terms of the direction chosen and the results achieved on the ground.

The development of the economic and social fabric is also a key parameter to be taken into consideration, since the CBT approach relies heavily on the participation of the productive private sector. As a result, economic development was factored in when selecting countries, with a view to achieving a fair analysis of private organisations' involvement and engagement with government institutions.

Finally, since implementation in francophone countries does not follow the same pattern as in countries influenced by non-francophone practices, it was also important to choose francophone countries, as well as non-francophone (and not exclusively anglophone) countries, while giving careful consideration to the geographical distribution of countries on the African continent, as well as their accessibility and level of security and stability when conducting field missions.

Considering these multiple variables and the need to select a realistic number of countries, both in terms of the time and budget required to conduct the study, IIEP-UNESCO Dakar and IFEF chose the following francophone and non-francophone African countries: Benin, Ethiopia, Ghana, Morocco, Rwanda, Senegal and South Africa.

## C. Study Implementation Methodology

Depending on the country, the diversity of institutions and stakeholders involved in the implementation of the CBT approach, and the depth of CBT experience available, the field missions lasted between one and two weeks. The number of interviews conducted ranged from about ten to more than twenty, depending on the length of time spent in the field. The consultations involved all stakeholders: the ministries in charge of technical and vocational education and training (TVET), sectoral ministries with vocational training (VT) systems, public and private training institutions that adopted the CBT approach, technical and financial partners, management and labour partners, including employers' unions and professional branches, as well as trainers and learners.

Following each of these field missions, which were supplemented by documentary research, a country report incorporating the same components as this summary report was produced. As a result, information-sharing and a multidisciplinary approach were given priority during the drafting of the study report and for the entire body of work that began in November 2018.

### i. Critical Analysis and Interpretation of the Data Collected in the Study Countries

As we have already mentioned, the whole range of paradigms and practices observed during the field missions proved to be both an asset and a challenge with regard to achieving consistency in the observations and findings to be used, and the recommendations to be presented.

The first phase of data processing focused on the aggregation of information and made it possible to draw conclusions for each country. This information sorting and classification exercise was conducted based on the themes selected in the information collection tool, i.e., the interview guide, as presented in Appendix 1. The table presented was turned into a compilation grid. The themes selected in this table (guide) are the same as those found in the terms of reference (ToR) used to establish the framework for the analysis:

1. History and institutional background of the introduction of the CBT approach
2. Employment and economic potential analysis processes in the selected countries
3. CBA processes for drawing up work situation analyses (WSAs), occupation and competency standards, and training and assessment frameworks
4. The implementation status of programs using the CBT approach
5. Training of trainers in the CBT approach
6. Creation of a certification framework directly linked to occupations
7. Impact of the CBT approach on the quality of TVET products

In addition to using the compilation grid, the analysis was also based on the criteria used to gauge the extent to which the CBT approach had been implemented and scaled up in the countries covered by the study, based on the successes and failures experienced. These criteria are presented in Appendix 3. This first level

of analysis provided the basis upon which the country report was drafted. The report then presented a more thorough and holistic analysis leading to the drafting of the seven-country synthesis report.

The analysis process used was the same for both levels of reporting. Once the data were collated, some findings emerged almost spontaneously. Each of the seven themes was also subdivided into sub-themes, which made it possible to break down the focus of the analysis and hone the recommendations made. Once each theme was analysed and findings were established, it was possible to draw the conclusion that some of the findings could be mutually reinforcing and could lead to more comprehensive findings across the entire study.

## ii. Limitations of the Study

This study on the contextualisation and adaptation of the CBT approach in seven African countries is innovative and unique in its comprehensive analysis of such a large number of countries. Indeed, most of the reference documents we consulted provide only a single analysis focused on one country or on a few neighbouring countries (e.g. Ethiopia, Kenya and Tanzania) with similarities in terms of the interventions or impacts of TFP assistance. Using a sample of countries that is limited in number, but representative in terms of its diversity, this study aims to issue recommendations and draw conclusions which, when so formulated, can not only echo the issues and challenges experienced in other countries, but also feed into their reflections and action strategies.

With the exception of Senegal, field missions were planned remotely and were mainly organised either by focal points designated by the Minister responsible for TVET, or by UNESCO regional offices or by IFEF, through networks of contacts within the ministries in charge of TVET.

Each interview began with a statement of the study objective to clearly define the nature of the information sought and ensure that the respondents did not think it was an evaluation or comparative study. It is important to reiterate here that the recommendations made in this report are not meant to be comparative. Instead, they are meant to support an analytical reflection by documenting good practices and presenting the real challenges related to the implementation of the CBT approach.

The definition associated with the term “competency” also varied during the field interviews, depending sometimes on the person interviewed and sometimes on the country concerned. Bias caused by differences in language or language proficiency (French or English) may also have had an impact on the definition. Due to variations in interpretation, the study grounded its analysis on the main principles of the CBT approach, to avoid getting bogged down in debates over terminology. However, the differences in the interpretation of the concept of “competency” have also led to limitations in or orientation of information collection.

From the standpoint of the results of the study, the findings and recommendations may benefit a number of other countries or even countries covered by the study that wish to update their practices and draw inspiration from the practices tested in another setting. It is our hope and wish that the facts presented in this report will allow these countries to avoid the pitfalls experienced by others and facilitate their search for solutions and good practices. This may help influence future policy directions and public policy reforms pertaining to vocational training and technical education.

## 2. HISTORICAL AND INSTITUTIONAL BACKGROUND FOR THE INTRODUCTION OF THE CBT APPROACH

The global economy experienced a boom following the end of the Second World War. Rapid training of apprentices and professionals for specific trades (direct on-the-job training) allowed a significant number of young people (mainly men) to enter the labour market. In North America, this period of effervescence was characterised by the creation of numerous vocational schools which, despite lacking the prestige of conventional schools or universities at the time, helped build the skills of a large proportion of the labour force and professional workers. The fundamentals of the CBT approach, i.e. training tailored to the needs of and with the involvement of the labour market, were being implemented, albeit unknowingly.

According to Boutin (2004), the CBT movement, at least in its initial version, had its roots in Taylorism and labour organisation – that is, in the industrial world. It took hold in the American school system in the late 1960s and was opposed to the person-centred approach pioneered by Maslow and Rogers (founders of humanistic psychology). The CBT approach quickly established itself in the world of education, beginning in the United States, in Australia and then in Europe. The United Kingdom, Switzerland and Belgium were among the first countries to redesign vocational education systems using this approach, with decision-makers moving from an outcome-based to a competency-based culture. Ultimately, training program design based on a CBT philosophy and principles, as they are known today, was gradually formalised in the 1980s.

The official paradigm shifts experienced over the last four decades are the outcome of numerous school reforms, initially driven by policy objectives, but also by social pressures to integrate training graduates. In addition, conventional training models were increasingly challenged by humanistic considerations supporting greater learner freedom and stronger involvement in their own learning process. Accordingly, governments decided to set up training systems based on measurable and quantifiable expected outcomes (by the economic sector in particular) and to follow the pace of student learning, in keeping with constructivism and socio-constructivism guidelines. In response to this teaching doctrine, a rethinking of the vocational training curriculum was required, shifting the focus from subject matter alone to the skills to be developed in response to the expectations of employers who had just entered a new era of competitiveness, notably due to the globalisation phenomenon which emerged from the 1980s onwards.

While these major changes took place in northern hemisphere countries, southern hemisphere countries continued to use pre-1960s pedagogy based on an outcome-based training (OBT) model. Due to unsatisfactory employment opportunities, especially for the growing number of young people, and also due to a mismatch between the training on offer and the needs expressed by employers, several countries in the southern hemisphere began to take an interest in the CBT approach. This approach would enable them to achieve better outcomes in terms of employment integration by improving training-employment matching.

5. <https://www.cairn.info/revue-connexions-2004-1-page-25.htm#>

At the dawn of the 2000s, boosted by bi-lateral and multi-lateral co-operation, the CBT approach spread in African countries. Some two decades later, most of the African countries that have undertaken reforms of their public policy on vocational training have adopted the CBT approach to teaching.

To provide a more practical illustration of the modalities of CBT introduction and the context in which it took place, the experience of the seven countries covered by the study is presented in the chronological order in which the CBT approach was introduced, whether officially or through pilot experiments.

## Ethiopia

Ethiopia has achieved important social, economic, and educational reforms, backed by a strong political will and TFP support. In addition to these reforms, there was significant devolution of decision-making and funding authority to regions, facilitated by the country's federal political system. After a series of recurring food crisis and poverty episodes, Ethiopia is now recognised for its rapid economic growth, which has established it as one of the most vibrant countries in Africa.

The Outcome Competency Approach (OCA) or Competency-based Approach (CBA), was introduced in Ethiopia prior to the start of the 2000s and was intensively implemented starting in 2005-2006. A major education reform acted as a catalyst for the decision to adopt the CBA approach, due to the government's increased will to involve businesses and address issues of chronic unemployment. The CBA approach was mainly introduced under the impetus of TFPs, including the German co-operation agency – Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) – which lends considerable support to efforts to structure vocational and technical training (VTT) in Ethiopia. In addition to Germany, other countries such as Singapore, China, Japan, Australia, Cuba, Korea, Italy, etc. have also contributed to the implementation of the CBA approach.

The paradigm shift in Ethiopia resulted in the production of 645 occupational competency standards (OCSs) representing all the professions listed in Ethiopia. To achieve this, Ethiopia drew on Singapore's comprehensive qualification standard model, Australia's OCS content and the German dual training model for the introduction of co-operative training. This first step led to the development of an Ethiopian CBA model that all bi- and multi-lateral co-operation programs have adopted. Underpinning the implementation of the CBA approach is, above all, a will for strong private sector involvement, which guided Ethiopia's decision to adopt it.

The government's initial vision was that TVET should be fully managed by the private sector by 2025<sup>6</sup>. The Federal TVET Agency (FTA), operating under the aegis of the Ministry of Education, manages the implementation of the TVET provision policy. This agency is responsible for communicating OCSs and assessment frameworks to training institutions. The responsibility for developing training frameworks has been transferred to training institutions.

In conclusion, Ethiopia has established a strong public-private partnership for OCS development. The final assessment framework is developed at the central level of government, while responsibility for developing a training framework is entrusted to training institutions and/or regions.

6. Federal TVET Agency, Ethiopian Renaissance and TVET Reform at a Glance, Addis Ababa, 2014, 24 p.

## Senegal

In the 1990s, a major reflection process was initiated in Senegal: quality training was needed to increase the employability of all young people, including those who had already completed many years of schooling. Following the Vocational Training Conference (Assises de la formation professionnelle) organised by the OIF in Bamako in 1998, Senegal organised a National Conference on Technical Education and Vocational Training in 2001, which resulted in an in-depth reform of the TVET system based on recommendations made in Bamako. This was followed, in 2002, by the creation of a ministry for vocational training. The reform, which was supported by French co-operation and the World Bank, led to the establishment of a Vocational Training Development Fund.

The CBT approach was first tested in Senegal more than 15 years ago through various interventions by TFPs (Canadian, French, Belgian and Luxembourg bi-lateral co-operation agencies) in the early 2000s. In embarking on this course, Senegal decided to adopt the CBT approach as the foundation for its educational reform in order to promote a better match between training and employment and improve the quality of training for a population in which 70% are young people under age 25. While experimentation with the CBT approach began in 2003, the first versions of the specific framework act were drawn up in 2006 by a tripartite state-employers-trade union committee. While the early versions between 2000 and 2005 were sometimes patchy and fragmented, various initiatives made it possible for TFPs to gradually implement large-scale CBT projects.

In 2015, the vocational and technical training framework act was adopted and formally ruled that the CBT approach was the methodology to be applied in Senegal. The recommendations of the 2014 Education and Training Conference reiterated the same recommendations as those adopted at the beginning of the 2000s and permanently enshrined the option of implementing the CBT approach. When this study was conducted in Senegal in January 2019, people were still talking about “experimenting with the CBT approach”, even though formal and informal initiatives had been in existence for nearly two decades.

The Ministry of Employment, Vocational Training and Crafts (MEFPA) is responsible for managing all vocational training programs, including apprenticeships, recognition of experience and support for apprentices.

In conclusion, Senegal has developed vocational training programs using the CBTA approach while other programs or different versions of the same programs continue to take an outcome-based approach. The roll-out of the CBT approach may depend in part on the human and financial resources made available, both internally and externally.

## Ghana

The aim of TVET in Ghana is to contribute to the development of a skilled labour force by matching the education system to the needs of the economy to provide young people with the skills they need to improve their employability. TVET development in Ghana is shaped by businesses’ growing demand for more post-basic education and training. Ghana is a country with a rich supply of raw materials, especially minerals. Since 2010, after the discovery of the massive Jubilee oil field, oil has become Ghana’s second largest export after gold. Nonetheless, its economy remains essentially based on agriculture while at the same time supporting industrial development.

The idea of introducing the CBT approach in Ghana was born in 2000 when the country was experiencing strong economic development and facing significant training requirements. Prior to this date, only the outcome-based training approach was used. As in Senegal, the CBT approach was introduced some two decades ago. In 2004, Technical and Vocational Education and Training (TVET) officially introduced Competency-based Training (CBT) into the system, inspired by the model developed by Botswana. In 2006, the TVET system received support from the Japan International Cooperation Agency (JICA) for a five-year pilot phase.

The TVET system in Ghana is managed primarily by the Council for Technical and Vocational Education and Training (COTVET) under the Ministry of Education. COTVET was established in 2006 to manage vocational training nationwide. It is the body responsible for standardising, regulating and supervising vocational training activities in public and private TVET institutions.

In 2012, the Ministry decided to harmonise CBT as well as the certification/qualification framework. In collaboration with industrial stakeholders, occupational standards were formulated, new curricula were developed, and training activities were organised, in particular with master craftsmen in the informal sector. Since 2012, COTVET, as provided for by Legislation Instrument LI 2195, has a mandate to serve institutions under 12 different ministries; its board of directors is co-chaired by the Ministry of Education and the Ministry of Science, Technology and Innovation.

In conclusion, following an experimentation phase, Ghana has established public-private partnerships over the past decade to develop occupational competency standards and implement training programs built on the CBT approach, but has not extended the CBT approach to the entire TVET system: CBT programs only involve a small percentage of TVET institutions, five training programs, and mostly the first two levels of certification (Proficiency Level 1 and Level 2).

## Benin

Benin's economy is highly reliant on its informal re-export and transit trading with Nigeria – which accounts for about 20 percent of its GDP – and on agriculture. In 1998, the country adopted a national policy to promote and develop vocational training and apprenticeships. Vocational training development continues to feature prominently in the strategies to be implemented to ensure this policy is a success. Supported by the national policy, the adoption of the technical education and vocational training reform in 2001 led to the creation of a Ministry of Technical Education and Vocational Training (METFP). It was then imperative to choose an approach for the implementation of the national continuing vocational training policy and the technical education and vocational training reform (REFTP), to wit, the CBT approach. Thus, the CBT approach has been in place in Benin for nearly 20 years.

One of the major strategic thrusts of this policy, dating back to 2001, is the development and modernisation of training by apprenticeship delivered by master craftspeople in their workshops. In developing and modernising apprenticeship training in the handicrafts sector, the national authorities had to deal with a lack of regulation and standards for occupations in the crafts sector. Practices varied from one business to another, and from one city to another. The master craftspeople who trained young people did not have any formal qualifications. The decision to develop and modernise training in craft businesses was thus a response to social as well as economic demand.

To make this choice operational, the METFP received co-funding from Swiss co-operation in Benin and technical support from the Swisscontact Foundation. In agreement with the Directorate of Vocational Qualifications and Training (DFQP), the latter has been testing the DACUM methodology since 2003 in order to develop training tools.

In conclusion, Benin first tested the CBT approach in the craft sector with the implementation of the DACUM approach in order to improve traditional apprenticeship. A partnership thus developed between representatives of craftspeople and the state to ensure that apprentices received what is known as dual training.

## Morocco

The second global oil crisis and a severe drought led to an economic slowdown in Morocco from the 1980s onwards, causing a rise in youth unemployment. Recognising the poor match between training and employment, in the early 2000s, the coordination body for public policies on TVET decided to introduce the CBT approach with support from Canadian co-operation as well as dual training with Germany support. Against this backdrop, the Vocational Training Ministry, with methodological support from Canada, initiated an experimental phase of the CBT approach between 2003 and 2009 in seven training institutions operating in the areas of agriculture, tourism, textiles, information and communication technologies (ICT), metallurgical industries, mechanical and electromechanical engineering, and crafts.

At the same time, TFPs, such as the European Union (EU) through the Meda II project, the French Development Agency (AFD), GIZ and the United States Agency for International Development (USAID), provided support in various sectors (agriculture, tourism, crafts, ICT, etc.) for the construction of training institutions, equipment purchases, as well as curriculum development and trainer training on the CBT approach. An analysis of this initial experimentation culminated in the launch of a new collaboration with Canada on a program called “REAPC” (Education Reform through the CBT approach) from 2009 to 2012.

The CBT approach is now applied to the three existing modes of vocational training – residential, dual and apprenticeship training – the first two of which are managed by the Office of Vocational Training and Employment Promotion (OFPPPT), which trains 90% of the country’s youth. The ministry’s Vocational Training Department (DFP) monitors apprenticeships in partnership with businesses. The CBT approach was also applied to private vocational training: private centres receive accreditation from the DFP if they provide evidence of using the CBT approach in developing their curricula.

The CBT approach is rolled out across all training pathways: all the curricula taught are designed or revised using CBT. However, the teaching methods associated with the CBT approach and the competency-based assessment model still combine OBT and CBT approaches, especially for residential and dual training. With the forthcoming opening of a trainer training institute (INFFP), the Vocational Training Department aims to intensify training for trainers and business mentors to guarantee their assimilation of the CBT approach. With regards to assessment, mastery of skills is still evaluated using a score out of 20. Finally, public-private partnership to ensure that training is matched with employment opportunities exists and is strong in certain training centres, such as Delegated Management Institutes (IGD) and apprenticeship training centres managed by professionals. This type of partnership is moderate to low in intensity in the system managed by the OFPPPT: the government is the main client, even though the OFPPPT is financed by a vocational training tax paid by businesses.

## Rwanda

The vocational training policy has been designed in response to the Rwandan government's economic development policy: develop a knowledge-based economy and strong industrialisation to make Rwanda a high-income country by 2050. Another important element of the policy is the promotion of self-employment, due to a large influx of young people into the labour market who need to be integrated before the economy is industrialised and specialised in higher value-added sectors. This strategy is also the outcome of a reflection process undertaken after the 1994 genocide. Indeed, improving education and living standards is one of the major guidelines outlined in the government's Vision 2050.

In the Ministry of Education's Vocational and Technical Training Policy published in April 2008, the CBT approach is recognised as a means for adapting training provision to the demands of the labour market. The CBT approach has been in place in Rwanda for about a dozen years, although programs based on the CBT approach were not established until 2015. In this regard, the TVET policy document (2015) builds on the CBT approach to support Rwanda's socioeconomic development and the alignment of TVET with the needs of businesses.

Matching of the provision of vocational training with the economy's job requirements is beginning to be achieved through the Labour Market Information System (LMIS). This alignment should lead to a professional integration rate of 80% of TVET graduates by 2024. Vocational training is managed by two institutions under the supervision of the Ministry of Education (MINEDUC): the Workforce Development Authority (WDA), which is responsible for validating and guaranteeing quality vocational training, and Rwanda Polytechnic (RP), which implements TVET.

TVET system governance and steering fall within the remit of the government (WDA and RP). Businesses are mainly involved at three levels: the Rwanda Development Board, an employers' federation, organises studies on employment requirements and projections. The 13 Sector Skills Council (SSC) reports on skills needs by sector and participates in the development of WSAs and OCSs, which are the cornerstones of the CBT process. Finally, businesses take in learners during their initial training and trainers during their continuing education.

In conclusion, Rwanda has implemented and disseminated the CBT approach in its TVET system through a public-private partnership in the first two stages of the CBT approach: understanding employment needs and developing occupational competency standards. Program operationalisation is handled by the state.

South Africa

During the apartheid era, vocational training, which was exclusively dedicated to the white population, was based on a dual apprenticeship system, managed by training institutions that had been created on the initiative of businesses. The end of apartheid ushered in universal access to education. This was followed by a protracted transition period during which the old system was rehailed. The economic and TVET worlds gradually lost touch. Current initiatives are restructuring the training system to ensure that the needs of businesses are better taken into account.

The TVET system has shifted from services targeting a very limited section of the youth population (during the apartheid era) to a broader service offering that targets the entire population. This increased outreach to a larger number of learners has not been matched by a proportional budget increase. To achieve greater efficiency, the country implemented a TVET reform slated for 2011-2016 and then extended it to 2020. In 2013, a white paper was issued that promoted the development of public-private partnerships (PPPs) in colleges and TVET centres.

TVET features a diverse range of types of training and apprenticeship that have emerged bit by bit in the country's recent history. Rather than replacing one another, these types of training have been layered one on top of the other, making training offerings and pathways particularly complex and unintelligible.

The CBT approach is not used for the two main training programs, National Technical Education (Nated) and the National Certificate Vocational (NCV), neither is it used for state-funded technical high school education. It is used for two of the remaining programs (Unit Standard Learnership and Dual System Pilot, the latter of which is spearheaded by German and Swiss co-operation), which target a minority of young people. In the case of the Dual System Pilot programs (called "Centres of Specialisation" or CoS), the 13 trades targeted were selected on the basis of a nationwide development plan drawn up in 2012. Ultimately, only these last two types of training use a real CBT approach, and only since the approach was implemented in 2012 (i.e. for less than a decade). While the CoS bring real hope for improving the quality of TVET and effectively mainstreaming the CBT approach, it is premature to draw conclusions because they were still only at the testing stage in 2019.

# 3. STUDY FINDINGS

## A. Progress in the Implementation of the CBT Approach

The CBT approach has had considerable leverage in the field of education and training: rarely has a methodological approach elicited such a response in TVET ministries, in the public sector (ministries and bodies related to those responsible for TVET), and in the economic sector. In some Western countries (Canada/Quebec, Switzerland, Belgium, Germany, etc.), curricula are currently mostly drafted with a focus on expected competencies. Currently, everything follows this single path to capture learners' trajectory from their entry into the training system to their employment.

The first CBT experiments in the study countries date back more or less two decades and were supported by TFPs (bi-lateral co-operation with Canada, France, Belgium, Germany, Switzerland, Australia, Luxembourg, Japan, etc.). Broadly speaking, it has also been observed in each of the countries that the various programs have often been patchy and fragmented, operating in parallel rather than in a harmonised and unified manner, leaving room for differences in methodology and terminology and phases of inactivity.

It also appears clearly that the leverage effect of CBT implementation is often due to substantial support from TFPs, initially with the agreement of the country but not on a direct intrinsic impetus from the latter. Therefore, in its initial phase, CBT implementation is often viewed as a "pilot experiment" to be gradually rolled out across the entire training system. The study found that countries that decide to begin with a pilot phase do not quickly and fully adopt the approach. This results in distinctions across centres, sectors and regions. Overall, this gradual introduction of the CBT approach sometimes generates resistance or methodological disagreements over its mainstreaming.

Program implementation approaches and strategies based on the CBT approach vary across the seven study countries. Major differences can be seen with regard to the approach, depending on whether the initial choice was to mainstream the approach or conduct a pilot experiment. Two countries, Rwanda and Ethiopia, initially opted for mainstreamed implementation, while a gradual, experiment-based approach was observed in five of the seven study countries: South Africa, Benin, Morocco, Senegal, and Ghana. The decision to start with pilot projects seems to create differences at the sectoral and/or territorial and/or training institution level, due to fragmented interventions, especially by TFPs pursuing their own specific directions. The differences observed in the northern and central regions of Senegal in comparison with the Dakar region are examples worth mentioning: a CBT approach was implemented in the northern and central regions of Senegal with the support of a TFP and with the agreement of the national authorities, while the Dakar region used OBT programs. A similar situation was found in Ghana: partners focused their interventions on certain institutions and were involved in only five training programs.

Referring again to the disparities noted earlier, it is also worth pointing out that such disparities may be present within the same region for training institutions: some training institutions have received infrastructure and physical resource support from TFPs, while others have only been able to rely on state support. However, all seven countries have shown deficiencies in terms of infrastructure and equipment. Field visits revealed wide-ranging disparities (such as in Ethiopia), even though the CBT approach is implemented nationwide and the implementation strategy focused on widespread implementation from the outset.

In addition to the regional/sectoral/institutional disparities, the pilot approach has another notable consequence: slower progress in the CBT mainstreaming process. In contrast, the experience-based implementation approach does not impede major strides in establishing a framework that is conducive to mainstreaming, as has been observed in Morocco and Rwanda. Benin has also focused on reforming its traditional apprenticeship system (a unique CBT implementation model).

In countries where the CBT approach is still not widely implemented, several training institutions operate in hybrid mode: they offer CBT programs (whose implementation is supported by TFPs) alongside outcome-based teaching (OBT) programs. In some cases, training institutions begin operating with programs based on the OBT approach due to a lack of equipment and materials, even though the CBT approach has been made mandatory for all new programs.

One very positive factor for training institutions working exclusively in accordance with the CBT approach involves discussions with managers, trainers and learners, since they demonstrate that training has enabled stakeholders (managers and trainers) to fully embrace the principles underlying the CBT approach and since they are determined and committed to implementing it. They favour a participatory approach for learners and set store by the collaborative work of trainers as well as their continuing education (or training of new recruits). As far as the learning environment is concerned, every effort is made to ensure that it is modelled on the professional world, although it is difficult for a number of training institutions to achieve perfect consistency due to obsolete infrastructure and a lack of financial and material resources. Learning that reflects the professional world is therefore still too often acquired during internships or through a dual learning approach.

Partnership dynamics with businesses/the private sector are still limited, even in countries where the approach is widely implemented. Despite the existence of partnership agreements and frameworks, private sector involvement remains a challenge in the program design process, in the provision of training (in some cases) and certification services, or in commitments to hosting internships, dual learning programs or apprenticeships (for learners or trainers, in the case of Rwanda). Barring rare exceptions, such as in upgraded traditional apprenticeship in Benin, CoS in South Africa, Sectoral Centres in Senegal, or IGDs and apprenticeship in Morocco, private sector involvement is still scant and below expectations.

Heterogeneity in the application of the quality mechanism for implementing the CBT approach is also observed. Often, it fails to take a holistic view of the training institution's management system or the quality parameters on which the CBT approach is based (trainers returning to the workplace for professional

development purposes, private sector involvement in learner assessments, etc.). The quality system parameters are founded on a more bureaucratic approach to the management of training institutions (monitoring of attendance sheets, timetables, classroom hygiene measures, etc.). The frequency of inspections, audits and support interventions varies, due in particular to the technical and financial resources allocated to them. As a result, training institutions in rural areas are often disadvantaged compared to urban institutions. In short, there seems to be a real discrepancy between the ambitions pursued by the bodies in charge of quality assurance and the resources actually deployed.

Independent training institutions are a necessity when it comes to implementing the CBT approach. This has been discussed and reflected upon in recent years in some countries, although it seems slow to become operational. Even in countries where the CBT approach is implemented nationwide, the management of most training institutions remains centralised within state institutions. This is often the case of sector monitoring (where it exists) required for planning training programs, engineering management (i.e. in Ethiopia, Morocco, and Rwanda, where it is still centralised), and learner certification management, which offers little flexibility to training institutions. Some exceptions are worth noting. These include training institutions involving the private sector in management, especially sectoral branches. Sectoral vocational training centres (construction, food processing, mechanics, etc.) in Senegal and delegated management institutes in Morocco come to mind here. In this case, there is greater flexibility and responsiveness in meeting the needs of the private sector.

On the other hand, training institutions governed by centralised state management or whose management involves the private sector have some degree of autonomy in terms of the provision of regulated services, the sale of continuing education or in terms of teaching methods and training standards development (i.e. Ethiopia and technical high schools in Senegal), since the latter do not require validation, either by the state or the private sector.

As a consequence, and as presented in the previous paragraphs and in Appendices 1 and 3, the themes on which the study is based, and the criteria for analysing the various practices observed in the countries with regard to CBT implementation and mainstreaming, are multifactorial (evaluation based on the CBT approach, training of trainers in the CBT approach, development of programs based on CBT engineering, law or decree on the adoption of the CBT methodology, government funding versus donor funding, system governance – whether or not the private sector is involved, etc.). and are based on overall findings.

In the second stage (Table 1), a brief inventory is presented by country based on the level of mainstreaming in the country or the number of programs developed in relation to those available, according to the “time” factor involved in achieving the level of implementation observed. It is worth reiterating here that the information presented is not intended for the purpose of comparing and evaluating countries. It is only intended to present the findings that will feed into the recommendations and findings that will be subsequently adopted. Therefore, the countries are presented in alphabetical order.

**Table 1 – Summary of Main Observations Regarding CBT Implementation and Mainstreaming**

Country	Main Observations
<b>Benin</b>	<ul style="list-style-type: none"> <li>• In 2016, finalisation of the development of competency charters for 24 trades.</li> <li>• 13 of these 24 trades practice dual apprenticeship leading to a Professional Qualification Certificate (CQP).</li> <li>• For the 13 CQP-certified trades, curricula were revised using the DACUM method.</li> <li>• In 2019, there were 46 matrices for 46 trades leading to the Trades Qualification Certificate (CQM).</li> <li>• The CQM has harmonised the certification of traditionally trained apprentices with a craftsperson, nationwide.</li> </ul>
<b>Ethiopia</b>	<ul style="list-style-type: none"> <li>• TVET has adopted the CBA approach and promoted the involvement of businesses/employers in competency development over the past 25 years.</li> <li>• In 2019, the CBA approach was fully mainstreamed (675 OCSs available, approximately 200 training frameworks taught, 21,000 TVET trainers trained in the CBA approach and more than 1,500 training institutions delivered all their programs using the CBA approach).</li> <li>• Transition to the CBA approach has been completed for initial and continuing education and for all training institutions (under the Ministry of Education or sectoral ministries).</li> </ul>
<b>Ghana</b>	<ul style="list-style-type: none"> <li>• CBT implementation approach began in 2006 with a pilot phase involving only five training programs and the first two levels of certification.</li> <li>• In 2012, legislation stipulated the mainstreaming of the CBT approach, but operationalisation measures were not ensuing.</li> <li>• Thanks to support from Germany with the Kreditanstalt für Wiederaufbau (KfW), the CBT apprenticeship approach is being implemented more extensively and at a faster pace (7/10 regions in Ghana use the CBT approach in apprenticeship).</li> <li>• According to COTVET, out of 288 public and 290 private TVET institutions, only 92 (25 of which are public institutions) have CBT accreditation (16% of the total number of institutions, 4% of which are public).</li> </ul>
<b>Morocco</b>	<ul style="list-style-type: none"> <li>• Morocco went through a CBT experimentation phase between 2003 and 2009. A CBT methodology was formalised (several guides were developed) and recognised as a baseline in 2009, through a decree.</li> <li>• Since then, a roll-out phase has been implemented. All stakeholders and professional training institutions are required to follow the same process to operationalise the CBT approach.</li> <li>• 160 initial vocational training programs out of 347 training sectors have been updated.</li> <li>• CBT programs have been developed for all residential, dual, and apprenticeship training programs delivered within the framework of the initial TVET, but their implementation is still experiencing difficulties, especially in terms of assessment/certification.</li> <li>• Apprenticeship training programs adapt the CBT approach more flexibly due to the high degree of autonomy vested in the mostly private training centres, which must demonstrate that they are applying the CBT approach in order to receive accreditation and benefit from government subsidies.</li> <li>• The CBT approach has also been implemented in the sectoral ministries of Tourism, Agriculture and Fisheries - with a 70% roll-out rate for Agriculture.</li> <li>• A framework law passed in 2019 institutionalises the CBT approach in all sections of the education system, including TVET.</li> <li>• To bolster public-private partnerships, the Moroccan authorities have launched the development of delegated management institutes (IGDs). Nine IGDs are currently operational and their management is entrusted to professionals under a delegated management agreement between the government and management companies created by professional associations in the sectors. With this approach, the IGDs are fully in the spirit of the CBT approach.</li> </ul>

<b>Rwanda</b>	<ul style="list-style-type: none"> <li>• It took Rwanda about ten years to reform its TVET implementation process.</li> <li>• Rwanda implemented the CBT approach and rolled it out in all centres for levels 5 to 7 of the NQF (National Qualification Framework).</li> <li>• Levels 6 and 7 are scheduled to start in 2020.</li> <li>• Since 2015, 146 vocational training programs have been reviewed and developed using the CBT approach.</li> <li>• In 2019, 1,600 out of 4,499 TVET trainers had been trained.</li> <li>• In 2019, 97,144 young people (56% boys, 44% girls) were enrolled in 360 public or private vocational training centres in a curriculum targeting 12 economic sectors.</li> </ul>
<b>Rwanda</b>	<ul style="list-style-type: none"> <li>• In 2015, the Vocational and Technical Training Framework Act was passed and formally adopted the CBT approach.</li> <li>• In 2019, a large number of programs were still delivered using the OBT approach.</li> <li>• For the 2015-2016 school year, the MEFPA recognised the presence of 384 educational institutions (107 public and 277 private).</li> <li>• According to the vocational and technical training directory (2017), 67 CBT programs, including 52 delivering a range of qualifications from the Certificates of Professional Qualification (CS) to the BTS (Highly Skilled Technician’s Certificate) in vocational training centres (CFP) and high schools (6 CS, 20 CAP, 5 BEP, 6 BT, 6 BTS), and 6 programs from levels 3 to 5 delivered by the Port Trades and Logistics Training Centre (CFMPL), two Certificates of Aptitude for Teaching Family and Social Economy (CAEEFS), two Certificates of Aptitude for Vocational Education (CAEP) and five technical baccalaureates.</li> <li>• Territorial, sectoral and financial fragmentation of CBT approach implementation initiatives based on TFPs’ focus areas or on certain economic sectors (e.g. agriculture, mining, mechanics, etc.).</li> <li>• Implementation differences at the regional level or in training institutions. (hybrid mode - CBT and OBT).</li> <li>• It is difficult to update programs already developed using CBT due to limited allocated resources.</li> </ul>
<b>South Africa</b>	<ul style="list-style-type: none"> <li>• Limited implementation of programs using the CBT approach.</li> <li>• Two main programs, Nated and NCV, are not often customised and are rarely in sync with local needs.</li> <li>• The Unit Standard Learnership and Dual System Pilot programs have been following the CBT approach since 2012 (less than ten years).</li> <li>• The CoS (13 trades selected on the basis of a large-scale development plan –2012) were still in the testing stage in 2019.</li> </ul>

## B. Good Practices Observed

The prevailing school of thought, which is influenced by the CBT approach, emphasises the need to give learners their rightful place at the heart of the learning process, as well as the need for in-depth reflection on the part of trainers, pedagogical managers (and managers of training institutions), and, more generally, on how to manage the training system. Despite the gaps and challenges discussed in the next section, it is worth noting that considerable efforts have been made to improve the quality of training.

Numerous debates have been launched on why it is important to ensure that the private economic sector plays an active role in developing training content and taking in trainees, but also in contributing to the governance of public training institutions. Efforts made to involve the economic sector in the study countries demonstrate a high level of understanding of the CBT approach with regard to training management. Finally, these debates and the issue of private sector involvement have increased stakeholders' (trainers', employees of training institutions', etc.) awareness of the important role they play in society.

With regard to training engineering, the concept of competency has gained considerable momentum, since it is used in drawing up employee skills assessments in the work environment, as well as in the design of the OCS in training based on the CBT approach. These OCSs provide a list of skills that form the baseline for education systems and ensure the first step towards a better match between training offerings and businesses' needs.

Overall, the implementation of the CBT approach has created dynamics between vocational training systems and the private economic sector. Their collaboration has grown stronger and has resulted in greater recognition of competencies by employers and increased willingness to delegate the management of public training institutions to the private sector.

This section of the report provides an overview of the good practices observed in the seven study countries, regardless of their level of progress in implementing the CBT approach. It also discusses the intrinsic and extrinsic variables of the TVET system, as presented in the following section ("C. Obstacles and Constraints affecting Implementation") that have impacted the roll-out of the CBT approach.

## Summary

- **The involvement of local businesses in the development/updating/contextualisation of training content encourages close collaboration with training institutions.** This facilitates the connection between the education sector and the employment sector, i.e. by identifying local companies' manpower requirements, making them responsible for taking in trainees, and increasing the supply of continuing education services in response to the demands of a changing job market. This involvement contributes directly to improving the skills of graduates, as well as to increasing the quality of the education system, two outcomes advocated by the CBT approach.

The Centers of Specialisation (CoS) responsible for dual vocational training in South Africa, like Morocco's Delegated Management Institutes (IGDs) and Senegal's Sectoral Vocational Training Centres, are examples of this partnership dynamic, which grants a major role to the private sector. The CoS have revived genuine collaboration dynamics between the private sector and TVET, especially when it comes to developing training programs, alternating theory and practice, providing certification based on integrated tests assessed by the private sector, and offering flexible and rapid training.

To better cater for training required to access jobs in strategic or promising sectors, Senegal has set up Sectoral Vocational Training Centres. These are managed within the framework of a public-private partnership (PPP) framework and training content is defined by professional branches (construction and public works, food processing, port trades, agricultural machinery, etc.) and "clusters" or sectoral training networks, made up of several institutions and administered by a board of directors chaired by the private sector (tourism, horticulture and poultry clusters).

- **Identification of sustainable options for implementing a CBT model that is sustainable over time and affordable.** One of the challenges faced by countries when implementing the CBT approach is the substantial investment needed to rehabilitate infrastructure and purchase training equipment. Upgrading and professionalising traditional apprenticeships is an interesting way to meet these financial and structural challenges. Choosing to invest in craftsmen's workshops and thereby build on existing assets (a certain level of equipment and materials already in place), as well as the knowledge and skills already acquired by master craftspeople, makes it easier to implement the CBT approach from a financial and technical standpoint.

Benin has built on an existing apprenticeship system, while upgrading and professionalising it to enhance its credibility. The country has thus minimised the impacts of a paradigm shift imposed by the CBT approach (traditional apprenticeship shares several values with the CBT approach: a practical, pragmatic approach requiring learner/apprentice involvement, etc). In addition, the focus on developing apprenticeship has allowed a cultural and social reconciliation between the educational and private sectors to emerge, which should not be underestimated in CBT implementation.

At the same time, the interest shown by Ghana in professionalising its apprenticeship system suggests that this choice is based on paradigms similar to those adopted by Benin. In Ghana, implementation of the CBT approach has been more successful in apprenticeship training, as demonstrated by strong involvement from master craftspeople who have become apprenticeship trainers. Apprenticeship ("Proficiency Level 1 and Level 2") is clearly illustrated in the National Certification Framework (NCC) for TVET. The CBT approach has largely contributed to the development and recognition of apprenticeship as a training method.

- **Responding to training opportunities through the rapid creation of OCSs based on strong private sector involvement.** By leveraging this approach, countries can quickly organise their economic sectors and align the skills required with economic priorities and the labour market. Logic dictates that education sectors should be swiftly linked to employment by developing OCSs, which are the cornerstone of the CBT system upon which training frameworks are based. Efforts are focused on producing OCSs at central level (involving the private sector) and delegating further development to the institutional level.

Ethiopia has taken this option, focussing partnerships with businesses on OCS development. Building on this approach, the country has organised a dozen economic sectors and has been highly productive: 675 OCSs were available in 2019. Program development is entrusted to the regional and local levels to allow greater decentralisation.

In Ghana, the CBT approach in apprenticeships has been the basic methodology used to define professional standards and involve economic actors in the development of training pathways. Ghana has focussed on organising the private sector, especially the informal sector, and forming associations to enable it to play a role in determining the competencies sought.

- **A clear and strategic political focus on mainstreaming the CBT approach instead of using a “pilot project” approach.** Although it does not preclude financial, institutional and organisational difficulties, focussing on mainstreaming from the outset facilitates a more homogeneous roll-out of the CBT approach. In addition, TFPs coordinate their activities more closely around this strategy. Geographic and sectoral fragmentation is lessened. The pilot approach seems to lead to a double-track implementation of the CBT approach, both regionally and within the same region or even within the same training institution. In addition, in a context characterised by “pilot projects”, it is more difficult to develop a structured and complementary articulation of TFPs, since they cannot rally round a clear vision guiding the implementation of the CBT approach.

The mainstreaming of the CBT approach in Rwanda was the outcome of a clearly articulated economic vision based on the will to establish a system to develop the competencies sought by the labour market. The CBT approach was the tool used to achieve that result. It took ten years for Rwanda to mainstream the CBT approach across its territory. In addition, Rwanda coordinated TFP action around its vision, allowing it work towards several goals at the same time: establishing partnerships with economic representatives, developing programs, equipping and building centres, and training trainers.

Ethiopia was also able to rally the TFPs around a common vision, having also opted for a mainstreaming of the CBA approach from the outset. This initial step made it possible to implement an Ethiopian CBA model to which all bi- and multi-lateral co-operation programs were adapted. As a result, the CBA methodology is standardised throughout the country, including all sectoral ministries and not only the ministry in charge of TVET.

**Table 2 – Summary of Good Practices Observed in CBT Implementation**

Good Practices Observed	
1	Strong public-private partnership in the implementation of the CBT approach supports the development of TVET (co-financing, delegated management of centres, definition of content and competencies).
2	The involvement of the local private sector in the development/updating/contextualisation of content provides flexibility in action that is otherwise impossible to achieve under centralised management alone
3	The funding required for quality implementation of the CBT approach is a shared responsibility between the public and private sectors.
4	The sustainability of the CBT approach is based on realistic implementation that is tailored to the realities and environment of the country, both in terms of physical and financial resources.
5	A clear political vision guiding the implementation of the CBT approach and supporting its mainstreaming from the outset, rather than relying on pilot experiments.
6	TFP coordination around a clear TVET strategy consistent with priority areas of economic development.
7	The agility of the chosen methodology and the flexibility of CBT implementation modalities allows the approach to be rolled out more rapidly.

## C. Obstacles and Constraints affecting Implementation

### General Points

Every reform and every change in methods or processes brings its share of tensions and anxieties. Not surprisingly, however, reforms involving the CBT approach to vocational training systems have been widely criticised, since some experiments, especially those conducted at the basic education level, have not been positive or conclusive. In 1990, new curricula based on the CBT approach were introduced into the basic education system in Benin with strong support from some TFPs. This pedagogical approach has sparked, and continues to spark, intense debates and controversies among trainers and in the education system. However, the CBT approach applied in vocational training seeks to create links between the job market and learner integration. In primary education, the relevance of this type of approach, which requires substantial resources, particularly when the focus is on basic learning<sup>7</sup>.

TVET has faced no shortage of challenges, including insufficient planning for the transition from the OBT to the CBT approach, a lack of trained human resources, insufficient financial resources to sustain change, demands for results from trainers and training institutions, and assessment procedures and systems inconsistent with the CBT approach. Despite these observations, TVET stakeholders remain convinced of

7. Jean-Marc Bernard, Alain Patrick Nkengne and François Robert (2007).

the positive impacts, benefits and outcomes achieved using the CBT approach, despite the obstacles and challenges encountered. All seem to share the opinion that the problem lies not in the CBT approach per se, but in the resources or methodology provided for its implementation, since it is not always tailored to the social and economic realities of the African continent.

Therefore, this section of the report outlines the main challenges and obstacles facing countries as they implement the CBT approach. To avoid comparing the implementation of a pilot experiment versus a general roll-out, it was taken for granted that the obstacles and challenges encountered during a pilot experiment would be directly related to the mainstreaming of the CBT approach.

## Selection of the Implementation Approach and Roll-out Strategy

In all of the countries visited, questions were raised regarding ongoing pilot experiments or regarding the financial and material resources needed to implement the CBT approach. The diagnosis showed that in countries that are slow to mainstream the CBT approach, the **“pilot experiment” concept can fuel resistance to change**, due to the divisions that the experiment creates among various TVET stakeholders. Furthermore, most of the countries that chose to start with a pilot project failed to harness the necessary resources to begin mainstreaming and remained dependent on support from TFPs. In the countries that decided to opt for mainstreaming from the outset, all actors (teachers, decision-makers, managers, businesses, etc.) seem to be mobilising to overcome difficulties. There are fewer frictions, since everyone can buy in to a common vision of CBT.

In addition, some have complained that the government **underestimated changes entailed by the implementation of the CBT approach**. In this sense, they agree with Perrenoud (1998)<sup>8</sup> who observed that “the extent of the shift in perspective is underestimated due to a false sense of familiarity with the language (referring to apprenticeship and the CBT approach). A competency-based approach calls for a complete reconstruction of training systems and approaches”.

The pilot experiments and initiatives implemented by all the states (and the TFPs that supported them) have shown that successful implementation of the CBT approach was underpinned by substantial resources and a major paradigm shift in planning, training management, evaluation-certification and regulation (especially through professional integration). It should also be noted that this paradigm shift has run up against bureaucratic and administrative red tape, notably due to the time required to change a procedure or implement new standards, etc. As a result, it has not been possible to scale up some pilot experiments because, since they were pilot experiments, they were not able to address all the stages of transformation of the training systems, even after more than a decade (or even close to two decades) of experimentation.

8. Our translation. [https://www.unige.ch/fapse/SSE/teachers/perrenoud/php\\_main/php\\_1997/1997\\_10.html](https://www.unige.ch/fapse/SSE/teachers/perrenoud/php_main/php_1997/1997_10.html)

## Delays in establishing a regulation system

Although the challenges and obstacles associated with limited resources, especially financial resources, can be viewed as the main causes of obstacles to CBT implementation, this section proposes a broader overview of all the challenges encountered. Some of them are shared by all countries, while others are specific to one or a minority of countries. It should be noted that although all seven study countries have adopted the CBT approach, **slowness in undertaking a regulation process for their TVET system (sectoral monitoring of jobs and monitoring of trainee integration) is a common challenge.** The management of their system is still based on training supply management (number of programs offered, number of learners trained, number certified, etc.) and not on the actual employment of trainees as an indicator of the external effectiveness of the TVET system.

## Skills assessment remains a challenge

**Another common challenge lies in the fact that, despite the efforts made in this area, private sector involvement in skills assessment is still limited. Assessment practices are still knowledge-based due to limited financial capacity to assess trainees' actual skill sets.** In addition, trainers lack the necessary workplace competencies, and their practical and technical experience remains limited or even non-existent. These challenges are directly related to the criteria presented in Appendix 3, i.e. those used to assess the degree of progress achieved in implementing the CBT approach in the study countries.

## Limited regulatory and legal frameworks

**A major hurdle lies in the political decision to put in place a legal and regulatory framework (law, decree) and substantial funding, which are slow to become effective.** All of the countries initially put in place a national policy supporting TVET or officially recognising it as a driving force for social and economic development. In most cases, these policies are consistent with educational reforms that have been underway for more than a decade. For TVET to meet the goal of converting graduates into operational workers (rather than unemployed people), the CBT approach has emerged as THE solution. Countries then put in place legislation proclaiming the CBT approach as the methodology to be used as a tool for operationalising reform.

**There appears to be a gap between the existence of this legislation and its actual implementation,** as was observed in Senegal and Ghana. Although the legislation formally established the CBT approach as the chosen methodology to be applied in 2012 for Ghana and 2015 for Senegal, the two countries are faced with the impossible task of extending the CBT approach across their entire territories, using their national budgets. The contribution of TFPs remains necessary, even after several years of experimentation. This difficulty in scaling up and coordinating TFP interventions nationwide leads to the conclusion that one of the main challenges here is tied to the political will to make the implementation of the CBT approach a priority. **The implementation of the CBT approach still seems to hinge on TFPs' involvement and has not been subject to transformational leadership.** One possible explanation for this situation could be the institutional instability observed in TVET ministries (structural changes, inclusion of secondary education, changes in titles and strategic directions, etc.).

## Funding models

The state's financial contribution to CBT implementation often remains unchanged from its pre-reform level and is not taken into account in the indexation of the budgets granted to ministries responsible for operationalising the CBT approach. Budgeting always tends to be based on the practical and logistical constraints specific to the OBT approach, which requires fewer consumables, equipment and materials. The same applies to the orientation of educational management, which remains more traditional than the orientation supported by the CBT approach. As a result, **budget and financial challenges are directly correlated with a pre-existing challenge, namely real recognition of CBT implementation as a government priority.** The enactment of laws or decrees has not resulted in a fundamental paradigm shift on the part of decision-makers and there is no correlating financial contribution. This constraint has been observed in five of the seven study countries, excepting only Rwanda and Ethiopia which managed to allocate 14% of their education budgets to TVET in 2015<sup>9</sup>, with Rwanda managing to coordinate TFP action around its vision.

The decision to implement the CBT approach in all seven countries was initially based on a substantial financial contribution from one or more TFPs. The initiative was launched with TFP support, either through pilot experiments or by supporting the development of apprenticeship (dual training), developing new target sectors in emerging areas of activity (green energy, extractive industries, etc.) or an approach focusing on economically disadvantaged areas. **While their financial contribution is decisive for the implementation of the CBT approach, it sometimes proves to be an obstacle to tailoring implementation to the country context.**

The TFPs' approach is mainly focused on projects aimed at specific targets, based on specific parameters (expected results, indicators, focus areas, beneficiaries, partnership organisations, etc.). As a result, although funding is invested in supporting CBT implementation, the implementation process may prove to be geographically or institutionally fragmented or distributed in phases, delaying nationwide roll-out.

## Inadequate infrastructure and equipment

**Infrastructure upgrading** is another challenge that was observed. Notwithstanding the goodwill of training institutions' management and pedagogical teams, implementation of CBT teaching strategies is constrained by a lack of space and by the way they are set up. Thus, the issue lies not in a lack of knowledge on the part of the trainers, but in the limitations inherent in the infrastructural framework. Due to an ever-increasing number of young people accessing training, learner-trainer ratios are rising, and the space occupied within training institutions is increasing, including with cohorts alternating between morning and evening sessions to increase the number of young people trained. Once again, **prioritisation of CBT implementation was either not pursued or was lost in the flood of government priorities.**

9. A Global Overview of TVET Teaching and Training: Current Issues, Trends and Recommendations. Final report: Thirteenth Session: Joint ILO–UNESCO Committee of Experts on the Application of the Recommendations concerning Teaching Personnel (CEART), 2018.

## Harmonisation of TFP interventions

**The absence of a clear and strategic vision, aimed at aligning and coordinating TFP action in the implementation of the CBT approach, is a challenge facing many countries.** The lack of consultation among TFPs and between TFPs and the state means that support is focused on addressing part of the national objectives, with a risk of duplication of efforts and conflicts. This has a counterproductive effect on the harmonised roll-out of the CBT approach and carries the risk of maintaining the CBT approach in a state of perpetual experimentation. While the principles advocated by TFPs in relation to the CBT approach are similar overall (WSA, identification of business needs, derivation chain leading to the production of standards, etc.), it may involve additional steps, its own specific templates or its own terminology (for example: using the concept of “capacity development” instead of “skills development”) and could lead to conflicting approaches, as well as misunderstandings and misinterpretations.

These situations result in serious and burdensome constraints, since countries must accept them in order to benefit from TFP support. Depending on the national bodies involved, various framework models and methodologies can be seen, raising the question of “who has the right CBT methodology?”. In addition, failure to coordinate TFP actions can benefit various bodies within the same ministry. This fragmentation contributes to making TFP actions more disparate, less complementary and unable to pool financial resources. TFPs sometimes create consultation forums on their own initiative, holding meetings and working together in a harmonised manner in order to adopt more strategic directions to guide their support activities.

Considering this situation, there is cause to re-establish links with political commitment and TFP financial support. If we look at the cases of Ethiopia and Rwanda, we can see that these countries were able to roll out the approach across their entire territory from the outset, like Morocco, which decided to roll out the approach after a pilot phase, even though they received TFP financial support (like the other four countries). This **reality is contingent on the countries’ capacity to coordinate TFP action and on the development of a clear vision and strong leadership and guidance to support CBT implementation.** In addition, the ministries or bodies in charge of TVET have also been able to impose the implementation of the CBT approach on sectoral ministries, which also demonstrates the decision-making clout and influence bestowed on those bodies.

## Lack of flexibility of the CBT implementation model

**Another obstacle encountered is the fact that the baseline model for the implementation of the CBT approach does not adequately fit the socio-economic environment of the countries or the cultural aspects inherent in training.** Going back to the idea of planning for the changes entailed by the CBT approach: adaptations can be numerous, costly and unrealistic if we try to import and transpose a functional system from northern hemisphere countries, as is, without contextualising it. Adaptation or contextualisation helps to ensure successful implementation of the CBT approach and make it sustainable.

The example of Benin is interesting. This country banked on the introduction of the CBT approach by redesigning its traditional apprenticeship system. Faced with a financial and structural challenge, Benin chose to invest in craftspeople's workshops and build on existing assets (a certain level of equipment and materials already in place), as well as knowledge and skills already acquired by master craftspeople. The CBT approach has been implemented by upgrading those workshops (to enable apprentices to complete their apprenticeship in accordance with the standards established in the reference standards), while professionalising master craftspeople to turn them into apprentice trainers (which means upgrading both their technical and pedagogical skills), while being less demanding financially and technically (because of the skills already in place and taking into account local realities).

Furthermore, building on a traditional apprenticeship system that is already in place, while renewing and professionalising it to lend it additional credibility, minimises the impact of the paradigm shift imposed by the CBT approach (traditional apprenticeship has several values in common with the CBT approach – a practical, pragmatic approach, requiring learner/apprentice involvement, etc.). Furthermore, developing apprenticeship also means reconciling both the cultural and social aspects of the educational and private sectors. Therefore, Benin's example of upgraded apprenticeship illustrates how the implementation of the CBT approach can be customised. This shows that **the failure to contextualise the CBT implementation methodology becomes a major obstacle to successful implementation, but even an even greater one to the sustainability of knowledge acquired during the experimentation stages.**

One observation may be made based on this experience: the implementation of the CBT approach relies mainly on applying standards or rules. Use of guides – reference documents or even recommended methodologies – has meant that the substance of the CBT approach has been forgotten. **The inflexibility or rigidity of the implementation process has been a major obstacle to stakeholder commitment or even motivation and, in a more holistic way, to a deeper understanding of the principles underlying the CBT approach.** A strict focus on the order of the steps and procedures reduced appreciation and understanding of the phenomenon, thereby limiting initiatives and innovations that could have facilitated the mainstreaming and sustainability of the CBT approach.

For many TVET stakeholders, CBT implementation boils down to a materials, standards and content development phase, in compliance with specific and well-defined development standards laid down by donors. As a result, a great deal of effort has been put into the product rather than on the importance of understanding paradigm shifts. **The time allocated for the production of standards, the organisational burden and the costs associated with managing their production are all obstacles to progress in implementation.** The standards are becoming restrictive and difficult to uphold for the institutions responsible for their implementation. This leads to many years of experimentation with a method specific to each TFP or each project, which is difficult to implement on a wide scale.

## Private sector involvement and accountability

Furthermore, the role and real involvement of the private sector in the implementation of the CBT approach is another major issue. Public-private partnerships (PPPs) are often cited as an example in the context of implementing the CBT approach. However, in practice, **private sector involvement remains timid** (with a few exceptions). The private sector is mainly involved in the training engineering process and in taking in trainees or trainers (for upgrading). A few examples, such as IGDs in Morocco, CoS in South Africa, and Higher Vocational Education Institutes (ISEPs) and Sectoral Vocational Training Centres in Senegal, rely on strong private sector involvement, or even involvement in the management of training offerings.

**The private sector's limited involvement is a major obstacle to CBT roll-out: their lack of involvement in decision-making on TVET policy management and implementation is an obstacle to achieving continuous alignment of training with employment.** Private sector engagement with the public sector requires a shared understanding of both sectors and dual accountability. While businesses are the first to seek a rapid response to their needs for skilled labour, their actual investment (again, with the exception of Rwanda, for example, or shared management training institutions in Senegal and Morocco) remains limited. In fact, the private sector does not take on responsibility because public institutions are not willing to delegate/transfer some of their responsibilities and prefer to retain control over TVET.

Similarly, the debate about joint management of training institutions remains topical, especially in a context of centralised management. This management mode, which gives greater power to the private sector, has been criticised by some public sector stakeholders (ministerial directorates or departments) who do not see any real benefits in terms of economy or management efficiency, other than giving the private sector greater access, or even power to interfere. In their view, it is simply an additional way of imposing a profit-oriented ideology (in particular, through the sale of services at the expense of the education function). Furthermore, the other factor observed ensues from the modalities of private sector involvement (for example, through a board of directors) and the decision-making power granted to the private sector in public management (for example, selection of training institutions' management personnel). These factors show that public-private partnerships at the institutional level need to be jointly constructed between private and public stakeholders.

Further, the centralised culture of the institutions has been a limiting factor on regional and local initiatives (except in Ethiopia and a few training institutions in other countries), and as a result, formal business-state agreements are limited. Private sector involvement in training institutions hinges on a proactive approach by both central and corporate actors.

A significant variable in the effective involvement of the private sector also depends on the economic dynamics prevailing in the regions and on the leadership exercised by training institutions. Many businesses turn to private providers rather than public institutions when purchasing customised training services

or recruiting graduates. This lingering reluctance regarding the public system is due to the fact that the programs delivered by public institutions are often obsolete. Trainers' lack of training is another variable that reduces private sector confidence in the public education sector.

It should be noted that the majority of public training institutions in the study countries still lack sufficient autonomy in terms of their budget and human resource management. However, some empowerment experiments, such as with TVET Colleges in South Africa, have had results. Since these institutions are not monitored and are not bound by an accountability policy, their ability to take initiatives depends on involvement and determination of the heads of the institutions and their teams. This leads to disparate implementation dynamics.

## Centralised Management

In relation to the governance variable, centralised management using a top-down approach provokes a **feeling that the approach is being imposed**, leading to poor stakeholder buy-in. Centralisation (development of standards, management of the certification process, validation of product standards, etc.) creates a discrepancy between central objectives and the realities on the ground, which further limits CBT buy-in and roll-out.

Ethiopia, which is a federal state, has an interesting approach: CBT operationalisation tasks are shared between regional territorial entities. The decentralisation of training framework development by the institutions themselves allows for greater adaptability of training based on local needs. On the other hand, the decentralisation process leads to significant variation in program content due to the operators' skill levels. Trainers' expertise and experience, as well as the diversity of equipment available in the institutions, are the main factors explaining these differences.

This section ends with a table summarising the top ten barriers and obstacles identified. The presentation follows their order of introduction in this study, and not their degree of significance in the implementation of the CBT approach.

**Table 3 – Summary of the Ten Main Obstacles and Barriers Identified in CBT Implementation**

Constraints and Obstacles Identified	
1	Under-evaluation of the changes caused by the implementation of the CBT approach.
2	Inadequate regulation of TVET systems due to weak sector monitoring and a lack of mechanisms to monitor professional integration.
3	A lack of political commitment and leadership, especially in terms of the failure to prioritise the CBT approach.
4	Reliance on TFPs, leading to state under-funding of TVET.
5	Inadequate material and physical resources (infrastructure and equipment).
6	Inappropriate TFP support, due to targeted actions and a project approach, which leave governments with limited room to manoeuvre.
7	A lack of clear and strategic country visions to rally TFPs around their national strategies.
8	Insufficient adaptation or contextualisation of the baseline CBT implementation model to the realities encountered.
9	Centralised governance, leaving training institutions with little autonomy.
10	Limited private sector involvement.

## D. Tipping Points

High unemployment rates, inadequate training, obsolete content and archaic theoretical training modes have been factors in the major educational reforms experienced by all the study countries. **Collective awareness of the social and economic difficulties encountered by young people was the first tipping point on which the adoption of the CBT methodology was based.**

Making the TVET sector reflect the institutional, economic, social and cultural changes experienced in the countries in recent years by choosing the CBT approach has been an ambitious and realistic goal.

**Lack of planning or underestimation of the scale of the changes involved is another tipping point; in this case, it has had an impact on countries' ability to implement the CBT approach over the long term.** The vision of the changes imposed by the CBT approach has focussed on and limited itself to the pedagogical engineering aspects, leaving aside sector governance (i.e. partnership management of training institutions, private sector involvement in TVET policies/decisions, indexation of the necessary budgets, and establishment of a regulatory system). However, this second component is in line with the vision underlying the CBT approach, i.e. supporting greater private sector involvement at all stages of the process.

Enabling TVET to perform its functions of education, socialisation and qualification, while trying to make it accessible to the greatest number of people, and ensuring equal chances of success for all, is a great challenge. Furthermore, doing so while trying to respond to the challenge of a globalising economy, with constantly evolving business needs that require skills that are increasingly specific and increasingly compatible with the requirements of professional mobility (or even the globalisation of practices), is an additional challenge, and all of the foregoing must incorporate new information and communication technologies (NICTs).

This change can only take place through strong leadership and by making TVET a national priority. **A genuine political will to implement the CBT approach and scale it up nationwide is a major tipping point that draws a line between those countries that have succeeded in this challenge and those that have remained at the experimental stage.** Successful implementation of the CBT approach does not depend on laws or regulatory considerations alone. It also relies largely on the human resources involved in the transition.

The decision to implement the CBT approach by mainstreaming or experimentation can have an impact on the roll-out process. **The choice of initial experimentation seems to be a negative tipping point when it comes to the speed of the mainstreaming process.** Even though decision-makers have opted for the CBT methodology, their decision is not always strong enough to support its roll-out. Considering that experimentation is, by definition, a procedure carried out to support, refute or validate a hypothesis, in a specific context and over a specific period of time, choosing it still leaves the option of back-tracking and deciding that the methodology is not selected after all. This observation stems from the fact that, in the case of Senegal, only after many years of experimentation (at least a decade) was the CBT approach confirmed by legislation (in 2015). However, large-scale roll-out has yet to be effectively or sufficiently initiated.

**The decision to choose experimentation as the initial option also seems to be linked to a country's ability to establish a clear, strong and strategic vision of its socio-economic development plan, which represents another tipping point.**

The dilemma produced by implementation through experimentation versus direct and total roll-out seems to be a breeding ground for multiple interventions by TFPs within the framework of "experimentation" projects. The fact that the country has difficulty defining its vision or that it does not have a very coercive approach to implementing the CBT approach seems to result in difficulty in coordinating the TFPs or getting them to buy in to a uniform vision for action in line with the country's development objectives.

**Raising awareness and defining the real expectations of the public and private sectors consensually is another tipping point.** The decision to choose the CBT approach is taken unilaterally by government entities, in an attempt to find a response to the challenges of professional integration (which also has a political basis) and provide training to meet businesses' needs for skilled labour. Therefore, it is only when the methodology was adopted that tangible private sector involvement became possible, with higher expectations than originally reckoned.

In addition to participating in curriculum design and providing internships, the private sector has been asked to “invest” financially and physically in public training institutions, in addition to contributing to building trainers’ capacities. In view of the slow pace of changes in the public authorities, the private sector, in addition to having the impression that its requests were not taken into account or were taken into account too slowly, has often been frustrated and disappointed, despite its increased involvement. **Reconciling the vision behind the CBT approach with a public or private observer’s point perspective seems to be a tipping point connected to the private sector’s involvement and the overall sustainability of the CBT implementation process.** It seems obvious that if the private sector is initially involved in determining the direction for the implementation of the CBT approach and is a stakeholder in the decision, its commitment will be greater. Furthermore, the nature of the modalities for implementing the CBT approach will be impacted, guaranteeing stronger buy-in and a better chance of sustainability.

**The understanding and adoption of the principles and values underlying the CBT approach are another negative tipping point regarding its contextualisation, roll-out and sustainability.** Adopting a top-down, rigid and process-oriented approach makes it difficult to roll out the CBT approach on a wide scale, especially since adaptation to local realities is inadequate and sustainability is hard to envisage (under those implementation conditions). Production stages are lengthy, which means that few new OCSs are developed (for example), since efforts are focused on revising what was produced previously. Funding for reinvestments in working materials or in upgrading material and physical resources rapidly runs out. A system that is overly focussed on methodology means efforts are made to “feed” the system instead of being directed towards development and roll-out.

In terms of understanding the CBT approach, engineering, ownership and the rationale for the sectoral analysis or WSAs have not always been well integrated, nor has the processing of the information gathered during WSAs into OCS. These steps are repeated, since they are part of the engineering process, but without really adapting them to the target clients or over time. For example, there are WSA workshops that can last up to a week, which means that the private sector’s participation is limited and deficient, while costs are clearly high. As a result, some believe that the CBT approach consists in classifying specific outcomes from the outcome-based training approach into subject competencies, which still retain the appearance and form of specific outcomes. It is therefore unsurprising that assessment methods are not easy to change, since these competencies (in fact outcomes) continue to be assessed as specific objectives according to a theoretical approach derived from the OBT approach. **This flawed understanding of the CBT approach in its holistic vision is therefore a tipping point that negatively impedes its smooth, flexible and rapid implementation.**

This section ends with a table summarising the main tipping points identified in this study. The order of their presentation follows their order of introduction in this study, and not their degree of significance in the implementation of the CBT approach.

**Table 4 – Summary of Tipping Points Identified with Respect to CBT Implementation**

<b>Tipping Points Identified</b>	
<b>1</b>	Collective awareness of the social and economic difficulties encountered by young people.
<b>2</b>	Lack of planning or underestimation of the magnitude of the fundamental changes brought about by the CBT approach.
<b>3</b>	Real political will by a government to implement the CBT approach and extend it throughout the national territory.
<b>4</b>	Selection of the implementation procedure: preliminary experimentation or direct roll-out.
<b>5</b>	The country's capacity to establish a clear, strong and strategic vision of its socio-economic development plan and bring TFPs on board.
<b>6</b>	Awareness raising and consensual definition of the real expectations of the public and private sectors.
<b>7</b>	Understanding the fundamentals and philosophy of the approach, including its principles and values.
<b>8</b>	Failure to adapt procedures and methodology to the country context and realities.

## 4. RECOMMENDATIONS, LINES OF ACTION AND SUPPORTING MEASURES

It is impossible for a competency-based approach applied using an imported template that is ill suited to local realities or even unilaterally imposed, to singlehandedly provide a satisfactory response to all the questions or issues for which it has been chosen as a methodology. The data collected in the seven study countries highlight issues that persist, at varying levels, in both the socio-economic and educational spheres. Due to this reality, it is impossible to present a cookie-cutter solution for all countries or targeted solutions to address specific problems in specific countries. The country reports, drawn up after each mission, address these questions and suggest recommendations and lines of action that take account of the diversity of variables present at the country level.

The guidelines proposed in this report are flexible and can be adapted to the different contexts and realities observed. It is important to stress that certain recommendations or lines of action are interrelated, since successful implementation of the CBT approach is multifactorial. However, to avoid confusing the reader, a decision was made to present them separately.

### The Government's Vision

- ✓ **RECOMMENDATION #1: Government policies should be founded on a long-term vision, particularly with regard to TVET reform involving major paradigm shifts, such as instituting CBT.**
  - o The gap between an official will to prioritise TVET and the ensuing shortfall in financial investment, particularly when a competency-based approach is adopted, is an example of such policy inconsistencies. The choice of a CBT approach may seem self-evident, but its implementation and, above all, the parameters for ensuring its sustainability are apparently more difficult. The decision to use a CBT approach is often taken in response to a known issue, but without taking the longer-term impact of the choice into consideration.
  
- ✓ **RECOMMENDATION #2: Governments should better coordinate their social and economic development strategies with their education strategies in order to pool efforts and develop a holistic vision.**
  - o A clear and strategic vision of socio-economic development priorities needs to be established so that TVET can act as a lever and be organised around these strategies. This will facilitate TFP coordination around the vision and enhance efficiency. The CBT implementation experiments observed during the study fluctuated over time and were not tied together by a central development strategy. As a result, efforts and funding were sporadic and insufficient due to poorly integrated and ill-concerted management among public actors in TVET and between the government and the private economic sector.

- ✓ **RECOMMENDATION #3: Governments should invest in mechanisms to support effective and efficient communication on CBT objectives and implementation.**
  - In order to ensure strategic management of programs and services, facilitate decision-making and promote accountability at all levels as well as transparency and collaboration between sectors and ministries, governments should invest in better data collection, communication, and management systems. Social and economic data should be widely disseminated, as well as data on TVET learners and graduates.
  
- ✓ **RECOMMENDATION #4: Governments should harmonise mechanisms for social, economic and learner-focused data collection and analysis.**
  - Although surveys are conducted at various levels (ministries, regional entities, training institutions, etc.), the data remains segmented and is not always triangulated. As a result, depending on the source, the data may vary and may not always have a comparative basis, which can introduce bias into decision-making.
  
- ✓ **RECOMMENDATION #5: Dependence on TFPs should be reduced through restructuring of government funding, better upstream coordination of TFP actions and private sector involvement.**
  - If the state hopes to control the governance and orientation of its vocational training system, it cannot continue using its current piecemeal methods (with varying approaches and tools). As the piecemeal approach is chiefly a result of the project approach implemented by the various TFPs, their interventions need to be reframed, which will require real efforts on the part of the countries. Relationships between beneficiary countries and TFPs need to be reformulated on the basis of a strategic vision and long-term programming of actions and desired outcomes. It is the countries' responsibility to initiate this coordination upstream, before TFP funding is confirmed. Each country must ensure that project funding is in line with public policy and also that the TFPs work together towards public policy goals.
  
  - The coordination of TFP inputs in a country through a local education group (LEG)<sup>10</sup> brings added value to enhanced consultation on a national strategy for education and training (hence, with a long-term vision), in contrast with one-off support in the framework of a project or initiative. An LEG is comprised of all development partners, civil society organisations and all ministries responsible for education. There are often thematic or sub-sectoral sub-groups, particularly on TVET (as is the case in Senegal). Accordingly, TFP contributions should be coordinated in the LEG and more particularly in the TVET sub-group.

## TVET Governance

- ✓ **RECOMMENDATION #6: TVET reforms, including adoption of the CBT approach, should culminate in a genuine reorganisation of the system and palpable changes.**
  - Reforms, as well as the various initiatives undertaken in terms of CBT, often end up resembling a layer cake or a fruit salad due to their different types of training and apprenticeship, multiple levels and exit pathways, the dichotomy of two different ministries carrying out TVET activities,

10. <https://www.globalpartnership.org/where-we-work/partner-countries>

disconnection with current policy guidelines, etc. Rather than replacing each other or working in symbiosis, through reforms combined with streamlining measures, new types of training are piled up on top of each other and/or tacked on and/or overlapped, so that the range of training on offer and the training pathways are particularly segmented, non-complementary, complex, redundant, difficult to understand or even ineffective

- ✓ **RECOMMENDATION #7: An operational TVET regulation system should be set up.**
  - o The current systems do not include TVET regulation and management systems. Even where the CBT approach is widely implemented, the systems remain focused on managing the supply of training. There is no regulatory system geared to the quantitative and qualitative needs of the labour market or segmented by economic sector. Few countries have set up national sectoral monitoring or rigorous follow-up on graduates with regard to their professional integration. Without such data, it is difficult to assess the impacts of implementing the CBT approach (or combined outcome-based and competency-based systems).
  
- ✓ **RECOMMENDATION #8: The supply of education should be clearly mapped to better target the action to be undertaken.**
  - o The ministries responsible for TVET lack a clear understanding of the number of programs offered by their training facilities (across all levels), regarding both competency-based and outcome-based approaches. The problem is compounded when technical ministries also provide TVET (i.e. the ministries of Agriculture, Tourism, etc.). This is notably due to the multitude of different initiatives and projects implemented simultaneously, either by the various ministries or under the impetus of the TFPs active in the field. Mapping would make it possible to conduct a comparative analysis of education offerings in order to support learner mobility between various levels and institutions, as well as teacher mobility, which would be easier to plan. This would result in greater efficiency throughout the whole training system, since the creation of parallel streams would be minimised. As a result, learners would suffer less from the non-recognition of skills they acquired in another learning pathway and teacher management would be facilitated.
  
- ✓ **RECOMMENDATION #9: TVET governance paradigms should be changed at all levels, including the central (ministry), regional (directorate) and local (training institution) levels.**
  - o Successful CBT implementation will depend on a significant financial contribution from the government and substantial human efforts, but above all on a major paradigm shift in terms of planning and management of training, regulation of the system, private sector involvement and decentralisation/devolution of governance. It is therefore important to increase financial resources for training institutions, initially through state support, but also by stimulating a more entrepreneurial culture within institutional management. The aim is not for them to compete with the private sector, but to position themselves by providing services to businesses, to generate income or to develop partnerships with local actors in order to encourage them to become more involved (e.g. co-financing).

- ✓ **RECOMMENDATION #10: TVET management should focus on the devolution of public powers to support increased private sector involvement.**
  - Enhancing and sustaining private sector involvement in partnership management is essential, notably through the establishment of training institutions with delegated management, boards of directors including or drawn from the private sector, management mechanisms involving sector tables, etc. Involving professionals in management through partnership agreements will ensure their participation throughout the CBT implementation process, including the financial aspect. This will support faster regulation of the system to meet skills needs (shorter cycles, responsiveness to local needs or realities, etc.). Indirectly, challenges in terms of sustainability will be mitigated by private sector involvement throughout the TVET system (including the management of training institutions). Finally, responsibility for managing the system must be gradually but definitively transferred to the decentralised level (regional and local and/or sectoral level and multi-level governance).
  
- ✓ **RECOMMENDATION #11: Incentives should be put in place to encourage the active participation of the private sector at local, regional and national levels.**
  - Business involvement is currently based on ad hoc requests, whereas the private sector needs to feel that it has a real responsibility for and interest in program design and validation, investment in training (beyond providing internships) and management of training institutions. While businesses need to understand both the benefits of supporting TVET and their responsibilities in relation to it, the fact remains that the paradigm shift required of them is significant. It is important to consider their context, with an economic fabric that is often reliant on the informal sector. Setting up funds to support continuing training for workers or offering tax credits for investment in education initiatives, along similar lines to tax credits for corporate social responsibility (CSR) initiatives, can be win-win solutions for all parties involved.
  
- ✓ **RECOMMENDATION #12: TVET system performance evaluations should be based on the principles of results-based management (RBM) and accountability.**
  - The competency-based learning approach is based on a snapshot of the work environment (e.g. with reference to tasks, performance standards and work organisation); in this sense, it should also lead to an improvement in the performance of TVET systems and their components. Use of performance indicators (e.g.: completion rate, trainee retention rate, rate of employment in connection with the field of training, etc.) should be included in the changes made in terms of governance. Consequently, the recommended vision of management should focus, at both national and local levels, on the achievement of the results evaluated through indicators and should be underpinned by associated accountability. Such changes cannot be made without addressing the other recommendations relating to the establishment of a regulatory system or greater empowerment and accountability of training institutions.

## CBT implementation and contextualisation modalities

- ✓ **RECOMMENDATION #13: Contextualisation of CBT implementation to fit local realities should be a condition for its implementation.**
  - CBT implementation modalities inspired by those used in northern countries are not realistic or viable over the long term in the South. The political, social, economic, informal and cultural fabric will require changes and adaptations; anchoring in the environment is at the core of the CBT philosophy. The implementation of the CBT approach must be based on innovative solutions to reduce its costs, particularly with regard to purchasing of equipment and upgrading of trainers. It is essential to promote applications that are rooted in the environment and build on what has already been achieved. Implementation of initiatives such as modernised apprenticeship is in line with this vision of adapting and contextualising CBT. This will make it more accessible and allow it to be institutionalised in a more natural way.
  
- ✓ **RECOMMENDATION #14: CBT implementation should be based on a vision of expected outcomes rather than on methodology.**
  - Simplification of methodological processes must be considered, since CBT viability is currently compromised due to the complexity of its implementation and management. The current inflexibility leaves little room for initiative and operational flexibility. The expected outcomes, such as a better professional integration, a better match between training and employment, and enhanced quality of learning, are overshadowed by too much focus on a very detailed and procedural methodology. The costs inherent in program development, implementation and subsequent monitoring are very high and difficult for states to sustain without external support from TFPs. By making use of the multitude of people trained in CBT engineering available in each country with a view to expanding knowledge and skills in training engineering, and by focusing on work carried out regionally or locally, it would be possible to save time and increase efficiency, but also to save money that could be reinvested in roll-out and sustainability.
  
- ✓ **RECOMMENDATION #15: Responsibility for revising and updating standards should be transferred to the decentralised level.**
  - Considerable effort is invested in the development of new occupational competency standards (OCSs) and CBT programs. On the other hand, the revision of what has been built over the past few years has been sidelined or is suffering from the complexity of CBT implementation processes. Although revision systems were observed, either they do not receive rapid feedback or are not adapted to territorial realities. As is the case with engineering, management of revision is often centralised and cumbersome, leaving limited leeway to adapt content to local realities. It would be important to increase local/regional stakeholders' involvement in order to support a better understanding of local realities and avoid divisions between centrally developed content and socio-economic realities in the regions.

## Communication, awareness and participatory approach

- ✓ **RECOMMENDATION #16: CBT implementation should be consistent with values such as participation and transparency, to create an inclusive dynamic.**
  - o The top-down approach has its advantages in the context of roll-out and implementation, particularly in terms of guiding the changes to be introduced, but over the long term, it can be restrictive without its counterpart, the bottom-up approach. It is important to increase the involvement of the actors in the field (trainers, management, administrative staff) as well as civil society (parents, learners, the community and employers) using a participatory approach to ensure that the CBT approach is adapted to reality and feedback is provided. It is recommended that a communication and awareness-raising strategy be put in place for those different stakeholders to ensure that the approach is in line with the public sector, particularly in terms of the expectations placed on them and the associated responsibilities.

## Capacity building

- ✓ **RECOMMENDATION #17: Capacity building for trainers, managers and even private sector actors should be supported at its full cost to ensure CBT implementation and sustainability.**
  - o Trainers are the cornerstone of pedagogical change. They should also be dynamic actors in adapting programs and should be extensively involved in the provision of tailor-made training services by training institutions. Building on this, the importance of investing in upgrading their technical and pedagogical capacities must be recognised. When corners are cut on human resource development, which is central to the CBT implementation strategy, the implementation and sustainability of the CBT approach is sabotaged. Instead, it is important to find realistic and appropriate ways to support their development (in businesses, through upgrading training for apprentice trainers, etc.), but also to raise their salaries so that their contributions are recognised at their true value.
  - o Training of other TVET actors, including managers of training institutions, support staff (head of works, sector head, etc.) and private sector representatives is also important. The burden of successful CBT implementation in a training institution cannot rest solely on the shoulders of the trainers. Managers and support staff involved in CBT implementation also need to understand and assimilate the changes in practices (e.g. planning of training schedules, the importance of having materials and equipment available at specific times, linking practical activities with more technical ones, the need for multidisciplinary teams of trainers, etc.) and also need to understand how the standards and frameworks are structured (OCSs, training and evaluation) in order to adapt their management practices accordingly (in terms of time and budget/material and human resources). Private sector actors should be trained on the paradigm shifts associated with the CBT approach, increased responsibilities and their active participation in the development of learners' skills and their evaluation.

✓ **RECOMMENDATION #18: Decentralisation should be accompanied by capacity building for training institutions, but also for all of the actors to whom roles will be delegated.**

- o Delegation of central management responsibilities or standards design to training institutions creates challenges due to inconsistent practices or issues with the quality and uniformity of program content. It is important not to underestimate the impact of change, which needs to be gradual and not rushed through without having prepared the actors responsible for making it operational. Decentralisation must be combined with a support process and coordination that allows the central authorities to gradually withdraw, while the local entity progressively shoulders more of the load. This can only be achieved if human and infrastructural resources are strengthened, failing which the disparities in the expertise and experience of the trainers in the training institutions and the diversity of their equipment will contribute to maintaining the existing gaps (which will then be laid at the door of decentralisation). The changes arising from decentralisation also involve local and regional authorities, professional organisations and sectoral or regional federations, thereby justifying capacity building for those entities to help them manage the transition.

Failing to address the substantive issues raised in these recommendations and proposed lines of action would mean pursuing an endless dialogue between teaching and apprenticeship, a dialogue that is limited to the theoretical level and does not address the real challenges encountered. It would also mean turning a blind eye to errors and potential realignments and accepting dysfunction in the implementation of the competency-based approach. Ultimately, it would mean accepting that the CBT approach is unsustainable and agreeing with its detractors.

## 5. CONCLUSIONS

These last lines seek to highlight one final reflection: ultimately, the greatest challenge facing CBT implementation is a genuine grasp of its essence and understanding of its nature. This applies to the numerous interviews conducted, which most often focused on elements related to methodology or operational elements of the CBT approach. The study countries were rarely asked to conduct self-evaluations of their experiences. In fact, the findings often boiled down to a series of pedagogical or financial challenges.

Few significant links were made between the current CBT implementation practices and the challenges encountered. The approach taken to CBT was rarely questioned, except to recall how the implementation stages unfolded. The changes in content or presentation modalities made in the CBT study programs have not necessarily translated into real changes in certain practices. Trainee-trainer ratios often remain high due to financial issues: because of the lack of resources, theoretical training is provided without practice, evaluation methods continue to focus on written production and fail to involve the private sector, etc. In practice, the ratios observed in the classroom and the supply of materials and equipment remained stable as long as the TFPs were there. Despite CBT program design, with the end of the projects and the withdrawal of the TFPs, there has been a gradual return to previous practices, not necessarily due to a lack of good will on the part of the training institutions.

The individual trajectories of the trainers who were asked to radically change their practices when implementing CBT programs should also be considered. The majority of these trainers came from "mainstream" schools, while others came from the private sector without the benefit of prior teacher training. They are therefore unprepared to change the teaching practices they learned according to the old-fashioned paradigm or picked up on the job, yet all of a sudden they have to introduce new principles into their work that are imposed on them from outside and on which the success of the CBT approach depends. For these trainers, the paradigm shift represents an enormous difficulty, especially as they do not wish to be perceived as being unfavourable to the change (as the CBT approach is presented in a positive light). For their supervisors, the challenge is daunting: to convince them, they have to go beyond lectures and undertake practical experimentation with a new way of organising their work in training institutions, in keeping with the CBT philosophy. It is often necessary for them to combine two modes of operation within the same training institution, maintaining outcome-based programs while launching competency-based programs.

Under these circumstances of shared difficulties, there is a strong temptation to create new rituals. The CBT approach is broken down into a three-step sequence: (i) learner assimilation (through reading or individual work, group work and a collective summary); (ii) demonstration by the trainer; (iii) application by the learner. Attempting to apply this recipe across all contexts can raise questions about the effectiveness and efficiency of the competency-based learning approach. It should be remembered that, in some regions and even within some training institutions, outcome-based learning and competency-based learning still coexist and, in the face of the difficulties experienced by those who ventured to try the CBT experiment, there is a very thin line back to outcome-based learning, especially if, when all is said and done, there is little difference between the assessment methods used.

In order to counteract the impact of the structural failures of the TVET system, we believe that countries will need to have the courage to turn their backs on the old rationale when the first difficulties arise. It is not advisable to wipe the slate clean and impose new educational guidelines. This is why we raise concerns whenever we encounter the term «CBT experimentation», since it suggests that experiments that prove unsatisfactory can be dismissed out of hand. On the contrary, experimentation should be seen as a key opportunity to tackle the most urgent and sensitive challenges. Each country, regardless of its level of progress, has developed good practices and learned many lessons that can be built on. Through this report, we hope to encourage countries to reflect on this.

It should be recalled that the study's objective was to identify good practices and examine how they could be used in other contexts/countries wishing to increase the effectiveness of the CBT approach in their technical and vocational education and training systems, and to examine the difficulties encountered in introducing and/or sustaining the implementation of the CBT approach. We achieved this objective by presenting a critical, yet benevolent, account of the observations made during fieldwork, as well as by proposing recommendations and avenues for reflection that are consistent with these observations. Our aim here was to take a different look at the debate currently emerging on the feasibility of introducing new CBT study programs, using the conventional formula most commonly adopted.

Ultimately, this amounts to asking whether, despite their goodwill, the “medium” chosen by some countries to implement the CBT approach did not result in the least suitable form being selected. Countries that have successfully rolled out the CBT approach across their territory, and those that have moved towards upgrading conventional apprenticeship, seem to be charting a hopeful course. The latter have, perhaps without really thinking about it, chosen to base their educational reform on the main pillars of their economic development or to base themselves on recognised learning experiences such as conventional apprenticeship. Although not everything is fully functional as yet, they have nonetheless managed to make a significant difference in the implementation of the competency-based approach. They can only ameliorate their current practices or continue to adapt them.

# APPENDICES

## Appendix 1 – Interview Guide

Table A) Themes and Sub-themes Selected for Country Interviews

Themes	Sub-themes	Questions
1. History and institutional context of CBT introduction	Implementation conditions and history	<ul style="list-style-type: none"> <li>• Could you please explain the history of CBT implementation?</li> <li>• How and by whom was it initiated?               <ul style="list-style-type: none"> <li>o Who made the decision to initiate it?</li> <li>o What type of CBT approach was adopted (what external support) and how was it adapted to country conditions?</li> <li>o What contributions have been made by the government, TFPs, the private sector and civil society?</li> <li>o What has been the level of commitment of each of these actors?</li> </ul> </li> <li>• How is TVET organised: technical education and vocational training, apprenticeship?</li> <li>• What is the status of CBT roll-out across the different sectors and regions? (Management of the transition)               <ul style="list-style-type: none"> <li>o What have been the difficulties or obstacles to roll-out?</li> <li>o What are the roles of regional and local actors in CBT implementation (education system, link between TVET and the private sector)?</li> </ul> </li> <li>• What influence do private school operations (e.g. Don Bosco) have on CBT?</li> </ul>
	Political and institutional framework	<ul style="list-style-type: none"> <li>• What are the key legal documents to obtain in relation with the implementation of the CBT approach?</li> <li>• How has the CBT approach influenced TVET operations and institutions?</li> <li>• How has it been tied in (and how are you currently tying it in) with socio-economic development priorities by sector?</li> <li>• Has the partnership inherent in CBT implementation helped to organise partnership governance mechanisms?               <ul style="list-style-type: none"> <li>o What is the purpose of the partnership?</li> <li>o What is the status of national, regional and local and sectoral roll-out?</li> </ul> </li> </ul>
	The question of financing	<ul style="list-style-type: none"> <li>• Who funded (who is funding?) CBT implementation?               <ul style="list-style-type: none"> <li>o And has CBT implementation facilitated private sector involvement in funding of the mechanism?</li> <li>o What has been the trend in the level of government involvement? Has it increased or decreased?</li> </ul> </li> <li>• What has been the impact of transition to the CBT approach on funding?</li> <li>• What was the extent of funding invested in CBT teaching and training and what were the funds used for? Question on CE and apprenticeship.</li> </ul>

**Table A) Themes and Sub-themes Selected for Country Interviews**

Themes	Sub-themes	Questions
<p><b>2. The job analysis and economic potential analysis processes in the countries</b></p>	<p><b>Background and analytical process</b></p>	<ul style="list-style-type: none"> <li>• Before CBTA implementation (or in the case of non-CBT design programs), what process was used to analyse jobs and economic potential?</li> <li>o What has changed since CBT implementation?</li> </ul>
	<p><b>Job analysis process</b></p>	<ul style="list-style-type: none"> <li>• What is the mechanism used for work analysis in each priority economic sector?</li> <li>• How are priorities set to select economic sectors or industries for CBT program design?</li> <li>• How are new occupations identified?</li> <li>• What is the decision-making framework/process for developing new fields/new occupations or the discontinuation of fields that no longer meet needs?</li> <li>o How are trainers in the discontinued fields handled?</li> <li>• How are businesses/employers involved in the decision?</li> <li>o At what level is the decision made? Public, private, partner?</li> <li>• Has the training method facilitated CBT implementation?</li> </ul>
	<p><b>Managing and regulating the flow of learners</b></p>	<ul style="list-style-type: none"> <li>• How does the CBT approach help manage/regulate the flow of learners?</li> </ul>
	<p><b>Consideration of distinctive features of regional/local development</b></p>	<ul style="list-style-type: none"> <li>• How are the distinctive features of regional/local development factored in to training program development/revision?</li> <li>• Have vocational training centres (VTCs) begun specialising in sectors according to the qualification needs of the businesses in their respective economic environments and geographic areas?</li> </ul>
	<p><b>Monitoring mechanism</b></p>	<ul style="list-style-type: none"> <li>• Is there a monitoring mechanism to support regular revision and adaptation of training programs to meet new qualification needs?</li> <li>o Is the system revised on a regular basis to meet the needs of the labour market?</li> <li>o What organisation or body organises or is in charge of program revision? Is the private sector involved?</li> <li>• Has the CBT approach facilitated the monitoring of the supply of training and the productive sector's demand for skills and needs in terms of qualifications (regulation of certification)?</li> <li>o Has the CBT approach helped to organise needs rationalisation or assessment?</li> <li>o Has the CBT approach helped facilitate the decision-making process?</li> <li>o Have the CBT practices of private training centres had an impact on the practices of public institutions?</li> </ul>

**Table A) Themes and Sub-themes Selected for Country Interviews**

Themes	Sub-themes	Questions
<p><b>3. Development processes for work situation analysis (WSA), occupational competency standards, training frameworks and evaluation frameworks</b></p>	<p><b>Development and validation processes</b></p>	<ul style="list-style-type: none"> <li>• Is the CBT program design process supported by a normative and/or methodological framework (e.g. a CBT guide) or set down in a government policy? Who is involved in program design (oversight and decentralisation)?</li> <li>o What is the subsequent validation process for the programs developed?</li> <li>• What body or bodies are involved in CBT program development?</li> <li>• What is the validation process?</li> <li>o Who validates the certification/evaluation standards?</li> </ul>
	<p><b>Partnership approach</b></p>	<ul style="list-style-type: none"> <li>• Were standards designed in partnership with all of the actors in vocational training, and notably with the participation of concerned employers' organisations, businesses and industries, as well as the government?</li> </ul>
	<p><b>Management of the transition</b></p>	<ul style="list-style-type: none"> <li>• How substantial is the transition?</li> <li>o Is the competency-based training approach implemented alone (pure CBT) or is there a transition between outcome-based training and CBT (in the country? within a VTC? within a single program, e.g. with a CBT teaching approach but a conventional assessment system?)</li> <li>• What are the obstacles to a full transition?</li> <li>o How long has the transition been taking place?</li> <li>• What is the degree of acceptance/ownership of CBT use?</li> <li>o Has the transition been successful?</li> <li>o Are donors still investing in the transition?</li> <li>• What major changes have been observed since the adoption of the CBT approach?</li> </ul>

**Table A) Themes and Sub-themes Selected for Country Interviews**

Themes	Sub-themes	Questions
	<p><b>Independent management of vocational training facilities (including their finances)</b></p>	<ul style="list-style-type: none"> <li>• How was the CBT implementation process set in place?</li> <li>o What is the current status of roll-out?</li> <li>o What are the obstacles and catalysts for roll-out?</li> <li>o How well is the process accepted?</li> <li>• Are all vocational training facilities endowed with administrative, financial and pedagogical autonomy?</li> <li>o Can they hire professional trainers?</li> <li>o Do they conduct their own strategic and operational planning?</li> <li>o Do they manage their own budgets?</li> <li>o Has the CBT approach led training centres to generate funds through production units (financial innovation) and/or influenced their teaching methods (application)?</li> <li>o Has the CBT approach helped training facilities develop a continuing education plan?</li> <li>o Have the training institutions become players in the economic development of their area? Of their community?</li> <li>o Is the budget adapted to CBT requirements (materials, infrastructure, equipment, and working materials)?</li> <li>• Is there an accountability mechanism? If so, how does it work?</li> </ul>
<p><b>4. Status of CBT program implementation</b></p>	<p><b>Learner-focused teaching</b></p>	<ul style="list-style-type: none"> <li>• What changes have been made to teaching methods (more specific questions) due to the introduction of the CBT approach?</li> <li>• What is the role of the learner in the learning process?</li> <li>o What learning strategies were put in place: subject-to-modular approach; multidisciplinary approach; reflective learning, etc.?</li> <li>o What percentage of training time is used for workshops?</li> <li>o What is the ratio of workstations (tool sets) to learners in a class?</li> </ul>
	<p><b>Training environment modelled on the working environment</b></p>	<ul style="list-style-type: none"> <li>• What changes have been made to the learning environment due to the introduction of CBT?</li> <li>• Are the technical and professional tools in line with what is used in local industry?</li> <li>• Are the consumables used the same as the ones used locally?</li> <li>• Beyond compliance, is an added value created that can enhance the quality of production in the local industry?</li> </ul>
	<p><b>Partnership dynamics</b></p>	<ul style="list-style-type: none"> <li>• What changes have been made to local partnerships due to the introduction of the CBT approach?</li> <li>o Has a school-environment consultation framework (professional environment, NGO, etc.) been put in place?</li> <li>o Have teaching methods used for training in conjunction with businesses (work-study, apprenticeship) or in the workplace been adopted and coupled with CBT methods?</li> <li>o Are they followed?</li> </ul>
	<p><b>Quality assurance system</b></p>	<ul style="list-style-type: none"> <li>• What changes have been made to the quality assurance system in training institutions due to the introduction of the CBT approach?</li> <li>• Is there a mechanism for measuring the status of CBT implementation – quality over the medium and long term?</li> </ul>
	<p><b>Degree of compartmentalisation</b></p>	<ul style="list-style-type: none"> <li>• What stage have you reached in the roll-out of the CBT implementation process?</li> <li>• What have been the obstacles or catalysts of the CBT roll-out process (in other industries and geographical areas)?</li> </ul>

Table A) Themes and Sub-themes Selected for Country Interviews

Themes	Sub-themes	Questions
<p><b>5. Trainer training on CBT teaching methods</b></p>	<p><b>Trainer training</b></p>	<ul style="list-style-type: none"> <li>• How are trainers trained on CBT teaching methods?               <ul style="list-style-type: none"> <li>o Duration, and</li> <li>o Resources.</li> </ul> </li> <li>• Do trainers have access to standards and guides?</li> <li>• Do trainers use the standards and guides (and do they understand them?)</li> <li>o What challenges and/or difficulties were encountered?</li> <li>• What changes in trainer practices have been created through trainer training?</li> <li>• Who is officially responsible for CBT implementation, coordination and management in the centre?</li> <li>• Is there a teaching methods unit within the training centre (or outside the centre e.g. inspectors, branch, national/regional) that makes it possible to pool trainers' learning or to share/sustain the trainers' training?</li> <li>• What strategies have been set in place to support trainers' acceptance of or commitment to CBT implementation?</li> <li>o What are the main challenges that have been encountered?</li> <li>• Have apprentice trainers and trainers from businesses been trained on the CBT approach?</li> <li>o Do they receive supervision?</li> <li>o Do they have access to documentation: standards, guide?</li> </ul>
	<p><b>Training of other VTC actors</b></p>	<ul style="list-style-type: none"> <li>• Are the educational advisers and/or inspectors responsible for program design and revision or supporting implementation trained on the CBT approach?               <ul style="list-style-type: none"> <li>o Are they trained at the same time as the trainers?</li> <li>o What type of training do they receive?</li> </ul> </li> <li>• Are administrative and management staff in training centres trained on the CBT approach?               <ul style="list-style-type: none"> <li>o Are they trained at the same time and in the same place as the trainers?</li> <li>o What is the content of the training they receive (what are they trained on; teaching methods only or their implications)?</li> </ul> </li> </ul>

**Table A) Themes and Sub-themes Selected for Country Interviews**

Themes	Sub-themes	Questions
<p><b>6. Development of occupational certification frameworks</b></p>	<p><b>Development and/or revision of certification/qualification frameworks?</b></p>	<ul style="list-style-type: none"> <li>• Has the introduction of the CBT approach influenced the development and/or the revision of certification/qualification frameworks?</li> <li>• Is there a connection between the certification/qualification frameworks and the national occupational standards?</li> <li>• Has the CBT approach assisted in the development/revision process for systems to validate learning from experience?</li> <li>• Is the qualification and certification framework operational?</li> <li>• How do professional organisations participate in the assessment and certification process?</li> <li>• What has been the impact of the CBT approach on creating bridges between TVET and other education sub-systems (basic education, the basic entry level for the illiterate) and higher education?</li> </ul> <p>How has the CBT approach changed the supply of certification (creation of new degrees and diplomas)?</p>
<p><b>7. Impact of the CBT approach on the quality of TVET products</b></p>	<p><b>Business satisfaction</b></p>	<ul style="list-style-type: none"> <li>• How has business satisfaction changed in relation to personnel hired on graduation from TVET following the introduction of the CBT approach?               <ul style="list-style-type: none"> <li>o Has a real improvement been seen in the practical knowledge of the graduates?</li> <li>o What were the main differences observed?</li> </ul> </li> <li>• What feedback systems have economic actors put in place to support and facilitate CBT implementation?</li> <li>• What tools are used to measure business satisfaction?</li> </ul>
	<p><b>System for measuring professional integration</b></p>	<ul style="list-style-type: none"> <li>• Is there a tool to monitor graduates' professional integration?               <ul style="list-style-type: none"> <li>o If so, does it provide information that makes it possible to determine whether the CBT approach has facilitated their integration? If so, what changes have been observed in measurements of professional integration following CBT implementation?</li> </ul> </li> </ul>

## Appendix 2 – List of Abbreviations used in this Study

AFD	French Development Agency (Agence française de développement)
CAEEFS	Home Economics and Social Economics teaching certificate (Certificat d'aptitude à l'enseignement d'économie familiale et sociale)
CAEP	Certificate of Qualification in Vocational Education (Certificat d'aptitude à l'enseignement professionnel)
CBA	Competency-based approach
CBT	Competency-based training (or teaching)
CFMPL	Port trades and logistics training centre (Centre de formation aux métiers portuaires et à la logistique)
CIDE	Consortium for International Development in Education
CNC	National certification framework (Cadre national de certification)
CoS	Centre of Specialisation
COTVET	Council for Technical and Vocational Education and Training
CPW	Construction and public works
CQM	Trades qualification certificate (Certificat de qualification aux métiers)
CQP	Professional qualification certificate (Certificat de qualification professionnelle)
CS	Certificate of professional qualification (Certificat de spécialité)
CSR	Corporate Social Responsibility
DACUM	Develop A CURriculuM or Developing A CURriculuM
DFP	Vocational training department (Département de la formation professionnelle)
DFQP	Directorate of Vocational Qualifications and Training (Direction de la formation et de la qualification professionnelle)
DHET	Department of Higher Education and Training
EU	European Union
FTA	Federal TVET Agency
GIZ	German co-operation (Deutsche Gesellschaft für Internationale Zusammenarbeit)
ICT	Information and communication technology
IFEF	Francophonie Institute for Education and Training (Institut de la Francophonie pour l'éducation et la formation)
IGD	Delegated management institute (Institut à gestion déléguée)
IIEP	International Institute for Educational Planning
INFFP	Trainer training institute (Institut de formation des formateurs)
ISEP	Higher institute of vocational training in Thiès (Institut supérieur d'enseignement professionnel de Thiès)
JICA	Japan International Cooperation Agency
KfW	German development bank (Kreditanstalt für Wiederaufbau)
LEG	Local education group (GPE)

LMIS	Labour Market Information System
MEFPA	Ministry of Employment, Vocational Training and Crafts (ministère de l'Emploi, de la Formation professionnelle et de l'Artisanat)
MESTFP	Ministry of Secondary and Technical Education and Vocational Training (Ministère des Enseignements secondaire, technique et de la Formation professionnelle)
METFP	Ministry of Technical Education and Vocational Training (Ministère de l'Enseignement technique et de la Formation professionnelle)
MINEDUC	Ministry of Education
Nated	National Technical Education
NCV	National Certificate Vocational
NICT	New Information and Communication Technology
NQF	National Qualifications Framework
OBT	Outcome-based teaching (or training)
OCA	Outcome Competency Approach
OFPPT	Office of Vocational Training and Employment Promotion (Office de la Formation Professionnelle et de la Promotion du Travail)
OIF	International Organisation of La Francophonie (Organisation internationale de la Francophonie)
OSCs	Occupational competency standards
PEFOP	Vocational Training Expertise Platform (Plateforme d'expertise en formation professionnelle)
PPP	Public-private partnership
RBM	Results-based management
REAPC	Education reform through the competency-based approach (Réforme de l'Éducation par le biais de l'APC)
RP	Rwanda Polytechnic
SSC	Sector Skills Council
TFPs	Technical and financial partners
ToR	Terms of reference
TVET	Technical and Vocational Education and Training
TVETR	Technical and vocational education and training reform
UNESCO	United Nations Educational, Scientific and Cultural Organization
USAID	United States Agency for International Development
VT	Vocational training
VTC	Vocational training centre
VTT	Vocational and technical training
WDA	Workforce Development Authority
WSA	Work situation analysis

## Appendix 3 – Criteria

Table B) Criteria used to Assess the Status of CBT Implementation in the Study Countries

Criteria	Indicators			
	1	2	3	4
	No	In progress		Established
1. An institutional, legal and policy framework including CBT has been set in place	No adaptation	Adaptation at start-up	Adaptation at start-up and on an occasional basis	Annual adaptation
2. There are suitable financial resources where CBT is implemented	No endogenous funding	Minority endogenous funding	At least 50% of funding comes from endogenous sources	At least 75% of funding comes from endogenous sources
3. Financing is sustainable	No	Exists – not operational	Exists – not systematically operational	Exists – systematically operational
4. A job monitoring and analysis mechanism exists and is operational (for the creation of new programs or the revision of existing ones)	No partnership approach	Few partners included	Most partners included	All partners included
5. The job monitoring and analysis mechanism is based on a partnership approach	No institutional model	Institutional model not adapted to the environment	Adapted institutional model	The institutional model is continuously adapted and updated
6. A CBT engineering model has been adapted to a national context (normative and methodological framework), and the process is framed by a methodological guide	No	Yes, partially operational		Yes
7. The country has a body for accreditation and quality assurance of CBT engineering deliverables	No	Yes, partially operational		Yes

**Table B) Criteria used to Assess the Status of CBT Implementation in the Study Countries**

	No	----	-----	Yes
8. A WSA is systematically conducted during the development/redesign of a training program	No	----	-----	Yes
9. The WSA is organised in such a way as to fully represent the diversity of the occupation	Not representative	Highly homogeneous	Well diversified	Very well diversified
10. Every stage in training engineering is carried out and validated in conjunction with professionals	No professionals involved in the engineering and validation stages	Professionals are involved in certain stages of engineering	Professionals are involved in certain stages of engineering and validation	Professionals are involved in all stages of engineering and validation
11. Trainers have access to and make use of guides and standards	No access to guides or standards for trainers	Trainers have access to guides and standards	Trainers have access to guides and standards occasionally	Trainers have access to guides and standards and use them consistently
12. Trainers and actors in training delivery (apprentice trainers, professionals in the trade, administrative staff, etc.) receive initial pedagogical training on the CBT approach	No training provided	Training provided for trainers only	Training provided for trainers and some other actors	Training provided for all trainers and other actors
13. Trainers and actors in training delivery (apprentice trainers, professionals in the trade, administrative staff, etc.) receive continuing pedagogical training on the CBT approach	No continuing training provided	Continuing training provided for trainers only	Continuing training provided for trainers and some other actors	Continuing training provided for all trainers and other actors
14. A support system exists for trainers	No support system	A system exists but it is not operational	A system exists but it is only occasionally operational	A system exists and it is operational

**Table B) Criteria used to Assess the Status of CBT Implementation in the Study Countries**

15. The pedagogical management of the training process is based on CBT principles (sticking to a timetable, CBA teaching and learning strategies, formative assessment, a learner-centred learning process, using standards, using materials and equipment, etc.).	Not based on CBT principles	Based on two CBT principles	Based on four CBT principles	Based on more than four CBT principles
16. Sufficient materials/equipment are available at the VTC or can be accessed to carry out the practical components of the training program	Very insufficient availability or accessibility	Low availability or accessibility (limiting most applied learning)	Good availability or accessibility (some learning activities are limited)	Sufficient availability or non-restrictive accessibility
17. The training environment is modelled on the realities of the professional world (material and physical organisation)	Not representative of the professional environment	Slightly (partially) representative of the professional environment	Highly representative of the professional environment (several elements included)	Perfectly representative of the professional environment
18. Businesses and professionals contribute to training for young people	No businesses or professionals	Businesses and professionals are occasionally present during the school year	Businesses and professionals are regularly present during the school year	Businesses and professionals are consistently present
19. Competency assessment involves businesses and professionals in the field	No businesses or professionals involved in assessment	Businesses and professionals are occasionally involved in assessment	Businesses and professionals are most often involved in assessment	Businesses and professionals are always involved in assessment
20. Assessment is consistent with the competencies developed in training	Not consistent	Consistent with less than half of the competencies	Consistent with more than half of the competencies	Consistent with all of the competencies

**Table B) Criteria used to Assess the Status of CBT Implementation in the Study Countries**

21. There is an occupational certification framework	No	----	----	Yes
22. A system for updating occupational certification is in place	No	Exists but is almost never applied	Exists and is applied every decade	Exists and is applied at least every three-four years
23. Active agreements or partnerships are in place between the VTCs and businesses	No agreements	Some agreements exist but are not systematically applied and/or not used	Many agreements exist but are not systematic and/or not systematically applied	All VTCs have agreements and they are used
24. VTCs offer training specialisations related to the qualification needs of companies located in their respective economic environments and geographical areas	No	----	----	Yes
25. Vocational training structures have administrative, pedagogical and financial autonomy	No legal framework to promote autonomy	A legal framework exists but is not applied	A legal framework exists and is partially applied	A legal framework exists and is consistently applied
26. A communication and awareness strategy exists for CBT stakeholders	No	----	----	Yes
27. A tool is available to measure the professional integration rate of CBT program graduates	No	Partially available		Yes
28. A tool for assessing business satisfaction with the skills of CBT graduates is available	No	----	----	Yes

## Appendix 4 – Presentation of the Study Team Members

NAME AND TITLE	ORGANISATION	CONTACT INFORMATION	COUNTRIES	Dates of field missions
Barbara Murtin Coordinator, Youth Training and Employment program	Francophonie Institute for Education and Training (IFEFF) – International Organisation of La Francophonie (OIF)		- South Africa - Ethiopia - Rwanda	
Lena Diop-Watt Program Officer, Youth Training and Employment program	Francophonie Institute for Education and Training (IFEFF) – International Organisation of La Francophonie (OIF)	Courriel : <a href="mailto:Lena.Watt@francophonie.org">Lena.Watt@francophonie.org</a> Tél : + 221 33 859 25 53 /+ (221) 77 372 92 89	- Benin - Senegal	
Éric Huby Vocational training and employment expert	Francophonie Institute for Education and Training (IFEFF) – International Organisation of La Francophonie (OIF)	Courriel : <a href="mailto:Eric.Huby@francophonie.org">Eric.Huby@francophonie.org</a> Tél : + 221 33 859 29 44 / + (221) 77 257 67 59	- Ghana	- Benin: 11-15 March 2019 - Ethiopia: 4-15 February 2019 - Ghana: 9-13 December 2019
Naceur Chraïti Head, Vocational Training Expertise Platform (PEFOP)	UNESCO – IIEP Pôle de Dakar	Courriel : <a href="mailto:mn.chraïti-h-sini@iiep.unesco.org">mn.chraïti-h-sini@iiep.unesco.org</a> Tél : +221 33 859 77 30 / + (221) 33 859 77 46	- South Africa - Morocco - Rwanda	- Morocco: 6-19 January 2019 - Rwanda: 14-25 September 2019 - Senegal: 14-25 January 2019 - South Africa: 8-20 April 2019
Khalil Bahloul TVET training expert	UNESCO – IIEP Pôle de Dakar	Courriel : <a href="mailto:k.bahloul@iiep.unesco.org">k.bahloul@iiep.unesco.org</a> Tél : +221 33 859 77 30 / + (221) 33 859 77 69	- Benin - Ghana	
Xavier Rosy CBT-VTT expert	Objective View	Courriel : <a href="mailto:xavierosy@gmail.com">xavierosy@gmail.com</a> Tél : +32 475 89 70 93	- South Africa - Morocco	
Sonia Michaud International Director and CBT-VTT expert	Collège communautaire du Nouveau-Brunswick	Courriel : <a href="mailto:sonia.michaud@ccnb.ca">sonia.michaud@ccnb.ca</a> Tél : + 1 506 475 5143	- Ethiopia - Senegal	

## Appendix 5 – List of Institutions and Organisations interviewed in each Country

<b>SOUTH AFRICA</b>	<b>BENIN</b>
• TVET DHET Offices	• National Directorate for Technical and Vocational Education
• National Skills Fund offices	• National Institute of Engineering Training and Capacity Building of Trainers (INIFRCF)
• GIZ – Support to the Comprehensive Africa agriculture development program (CAADP)	• In-Service Training Development Fund (FODEFCA)
• Swisscontact – South African co-operation initiative	• Ministry of Secondary and Technical Education and Vocational Training (MESTFP)
• Steel and Engineering Industries Federation of Southern Africa (SEIFSA) – CoS projects	• National concertation framework for the promotion of TVET
• Capricorn College, Polokwane, Limpopo region	• National council of employers – training commission
• Ehlanzeni College, Nelspruit, Mpumalanga region	• Medji agricultural college of Sékou
• Gert Sibande TVET College, Standerton, Mpumalanga region	• Bohicon technical college
• Ekurhuleni West College, Johannesburg Gauteng region	• Abomey VTC
• Congress of South African Trade Unions (COSATU)	• Lokossa Technical teacher training college (ENSET)
• Business Unity SA (BUSA)	• Lokossa University Institute of Technology
• Agricultural Sector Education and Training Authority (AgriSETA)	• Agence française de développement (French co-operation) – urban development, social sectors and governance centre
• Intergovernmental Relations – Department of Public Enterprises	• Sè VTC
• Transformation, Skills & Youth Development – Department of Public Enterprises	• National confederation of artisans of Benin (CNAB)
• Department of Higher Education & Training	• Union of interdepartmental guilds chambers of Benin
• Quality Council for Trades & Occupations	• GIZ – National Office
• Trade Test Center Olifantsfontain	• Swiss Co-operation Office in Benin program - Basic education and vocational training
• Minerals Council South Africa	• Paul Gérin-Lajoie Foundation – Project for the sustainable integration of graduates in the agri-pastoral sector
<b>ETHIOPIA</b>	<b>GHANA</b>
• Federal Technical and Vocational Education and Training: <ul style="list-style-type: none"> <li>- Directorate for Training of Trainers</li> <li>- Directorate for Competency Development</li> <li>- Finance Directorate</li> <li>- Certification Directorate</li> </ul>	• Council for Technical and Vocational Education and Training (COTVET) <ul style="list-style-type: none"> <li>- Policy planning &amp; Research department</li> </ul>
• Ministry of Agriculture (TVET Office) – Addis Ababa	• Skills Development Fund (SDF)
• Catering & Tourism Training Institute (CTTI) – Addis Ababa	• Technical Examination Unit – Education Service
• Ministry of Education – TVET Directorate	• Informal sector association
• Ministry of Culture and Tourism – TVET Office	• Federation of professional trade associations of Ghana (FEPTAG)

• GIZ National Office	• FEPTAG -2nd Image International skills College
• United Nations Industrial Development Organization (UNIDO)	• FEPTAG – Association of Professional Photographers
• African Union Department of Education	• National Association of Beauticians and Hairdressers (NABH Ghana)
• UNESCO – Better Education for Africa’s Rise (BEAR II)	• Accra Technical Training Centre (ATTC)
• Regional directorate of TVET office of Adama, Oromia Region	• Tema Technical Institute
• Adama Polytechnic College, Oromia Region	• Ghana Employers Association (GEA)
• TVET Bureau management in Hawassa, Southern Nations Region	• Koforidua Technical University (KTU)
• TVET College – Hawassa, Southern Nations Region	• National Board for Professional and Technician Examinations (NABPTEX)
• Alage Agricultural TVET College – Hawassa area	• GIZ – CAADP Agricultural Technical and Vocational Education and Training for women project
• Permanent Representation of the OIF to the African Union (RPUA)	
<b>MOROCCO</b>	<b>RWANDA</b>
• Secretariat of State for Vocational Training (SEFP)	• Department of Institutional Development and Research – Rwanda Polytechnic (RP)
• Workplace Training Directorate	• Workforce Development Authority (WDA)
• Tertiary sector studies department at the planning directorate studies division	• Integrated Polytechnic Regional Centre (IPRC) – Kigali
• Canadian Co-operation Office – co-operation division	• SOS TVET School
• Tourism training institute	• Ministry of Education (MINEDUC)
• Consortium for International Development in Education (CIDE)	• Rwanda Development Board
• Ministry of Tourism	• Association for the Promotion of Education and Training Abroad (APEFE)
• Fisheries Department	• Mpanda TVET School (Gitarama/Muhanga region)
• Private Vocational Training Institute (IPIAB)	• Nyanza TVET School – Southern Province, Nyanza District, Ruhango
• Prince Sidi Mohamed Institute of Agricultural Management and Marketing (IPSM)	• Giheke Training Centre
• DGFR – Agriculture	• IPRC Karongi
• Institute for Training in Crafts (IFMIA) – Salé	
• Institute for Training Automotive Industry Professionals in Casablanca (IFMIAC)	
• Association for the Promotion of Education and Training Abroad (APEFE)	
• Higher Council for Education, Training and Research (CSEFRS)	
• Office of Vocational Training and Employment Promotion (OFPPT)	
• General Confederation of Moroccan Enterprises (CGEM)	

<b>SENEGAL</b>	
<ul style="list-style-type: none"> <li>• Ministry of Employment, Vocational Training and Crafts (MEFPA)</li> <li>- TVET Directorate</li> <li>- School-Business Training Program (PF2E)</li> <li>- Pedagogical Division</li> <li>- DPPS</li> <li>- Bureau of follow-up and integration</li> </ul>	<ul style="list-style-type: none"> <li>• Ministry of Employment, Vocational Training and Crafts (MEFPA)</li> <li>- Quality Bureau</li> <li>- Directorate of Apprenticeship</li> <li>- Directorate of examinations, professional contests and certifications (DECPC)</li> <li>- Studies and planning units</li> </ul>
<ul style="list-style-type: none"> <li>• LuxDev – Technical and Vocational Training and Employability</li> </ul>	<ul style="list-style-type: none"> <li>• Fatick VTC</li> </ul>
<ul style="list-style-type: none"> <li>• African Development Bank (Senegal office)</li> </ul>	<ul style="list-style-type: none"> <li>• Kaolack VTC</li> </ul>
<ul style="list-style-type: none"> <li>• Canadian Co-operation Office/Canadian Embassy</li> </ul>	<ul style="list-style-type: none"> <li>• Diourbel VTC</li> </ul>
<ul style="list-style-type: none"> <li>• French Development Agency (AFD)</li> </ul>	<ul style="list-style-type: none"> <li>• National Agency for the Promotion of Youth Employment in Senegal (ANPEJ)</li> </ul>
<ul style="list-style-type: none"> <li>• Association for the Promotion of Education and Training Abroad (APEFE)</li> </ul>	<ul style="list-style-type: none"> <li>• Normal School for Technical and Vocational Education (ENSETP)</li> </ul>
<ul style="list-style-type: none"> <li>• Ministry of Tourism</li> </ul>	<ul style="list-style-type: none"> <li>• Saint-Louis VTC</li> </ul>
<ul style="list-style-type: none"> <li>• Ministry of Employment, Professional Integration and Workforce Intensification</li> <li>- Directorate of Employment</li> <li>- Technical and vocational training fund</li> </ul>	<ul style="list-style-type: none"> <li>• Headmaster, André Peytavin Technical School, Saint-Louis</li> </ul>
<ul style="list-style-type: none"> <li>• Afrique Communication design office</li> </ul>	<ul style="list-style-type: none"> <li>• Higher Institute of Vocational Education (ISEP), Thiès</li> </ul>
<ul style="list-style-type: none"> <li>• United Nations Industrial Development Organisation (UNIDO) – IDEA Programme</li> </ul>	<ul style="list-style-type: none"> <li>• Network of vocational training institutes of Senegal (RISEP)</li> </ul>
<ul style="list-style-type: none"> <li>• National Office of Vocational Training (ONFP)</li> </ul>	<ul style="list-style-type: none"> <li>• Technical High School of Thiès</li> </ul>
<ul style="list-style-type: none"> <li>• Implementation Unit – Poultry Farming</li> </ul>	<ul style="list-style-type: none"> <li>• School Inspections Offices (IA) of Thiès and Fatick</li> </ul>
<ul style="list-style-type: none"> <li>• Mbao centre for the modernisation of livestock farming</li> </ul>	<ul style="list-style-type: none"> <li>• National school of home economics and social economics (ENFEFS)</li> </ul>

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IIEP-UNESCO Dakar and the IFEF have carried out a joint study on contextualizing and adapting the competency-based approach (CBA) in 7 African countries: South Africa, Benin, Ethiopia, Ghana, Morocco, Rwanda, and Senegal.

This study has identified good practices and their use for making the CBA more effective in TVET systems, as well as the difficulties encountered in introducing or sustaining this approach. Particular attention has been paid to identifying the turning points (positive or negative) that characterized the process for implementing the CBA, in order to draw the lessons learned from them.

Based on the conclusions drawn from analysing the implementation in these 7 countries, the study makes recommendations for successfully adapting the CBA to the context of African countries.

