Intention, tensions and mediations in and out the National Qualification Framework

A comparative analysis between two Brazilian S-System institutions

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Abstract

The implementation of the National Qualification Framework (NQF) has become the focus of attention of researchers and policymakers worldwide during the past decades. The possibility of creating both quality assurance and a transparent system capable of improving communication between stakeholders, while adapting workers for the knowledge society demands, lead international agencies to consistently recommend NQF to policymakers. Lately, researchers around the world had shown concern with the extent of NQF adequacy, especially when implemented in developing countries. This study brings into view the Brazilian Technical and Vocational Education and Training (TVET) policy, to identify efforts towards an NQF implementation, characterize the NQF and identify intentions and tensions inbred in the implementation process. It also examines the experience of two S-System institutions to illuminate how being part of or apart from the NQF helps institutions to navigate through intentions and tensions identified in the NQF and to mediate them.

 This is a qualitative cross-sectional research, based on data collected through official documents and semi-structured interviews, and through the use of thematic coding and Critical Discourse Analysis, this study reveals an NQF in process of implementation in Brazil. It is characterized by a linked control with programmes separated in tracks or, in Brazilian policy lingo, "learning itinerary", vertically divided in three levels and horizontally articulated in thirteen technological axes. The policy is driven by the intention of promoting lifelong learning and inbred by tensions related to the articulation between TVET and basic education and its effect in work mobility, stakeholders' participation, professional profile orientation, and informal economy. In the institutional level, mediations to the tensions were made both through the development of tight descriptors and outcome standards, or through the adoption of strategies not prescribed by the Brazilian NQF.

To establish patterns and casual connections among the collected data, the study of Allais (2013), Young (2013) and Tunk (2007) on NQF implementation were adopted as an analytical framework. This way, pattern, features, intentions, and tension observed in other developing countries, functioned as references for the Brazilian experience, which could then be set in context with the global debate on NQF. The analysis suggests that through the NQF, Brazil has advanced in TVET policy identity and organization, but some challenges remain.

On the one hand, the implementation process needs to be completed, and, on the other hand, the chosen features of NQF are required to better adequate to the Brazilian policy reality.

Acknowledgements

At the very least, this study made me more aware of how poverty cycles are hard to be broken. The limited desire and capability of policymakers and researchers to impact and improve vulnerable populations' lives is a historical tendency constantly reviewed by me during these months of studies. In this sense, above all, I would like to acknowledge my great grandparents' (vó Ninha and vô Pedro) contributions. It is only because they dared to dream a life outside the poverty so typical of the Northeastern Brazilian countryside, only because of their efforts to break the family's chain of illiteracy, that I am here today. For that, I am forever indebted.

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Abbreviations

NQF   National Qualification Framework

TVET   Technical and Vocational Education and Training

OECD   Organization for Economic Co-operation and Development

UN   United Nations

ILO   International Labour Orgnization

NGO   Non-governmental organizations

CNI   Confederação Nacional da Industria

BNDE   Banco Nacional do Desenvolvimento

CNCT   Catálogo Nacional de Cursos Técnicos

SETEC   Secretaria de Educação Profissional e Tecnológica

CNE   Conselho Nacional de Educação

SGC   Sistema de Gerenciamento de Clientes

SISTEC   Sistema Nacional de Informações da Educação Profissional e Tecnológica

1 Introduction

1.1 National Qualification Frameworks

International research on the Technical and Vocational Education and Training (TVET) have recently found its interests turned towards the implementation of the National Qualification Framework (NQF) worldwide. Some countries, like New Zealand, Australia, Scotland and South Africa, are pioneers in this area and have accumulated experiences and results after decades of NQF implementation. Other developed countries have reported some success in its implementation, but they still lack data concerning the implementation impact. (Cedefop, 2008). The promise of a system that is capable to manage worker's qualification with transparency and promote better communication between employers and educational institutions, as well as promote workers' mobility, was enthusiastically received by bilateral agencies. In this sense, the recommendation of bilateral agencies such as the *World Bank*, the *Organization for Economic Cooperation and Development* (OECD) and the *United Nations* (UN) has made the NQF implementation spread among developing countries.

Researches coordinated by Young & Allais (2009) and funded by the *International Labour Organization* (ILO), have made some reports on core issues involving the NQF implementation in five continents. One difficulty pointed by the team is the lack of local-based researchers. According to Young & Allais (2009), the absence limited the range of collected data and analysis production. Thereby, this study aims to work on this gap and intends to bring some views on the NQF implementation in Brazil, as well as on the political tensions underpinning its features. Brazil is the biggest country of South America. It also has the biggest economy and a strong political influence in the region. More to the point, the Brazilian professional education methodologies developed by one of the institutions studied in this research are being replicated in several countries. South American countries like Venezuela, Chile, Argentina and Peru; Lusophone countries such as Mozambique; and even in developed countries like Canada. Learning about Brazilian NQF implementation may be a

way to understand global tendencies and to provide important information for policymakers and workforce development professionals worldwide.

1.2 Local relevance

The study of NQF has been of particular relevance in Brazil since the '90s. After the country's re-democratization, a series of educational reforms have changed the TVET scenario and have turned it into an independent education modality. The studies and efforts to operationalize this model have produced new systems and organizations during the past two decades. This is a notable change in TVET national policy, once it had been disarticulated since the country's foundation – except for few successful initiatives, such as the Service System.

The S-System is composed by a group of parastatal institutions in service of different economic segments. The expression parastatal was first used in Italy in 1924 to indicate a halfway between public and private interests. Despite that, in Brazilian legislation, it designates private juridical persons who collaborate with the state in non-profitable activities and to whom the state provides protection by delegating some of its public authority. (Pereira, 2019). In other words, they are a type of private entity that executes activities typically attributed to the state. Over the years, S-System institutions have developed unique features. They are present in all the twenty-seven Brazilian states and are therefore a national structure with national guidelines and frameworks. But, at the same time, as the economic activities variate from region to region, S-System institutions keep local administration units with large range of autonomy. Though they are present in the whole country and function beyond the borders, these institutions offer services for a small target group – workers from a specific economic category. This fact unloads the maintenance costs of a broad national policy and, according to the *World Bank* (2002), is the reason why the implementation of the National Qualification Framework has failed in many developing countries.

When it comes to international networks, the institutions have been establishing alliances that sometimes coincide with or are influenced by Brazilian state's international agreements. But, overall, the alliances are independent from the international agreements. The establishment of partnerships in accordance with practical demands that arise from daily challenges has shown

better dynamic and results in contrast to an establishment that would take into account broad agreements made on the state level. The results generated by the S-System led it to be called "The South American solution for Professional Education" by the WB (2002). SENAI, one of the nine S-System institutions, is considered nowadays the second bigger professional education complex, according to the *WorldSkills*, and one of the main international organizations in the Southern Hemisphere, according to the UN. Such an exception in South America makes the NQF implementation impact over the S-System institutions worth a closer look. In the means that not all the services joined the new national policy, it became possible to observe the differences between the services that develop their work inside and the others which develop their programmes outside the national policy new logics. Allais, David, Strathdee, Wheelahan and Young (2009) defend the necessity of investigating "how superficially similar frameworks work out differently in practice.". In this sense, the goal of this study is to firstly understand Brazilian NQF implementation and, after that, to investigate how does it impact institutions' educational praxis, especially in developing countries.

1.3 Research purpose and question

As it was previously said, the NQF has been recommended by important actors in global governance. But, at the same time, publications are starting to show some concerns about the NQF implementation process in developing countries due to their lack of previous structure or their current unresourceful governments. An issue within this concern is how the main features of an NQF can impact this given scenery. If one turns attention towards the S-System, it may be possible to strategically compare very similar and traditional institutions that had followed different paths in the NQF implementation process.

Through this context, this study aims to identify if there is an NQF being implemented in Brazil, and, in the case of its existence, how it can be characterized in relation to the most relevant global NQF core of the debate. This study also intends to find out which intentions and tensions underlie the NQF implementation process. Further on, the work is directed to clarify how being part of or apart from the NQF can affect SEBRAE's and SENAI's navigation through the mediations of intentions and tensions identified in the NQF implementation process. No political analysis is complete if it does not take into consideration

the underlying reasons for what is stated in texts and the unfolding consequences of them in policy execution. Thereby, this study aims to explore the NQF features, intensions and tensions that underlie the policy implementation, and possible mediations to the NQF's implementation process, in order to contribute with reflections over which NQF is worth to be implemented. That is the real question that has driven all the research efforts in this area.

1.4 Study structure

After the introduction, the second chapter presents the historical context of TVET in Brazil, with special emphasis on the period after 1985, that corresponds to the re-democratization of the country, when the current Educational System was designed and implemented. Afterwards, in the same chapter, the S-System overview and SEBRAE and SENAI structure are illuminated.

Chapter 3 introduces the framework of analysis. First, Stephen J. Ball (1994, 1998) ideas about policy analysis are presented as the analytical grounds for this study. Secondly, the concepts of learning outcomes orientation and competence-based curriculum are explored. Finally, the debate around NQF implementation is introduced.

Chapter 4 presents the research design and methodology, which consists of a cross-sectional qualitative research based on document analysis and semi-structured interviews. The chapter describes the criteria to access authenticity, credibility, representativeness, and meaning during the data collection; and the use of Critical Discourse Analysis and Thematic Coding as data analysis strategies.

Chapter 5 goes from the research's strategies to the findings and determines if an NQF is being implemented in Brazil. It also describes how the Brazilian NQF can be characterized in relation to the most relevant global frameworks. Further on, it identifies which intentions and tensions underlie the NQF implementing process. At last, the chapter discusses how being part of or apart from the NQF affects SEBRAE's and SENAI's navigation through the mediations of intentions and tensions identified in the NQF implementing process.

Chapter six presents some discussion on competence-based curriculum as a language of communication, and curricular articulations between TVET and secondary educations.

Finally, the chapter explores SEBRAE and SENAI structures of organization as a nationally applied policy; choices for centralized or decentralized systems; and difficulties and achievements derived from those choices.

The final chapter draws some ideas and opinions over the findings. It first addresses conjectures over the Brazilian NQF present and future challenges. Secondly, it presents contributions that these institutions' experiences have for policymaker decisions.

2 Context of the TVET field in Brazil

2.1 TVET in Brazil

This review focuses on the foundation and historical development of the TVET field in Brazil. The intention here is to show, alongside the historical progression, the changes involving education concepts and organization; political movements; and social tensions embedded in the policy-making. A view over Brazilian TVET policy reveals a struggle for recognition, validation and organization. This fight is rooted in Brazilian social structure: as it was the last country in the world to abolish slavery, the qualification of workers got ultimately scuppered by the deniability of their humanity. Later on, with the growth of a free colored population in the urban centers, some assistance initiatives were developed to provide services and artisan goods and to control vagrancy and vandalism.

TVET recognition as a state policy to education and economic growth came almost three centuries after the colonization. It was propelled by intense social transformation and the country's industrialization. At that point, social heritage would collide with the strategic need for qualified workers: while the country was massively in need of qualification for the new born industries, the low prestige of physical work in the society restrained the insertion of professional courses in the school system.

The tension between industrial sectors and society crossed the following two centuries and featured a policy in which professional education and the school system followed different paths. They had some convergent moments, but were mostly independently or even ignored each other (Schwartzman & Castro, 2013). This dispute was reinforced by the social perception that reaching the tertiary level, more than an economical or intellectual aspiration, was a matter of belonging to the top or the bottom of society. Furthermore, the industrial development in the early years didn't follow the government projection, resulting in the return of schools' artisan's programmes, more than industrial preparation ones. Instead of a shift from one production mode to another, the countries witnessed an overlap of production modes that sometimes made the goal of qualification unclear. In the end, a dual system was projected

with general education at one side and professional education at the other. At the organizational level, the private sector was responsible for the biggest part of the offered programmes, often supported by public funds. Additionally, the articulation between institutions and the state was recent and insipient, as well as the focus on monitoring. These arguments are developed in from a historical perspective in what follows.

2.1.1 Brazil during colonization

During the colonial period (1500-1822), the preparation process for work was made in practical activities. There was no formal instruction, so that Brazilian natives and Africans brought through the slavery trade were forced to inhuman conditions of life and work. Brazilian economy was a regime of plantations. But, after a while, especially after the beginning of the mining cycle, small urban centers began to appear and, with them, a demand for artisan goods and services. The Catholic Church, through the Jesuit missions, was responsible for the development of the first professional centers. In those missions, the priests tried to reproduce an autarchic system to produce consumer products and services that were developed by them in Europe (Manfredi, 2017).

Later on, during the 18th century, religious orders amplified the production scope through metallurgic and textile corporations. They were developed in a masters' and apprentices' system, in which after four years an apprentice could be evaluated and, if approved, would receive a certification to become a corporate member. According to Manfredi (2017), the orders operated through the logic of manual work disqualification and physical punishment. There was also a distinction between orders designated to white and to black people. It reinfused social separation both representatively and in terms of education strategies.

2.1.2 The Brazilian Empire

The regent prince D. João VI founded the first professional school in Brazil in 1809, during the colonial period, to assist orphan children. The school offered professional education – such as handcraft, bakery or carpentry – for poor children, while the rich ones would be

prepared for a higher education level, compatible with their oligarchic life, in religious schools or other private initiatives (MEC, 2007).

In 1807, Brazil became involved in a political maneuver the *Napoleonic Wars* that resulted in the Royal family's arrival at the colony. In 1815, the colony was elevated to a United Kingdom of Portugal, Brazil and Algarves, and, in 1822, it finally became an independent empire. The basic socioeconomic structure of the country was the oligarchic agriculture inherited from colonization, but the commercial sector expiation began to demand industrial activities. The economic complexification also propelled the development of the state apparatus (Manfredi, 2017). At the education field, the state takeover started at higher education and went downwards to the basic education some years later.

The professional qualifications were mainly developed by the *Escolas de Educandos Artifices* (*handicraftsmen learners' houses*) where orphans and excluders were co-opted to compulsory learning whenever a manufacturing entrepreneur needed a workforce. They were also offered by the *Liceus de Artes e Oficios* (*Liceus of Arts and Vocations*) – a civil society initiative composed by rich families and state members. The *Liceus* offered basic education, numeracy, literacy, and a professional course that was concluded after three years of supervised work. The period of supervised work at the professional course had the double function of paying for the education and accumulating a small contribution that was given to the apprentice after the program's conclusion (Manfredi, 2017).

Educating a workforce was not part of education or economic policies. Those first initiatives were based on social care and on the prevention of vandalism. Therefore, they represented a concern with social stability. Also, the urban centers that accumulated vandal populations were rather small, not demanding from this policy a complex management system. During the 19th century, this social order was challenged by the economic changes and by the social insurrections that the Independency (1822) and the abolition of slavery (1880) caused, resulting in the Republic proclamation (1889.). The following changes evolved until middle 20th century, when a new society structure demanded a new education policy.

2.1.3 First Republic and *New State*

Between 1889 and 1930, the country faced the abolition of slavery and an intense immigration policy. The expiation of coffee growers' sectors has later provided capital accumulation for the birth of the industrial and commercial sectors. The rise of these sectors generated new demands for professional education.

The economic change expanded the urban centers that had masses of workers living there. The arrival of immigrants from Europe, mostly from Italy, helped to create strong worker movements that were organized in unions and driven by anarcho-syndicalist ideas. The education conception changed from assistentialist and compensatory orientation – grounded in the Catholic ideology of work as the antidote for laziness –, to a qualification for the work market and suppression of social movements' influences.

In that period, the disarticulated initiatives in professional education were grouped or suppressed by the creation of school networks that englobed an autarchic federal technical school with nineteen unities spread in different states. The federal technical schools have passed through a series of transformation, but nowadays they are still one of the most important institutions in Brazilian TVET governance.

In addition to ecclesiastic schools – the Salesians prominently –, states and municipalities also developed regional networks. They composed an articulation to implement an official agenda for TVET: the qualification seeked to attend to the labor market demand through technical and practical knowledge. On the other side of interests, the unions were growing in size and influence and began to provide programmes for workers and their families. The programmes were oriented towards modern science and integral education. There are not many registrations on how those courses were articulated, but it is assumed that, besides the ideological core, in the beginning the training was practical and made on-the-job, since the techniques demanded by the newborn industries were not very complex, but they were gaining complexity alongside the means of production's evolution. (Manfredi, 2017).

 In the 1930's, the social agitation caused by the union organizations was so intense that the country was immersed in a dictatorial period to recover social order. During that period, which has lasted until 1945, the union driven by workers was suppressed and replaced by *Official Unions* conducted by state and employers' associations. The *Official Unions* were responsible for giving concessions to the working class, in terms of working rights and

assistance, to pacify the intense social conflicts. Those Unions are the origin of the S-System – as it is described in the following section.

During the *New Republic*, there was an attempt to create a professional schools' network to technically prepare qualified workers to the industrialization in progress. However, the industrialization rhythm did not meet the policymaker expectations and, by the end of the period, most of the professional courses still functioning offered manufacturing qualification. (Manfredi, 2017). After the '40s, the scenario was reversed: industrialization and later insertion in global economy dictated a rhythm hard to be followed by the TVET policy. The education system was now oriented towards the consolidation of the duality between intellectual and manual work. Moreover, this separation should also follow the social division of labor. In this sense, on one side it was created a propaedeutic secondary school for higher education access; and, on the other side, in a completely disarticulated way, professional education. Those ideas – a dual system controlled by the state, separated independent professional programmes, and private sectors mainly responsible for the courses offered –, were implemented by a set of reforms, called *Reforma Copanema*.

The *Reforma Copanema* enabled SENAI's creation under the regulation of the Law n° 4048/1942. SENAI was later expanded to the commerce and agriculture and then originated the S-System. (MEC, 2007). Another consequence of the reform was the complete independence of the private sector from professional education, which would later result in an overlap of uncoordinated actions still present nowadays. The *Copanema* reform also brought a vertical ramification to TVET. The TVET policy was composed by a system of levels that would go from basic education to higher education, but that was separated by the area of knowledge. Only the propaedeutic course could guarantee access to any high education program, in a reproduction of the fascist education reforms in Italy. (Cunha, 2000). After the reform, a series of modifications would slowly disarticulate the logic of progression by area drawn through a system of equivalence. On the following decades, this idea gained strength, and would result in another attempt of reform in 1961 – a Brazilian version of the comprehensive high school but applied to the second cycle of basic education. (Cunha, 2000).

The dispute between universal and dual education – the strongest point of dispute from there on – involved at last three elements: the need for qualified workers propelled policymakers towards compulsory technical qualification; the society resistance to physical work, especially from high and middle classes, demanded a propaedeutic secondary education; intellectual

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movements advocated for an universal education in which practical dimensions should never be taught dissociated to its theoretical core. The figure below, extracted from Manfredi's book (2017), renders a perspective of the policy progression throughout the decades.

Figure 1: Education reforms from 1942 to 1996
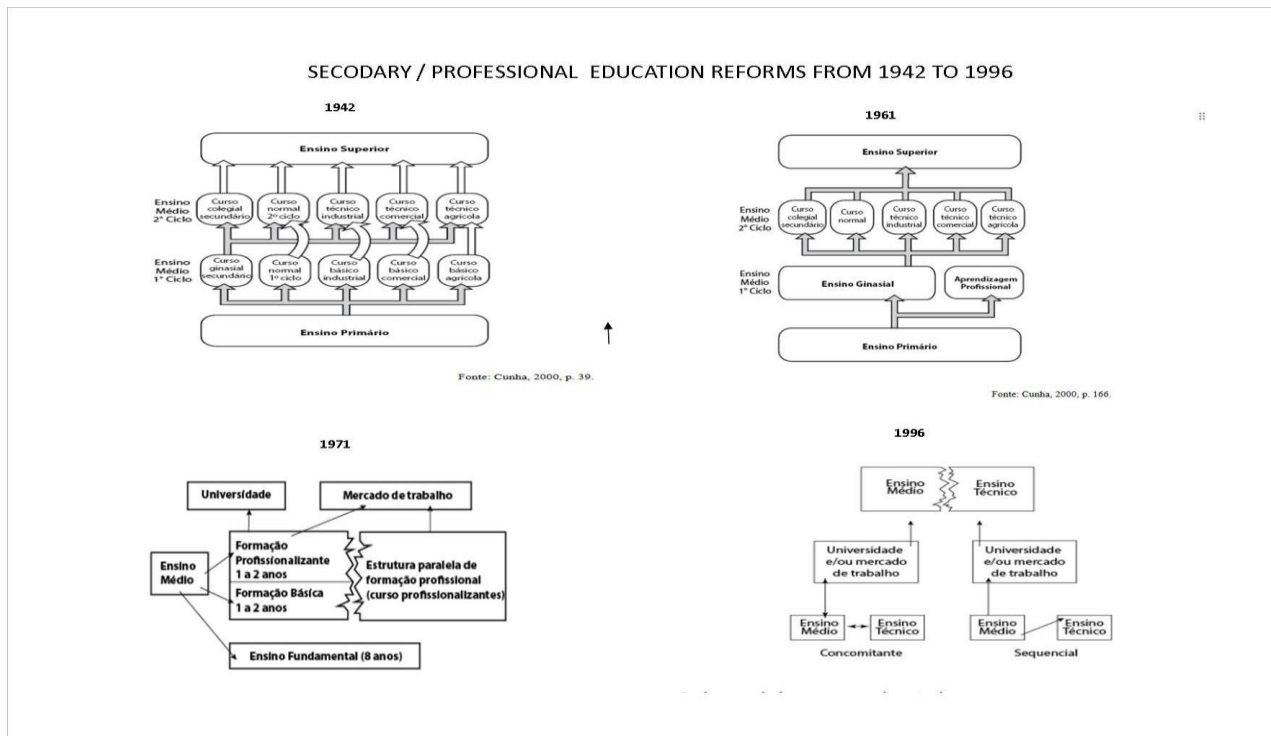
Source: Manfredi (2017)

As the figure shows, Brazilian education system still suffered one last transformation before the current structure was approved. It turned professional education a part of the secondary education curriculum. The underpinning reason for this reform was a pressure for qualified workers in addition to a military regime in power.

All over the world, along the second half of the 20th century, technological evolution changed the work market dynamic. Job positions began to require more complex skills and TVET became even more important to the economic growth. Changes in the qualification policies became strongly influenced by international agencies, especially by the *World Bank*. Brazilian debts with the bank have made the country vulnerable.

In 1961, all the four technical courses became equivalent. One decade later, in 1971, the technical courses became compulsory in the public school system (MEC, 2007). As mentioned before, the relationship between general and professional education at the secondary level is marked by a back-and-forth process. At that point, there was at one side a large demand for technical workers and, at the other, a need to suppress the demand for higher education. That scenario led the government to impose professional education for the whole population.

TVET was then, and still is, understood as an inferior modality of education intended for a poor population (Ferreti & Silva Jr, 2000). As a consequence, the idea of an integrated TVET of basic education that obligated rich children to learn blue-collar jobs became a challenge. Instead, social pressure sustained an independent system that could provide professional education for the poor population. In 1975, the reform was completely disfigured, but it left the secondary level disarticulation as a legacy.

Another legacy from this period was the expansion of professional education driven by the private initiative, the S-System in particular. Alongside with big national projects – generated by part of the modernization and development strategies –, a massive demand for workforce emerged and needed to be solved as soon as possible. In order to do so, the government invested in a partnership with private institutions to offer programmes for immediate preparation to work. This program was called PIPMO and is partially responsible for the expiation and consolidation of the S-System in the national TVET governance. (Manfredi 2017).

 In the '90s, as the country's re-democratization occurred, a new set of reforms was realized and involved almost all the areas of policy. A new *National Framework* for TVET was approved. The new document presented TVET as a complementary modality of education. The declared objective was to integrate knowledge and adapt society to the Post-Fordism production mode that characterized the technological society (MEC, 1997). At that perspective, the development of skills was the principle goal for a division that should accord to occupation. The last one should be subordinated to the economic demand. The TVET, associated with a solid basic education, was presented as the key for the country economic success.

At the beginning of the '90s, there were four different articulations and projects to professional education in dispute. The *Ministry of Education* wanted to implement a national system with five levels of professional education, to follow the European tendency. The *Ministry of Labor* wanted to include professional education under the employment's and income generation's policy umbrella. They also defended a basic education more professionally oriented. The entrepreneur's, industrial's and other employers' associations defended investments in basic education and the maintenance of the independent professional education system. The fourth project was defended by the civil society and was related to a unified polytechnic school (Manfredi, 2017)

The idea of polytechnic education first appeared in Brazil in 1932, in the *Manifesto dos Pioneiros da Educação Nova* (*The Pioneers of New Education Manifesto*). The term "polytechnic" is inspired by Marxist authors and Antonio Gramsci's work: it consists of a perspective of education in which theory should not be taught apart from its practical aspects and vice-versa. The ideal of an educational system that does not divide society in such way is still a strong consensus among professionals in the field (Schwartzman & Castro, 2013).

The reform spent eight years under examination, reformulations and disputes in the congress (Santos, 2008). By the end of this process, in 1996, the approved law had Marxist referential, but it was shaped to provide courses under economic demands, in an unfulfilled promise that more qualification would mean more employability (Ferretti & Silva Jr 2000). The approved reform presented as a primary goal the adequation of education to the global modern society changes. The secondary education was responsible for the basic education; the preparation for work and social life; and the development of individuals in their human dimensions. The TVET policy was developed apart and divided in three levels. The programmes were optional and could be developed either separately, articulated, posterior or concomitant to secondary education. The policy details are in the subject of the fifth chapter. For now, it's important to report the triumph of the dual system. One of the consequences of this triumph was the extinction of technical courses in the majority of schools in 1996. In a few institutes, they were replaced by polytechnic formation – the teaching of scientific fundamentals of different modern work techniques.

The developed countries commonly adopt two different models of secondary education and some variants of them. The European model design has multiple institutions with different levels and goals for professional and theoretical/academic skills. The American model, also

known as the "comprehensive high schools", sets all the students within a geographical area to go to the same school, where they will shape different curriculums depending on their progress and skills (Castro, 2008).

Brazil in its turn adopted a model composed by one single prototype of school, that offered a curriculum in which all the students should study the same disciplines and contents. This model, according to Castro (2008), overloaded the secondary level, as it gave to this level four different missions: to complete the general education initiated in the basic level; to prepare students for the academic world; to lay the groundwork for professional education; and to serve as a direct entry for the labor market. Other important fact is that TVET's curriculum has always been built apart, as a complementary course with an unclear function, regardless of TVET's integration or segregation from secondary education in the school's system.

Ferretti & Silva Jr (2000) point out that, despite the ambitious goal, this reform is associated to a decrease of investment in an area that was already precarious. In addition to this, the reform presumed the association of a flexible, integrated, professional and technological knowledge to the modern economy dynamic – though that could be true in developed countries, it didn't match Brazilian reality. Also, as the reform did a superficial analysis of the work market, it dissociated technological influences from historical and social ones. That particular aspect of the reform analysis ignored contributions from work sociology, which demonstrates that, especially in developing countries, diverse production models can coexist. According to Ferretti & Silva Jr (2000), the state's establishment of the skill model, in its individualist and segmented logic, put on the workers the responsibility for their success or defeat. That was aggravated by the context of severe unemployment rates. Tanguy (1999) makes a similar critique. The author points out that, in the French system, the equivalence relation between qualification and employment is based on superficial analyses of the dynamic concerning work and education. This relation of equivalence creates the idea of qualification as a way of adapting the workers to changes in a work position that would be presumably offered. An education based on the development of specific skills is built around this belief.

The fact that the increasing qualification among young population coexisted with an increasing unemployment rate among the same, challenges such assumptions. Furthermore, though an individual with certification is less vulnerable than the one with none, the population with higher qualification tends to be more vulnerable to employment variation.

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Since the qualification is only a part of the work market and cannot guarantee employability, the professional courses in practice work as a sort of waiting line where the acquisition of some skills is offered (Tanguy,1999).

In 2002, at the Lula's left wing government, the expectation was to create a new cycle of rapprochement between TVETs and the school system that was started through the decree nº 5.154/2004. This decree established a new framework that involved separated, semi-integrated and integrated courses (MEC, 2007). Worker emancipation, social justice and inequality fight became important guidelines for this integrated curriculum. More than the allocation of TVET's courses, this new cycle implied the establishment of principles and bases for the work class emancipation (Frigotto, Ciavatta & Ramos, 2005). Such curriculum put in relation scientific, work, and cultural knowledge in the development of work axis.

The expectation set by the decree nº 5.154/2004 did not become a policy. Instead, the government invested in independent and disarticulated programmes. Frigotto, Ciavatta & Ramos (2005) conclude that what actually happened during this period was the modernization of the old, since the dichotomy between work and the citizenship world remained, and the worker was reduced to human capital. The reason for that "failure", according to the authors, is that the dispute in the TVET field is part of a broad social structure marked by slow changes due to the social classes' relations of power.

This period, the labor party's government, is also characterized by the migration of many technical courses to the high education – denominated echnological graduation. Finally, in the 9th of February of 2017, after the labor party president impeachment, a new reform was approved and ratified. Once again, the technical formation became compulsory, as it used to be in 1971. The reason was the same: the market needs for qualified workforce. There are so far few materials on the new reform's impact, but it reflects the resumption of the conservative right-wing power. Although the 2018 elections consolidated the victory of the conservative power, any attempt to predict which turns Brazilian policy will take would be groundless.

 The Education for All Brazilian report (MEC, 2014) published that, in 2013, around three million people enrolled in technical courses in Brazil. There are very few data on the impact

of those courses on employability or on the increase of workers' skills. The private sector's role in the countries' labor and education policies' plan is also unclear. For this matter, the S-System is strategic, once those institutions accumulated around seventy years of data related to TVET programmes and to their impact on the economy and employability rates. Data from the *Ministry of Education* revealed that, considering all the three levels that encompass this education modality, 67,7% of TVET institutions are private, and 32,7% are public. Also, they showed that the S-System is respectively responsible for 19,1%, 7,8% and 1,9% of the levels (Manfredi, 2017).

2.2 S-System

In Brazil, business owners created a joint system of social contribution based on constitutional determinations: The *System of Services* or S-System. They are autonomous social services paid by companies in order to assist qualification for workers and make contributions to their economic sectors. Though autonomous and without lucrative purposes, the S-System is considered a parastatal organization. It is a joint of parastatal institutions regulated in some levels by the state and has the authorization of the Brazilian Government to collect mandatory contributions. In that way, their services are partially or completely subsidized.

The S-System institutional model alludes to the *Official Unions* that were implemented in Brazil during the *New State*. It consists of labor organizations conducted by stated and employers' associations. The *Official Unions* were responsible for giving concessions to the working class, in terms of working rights and assistance. Their scope also includes workers' qualification, which enabled them to implement an hegemonic rationale over technical, and social aspects of the work dynamics. It also enabled them to determine what social and economic modernization meant (Manfredi, 2017). Though this prime orientation is still present nowadays, one can assume that the social impact of those institutions changes according to the context they are inserted in. The S-System still is an employer's driven organization. But, in a context which work unions and other NGO and social civil organizations are allowed to exist and develop their own programmes, the S-System would be better placed as one approach over TVET among others. The articulation with the government and the access to public funds are counterpoints to the democratic argument previously made.

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The S-System is the biggest professional education network in Brazilian history and its consolidation as so is only possible due to power of industrials, entrepreneurs and other employers organizations over the government (Manfredi, 2017).

There are nine institutions that serve different professional categories: the SENAR – *Serviço Nacional de Aprendizagem Rural* (*National Service of Rural Apprenticeship*); the SENAC – *Serviço Nacional de Aprendizagem do Comércio* (*National Service of Trade Apprenticeship*); the SESC – *Serviço Social do Comércio* (*the National Trade Social Service*); the SESCOOP – *Serviço Nacional de Aprendizagem do Cooperativismo* (*National Service of Cooperativism Apprenticeship*); the SESI – *Serviço Social da Indústria* (*Industry Social Service*); the SEST– *Serviço Social do Transporte* (*Social Service of Transportation*); the SENAT – *Serviço Nacional de Aprendizado dos Transportes* (*National Service of Transportation Apprenticeship*); the SENAI – *Serviço Nacional de Aprendizagem Industrial* (*National Service of Industrial Apprenticeship*); and the SEBRAE - *Serviço Brasileiro de Apoio às Micro e Pequenas Empresas* (*Brazilian Service of Micro and Small Size Companies Support*). The last two institutions are the focus of this study.

The *Social Assistance* services or institutions are focused on the welfare of employees and their families. They count with programmes that can also include education, but that don´t have workers' qualification as a primary goal. A closer look on the list above reveals six economical axes: Rural, Trade, Cooperatives, Industry, Transport, and Micro and Small Enterprises. The S-System has a common structure of management and financing. It is mostly regulated by law, but it is not a homogeneous system: some features are shaped according to the institution's history and particularities.

In general terms, the institutions are organized in unities of standardization, consulting and supervision and in unites of execution and management. They work through a federative logic with a central administration and regional instances. The collegiate and advisory boards that constitute both types of unities are usually composed by representatives from the government, the employers' associations, the technical bodies and, since 2006, from the work unions. Their composition and proportions can change according to the regional articulations and particularities. The S-System legislation is very specific on organizational and financial details, but vague on the definition of the S-System mission. This particular aspect gave to those institutions the power of adaptability to historical changes. Manfredi (2017) mentions three main waves of adaptation to policy scenarios: (1) during the '60s, due to the sudden

industrial expansion, the intuitions, especially SENAI, started to focus on short programmes with fast return to work places – this activity represented the majority of the offered courses; (2) in the '70s, the S-System moved towards the other end when secondary education became compulsory: it began to offer secondary professional courses that had long duration; (3) finally, during the '90s, the new education reform pushed professional education to the tertiary level, and the S-institutions began to offer technological courses alongside with the other services.

Nowadays, the S-System institutions have a structured design to accommodate a diverse set of activities: technological research centers, social services centers, education unities, itinerant education unities, worker's right counseling, among others. Some institutions also develop programmes for adult literacy, certification of prior learning, loans, and regional agreements and partnerships.

2.2.1 The National Service of Industrial Apprenticeship – SENAI

The *National Service of Industrial Apprenticeship* (SENAI) is an autonomous service without lucrative purposes that aims to increase Brazilian Industries' competitiveness by promoting professional and technological education, innovation and industrial technology's interchange.

It was founded in 1942, in the 22nd of January, during a strong wave of national industrialization. The new institution was funded by entrepreneurs and administrated by the CNI - *Confederação Nacional da Industria* (*National Industry Confederation*). It received legal authorization from the Brazilian Government to collect mandatory contributions for the development and maintenance of the service – an initiative regulated by the decree nº 4.048/42.

A decade later, SENAI became a reference for Industrial Education and Training and a model for similar institutions in Venezuela, Chile, Argentina and Peru. The central role of the service continued to grow in the course of the '60s, '70s, and '80s. The institution has turned into a connection link between banks, industries, and ministries in policies that articulated professional education, industries' technical support and technological development. SENAI also received funds and knowledge exchange from Italian, German, Japanese, Canadian,

French and American Institutions. These alliances amplified SENAI's influence beyond South America. Nowadays, SENAI is the largest professional education complex in Latin America, ranking the fifth position worldwide (SENAI, n.d).

SENAI is an autonomous institution with national coverage that has a well-articulated structure based on normative units and decentralized execution. It is composed by normative and executive bodies – both national and regional. SENAI is nationally administered by the CNI and regionally managed by the Industrial Federations. The main instance of decisions is the *National Council*, which is presided by the CNI. The Council is composed by regional council presidents; by the Regional Industrial Federation president; SENAI's general director, representatives from the *Ministry of Education*; from the *Labor Ministry*; and by six industry workers' representatives. The *National Council* organizes and distributes budget, celebrates associations and agreements nationally and internationally made, and establishes the overall education policy. It is supported by the twenty-seven regional councils – each one representing a different Brazilian state (SENAI, n.d).

The *National Department* elaborates studies related to the work market and determines guidelines for the national programmes. It also offers support to regional programmes. The department is divided into two units: *Professional and technological education*, and *Innovation and technology*. The first unit focuses on education and training programs. The second one on industrial technological assistance. The structure is described in the following fluxogram:

Figure 2: SENAI's management structure

Source: http://www.portaldaindustria.com.br/SENAI/institucional/departamento-nacional/
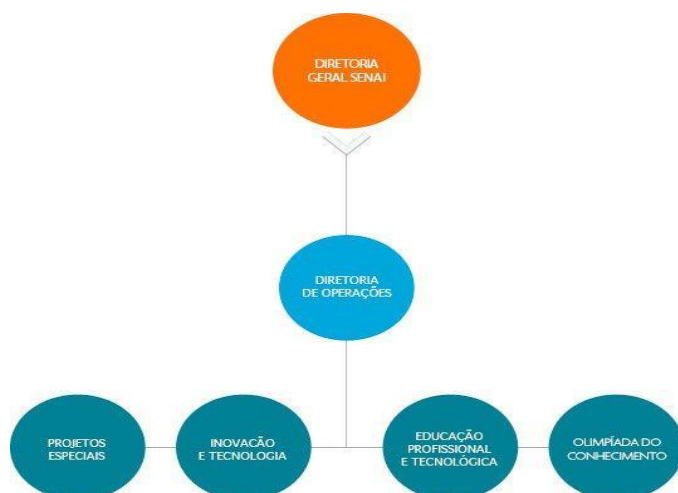
The General Board of Directors (*Diretoria-Geral*) plans professional education goals and strategies, while the Operation Board of Directors (*Diretoria de operações*) manages national projects and articulates regional actions and governmental partnerships. It coordinates the execution of the *Professional and technological education's* and the *Innovation and Technology's* units. The Operation Board of Directors is also responsible for the *Knowledge Olympics* (*Olimpíada do conhecimento*). The Olympics consists on a tournament of professional and technological knowledge that involves around a hundred and two thousand competitors from the whole country and selects the Brazilian delegation for the *WorldSkills*.

According to the institution's database (SENAI, n.d), since it's foundation in 1942, 73.7 million people had enrolled in SENAI's programmes. The programmes currently cover twenty-eight knowledge areas and are developed according to the industrial demands. SENAI has five hundred and forty-one unities and four hundred and fifty-two mobile unities. It also counts with nine professional educational centers localized in Angola, Cabo Verde, Guatemala, Guinea Bissau, Jamaica, Paraguay, São Tomé and Príncipe, East Timor and Peru. The institution also offers distant education courses. For this purpose, SENAI developed a standardization program called *Metodologia SENAI de Educação Profissional* (*SENAI's Methodology of Professional Education*). The program is based on formative itineraries and modular courses that include national curriculums, guidelines and didactic material.

SENAI's Education Department

SENAI's apprentices' service englobes professional courses for learning a new profession (*aprendizagem*), qualification for active industrial workers, nationally recognized technical courses, and technological courses that can provide a higher education diploma to the egresses. The target group for these activities is the active industrial worker and potential new workers in the community. SENAI's mission is to become the top of mind in terms of industrial workers' training.

The courses are planned by the *Education Unity* – a committee composed by technicians, SENAI's teachers, and company's and labour union's representatives. The development process of a new program can sometimes start at a school unity and can be based on clients' (the industrial companies) or on community demands. The school elaborates and inserts in the

system a pre-project with a teaching plan, a justification, the didactic material and the program's total number of hours. The methodology is not a unit proposition. It is developed by the *National Unity* and spread throughout the country. The demands sent by regional unities must follow a strict bureaucratic procedure in order to be approved.

SENAI's features consist of a centralized methodology – synthetized in SENAI's Methodology book –, as well as its system, and an online platform, in which the all the information on the courses are handled (SENAI, 2013). SENAI also has departments that focus on research, technic and technological assistance. Such departments develop solutions and products for the industries. The SENAI's *Institute of Innovation* (*Instituto SENAI de Inovação* – ISI) has a partnership with the *Fraunhofer Institute* (Germany) and the *Massachusetts Institute of Technology* – MIT. The ability to integrate training, research and assistance places this institution at a strategic point when it comes to the traditional gap between the TVET and the work market. Wilson (1993) affirms that SENAI is the most influent professional education center in the world. This is a certainly strong and arguable statement. But what is out of doubts is that SENAI's methodology has influenced both a developed country like Canada, and a developing one as Mozambique. That is an achievement no other Brazilian Education Institution have reached so far.

2.2.2 The Brazilian Service of Micro and Small Size Companies Support – SEBRAE

SEBRAE emerged in the same historical context of SENAI, but its consolidation as a part of the S-System came almost 30 years later. The reason of that is because, by the time the decree nº 4.244/42 was published, micro and small size companies were not understood as an economic segment. The systematization of the segment's identity aspects – the definition of small and micro entrepreneurs – took some time. When the demands and needed actions were clear, SEBRAE was lagging behind the historical progression of policies (SEBRAE, n.d).

Since the colonial economy, while the government laid its eyes on the main economic activities – agriculture and natural resources extraction –, a rather larger group of people created business that enabled big economic activities such as transportation, food, clothing

and housing. Despite its size and role, this disperse group of entrepreneurs spent almost four centuries obliterated from all the national policies. It was not until August 1960 that micro and small companies caught public attention for the first time (Prado, 2015).

This date became a landmark due to a report known as *The document 33*. The title of the document was *The small and medium companies' problems*. This rapport was elaborated by a subgroup inside the *National Development Council*: the GRAMPE – *Grupo executivo de assistência Técnica à Média e Pequena Empresa* (*The executive group of technical assistance for small and medium companies*). Their main concern was the industrial activities, but they were also interested in the creation of a small industrial entrepreneur statute to protect small companies from the bigger ones.

GRAMPE did not function for enough time to put its project into action. In the following year, the group had to be dissolved: a new president was elected and unleashed a series of political tensions merged from the Cold *War* context. The next four years were politically instable, until the military regime seized power in 1964. Nevertheless, GRAMPE managed to spread two messages: there was a group of entrepreneurs who needed specific policies and their main problem was credit. In between 1965 and 1972, some policies targeting micro and small entrepreneur were implemented, first concerning credit and then managerial training for proper use of the landed money.

In order to attend such demand, in 1972, the CEBRAE - *Centro de Assistência Gerencial à Pequena e Média Empresa* (*Center for Small and Medium Enterprises Managerial Assistance*) was created inside the BNDE – *Banco Nacional de Desenvolvimento* (*National Bank for Development*). That is the official foundation of SEBRAE.

The background of CEBRAE's creation reveals an articulation of many actors: entrepreneur organizations, technological institutions, assistance organizations, banks, private funds and funds for the social development. The awareness of the existence of an intersectoral group, present in different economic activities and yet sharing common features, problems and interests, activated a broader network that has grown beyond the industrial sector. (SEBRAE, n.d). Those three activities – credit, training and political articulation – are the foundation of SEBRAE's structure. They also show one of the most relevant differences between SENAI and SEBRAE: while SENAI devotes itself to an industrial learning sustained by a political

articulation outside its domain, SEBRAE is, at the same time, the stage for political articulation, policy execution, education and training.

Being a stage for political articulation turned out to be a problem by the time CEBRAE consolidated itself as a national actor. At that point, the military regime had declared a *State of Exception* known as *Ato Institucional Nº5 –* AI5 (*Institutional Act Nº5*). The intention behind AI5 was to suppress any opposition against the government by suspending all the individual rights. One of the measures was to prohibit associations, professional bodies and confederations – all sorts of real or potential political groups. For this reason, CEBRAE waited twenty years to be incorporated into the Service System. In its early years, CEBRAE had only four employees. The solution for the understaffed scenario was to articulate public institutions and relevant institutions all over the country: those institutions' employees were trained as consultants and engaged in programmes articulated by CEBRAE. The fact that BNDE was responsible for credit lines put CEBRAE in a strategic position.

Throughout the '70s and '80s, CEBRAE's formula proved to be efficient. That enabled the creation of more credit lines that targeted new activities such as commerce, exportation, agriculture and agroindustry. During the 80's, CEBRAE acquired its own credit program, that was specifically designed for small and medium enterprises. The educational sector also expanded due to the creation of three different programmes and the development of strategic alliances with technological institutes in France, Portugal and USA. As well as with Latin America associations, among other international partnerships.

During the '90s, after the country's re-democratization, the new constitution enabled the recognition of the small and micro entrepreneurs as a juridical person. That opened doors for specific policies. Furthermore, the government claimed for itself the task of organizing those policies and, by 1990, CEBRAE was facing its own extinction. Luckily, the articulation created between actors in the course of the previous two decades managed to save the institution by adding it to the S-System, which became possible after the revocation of the AI5.

In 1990, CEBRAE became SEBRAE, with the clear mission of becoming an entity for the economic development. As an assistance service, it was funded by 0,3% of the fundraising allocated for SENAI and SENAC. The governance model was shaped in a way to avoid a single owner. Instead, SEBRAE's action should be connectable with the other services. The

highest instance is the Deliberative Council, that includes thirteen representatives from confederations of different economic activities, some ministries, financial institutions and public banks.

SEBRAE's Education and Training structure

In its forty-seven years of existence, SEBRAE has nationally expanded and counts with unities in all the twenty-seven Brazilian States. Its role is to foster entrepreneurship and, as mentioned before, the institution has three branches of action: credit, political articulation and education. (SEBRAE website). At the education field, the EMPRETEC is responsible for making SEBRAE's fame among micro and small Brazilian entrepreneurs. It is a capacity-building program of the *United Nations Conference on Trade and Development* (UNCTAD) – an intensive entrepreneurship training that has forty national centers, among them SEBRAE as the Brazilian representative. According to SEBRAE database, in twenty-two years, two hundred and fifteen thousand entrepreneurs attended EMPRETEC's courses. A survey made by the institutions in 2016 interviewed one thousand, eight hundred and twenty-one entrepreneurs, former EMPRETEC participants, after the course: 90% percent of them confirmed profit growth and 30% affirmed that had business plans. Survey made before the course pointed that only 7% had business plans.

Besides EMPRETEC, SEBRAE has two other branches of courses: the *Entrepreneur Education and the Solutions Portfolio*. The Solutions *Portfolio* is a database of consultancies, instructions and trainings offered by client demands. It is also used when the need for a solution comes up during the development of a group project or of productive arrangement projects. The agent then goes to the "solution bank" and seeks for the right program – which can be offered by the same regional unity, another unity or by external partners.

The *Entrepreneur Education's* main goal is the development of an entrepreneur mindset in children and young students. The project scope reaches basic secondary and higher education. The intention is to reduce student's deficit of entrepreneur' skills before they became entrepreneurs, and therefore SEBRAE's clients. A last frontier for them is to promote e-learning programmes through a platform for entrepreneurship – a growing. but still underexplored initiative design for the entrepreneur who is not willing to go back to the

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classroom. Those four branches summit SEBRAE's basic structure for education and training. Other initiatives can be regionally found in accordance with local partnerships and arrangements. SEBRAE is primarily an instance for policy articulation, so its goals are not to offer all the needed training, but to gather the information on what training is available and facilitate entrepreneurs' access to it (SEBRAE, n.d).

As it may be clear at this point, Brazil is in a very strategic time for the planning of TVET's policies. The 1996's education reforms inaugurated a new conjuncture in a secular dispute on whether or not, and also how, TVET should be included in the secondary education. The post-reform scenario is one of segregation between the two educations – a model that so far has not been tried in Brazil. In this sense, the S-System institutions are in a strategic place at this moment, since they were a pioneer in this model of professional education. Along the eighty-six years of experience with professional training built apart from school, besides a coverage that goes all over the country, those institutions have developed structures that are almost and NQF their own and can hint ways to the Brazilian NQF implementing. The next chapter sets the analytical framework used for research on Brazilian NQF implementing process. The chapter first sets some ideas on what a policy is and how to proceed studies in the field. After that, it presents core ideas on the NQF field.

3   What is policy

The purpose of this chapter is to set the analytical frameworks used as the ground to find if there is an NQF being implementing in Brazil, and consequently, in the case of its existence, to stablish how it can be characterized in relation to the most relevant global NQF core of debate. It also aims to clarify which intentions and tensions are underlining the NQF implementing process. And, at last, to understand how being part of or apart from the NQF affects SEBRAE's and SENAI's navigation through the mediations of intentions and tensions identified in the NQF implementing process. Instead of choosing one theory, this work is guided by Ball's (1994) idea of toolboxes, which points that when it comes to the analysis of a complex phenomenon as policy, two theories seem to be probably better than one. The chapter follows this approach and constructs concepts and theories in order to subsidize the analytical exercise or 'a heuretic device' (Ball 2008). They are gathered in three sections: policy features in their tensions and incoherencies; learning outcomes' concepts and competence-based approach; and the core debate on NQF implementation with emphasis on developing countries.

According to Ball (1994), many studies fail to offer a clear concept of the policy upon which the study is built. That partially occurs because researchers understand policy as a one meaning word which, according to the author, can crystallize a rather ongoing, interactional and unstable process. As an alternative solution, Ball (1994) proposes the dual, but excluding, idea of policy as a text and as a discourse.

3.1 Policy as a text

A text of any kind implies the author's and readers' generating meanings. To understand policy as a text is to understand that both code and decode bare interpretational and representational history. Even after a text is elaborated, it can have meaning shifted in the arena of politics. By the end, quibbling and dissent can result in blurry meanings, which sometimes can make it difficult to identify what a policy is and what it intends to achieve (Ball, 2008). The documents selected as relevant ones for the Brazilian TVET policy are

approached here through this idea of text policy as an instance of dispute, syntheses and possible incoherencies.

Identifying purposes in policy text implicates identifying how policy is represented and disseminated through policy text. As the documental analysis progress, the attempt to describe, interpret and explain the NQF features. Bowe, Ball & Gold (1992) claims that in the context of international education policy, some perspectives, more specifically the economic one, can be observed in the use of some rhetorical terms. To identify and contextualize the rhetoric is then one of the analytical tasks.

According to Ball (1994), when approaching the economic perspective over education policy - which seems to be dominant in the current global arena -, there are three main responses/criticism of a policy aligned with knowledge economy: 1) as it runs into policies, it tends to generate narrow instrumental approaches to the economics of knowledge. By commodifying knowledge, we deny the primacy of human relationships in the production; 2) it raises questions about the real significance of the knowledge of economy and the lack of empirical data on its real impact on a nation economy; 3) the linking of development and knowledge economy reinforces systematic inequality. Beyond rights and wrongs, the knowledge economy is an idea that can be reflected in reality, but not completely shaped. That, in certain level, may reflect in the incoherence within knowledge economy policies.

The responses described by Ball (1994) can also be found in Young and Allais' (2013) work on NQF implementation across the world. Both investigations are in accordance when it comes to the economical motivations underlining policy reforms. There are few doubts about the economical orientation of educational reforms, but, at this transitional stage, it is not possible to provide a conclusive study on Brazilian NQF. As this work follows Young & Allais' (2013) path, its intention is to create a set of contextualized understanding over the use of some key ideas - such as level descriptors, transparency and learning outcomes. The second analytical task is to describe the process of drawing the TVET's policy throughout local and international perspectives and demands, and to present the current shape of Brazilian NQF. In this way - not only describing texts, but also interpreting intertextualities and contexts -, a better ground for police discourses analysis can be created.

3.2 Policy as a discourse

A policy text registers, to some extent, the process of dispute that happens during its elaboration. But the dispute of power does not end with the text conclusion. Once a text is published, it is hard to presume how the stakeholders will act on it. Policy as a discourse is about the what, where and by whom things are said and done (Ball, 1994). As a policy runs through systems of power, a series of disputes and syntheses are constructed. They modify the policy text and adapt it to practical challenges, and sometimes give voices to marginalized agendas. Another possible phenomenon is the expression of hegemonic meanings that were sometimes hidden in the policy text and are now expressed in the way the organizations make sense out of the generic guidelines set by the policy text.

Ball (1994) suggest three tensions and incoherencies within policymaking: a) capital accumulation and economic efficiency, b) social order, social authority and stability c) technical and managerial problems of the state itself'. By the usage of the British educational reforms in the '80s, he points out how sometimes changes seek economic efficiency. For example, they can indirectly treat social authorities and generate counter-reforms to stablish the return of traditional values. The accumulation of shapes and features created by those tensions, in addition to disputes and syntheses developed by the circuit of power, can provide a superficial look over policymaking and miss the logic upon how an institution organizes its praxis. For this reason, those elements are useful references in the attempt to recognize and analyze non-official mindset present in institutions' daily work.

3.3 Learning Outcomes and Competence-Based standards

The concept of learning outcomes adopted here is the one described by Young, Allais and Raffe (2009) as the qualifications related to a domain - often translated in specific competences -, that are required to habilitate a worker, regardless of how and where learners have become qualified. Its essence is the detachment of inputs and processes from outcomes. An NQF learning outcome oriented is, therefore, a framework that separates aimed outcomes from the means required to achieve them. There are multiple discussions and interpretations on what learning outcomes are and even more different types of level descriptors and

competence classifications. The Cedefop (2008) referees as their work definition the concept of LO as "statements of what a learner knows, understands and is able to do after completion of learning". The idea of LO as a statement leads to an interpretation of LO as an input, since it doesn't state what students actually learn, but what is expected from them, in opposition to learning achievements as the actual output (Ermenc, 2012). The discussion about LO orientation is then a discussion about a planning tool. LO Has been used in functional analysis and has derived competences from job occupations, as a reference for levels descriptors, for relating theoretical and practical skills, and as a vehicle for quality assurance. It is not possible to pin where the use of competences is originated from, except for punctual circumstances (Cedefop, 2008).

For the purpose of studies in Brazilian NQF, the French definition may be of better use: the *Socle Commum* in France defines each of the competences as a combination of essential knowledge, skills, abilities and attitudes. (Cedefop, 2008). In this sense, "Competency is the set of behavior patterns which are needed to allow the incumbent to perform tasks and function with competence" (Woodruffle, 1993). It entails the ability to do something to a required standard; to attain general competences through the acquisition of essential knowledge, values, and skills (Meyer-Adams, Potts, Koob, Dorsey & Rosales, 2013).

Despite variations, a common trend of expectation can be found across countries. Meyer-Adams et al. (2013) describe the implementation of competence-based standards as a way to create better transparency in what learning outcomes are through the assessment and generation of information to improve curriculum. The transparency generated by a competence-based system meets aspirations for data on allocation emphasis, accountability, uniformity and communication.

There are also concerns related to assessment efficacy: competence-based assessments tend to create rigid systems and to excessively narrow knowledge. The great shift in the adoption of competence core in curriculum and assessment, in TVET, is the detachment from focus on knowledge logic for branching and division to focus on job and people's responses to it.

The problem arises when a system sets many tightly defined targets in a broader approach to identifying goals with no clear link between them (Cedefop, 2008). The competence core has the merit of having the job tasks as the central concern. But if a curriculum is built assuming uniformity of a job's title, the program would neither prepare the student to take a position in

a workplace (Woodruffle, 1993), nor prepare him or her with conceptual knowledge that would help to adapt to new circumstances. This is kind of what Young (2013) reported from the UK's NQF experience and is better explored in the course of this study.

In NQF policy, competence–based outcomes are challenged by some expectation. Two of the basic goals brewed in NQF implementation are to improve qualification and meet the labor market demands. In certain way, NQF is expected to promote horizontal mobility between job positions, and vertical mobility in between levels of qualification which can often involve mobility between institutions. The efficiency of LO as a language of communication between policymakers, institutions and the labor market is not clear yet. For all we had exposed, the competence core strategy is theoretically in adequacy with worker qualification oriented to specific job positions. Nevertheless, it is still a debate in what extent competence-based programmes equip students with appropriate skills to move up in qualification levels.

Muller (2009) proposes the idea of contextual and conceptual coherence through a different approach to curriculum. When a discipline has a vertical aspiration, it presumes an increase level of complexity in abstractions and concepts. The curriculum coherence is internally driven by the knowledge nature. Whilst segmented courses have each segment adequate to its context, sequence is taken less into consideration.

Outcomes-based curricula tend to segmentation, but all curricula should be built in a mix with emphasis chosen according to its intentions (Muller, 2009). If it is intended to provide the basis for an employer to recognize what an applicant knows, the program is featured in discipline-based concept. If, instead, a curriculum focuses on what is needed for executing a task in a specific work place, the priority should be given to the context. Besides, a lack of conceptual coherence leads to stagnation in qualification level.

The core debate on learning outcomes has become more and more relevant. Implemented NQF is tending towards LO orientation. The unfolding consequences of what had been presented in this section are seen in the next section in the context of NQF implementing. Ball (1994) alleges that, in a common-sense public, policy can be understood as something constructed within the government, what he calls 'big-P policy', as a contrast to the 'little-p policy' - the one made and remade in localities and institutions. And, in that sense, education policy is also always about education reform, about doing things differently (Ball, 1994).

3.4 Intention and tensions in NQF implementation

Policymakers should ask some questions as they attempt to implement an NQF. Country priorities should be defined regarding to whether workers' motility between occupations or geographical mobility is more adequate to employability demands. Some decisions on curricula design should take into consideration the workers' intellectual resources for moving up in qualification levels, and the emphasis that policymakers should give to the gaining of contextualized knowledge required for job positions' qualification. Finally, governmental instances should consider if the means available are sufficient for implementing a centralized policy, and in what extent it may be better to work with the existing regional QF.

Those definitions should reflect a set of goals and an unfolded NQF's design and implementation strategies. Tuck (2007) gather and organize those instances in an NQF introductory guide for policymakers. According to his scheme, NQF implementation can be organized in three dimensions of decision: purpose and scope, strategy and design, and implementation. The purpose is divided in sets of goals that intend to promote lifelong learning or quality assurance. In terms of strategy, an NQF can be tracked, linked or unified, depending on how the programmes are connected with each other. Strategically, an NQF can also be tight or lose controlled, depending on in which extent the programmes are regulated. The guide is structured on a hypothetical situation in which a policymaker would start from the zero point - which is hardly applicable. Nevertheless, the scheme, attached as appendices 1, can work as a guide for the debate on NQF features.

Establishing priorities and intentions are important because, according to Allais (2013), NQF implementation in developing countries has been way less successful than first expected. To understand the challenges faced by developing countries in the NQF implementation, it is necessary to unfold features of an NQF, point out the tensions it created and indicate possible mediations. According to Young (2013), whether the primary goal of implementing a NQF is to create an instrument for driving a policy reform, or if its purpose is to link qualification separately developed, it will characterize the distinction between regulatory and communication frameworks. These two types of FW differ from each other by generating a top/down model in which the stakeholders are expected to comply with a centrally defined

framework in the first case, or by building a framework based on a complex process of negotiation in the second.

The NQF typification is rather a continuum then a clear-cut definition. For instance, England, New Zealand and South Africa developed a differentiated model including different types of qualification for different purposes (Young, 2013). In the process of analyzing TVETs' policy, it is important to keep in mind the local to global orientation that led the research to a constant back and forth from international to local particularities (Hugh & Loveder, 2008). One important function of the NQF is to create a comprehensive system capable of articulating social partners, stakeholders and approaches to qualification and goals. Allais (2013) presents a list of aspirations commonly involved in the decision of implementing an NQF:

- Improve learners' mobility with both respect to occupation in workplaces and qualification levels;

- Articulate educational providers and existent qualification systems;

- Improve transparency, flexibility and quality;

- Increase relationships between providers and the labor market;

- Recognition prior learning;

- Involve industries in the set of standards or learning outcomes;

- Improve the status of TVET qualification;

Those achievements are linked with broader goals of improving the relationship between education and economy, as well as related to economic competitiveness and lowering unemployment levels (Allais, 2013). After presenting such a long list, it is easy to see that the expectation on NQF implementation is high. One can arguably say that an NQF can impact all those areas, but the results observed so far indicate some problems in the attempt to achieve so much at once.

Young (2013) calls attention to the importance of observing conceptual and contextual coherence, instead of relying on generic concepts of competence in the assessments' elaboration process. Based on the UK experience, the non-observance of these two principles led, on one hand, to students' lack of appropriate concept to progress to new levels. On the other hand, it made students unable to undertake tasks in specific workplaces. Contextual and conceptual coherence can also impact other goals in a LO oriented NQF. Perceive progression as a matter of describing levels has no pedagogic or curriculum basis, as much as it does not guarantee portability or transferability (Young, 2013).

Young, Allais and Raffe (2009) describe a tendency of transition from 'institutional-based' to 'outcome-based' framework. In this context, some issues are raised: trust, mediation of tension between stakeholders, generic criteria, promotion of learning itself and weakened institutions. In a common sense, public policy can be understood as something constructed within the government, the 'big-P policy', in contrast to the 'little-p policy': the one made and remade in localities and institutions. In that sense, education policy is always about education reform, about doing things differently (Ball, 2008).

It is expectable that a policy driven by policymakers will find resistance and suffer modification as the policy is implemented. Allais (2013) observes that, while many studies show institutions' dissatisfaction with NQFs because they are oriented towards market demands, employers regard the same NQFs as an educational driven device that they must comply with. That represents an absolute failure on delivering a comprehensive system capable of articulating actors. A strategy more likely to be successful is to recognize the institutional logics that exist in the countries, while attempting to implement the intrinsic logic of the new reforms (Raffe 2009 in Allais 2013).

Not only the formulation of NQF should include the existing FW, but also the institutions that are not included in NQF could contribute to qualification policies: "we also need to know how teachers and trainers use traditional qualifications that are not part of a framework and how they might use framework-based qualifications in supporting progression" (Young 2013). That is the purpose of this study. However, creating participation involves more elements, and the first reflection raised is upon who is driving the NQF. Most of the NQFs are described as dialogue based, however, the analysis of stakeholders' interactions cannot but lead to the conclusion that they are driven by the policy maker. Attention should be driven to the role that different stakeholders can or should play. In some cases, government bodies are

by odds together in unclear articulation within government sectors (Allais, 2013). "The NQF aspires to be a demand-led model by seeking to involve employers directly in designs and assessment issues. However, our research did not find much evidence of willingness on the part of employers to be involved" (Young, 2013). In addition to this presumed willingness, in some cases the government expects employers to fund trainings, assessment and certification, while employers expect exactly the opposite. Within the balance of power and roles, the institutions' place is probably the most complex. As the NQF tends to create pathways for employers to decrease education providers' decision power (Allais, 2013), it raises questions about what motivates teachers and what kind of supports should be offered in order to improve quality.

The institutions' loss of protagonism is intrinsic to a learning outcome oriented FW. When an institution is unknown, an employer can only rely on written descriptions of skills, but it is unclear to what extent a program can be trusted. According to Young, Allais and Raffe (2009), the central issue of this shift is the way society trust is claimed. Workers' mobility both internationally and within a country propelled the shift from the trust in the institutions and specialist decisions to a list of written statements of what outcomes should be expected from a program. The Cedefop (2008) talks about 'communities of practices' as the new base for trust. However, it is still unclear how it is going to work.

Nevertheless, NQFs around the world has shown great success in improving educational providers' articulation, as well as they have resulted in a reduction of learners' mobility in some countries (Allais, 2013). That also involves questions regarding the role of learning outcomes as a mediator between employers, institutions and students, once it is still unclear what outcomes mean in practice as a language of translation (Young, Allais and Raffe,2009). The standardizing judgments about workers give more competitive advantages in terms of identifying talents and, eligibly, better communication between institutions, government and work places. But without metrics for assessing workers, if the criteria of judgment are rather generic, the expectation of improving the gap between offer and demand of skills will be compromised (Lauder, 2013).

Lauder (2013) also says that, when it comes to levels below the university graduates, decision-makers are more concerned with motivation and attitude, than with what kind of skills an NQF can register. This led to the question of what improving skills actually mean, once they derive from a vague defined concept of knowledge workers (Young, 2013). The
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general assumption is that knowledge economy led to a demand for employees to think for a living. But reality is more complex. Since productivity does not come from giving people permission to think, but from imposing barriers to individual initiative and through a detailed division of labor. As a consequence of this contradiction of terms, the idea commonly accepted that the market is in a hunt for talent it is not fully translated in reality. In terms of reality, a vast number of workers is required to follow controlled intellectual routines, instead of having their creativity fomented in a process known as digital Taylorism (Lauder, 2013). The unfulfilled promise of innovation in all job positions, brought by economic knowledge era, raises questions about what type of learning is being promoted in NQFs.

To summarize, the desire for regulation and flexibility to meet the market demands often contradicts with quality improvement. The standards that are supposed to be flexible are seen as rigid by many stakeholders. Also, the students' egress from short terms' programmes are likely to present a lack of skills needed to move up in the qualification levels. Modular based programmes so far had also been unable to enable students to move in-between institutions (Allais, 2013).

The last set of tensions derives from the developing countries' context. It regards to qualification role in countries with a large number of informal economic activities and the recognition of prior knowledge. The idea that providing formal qualification to workers will help them enter the formal economy is bounded by the assumption that there is an available position in the formal market, which is not the case in most of the developing countries (Allais, 2013). It is equally arguable that demanded-led qualification will improve the success of workers in informal economies. Few improvements are also found in the recognition of prior knowledge endeavor. The workers, though found gratification in such recognition, tend to keep developing the same activity they were developing before, neither they become more likely to move in the qualification levels (Allais, 2013).

The set of tensions and intensions described here is a common trend in NQF implanting. Each country will develop solutions driven by the accommodations of power tensioning the policy. Those accommodations involve strategic decisions and disputes can be read through policy texts and discourses. The specificities of the Brazilian context and the features it generates will be the focus of this study from now on. But, at first, the methodology and the methods used to study Brazilian NQF implementation will be described in the next chapter.

4 Methodology and Methods

In this chapter, the methodological framework for data collection is elaborated to clarify whether there is an NQF being implemented in Brazil, and, in case of its existence, how it can be characterized in relation to the most relevant global NQF core of debate. The study also aims to find out which intentions and tensions underlie the NQF implementing process. Further on, the study intends to clarify how being part of or apart from the NQF affects SEBRAE's and SENAI's navigation through the mediations of intentions and tensions identified in the NQF implementing process.

Bearing those questions in mind, a comparative qualitative research is elaborated using cross-sectional design and a collection of data on two cases at the same point in time (Bryman, 2012). In line with this research approach, consideration of Critical Discourse Analysis (CDA) is appropriate. The chapter thus elaborates a five-step qualitative content analysis and describes the details about qualitative approach and data collection, the late consisting of documental analyses and semi-structured interview. Though the cross-sectional design is more commonly used in quantitative studies, the application of this design to entail an interpretative constructionist study is meant to create patterns of association by comparing two meaningful cases in Brazilian TVET - hence enabling a better understanding of policy as a social phenomenon (Bryman, 2012). The comparative dimension built between the two chosen institutions is justified by the common context: the institutions belong to the same system, context and are under the same legislation. But it is also justified by their contrast: they are institutions that inbreed nationally implemented QF, but they differ in their relation to the NQF.

The critical discourse analysis is paramount to the goal of understanding "how discourse is implicated in relations of power" (Janks, 1997), and to the possibility of deepening the study analysis towards micropower flows present in the discourse and policy texts. (Ball,1994). The discourse is analyzed based on a theoretical frame previously mainly developed by Young and Allais (2009). It is, therefore, an inductive and ideographic study characterized by the effort to reveal meanings of social phenomena contents (Bryman, 2012). The adoption of critical discourse analyses is also coherent with TVET's constant back and forth movement

from international to local particularities, which gives researchers uncertain choices in the process of linking local and international references. Allais (2009) reminds:

"The difficulty of terms used in different ways as well as institutions' systems and processes which are taken for granted inside a country are not made explicit but may lead to the same policy to be manifested very differently. Qualification Frameworks are particularly problematic as they are arguably the product of global comparisons and internationalization, as well as they are an object of study within" (Allais, 2009, p. 45)

It became clear that upholding a strict correlation between Brazilian NQF features and internationally established concepts, without a reflection on discourse and a use of language as a social construction, did not promote an adequate view over the NQF implementing process. The research context - a developing country that was implementing a series of reforms in order to make the transition of its legislation from a dictatorial logic of governance to a democratic one - requires consideration to the transitory stage of policies. The relevance of evaluating different stages of implementation and institution navigations through those reforms emerges from this perspective. With this purpose, the analytical framework formulated in chapter 3 sets theoretical references. By approaching the phenomena through critical discourse analysis, the international core of debates is still the ground for this study, but the NQF features are mostly analyzed in the perspective of their role in NQF policy, rather than as a way of establishing strict correlations.

Before moving towards the specific research instruments, it is worth to establish a reflection if the CDA figures in this study are either used as a research tool or as a method. According to Bryman (2012), CDA is an approach for interpreting data. This is reinforced by Janks (1997), who defines CDA as a research tool derived from the critical theory of language. Fairclough (2011), on the other hand, defends that CDA is a research method itself, whose theoretical positions "incorporate the view of language as an integral element of the material social process" (Fairclough, 2011). The focus on social practices is driven by the possibility of combining perspectives of structure and action, with the central concern of "shifting articulations between genres, discourses, and styles" (Fairclough, 2011). More importantly, the use of CDA as a research method means to have emancipatory objectives - a concern with "the problems confronting what we can loosely refer to as the 'losers' within particular forms of social life" (Fairclough, 2011). Since this study is directed to enable the silent voices in policy discourse, it would be arguable that the research presented here is a combination of

cross-sectional and CDA designs, instead of a cross-sectional designed research adopting CDA as a data analysis tool, as it is also anticipated by Fairclough (2011). Both interpretations are equally possible and do not impact the results generated by this study. Finally, based on the questions and design that are described, it is possible to conclude the applied nature of the research, hence its intention to "illuminate a societal concern, and to help people to understand the nature of a problem and contribute with potential solutions" (Patton,1990). Some considerations will now be made on data collection and the procedures to guarantee its quality and validity.

4.1 The study of official documents

Since this study is focused on education policy and frameworks, the inclination towards official documents deriving from state and institutions was clear from the beginning. The documents assembled for this study fall into the category of "official documents derived from the state". (Bryman, 2012). They are assembled from *The National Secretary of Professional and Technical Education*, since it is the database where all the legislative texts regarding TVET are obliged to be stored. The rationale used for assembling the documents was based on Scott - as it is mentioned in Bryman (2012) -, who established four criteria for assessing quality: authenticity, credibility, representativeness, and meaning.

Credibility is not based on the absence of bias, but on the fact that the selected document reveals policy biases. A similar idea can also be applied to meaning as a criterion. Once again, it's important to point that the center of this study is the dispute of possible meanings within the same text or speech and their relation to conflictual frameworks and interests. Therefore, the concern here is to find documents addressing regulations, guidelines and theoretical frameworks containing elements that revealed both the description of Brazilian NQF features and underlining disputes and incoherence in the policy elaboration. *The National Secretary of Professional and Technical Education* was selected as the only source due to the fact that following this reference is a matter of ensuring not only representativeness, but also authenticity.

Although there are other sources which display documents that impact TVET, they are not included here. The reason behind it is that they solely influence the unregulated sections of

the TVET policy. For example, the Ministry of Labor employability policies hold a different agenda for training at this level; this is one source of funding and curriculum guidance among others. Documents related to these types of policies are not analyzed, since they do not give additional information on NQF implementation other than the acknowledgment that, in the current stage, it does not hold all the stakeholders accountable.

4.2 The use of semi-structured interviews

As a qualitative interview, the use of semi-structured interviews here is more open and gives emphasis on interviewees' point of view. This data collection strategy encourages the interviewers to go off the topics and uncover not anticipated themes (Bryman, 2012). The use of open-ended questions in combination with documental analysis, can contribute with social insights that cannot be registered in official documents. It facilitates, in this sense, the explanation of police discourse accounts for the last step of CDA. The approach adopted is defined by Taylor & Bogdan (1984) as an "encounter between research and informants directed towards understanding informant perspectives on their lives, experiences or situations as expressed in their own words". The interviews' goals are directed towards learning about non-observable structures. In these cases, "the informant role is not simply to reveal their own views, but to describe what happened and how others viewed it" (Taylor & Bogdan, 1984). The process is an attempt of making variables of interest and possible empirical indicators to the social dimension of NQF. It works in such way by collecting "novel information that is not already accessible in databases or other primary sources", "actor perceptions" and steps "in casual mechanisms" (Panke, 2018).

The use of such flexible and dynamic interviews brings potentials and difficulties. To begin with it requires the research to learn about what and how to ask. Also, it demands a previous knowledge about what is important to the informants, and not only to the research interests (Taylor & Bogdan, 1984). Semi-structured interviews are characterized by "precise and standardized questions and the possibility that interviewees give open answers" (Panke, 2018). As such, they have the advantage of making interviews comparable, and at the same time reveal additional insights, which come in handy in the social aspects of the policies and the comparative dimension of this study. At the same time, it "can make it difficult to

interpret answers in a comparative manner and extract the same type of information" (Panke, 2018), another difficulty is regarding the decision of how many informants to recruit and how to select them in order to have the insight needed for the research. Those decisions and their implications to the research methods are described in the next subsection.

4.3 Collecting and applying qualitative data

In order to work with micro-power disputes reflected in text and discourses, the CDA was the logical choice here, using the thematic coding as one of the strategies. The focus lies on the versions of world and society produced in discourse, and on the seeking for the language used to evokes the significance of power and social differences in society (Brymam, 2012). During the critical analyses, it is intended to read the selected texts in their intertextuality and within the informal context of policymaking to uncover interpretative repertoires.

In the documental analysis of Brazilian TVET policy, the documents are first analyzed in a way that enables to draw the NQF as close as possible to how it is meant to be read. This is followed by a crossed analysis between texts: normative hierarchy, who wrote for whom, arguments and rhetoric used, conceptual contradictions, etc. All of this is done in an attempt to identify the deeper core of debates. The methodology follows Janks' (1997) guidance and is made in three dimensions: text analysis or description, processing analysis or explanation, social analysis or interpretation. According to the author, this approach enables to focus on text signifiers, linguistics, juxtapositioning, among others.; and, at the same time, it makes it possible "to recognize the historical determination of these selections and to understand that these choices are tied to the conditions of possibility of that utterance". Janks (1997) tackles these steps based on Fairclough (1995). However, latter publication of the same author indicates the application of CDA in five stages: (1) identification of the problem; (2) problem diagnosis; (3) the establishment " through critique that the social order inherently generates a range of major problems which it 'needs' in order to sustain itself"; (4) "identification of hitherto unrealized or not fully realized possibilities for change"; and (5) reflection on the analysis' relevance (Fairclough, 2011). The two models differ in steps, but not in aimed results. Patton (1990) also presents a similar two stepped process - description and interpretation -,   simply as a qualitative analysis' steps. Janks' (1997) model can be

interpreted as an adequation of qualitative analysis to CDA purposes and its adoption is justified because of its suitability to this research's questions. These dimensions are treated in data analysis steps as it is described below.

4.3.1 Documental analyses

The documental analysis was the base to answer the first three research questions, namely: (1) if a NQF is being implemented in Brazil; (2) if there is a NQF, how it can be characterized in relation to the most relevant global NQF core of debate; and (3) which intentions and tensions are underlining the Brazilian NQF implementation. After deciding over the CDA of texts, two steps were used in order to set the grounds of data analysis: selecting and narrowing the document set, and thematic coding. That is followed a by a three-stepped CDA: description, interpretation and explanation.

Narrowing the document set

After deciding the source and criteria of the data assembled (section 4.2), there were over a hundred documents available among laws, decrees, legal recommendations and ordinances. In a first screening, documents that treated too practical matters - such as nominations, authorizations, calendar definitions, etc. - were eliminated. Such documents are of little relevance for understanding the policy features.

All the ordinances were, for the criteria mentioned above, eliminated and seventy-three documents were scanned. During the preliminary reading, more texts were eliminated based on the first criterion - due to practical matters. Some decrees and recommendations were corrections of previous law texts. The modifications, although relevant for legal concerns, did not significantly change the meaning. They were subsequently also eliminated. When a document had one or more editions, only the most recent was included in the list. At last, documents with contents that could be associated to TVET, but did not directly refer to it, were not included.

Two texts outside SETEC's database were included because, though deprived of legal or normative function, they revealed the meaning behind almost all the key concepts present in NQF policies. The complete list of documents can be found in the appendix 2. At the end, fifty-nine documents were selected for the thematic coding.
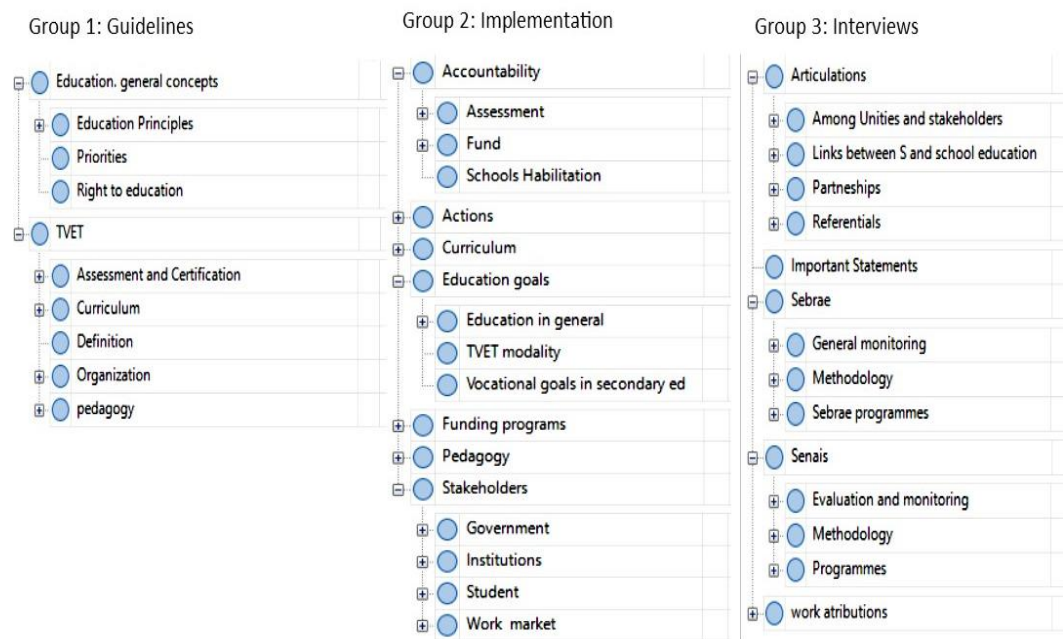
Thematic coding

Thematic coding is more commonly used in a ground theory strategy. However, Bryman (2012) mentions the possibility of using such strategy as part of many qualitative approaches. In this study, the thematic coding is used as an auxiliary approach to the data. Since the set of documents was too extensive even after narrowing them down. Additionally, they often have many sections that are irrelevant to NQF studies. The goal of using the coding is to select relevant excerpts in the texts and unite them according to themes. Later on, those themes were grouped and analyzed, in accordance to their suitability to answer each one of the research's questions.

The process of coding begins with a reading that is made to specify the documents' degrees, the role those texts play in the policy, and how they are linked to each other. At the end of the process, it became clear that one needed to create two different groups: (1) framework and guidelines; and (2) implementation. The first group is composed of a set of documents concerned with drawing the TVET policy in its features, concepts, and possibilities. The second refers to implementation details, funding programmes and other types of actions. The creation of these two groups enabled the analysis of hidden priorities and intentions, since text analysis is based on the presence, but also on the absence of contents.

All the documents were read and freely coded according to the thematics revealed by the text. After some readings, groups and subgroups were created based on intertextuality, but without any influence of this study's analytical framework or research questions. By the end of the process, texts' contents were divided in themes - as it is shown in the scheme below:

Figure 3: Thematic coding

Group 1: Guidelines

- Education. general concepts
  - Education Principles
  - Priorities
  - Right to education
- TVET
  - Assessment and Certification
  - Curriculum
  - Definition
  - Organization
  - pedagogy

Group 2: Implementation

- Accountability
  - Assessment
  - Fund
  - Schools Habilitation
- Actions
- Curriculum
- Education goals
  - Education in general
  - TVET modality
  - Vocational goals in secondary ed
- Funding programs
- Pedagogy
- Stakeholders
  - Government
  - Institutions
  - Student
  - Work market

Group 3: Interviews

- Articulations
  - Among Unities and stakeholders
  - Links between S and school education
  - Partneships
  - Referentials
- Important Statements
- Sebrae
  - General monitoring
  - Methodology
  - Sebrae programmes
- Senais
  - Evaluation and monitoring
  - Methodology
  - Programmes
- work atributions

Though the figure does not show all the subgroups, it intends to clarify the construction of the correlation between coding themes and the definition of intentions, features, tension and mediations that are built in the next chapter. The figure also shows the interview's coding. The treatment given to this group of coding is the subject of section 4.3.2. After this brief presentation on how the excerpts of text were selected for the critical discursive analysis, it is time to explain its steps and strategy.

Critical Discourse analysis

The first aim of the critical discourse analyses (CDA) is to determine if there is an NQF being implemented in Brazil, and, if there is, how can it be characterized in relation to the most relevant global NQF core of debate. These first two questions are to be answered during the first step of CDA, which is named text analysis or description.

The text description begins with the attempt to identify indicators that can reveal if an NQF is already implemented or in the process of being implemented. The initial readings did not show definitive evidence of an NQF. However, they hinted the construction of a system with features resembling those of an NQF policy. Consequently, guided by those hints, the documents were looked at through a bird's-eye view, which resulted in another division

strategy and in a chronological approach. The homologation date and the overarching content of each of those groups was then examined. During the search for patterns, timewise correlations surfaced and enabled confirmation of a Brazilian's NQF implementation process.

The processes of text analysis or description continue to determine how policy features can be characterized in relation to the most relevant global NQF core of debate. Tuck´s (2007) scheme, referenced in chapter 03 and included in appendix 1, was used as a referential structure. For each dimension and sub-dimension elaborated by him, a coding group was used to respond to the questions raised, and therefore feature the NQF.

The processes are a gradual approximation between the document set and the global NQF core of debate presented in the analytical framework. They intend to identify NQF features and describe them in relation to global references. The first coding made in thematic nodes generated from the text was, whenever appropriate, grouped according to the NQF elements' debate. The scheme works as an order of discussion: the concepts of each dimension were analyzed taking into consideration the analytical framework as a whole. After the features were described, it was time to move to the CDA second level - processing analysis or explanation.

The third research question intends to find out which intentions and tensions underlie the NQF implementing process. This question is to be answered in a two-stepped process: firstly, Tuck's (2007) scheme is used one last time - in association with the description of texts' excerpts selected according to thematic coding - in order to reveal the intention underpinning the NQF implementation; secondly, the tensions are searched through connections and relations inbred in the text description, hence the tensions crystallized from the NQF features and intentions. The literature on NQF (section 3.3) sets some suggestions on what kind of choices of features are likely to generate some types of tensions. Out of the core debate, Brazilian reality is explained through the relation between intentions, strategies and designs, in addition to the text coding's contribution.

A peculiarity about the Brazilian normative system became relevant at that stage: the *National Education Council*'s opinions or appreciations. According to the national regulation ritual, whenever a piece of legal text has unclear meaning in itself or in how it is meant to be translated in action, educational providers for instance require from the Council an opinion on the matter. The Council's opinion becomes then the official interpretation. What made it

especially relevant for this analysis' stage is that, to justify its final opinion, the Council reports excerpts of background processes that generated the text in debate. A whole history of policy progression and stakeholders' positionings are registered in those opinions and were paramount in identifying where the tensions in the NQF implementation process lied.

As a parallel to the steps above, cross-checks were performed to investigate the coherence between those documents. In other words, how one document reinforces or denies the statements made in a second document. That concluded the national policy analysis and lays the groundwork for the institutional section of the studies. The execution of the first two CDA steps - description and interpretation -, concludes the documental analysis and addresses the research questions related to NQF's implementing and features. To create findings at the analysis' explanatory level and answer the last research question, the research now turns to the data collected during the semi-structured interviews.

4.3.2 Semi-structured Interviews

The last research question addresses the issue of how being part of or apart from the NQF affects SEBRAE's and SENAI's navigation through the mediations of intentions and tensions identified in the NQF implementing process. That question is approached during the completion of the social analysis or interpretation - the third and last CDA step (Junks, 1997). It proceeds using the data collected during the semi-structured interviews as a base to analyse the social dimension of the NQF debate.

One note needs to be made before we continue the methodology description – it regards to the assumption that those two institutions are part of or apart from the NQF, and how this assumption was made even before an NQF was identified. During the research's project elaboration, SENAI and SEBRAE were chosen among other S-system institutions due to their relationship with the TVET policy. Though it was premature to talk about NQF, according to the information available in both institutions' website and in the *Ministry of Education's* official page, SENAI's inclusion and SEBRAE's exclusion from TVET policies was driven by the *Ministry of Education*. This fact was confirmed in the first contact made with managers of both institutions. It is arguable that whether or not two intuitions are part of the NQF should be a research question, but the clear statement made by the two institutions gave

validation to the assumption and the question became hardly necessary. That being clarified, the steps used to understand how being part of or apart from the NQF affects SEBRAE's and SENAI's navigation through the mediations of intentions and tensions identified in the NQF implementing process are described here.

A question guide was created for the interviews, with eight thematic areas (Appendix 3). The areas are related to the informant's knowledge and opinions on: (1) NQF features; (2) the institutions' structure; (3) core ideas influencing the adopted methodology; (4) personal references adopted in their practices; (5) LO assessment and monitoring; (6) program's reforms; (7) program's impact on students' employment and incomes; and (8) the relation between their practices in classrooms or management levels and the institution's guidance. According to Taylor & Bogdan (1984), the qualitative interviewing calls for a flexible research design: "neither the number nor the type of informants is specified beforehand. The research starts with a general idea of what people to interview and how to find them but is willing to change courses after the initial interview". Moreover, the authors affirm that the number of informants selected should be based on the potential of informants to aid the research in development. For assessing the educational praxis, while recruiting informants, the concern was on having at least one informant from each level of the educational sector both in SEBRAE and SENAI.

The informants were recruited from SEBRAE's and SENAI's unities in the State of Ceará, Northeast of Brazil, the state was chosen due to possibility of accessing stakeholders. First, the regional managers were contacted and interviewed, afterwards, it was possible to snowball to school unity managers, project managers, teachers and instructors. By the end, nine interviews were made with four of the informants from SENAI and 5 from SEBRAE. As described in the board:

Figure 4: Informants coding

SENAI	code	SEBRAE	code
Education manager	A1	Regional manager	B1
Teacher coordination	A2	Educational manager	B2
Student Analyst	A3	Instructor 1	B3
Teacher	A4	Instructor 2	B4
		Instructor 3	B5

All the interviews were made in the course of fifteen days. They were all conducted in Portuguese and took an average of thirty minutes. The interview's site and schedule were chosen in order to suit informants' needs. They took place mainly in the institutions' unities, except in the case of SEBRAE´s instructors, whose works are not located at on SEBRAE's facilities. In those cases, the interviews were made at their personal offices or at public places of their preference. All the interviewers were eager to be heard, which sometimes extended the interview for a longer period than it was needed. The interviews started with an explanation about the research's context, publication, data treatment and anonymity. It was then followed by a verbal and written agreement on collaboration. During the conversation, the main difficulties were to translate academic terminologies into a colloquial vocabulary. The use of expressions such as referential framework or learning outcomes would inhibit some informants - who were able to answer the questions whenever they were paraphrased in a different vocabulary. They frequently voiced uncertainty about their relevance to the study. Especially the informants contacted by email, who have asked to see the questioner before agreeing with the meeting. Concerns regarded to the research's intentions, anonymity, final say, money and logistics, common misunderstanding issues pointed by Taylor & Bogdan (1984), were not manifested.

 The interviews were recorded and afterwards transcribed. The same strategy for thematic coding used for the documental analysis was adopted for the coding. That means that the interviews were read and freely coded according to the thematics revealed by the text, and later grouped based on intertextuality. According to Patton (1990), it is coherent with a cross-case analysis to group all the answers together and analyze them as different perspectives on the same issue. Grouping answers in thematic coding is an unorthodox procedure, since the semi-structured interviews are usually coded according to the questionnaire. (Panke, 2018). Despite that, the amount of insights and non-predicted information raised during the interviews made the thematic coding more appropriate to describe the social situation in the institutional level. However, a separation of cases in different subthemes was observed, in order to enable in-depth analysis and later comparison of institutions separately. While the informants' contribution provided insight, ongoing orientations that did not appear in official documents - the institutional structure (sections 2.2.1 and 2.2.2) -, could compensate the fragmentary way in which the information was given during the interview. That enabled information contextualization and also the distinction between factual and interpretative information (Panke, 2018). Lastly, features and inbred tensions identified during the

documental analyses were retaken and dimensioned into the institutions' scope. Once again, the codings were selected and grouped as they suited the subject in debate. The above analysis' steps revealed the final goal, which is to characterize NQF tensions and mediations at the institutional level.

4.4 Reflections on validity

The concern with integrity of conclusions that are generated from a piece of qualitative research is particularly challenging. "The problem is that we have few agreed-on canons for qualitative data analysis. There are no straightforward tests for reliability and validity". (Patton, 1990). The issue to reflect on is essentially about how to approach validity in such an off-rules scenario. Potter (1996) proposes an examination over data analysis' expectation, process of analysis, conceptual leverage and generalizability. Patton (1990), on the other hand, suggests a closer examination over the application of guidelines with judgment and creativity: monitoring analytical procedure, reporting findings construction, and approaching the theoretical generalizability of the study. In both approaches, reflection on validity is a matter of the coherence between purpose, research design and findings. In other words, "research rigor and contribution to theory" in a context where "human factor is the great strength and the fundamental weakness" (Patton, 1990).

Some potential weaknesses to this study can be listed. The most important of them is language: this study is based on Portuguese texts and discourses. They are reported here in English. Moreover, it is a study in which language has a central role in the findings. The main concern here is not on the data analysis, since the study is conducted by a Portuguese native speaker, but on the way the analysis is reported. This is particularly true when it comes to interpret the meaning of competence in Brazilian NQF. Since there are so many definitions worldwide, with nuances of variations that can easily become lost in translation, the task to relate Brazilian competence-based curriculum to the global core of debate in NQF became a delicate task. But the attempt was made to "the very best with your full intellect". (Patton, 1990). Also, the results, though arguably imprecise in some details, met the research purpose.

The second threat to validity is the analysis itself. In the words of Patton (1990): "the challenge is to make sense of massive amount of data, reduce the volume of information,

identify significant patterns, and construct a framework for communicating the essence of what the data reveal." (Patton, 1990). The articulation between interviews and documental analysis was particularly challenging. As the framework restricts the possibility of patterns and correlations, it may had led to an under-use of the interview data. That was compensated in the discussion chapter, in which the logic chain created by research purpose, framework and research design became more flexible and remaining important data pieces could be interpreted and reported.

All in all, the use of off-trade designs (Patton, 1990), such as an inclusion of thematic-coding steps, was adopted. The fine line between process and outcome was also observed. Since the NQF debate and presented results contribute to a large debate both nationally and internationally, the results, despite the internal validity weaknesses, are of strong external validity (Bryman, 2012).

5   Brazilian NQF implementation

This chapter examines the four research questions. They are namely (1) if there is a NQF being implemented in Brazil; (2) in the case of its existence, how it can be characterized in relation to the most relevant global NQF core of debate; (3) which intentions and tensions underlie the NQF implementing process; and (4) how being part of or apart from the NQF affects SEBRAE's and SENAI's navigation through the mediations of intentions and tensions identified in the NQF implementing process. In order to answer those questions, the findings are generated through the use of the three steps for Critical Discourse Analysis: text analysis or description, processing analysis or explanation, social analysis or interpretation (section 4.3). In order to do so, the study uses documental and semi-structured interviews as data collection strategy, supported by the debated set in the analytical framework (chapter 3) and in the policy contextualization (chapter 2).

By the end, the drawn picture is of an NQF implementation in progress, with the aim to promote lifelong learning, and using linked tracks as an organization strategy. The policy reveals itself as a centralized one. It's possible to say that it is centralized by the *Secretary on Professional and Technical Educations* but based on the school's autonomy as an orientational principle. The tensions inbred in the policy features and strategies were related to stakeholders' participation, quality assurance, and qualification relevance in the context of large informal economy. The mediation of those tensions, when found in the institutional level, are made through either a better elaboration of strategies adopted by the NQF or trough solutions that were not anticipated by the NQF.

## 5.1 Implementation of an NQF in Brazil

To determine if an NQF is implemented or in the process of being implemented in Brazil, a bird's-eye view of the policy's text production set in motion a chronological approach (section 4.3.1), in order to identify NQF's regulations or enough regulation's initiatives to characterize a NQF's implementing process. The data assembled confirms the hypothesis of

an NQF being implemented in Brazil and suggests the education reforms of 1996 as the starting point of the NQF's implementation process.

The NQF's implementation analysis began with fifty-nine documents assembled during the data collection. Those documents were grouped in four categories, based on their connections and complementarity within each other. The *Education guidelines* set is composed of the education milestones: the Constitution and the *Education Law*, as well as their alterations, supplementations and support texts. The *TVET Regulation* group is composed by the regulation of strategies, orientations, systems and devices required to support the policy implementation. The third and fourth groups are part of TVET regulation, but they were placed separately because they represent important changes in the policy course: *National courses index* is related to the organization of a list of nationally recognized qualification; Programmes reunites a series of funding strategies. The set of documents are placed in a chronological frame and   reveals the following pattern:

Figure 5: Number of publicized documents (y axis) along the past three decades (x axis) grouped according to their subject.
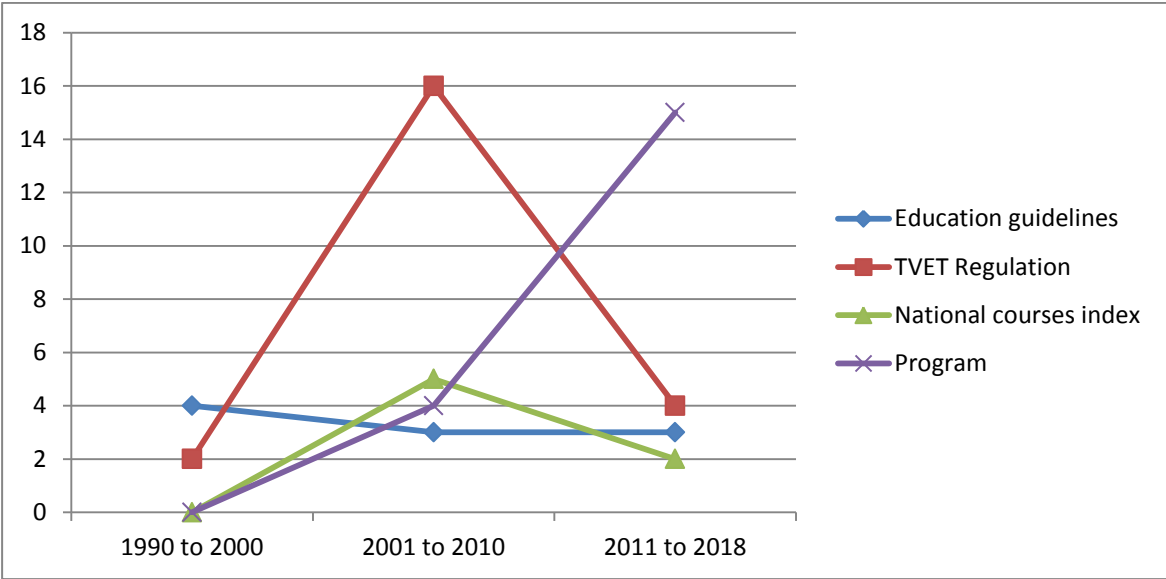
The *Education guidelines'* category has a stable low flow of progression, while *TVET Regulation* and *National courses index* show an intense policy text production from 2000 to 2010. The last group, *Program* experiences an intense policy production, while the second and third groups are decreasing. The graphic demonstrates how the separation between TVET and secondary education - promoted by the 1996's reforms (section 2.1) -, propelled the regulations observed in the following decade. A *National Education Council*'s appreciation

reinforces the correlation between the two phenomena. It states that, after 1996, TVET gained individual identity and could no longer be contextualized in the secondary education core. (CNE/CEB 39/2004). The pursuit for this individual identity propelled the TVET's structuring. The funding programmes were propelled in cascade. In the content of the texts, it is clear that the government's intention to encourage institutions to join policy articulations and initiatives - in exchange to offered funds – was to improve institutions' structure and student's scholarship. Based on those evidences, it is possible to assert the existence of an NQF. It began to be implemented in the '90s and the process continued throughout the three following decades. The Brazilian NQF implementation is still incomplete, despite the many years that follow its implementation, the set of documents do not show a systematic NQF policy text, instead the NQF features are regulated through documents' associations. The features are explored in the following topic.

5.2 Brazilian NQF features

As the process of implementing a Brazilian NQF is demonstrated, the examination of the second research question arises: how it can be characterized in relation to the most relevant global NQF core of debate. The previous chapter presents Tuck's (2007) scheme as the guiding structure, and points sorting excerpts of policy texts in coding themes as the two main strategies. Furthermore, the debate is set in chapter 3 as a base for critical discourse analysis. According to Tuck's (2007) scheme, policymakers should consider some steps when implementing an NQF (appendix 1). These steps are not traceable through policy text, neither they are centrally relevant to determine NQF features, hence they were excluded from the findings. The eliminated steps are "What must be done to stablish an NQF", and "How will the NQF be governed and managed". This subsection is therefore concentrated on the characterization of Brazilian NQF features. Such characterization is based on the strategy's and design implementation's dimensions. The analysis demonstrates an NQF featured by a linked curriculum organized in tracks, and tight in the middle level. In terms of governance, the NQF is centralized by the *Professional Education Secretary* and assisted by government stakeholders and apex bodies. The competence-based curriculum is adopted as the NQF language of communication, and the outcome standards designed based on occupations or professional profiles.

5.2.1 Strategy

The strategy can be sorted in four features: (1) how unified and centrally controlled it should be; (2) what additional policy measures might be necessary;(3) what must be done on these purposes; and (4) how the NQF should be governed. (Tuck, 2007). For the first feature, an NQF can be tracked, linked, or unified (Section 3.3). Two types of concerns help to clarify this feature: the ones related to the articulation between TVET and secondary education, and the ones related to the CNCT – *Catálogo Nacional de Cursos Téctnicos* (*National Index of Technic Courses*). Most of the texts addressing the two concerns are in the theme *TVET curriculum*, both from coding groups 1 and 2. The policy described in those excerpts showed an option for a linked control with programmes separated in tracks – in Brazilian policy lingo, *learning itinerary* –, vertically divided in three levels and horizontally articulated in thirteen technological axes.

The first dimension of NQF features are the controlling strategies, characterized by the programmes' tracks and linkages. The educational reforms of 1996 (section 2.1) determined the separation between basic education and TVET – after that, TVET was classified as an education modality. From this determination, according to the regulation, TVET is divided into three levels: professional, technical and technological. The linkage with basic education happens mostly through secondary education, once the professional level should be offered regardless of basic education accomplishment, or have access criteria determined by schools. The enrollment in technical programmes is free, but the student's certification is bound to secondary school's conclusion. On the other hand, the access to technological courses is restricted to secondary school egresses' students, and the certification is granted independently from higher education.

The internal links between TVET levels are made by the CNCT. The document is horizontally articulated in thirteen technological axes and vertically divided in the three levels of TVET. Each axis is composed of learning itineraries. Those are defined as the set of steps composing the professional education offer in its different levels. They are organized inside each technological axis and enable continued and articulated learning, throughout studies and experiences certifiable by habilitated institutions. (CNE/CEB 6/2012). They are ultimately modular courses that can be combined in different progressions: starting from professional

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courses and going all the way up to the technological programmes' improving work qualification; or horizontally promoting mobility in between domains.

Besides the modular orientation, the concept of learning itinerary also speaks on the tightness' or looseness' aspects. Following the CNCT regulation is mandatory to all technical courses, which is the qualification middle-level. In this sense, professional programmes not legally bound to follow itineraries are encouraged to follow them to facilitate their egress' students to credit their accomplished courses onto the next level. Similarly, the conceptual linkage facilitates articulations with technological courses through complementary policies and agreements. The Brazilian policymaker strategy is to tighten the middle level in order to approximate the ends. The CNCT is a communication device that applies some extent of regulation whilst enabling different approaches. It is possible to say that, in terms of control and unification, the Brazilian NQF is featured as a linked QF, with its modules organized in itineraries, vertically divided in three levels and horizontally articulated in technological axes. The NQF links TVET with basic education by the demand of secondary education conclusion – both to conclude the second level and to enrol in the third.

The second aspect in the strategy dimension is the measures needed to achieve the NQF goals. The political breadth of the reform is consistent in terms of its use in laws and regulations. As the devices were being implemented, they were incorporated in the subsequent regulations. Alignment in the use of concepts, incorporation of newly founded work groups and networks, and convergence of systems can be observed in the implementation design's evolution. The concepts and the rationale set – available in the guidelines (group 1) –, is translated as implementation (group 2) in terms of policy for assessment, school habitation, articulation between stakeholders and funding.

When it comes to adequate funding, some issues can be found in most of the developing countries. While basic and higher education have their funding's clearly determined and regulated by law – the responsibilities are divided among federation, states and municipalities –, TVET's accountability as an education modality is rather complex. The funding comes from different sources aligned with diverse types of policies. The texts found on funding report support to improve institution's facilities and student's internships. In exchange to that, they demand the adhesion to strategies of integration with basic education, connection with the job market and education offer for the vulnerable population. Those programmes are simultaneously a strategy for access, incentive for participation and a controlling strategy.

Since the institutions' autonomy is a strong feature in the policy, the government holds the ropes through the funding. Although only the documents from the *Ministry of Education* were included in this analysis, other ministries can be – and probably are –, offering funds to education providers tied to their own agenda.

Souza *et al* (2015) affirm an increase in investments in TVET from 0.04% of the GDP in 2003 to 0.2% of the GDP in 2013. Despite that, little discussion was found on what would be considered an adequate funding to an NQF policy. What is possible to determine by the documental analyses is that the fund offered in the *Ministry of Education* sphere is consistently bound to the NQF strategies and goals. Additionally, it is possible to confirm that the financial support offered both to students and institutions strongly increased from 2011 to 2013. This can be considered a consequence of the NQF implementation, especially because the documents regulating the CNCT state that this device will 'promote a qualification mapping, enabling correction and setting the grounds for further policy measures. The combination of policies implemented between 1996 and 2018 indicates a concern with policy breadth. However, it is not possible to determine if enough measures have been taken to achieve NQF goals.

 A last aspect of strategy is the governance role. In order to analyse this aspect, it is important to give a closer look into the implementation code group (group 2) – especially into the subthemes *stakeholders*, *school habitation* and *curriculum* – , showed that the *Ministry of Education* is, as expected, the central actor, along with the SETEC – *Secretaria de Educação Profissional e Tecnológica* (Secretary of Professional and Technological Education). The SETEC is responsible for coordinating the policy and the *National Council of Education* is responsible for normalization related to operation issues and law interpretation. SETEC internally organizes the policy throughout the SISTEC – the data base system –, and the CNCT – the index of courses. Those are the two main devices for framework management, to provider quality assurance and creation of standards. Finally, there is the National *Professional Education Network*: the union of public autarchic institutions. They are responsible for the elaboration of support materials and actions, and also for the accreditation policy among them. As it is displayed in the flowchart:

Figure 6: NQF governance structure
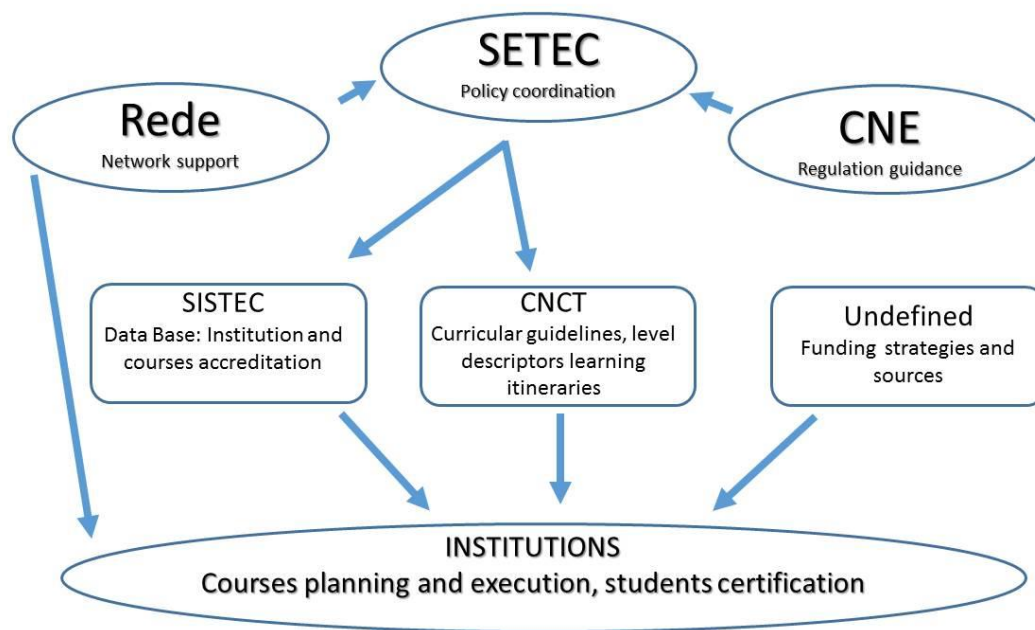
The flow throughout the NQF shows a structure with articulations in progress. The funding is evidently a loose end, and school accreditation and student's certifications are also weakly regulated. The documental analyses do not reveal much on methods and criteria for those. It does not reveal consistent participation of the civil society, employers, and other ministries either. Though it is a step towards the NQF characterization, the governance flow does not reveal the completion of adopted features. In order to complete this task, the next subsection closely looks into the certification policy and level descriptors.

5.2.2 Design and implementation

Design and implementation are equal to the NQF features themselves. They are related to framework levels and quality assurance systems, and also involve the decision on outcomes/standards, assessments, modules, credit, and institutional accreditation. In order to express the NQF strategies, the framework of levels is already described and only complementary discussed. The other features are closely approached, and reveal a competence based-system of curriculum and accreditation oriented towards the principles of mobility, flexibility and schools' autonomy.

With regard to level descriptors, all the education levels described before, as well as the learning itineraries, are competence-based. The technological axes are conceptually-oriented, while the curricula within the axes are context-oriented (section 3.2). In fact, guideline texts (theme code – group 1; subtheme – TVET) state that professional competence is one of the educational principles, alongside with flexibility, contextualization, interdisciplinarity, professional profile, programmes' renewal and schools' autonomy. Nevertheless, the NQF, at least in the first two levels, does not establish competence level descriptors. According to the *National Curricular References*, the policy guidelines regulate the professional profile that each program must outcome. The competence set that will be chosen for that intent is decided by each school and then submitted to SETEC's approval.

According to the CNCT, each technical course is obliged to follow national standards in order to be regulated. Such standards are in terms of: which axis the course belongs to; the course load; what is the professional profile developed by the course; the minimum of infrastructure needed; the work field the egress is expected to enrol; occupations associated to the course (according to the Brazilian occupation index); possibilities of intermediary accreditation (based on learning itineraries); possibilities of horizontal quality improvement; and possibilities of vertical mobility for technological courses. The last three standards are based on itineraries. In addition to that, the process of courses' accreditation also includes the evaluation of goals and justification, the requisites for students' enrolment, the curricular organization, criteria for prior learning recognition, evaluation criteria, teacher staff qualification, and certification process.

The policy regulation determines that the curricula must be organized throughout competence sets that should be linked to the assessment. The education providers define the set of competences, as well as the assessment methodology, according to their pedagogical project. The SETEC evaluates the project coherence, and, after approval, validates the course. In this context, the learning outcomes are partially used to establish standards to be followed, and partially function as a language of communication between stakeholders.

The education providers are accredited according to rules beyond TVET's scope. SETEC is only responsible for holding the technical and technological programmes accountable. SISTEC is the database that serves to this purpose. Student's assessments are a school's prerogative, clearly stated in one CNE appreciation (CNE/CEB 40/2004). According to it, the council's opinion is required towards specificities of competence-based assessment. The
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appreciation gives an orientation, but concludes that, in that matter, the school's decision prevails over the opinion of CNE, hence the *Ministry of Education*. The SETEC provides orientations and guidelines for assessment. A specific policy in terms of prior learning recognition, the CERTIFIC, is implemented. Such policy is executed by the professional education network, as it was described in the previous subsection.

The document set guidelines for accredited institutions to recognize prior learnings. The institutions in question are primarily part of the *Professional Network* but can be extended by others. The policy includes technical support and training for the professional in charge of students' certification. The study of this policy features' achievements worth a separated study. In brief terms, it is worth to mention that, since their foundation, they had enabled at least hundreds of students to move in between institutions, besides certificated them for work. (Costa, 2015). According to Allais (2013), recognition of prior leaning policies has not been successfully implemented in developing countries, as far as the international researches could register. Probably due to its recent foundation and to its small scope, it is early to produce studies on CERTIFIC's impact on workers' life. Nevertheless, recognition of prior learning is certainly an NQF strategy.

The final stage of features reveals a weak investment in quality assurance policy. At least as a national policy, no national assessment program was found to ascertain the students' qualification. The institution accreditation happens out of the TVET's scope, meaning that for applying to offer a technical or technological programme, professional programmes, the education provider needs to be already habilitated by the *Ministry of Education*. To summarize, Brazilian NQF design, it´s possible to state that the policy texts describe a competence-based NQF in terms of curriculum and assessment; the outcomes described, on the other hand, are based on professional profiles(that means that the same programme, generating the same professional accreditation, can be offered by institutions in different competence sets); and that the SETEC is accountable for keeping the coherence among the programmes. The assessment is a school's prerogative, supported by an apex body. (Tuck, 2007).

The strategies and features indicate a linked NQF organized through learning itineraries and technological axes tightly regulated in the middle level. In terms of governance, it is centralized by the SETEC. Also, it counts on the CNE for regulation and on a professional education network for execution. The schools' autonomy to make central decisions on

curriculum, prior learning recognition, students' assessment and accreditation complete the characterization of Brazilian NQF features. The next section explores the intensions and tensions inbred in the policy.

5.3 NQF intentions, tensions and mediations

The third research question aims to determine which intentions and tensions underlie the NQF implementing process. It was established in chapter four that the strategies used for this stage are to firstly to apply the strategy to characterize Brazilian features - the use of Tuck's (2007) scheme in association with text description sorted through thematic coding. Secondly, the tensions are searched through connections and relations inbred and described in the analytical framework (section 3.3) and put in context once again based on adequate text excerpts. Identifying tension is the achievement of the Critical Discourse Analyses' second step: processing analysis or explanation. The two steps conclude that Brazilian NQF is driven by the intention of promoting lifelong learning and is underlined by tensions related to the articulation between TVET and basic education and its effect in work mobility, stakeholders' participation, professional profile orientation and informal economy.

5.3.1 Intentions

Tuck (2007) describes the main set of goals in an NQF as "promoting lifelong learning, and quality assurance and recognition". According to the *Education Law* (LDB 9.394/1996), TVET as an education modality has the primary goal to 'habilitate for work'. In this sense, it is expected that an NQF implemented under this premise would incline towards the second set. However, a closer look at the document set suggests otherwise. Although goals related to both sets are mentioned throughout the texts, the frequency and, more importantly, the translation of those goals in strategy implementation, incline towards promoting lifelong learning as the NQF primary purpose. The set of goals are defined by Tuck (2007), as it follows:

Figure 7: NQF set of purposes, Source: Tuck 2007

Promoting Lifelong Learning

including objectives such as:

- improving understanding of learning routes and qualifications and how they relate to each other
- improving access to education and training opportunities
- creating incentives for participation in education and training
- making progression routes easier and clearer/ improving learner and career mobility
- increasing and improving credit transfer between qualifications
- increasing the scope for recognition of prior learning (RPL)[14]

Quality Assurance and Recognition

including objectives such as:

- ensuring that qualifications are relevant to perceived social and economic needs
- ensuring that education and training standards are defined by agreed learning outcomes and applied consistently
- ensuring that education and training providers meet certain quality standards
- securing international recognition for national qualifications

Only four documents were directly concerned with quality and assurance recognition – specifically with certification –, and institution accreditation. Concerns with promoting lifelong learning were found in thirty-seven documents. They regulate strategies to recognize prior learning, create routes' progression, and organize a comprehensive index of available qualification, improving access and incentivizing qualification through funding and scholarships. This is also explored in the previous subsection, which points out the existence of a weak strategy set for quality assurance. The number of documents is not a definitive criterion. Since many texts are corrections or additions to previous publication, some set of documents have the same content, but are directed to different stakeholders (private and public schools for instance). As a consequence of that, they had to be published separately. Despite this, the difference in numbers is substantial enough to indicate promoting lifelong learning as the primary purpose, especially due to the concentration of this concern in the regulation of policy strategies. The context of Brazilian low education rates, in addition to the strategies chosen, reinforces this statement. Taking in consideration all aspects described here, it is possible to affirm that the Brazilian NQF's main intention is promoting lifelong learning.

5.3.2 Tensions

Regardless the data revealed by the praxis in the institutional level, four areas of tension can be speculated based on inconsistencies: the relation between intentions and strategies; the lack of elaboration; the connections between TVET education and labor policy; and the context where the NQF is being implemented. Those tensions cross the list of tensions identified in developing countries' NQF implementation by Allais' (2013) studies (section 3.3). Through the features revealed in Brazilian NQF, three groups of tensions can be identified and it's possible to affirm that they are related to the articulation between TVET and basic education; its effect in work mobility; stakeholders' participation; professional profile orientation; and informal economy.

The relation between TVET and Basic Education and its effect on learners' mobility

TVET's detachment from secondary education after the 1996's reforms raises some questions regarding curricular articulation. The first one is that it tends to overload students, since they must accomplish both certifications in order to be habilitated for work in the technical level. In this sense, it is expected an impact on the promoting lifelong learning goal, in addition to employment uncertainty.

The second question brings out the articulation between curricular elements among themselves. The Education Law assigns to secondary education the task to 'provide to students the conceptual base to understand the technological foundation of the world of work and production, For TVET, the Education Law assigns the task to "habilitate for work", which led the curricula to be noted for labor-oriented competences and context coherence. That has already been addressed by Muller's (2009) studies on curricular coherence, as well as how conceptual curricular elements should be observed in order to promote vertical mobility (section 3.2). On this note, it is expected that the conceptual bases provided by secondary education promote the bases for vertical mobility in TVET's programmes.

However, instead of using the conceptual bias for articulation between curricula, the guidelines approach three principles as articulators: ethics, aesthetics and politics. It was not possible to trace any influence of those articulators in the policy NQF features. With

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characteristic principles of TVET policy, the opposite can be observed: competence-based curriculum, flexibility, contextualization, professional identity, updated curriculum, and institutions autonomy are used as conceptual grounds for policy development.

The tension raised – besides the need for a better articulation between curricula – is a possible mismatch between the technological foundation planned in secondary curriculum and the conceptual core used to elaborate the technological axes – which is designed to promote vertical mobility in the NQF. The third point is the lack of literacy and numeracy resulted from the low quality of basic education and its impact on NQF goals. The organization promoted by technological axes and learning itineraries may create a comprehensive system with easier progression routes. But it does not guarantee students' capability, or even willingness, to progress towards upper levels. Narrowed curricula's capacity of being a provider for knowledge economies is debatable. As well as it is questionable if the economy of knowledge is a reality in Brazil, and to what extent it would be. Maybe a more adequate question is how TVET can contribute to this transaction of economies.

Stakeholders participation

During the NQF's structure implementation, a CNE deliberation on prior learning recognition for studies and work purposes is mentioned. The same document brings an interesting narrative on the creation of a national system for professional certification and on how decisions were made in regard to it. The starting point was a combination of policy texts demanding the creation of a national certification system among all policy stakeholders: ministries, education providers, employers and workers' organizations, and also other governmental or civil instances involved in the policy.

First, a pilot was designed by the *Ministry of Education* and, according to the report, the CNE began to articulate public auditions. But before any action was taken, the SETEC required an internal conduct, claiming the need for better alignment in-between ministries. This report describes, in addition to other texts related to certification policies, a decision making chain. It started from a broad inclusion of all stakeholders and ended with a policy centralized on SETEC which had its apex body made in partnership with the *Ministry of Labor*.

The CERTIFIC's guidelines, the final shape of the certification policy above described, anticipate a plural articulation between government instances, civil organizations and education providers – the same body of stakeholders whom were step by step excluded from the policy elaboration. What reverberates here is described by Allais (2013) as "the-chicken-and-egg of stakeholder participation": when a policy is dialogue-based but driven by policymakers. Lack of participation generates less engagement and different interpretations of what the policy means. Ultimately, it reflects on the policy transparency and relevance, which can be aggravated by the weak quality assurance system – identified before as an NQF characteristic. The stakeholders' participation is also important in order to guarantee the NQF relevance. The importance of aligning professional qualification with market demand had been pointed out throughout chapters 2 and 3. However, it is particularly important for the NQF implementation in developing countries to think about NQF in terms of economic reality, which is the next tension subject.

Professional profile and informal economy

During the NQF characterization, the professional profile was identified as an outcome standard for technical courses. The CNCT displays professional titles for what an egress student from each program may be habilitated for. The titles are from the *National Index of Occupation.* The programmes are required to associate those profiles with a set of competences, stabilising in this way a co-relation between professional education and market demand. At least two points in this strategy are arguable.

Firstly, the CNE appreciation 11/2008 states that CNCT construction started from the acknowledgement of title dispersion that needs to be better organized for the sake of transparency (CNE/CEB11/2008). The progression of texts addressing CNCT regulation shows a convergence and a narrowing of titles that improved the systematics, until the index became transparent and complete enough to centralize the policy. According to Allais (2013), NQFs have better chance to succeed if they manage to implement new logic while accommodating existent qualifications, ergo the adopted strategy was coherent. The question, and possible tension, is the adequacy of the programmes to professional titles they are related to, since nothing was found in the documents that could indicate an effort toward this alignment.

In another approach to the same topic, Woodruffle (1993) calls attention to the fact that the same job title hardly means the same tasks and, consequently, the set of competences related to it (section 3.2). This becomes particularly aggravated by Brazil's size and shape. The guidelines mentioned regional contexts and productive arrangements as part of the programmes' planning. But it is unclear how it is reflected on the professional profiles used as outcome standards in the CNCT elaboration. A weak inclusion of employers in the policy governance, examined in the previous tension, associated with the inaccurate correlation between competence sets and occupations, would hinder, among other things, the intention of promoting work mobility.

The employability factor is above the relation between domain and occupations. The NQF is designed under the assumption that jobs will be available, which is not the Brazilian reality. According to the national census (IBGE, 2017), in 2017, 48 % of the workers were in the informal economy. Preparing for a formal job position decreases in relevance when associated to the prospects of being employed in a formal job position.

The three tensions here exposed do not conclude all possible tensions and difficulties in Brazilian NQF. The next section retakes the tensions presented here and delaminates how and if they affect two institutions – one developing its qualification as part of Brazilian NQF, and the other apart from it. The analysis proceeds to see hints of other possible approaches to address and mediate the issues underpinning the NQF implementation, as well as the different tensions created by them.

5.3.3 Mediations

This section is composed by comparative cross-sectional analyses between two institutions composing the Brazilian S-system. This is the final step to clarify how being part of or apart from the NQF affects SEBRAE's and SENAI's navigation through the mediations of intentions and tensions identified in the NQF implementing process. For this purpose, the data analysis will approach the third and last Critical Discourse Analysis' step – social analysis or interpretation –, using the data collected during the semi-structured interviews (section 4.3.2) as a base for analysing the social dimension of the NQF debate.

Relation between TVET and Basic Education and its effect on learners' mobility

Many of the students who attend to technical and professional courses have a deficit on numeracy and literacy skills, either because they did not complete the secondary education or due to the low quality of basic and secondary education in Brazil. This statement is made in one way or another by all four of SENAI's informants. The strategy used by SENAI, mentioned by A1, consists of joint efforts with SESI (*Industrial Social Service*). The two institutions have intrinsic relations. Both of them are managed by the same unities in the higher level of their organizational structure. They also have A1as their regional educational manager.

Once SESI offers secondary education courses, the strategy is to create integrated or concomitant secondary courses within the two S-institutions. They are created in a format that is determined by the legislation. That enables curricular complementation and alignment in between the two houses, but it is not extensive to all the students enrolling technical courses. The lack of numeracy and literacy skills are pointed out as an issue by A2, A3 and A4. They work in the school's unity and describe strategies adopted in the classroom level involving early diagnoses, student by student monitoring and parallel reinforcement activities. A1 also describes that SESI and SENAI work together in the recognition of prior learning policies. Together, the institutions developed a system that can take into consideration knowledge related to both basic and professional education. Nothing is mentioned on technological knowledge and vertical mobility.

It is arguable if vertical mobility or the preparation of workers for the knowledge economy are priorities, at least until the technic level. In the studied school unity, A3 – which works in direct articulation with the industries due to student´s internships –, describes that the industries they were working in articulation with were recruiting shop-floor employees. The assumption that the society of knowledge will promote qualified and creative workers is discussed previously (section 3.3 and 2.1), both by Lauder (2013) and Ferretti & Silva Jr (2000). The first author argues on the unfulfilled promises that knowledge society will promote intellectual talents. According to Lauder (2013), that is true only for a few, the majority of workers will be kept on routine jobs, in a system known as 'digital Taylorism'. The second author points out the social studies' contribution and shows that, especially in

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developed countries, old and new production modes often coexist. In that case, an NQF oriented towards the knowledge society, which is one of the TVET policy orientations, can be premature and end up not qualifying workers for the job positions available on the market. Hence it can end up putting students' mobility as a secondary goal.

As a reverse contribution, SEBRAE seeks to introduce the entrepreneur's competences in the school system. The development of an entrepreneur's mindset in children and young students is the entrepreneur's education main goal. Informant B2 mentioned a private study that revealed a significant deficit of entrepreneurs' skills in the academic environment which the institution tries to train teachers with entrepreneur's education methodology. The idea, though interesting, would take a bigger scope policy to actually impact SEBRAE's practices. The evaluation and monitoring of this action are focused on the teachers: the goal is to tool up teachers in schools with methodologies. Students, in turn, should just become acquaint to the entrepreneur's world. Results are expected in long-term, hence they are non-measurable in a short time. The two types of mediation hint that the separation between basic education and TVET is theoretical. Since they are working with the same individual, it leads both institutions to create curricular articulations in order to better integrate their qualification.

Stakeholders participation

SEBRAE is at the same time a service resulted from policy disputes and the arena where the policy is developed. Articulation has been a key factor since its foundation, alongside with the focus on their students/clients. The strong connection with the clients – and the focus on them – also generates the instructors' and consultants' obliteration.

SEBRAE's relation to the instructor is made by the SGC - *Sistema de gestão de clients* (*Client's Management System*). It is where all the consultants and trainers who are not part of SEBRAE's body manage their participation. Through the SGC, instructors are accredited, the demand for training is generated, and the trainings are evaluated by clients. During the interviews, besides the SGC, all instructors demonstrated little knowledge on SEBRAE's organizations, visions or goals. When asked how it is working for SEBRAE, the instructors mainly started to explain how the system works, what tools SGC has and how they adjust their personal information to fit the system.

There were frequent comments related to SEBRAE's distance from its instructors, the impersonality of the SGC management and the unevenness among instructors. They also reported the lack of sharing between them and the unclarity on how the mediation between clients and instructors happens. Instructor B5 remarkably expressed the need to understand the body of the project she was included in, as well as the desire of being part of the planning level and creating alterations in order to provide better solutions. Informant B4, otherwise, demonstrated good knowledge of the projects and the context in which his work was inserted. He also mentioned feedbacks he gave to SEBRAE's regional managers that sometimes resulted in a program's alteration.

Informant B5 even affirmed that she did not believe that it was of SEBRAE's interest to work with the instructors due to the institution's size: "what I feel is that, as instructors, we could be the first target of SEBRAE's interests, but what happens is exactly the opposite (…) as an instructor or consultant, we do not have the opportunity to give any feedback". The instructor's feedbacks, as far as the interviews shows, are a loose end in the institutional planning. "To what extent this [their feedback] goes back to SEBRAE? It does not go." - informant B5 states. Informant B3 concludes: "the feedback is not working with the instructor anymore, at least in that project or for a while". The instructor's feedback meets the manager B1 statement of how SEBRAE works with a slim structure. In a sense that as its focus is to monitor the clients, it lets the classes executed by the partners to be a loose end in its monitoring system.

Teaching trainings was only described in a context of a new productive arrangement project's launch. In those cases, the professionals in SEBRAE's data based are invited to workshop in which he project is explained. One of the informants, B5, declared that she only attended to the workshops a couple of times. B4 said that he has always participated, B3 confessed that she had never gone to any of them. When instructors attend to those workshops, they increase their score in the system and become more likely to be hired in the project's actions. Despite that, all the classroom work is developed by instructors and independently based on their own studies and experiences.

As far as the interviews could show, SEBRAE's instructors seem to be unaware of the institutions' methodology. In all the interviews, it was remarkable that the instructors did not understand the role of their work and how it is connected to the institutions' works. The level of disconnection changed according to the area of knowledge where an instructor works. On a

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bright note, all three interviewees also mentioned how the trust given by SEBRAE made it possible for them to create and adapt their work based on the demand, since they are free to invent and apply their own strategies.

While SEBRAEs instructors demonstrated little knowledge on SEBRAE's methodology, SENAI's school workers had difficulty to mention other sources then SENAI's book, whose elaboration is external to schools and often does not address local demands. The information gap between policymakers and teachers is not exclusive from this context. What changes from one model to the other is the way it happens. The feedback is part of SENAI's system, but it is perceived as slow and heavily bureaucratic. Even when a suggestion is incorporated it happens within the methodologic boundaries.

As a S-service, SENAI is managed by employer's organization. This puts the stakeholders' participation issue, previously discussed in this section, into a different perspective. Still, the student's analyst A3 reported that industries are often not aware of what competences SENAI's programmes develop. If it is truly happening in an institution so intrinsically related to its work market, the regular education providers are probably facing even worse communication gaps. In conclusion, communication with employers or clients is in both cases made through strategies other than the curricular transparency.

Professional profile and informal economy

SEBRAE's work is mainly empiric oriented, since all the mentioned programmes and solutions had a starting point on a practical demand. Historically this institution started as a credit line in a bank. When SEBRAE – known at that point as CEBRAE –, was founded, the small and micro entrepreneurs were invisible as an economic segment in terms of policy. The Brazilian entrepreneurship features became visible s as CEBRAE tried to develop solutions: first for credit orientation, then for management and so on, until the current structure of programmes was designed. This connection with the practical demand is present in all the informants' discourses. B1, who has been working at SEBRAE for twenty-nine years, shares:

> "and there [field] I had to develop motivations for them to learn what I have to teach
> This is good because we learn. It was where I learned the most, when I was working in
> the field (…) Those knowledges are not in the academy, there are no administration

books, because they are part of a tacit knowledge. Then you think – 'I spent my whole life studying and I never understood what this guy did'. But the guy, based on his experience, developed something marvellous. (…) because the academy in Brazil has a serious problem, its content does not connect with the community."

This declaration hints a profound penetration in the low economic social sector. Through the entrepreneur's bias, it is possible to invest in both formal and informal economy, and in the formalization of informal activities. Of course, it is a peculiar angle that is not applicable to an NQF in all its technological axes and extensions. But it suggests the possibility of investing in informal economy and looking at professional education in terms of improving incomes besides employability.

SENAI´s work relies on the premises of job vacancies to be filled, it does not impact the informal sectors. On the other hand, it is concerned with updating its professional profile. The pressure for renewing its portfolio was mentioned by A1 because of the market competitiveness, as well as of the economic crises, once the service is funded according to industrial sector profits. In this sense, working with professional profile is relevant and needed for the formal economy expansion. However, it lays a limit on SENAI's contribution – if not for employment, for income fomentation – and that can make this professional education segment less appealing, since there are small chances of employment after the programmes' conclusion.

Summarising this analysis step, the Brazilian NQF main intention is promoting lifelong learning, and three tensions are imbrued in the NQF implementations. The articulation between TVET and basic education can face challenges related to students overloaded by extensive curricula; potential mismatch between the technological foundation planned in secondary curriculum and the conceptual core used to elaborate the technological axes; and the lack of literacy and numeracy. Stakeholders' participation can be compromised by a policy that is dialogue-based, but actually driven by policymakers. Finally, the use of professional profile as an outcome requires reflections on linkage between NQF programmes and the professional titles, inaccurate correlation between competence sets and occupations, and the assumption that jobs will be available in context of large informal economy. What the comparative analysis of SENAI's and SEBRAE's mediations indicates is two directions for future decisions on NQF policies: one is the adaptation of Brazilian economic and educational context, which requires the consideration of informal economy dynamics and the gap between

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formal and informal education and knowledges; the other is the formulation of more detailed descriptors and regulations for the NQF features.

5.4 Chapter conclusions

This chapter addressed the four research questions: (1) if there is a NQF being implemented in Brazil; (2) in case of its existence, how it can be characterized in relation to the most relevant global NQF core of debate;(3) which intentions and tensions underlie the NQF implementing process; and (4) how being part of or apart from the NQF affects SEBRAE's and SENAI's navigation through the mediations of intentions and tensions identified in the NQF implementing process. What the collected and analysed data shows is an NQF in process of being implemented, featured by a linked curriculum organized in tracks, learning itineraries, and grouped in technological axes. The NQF is tight in the middle level, the technological programmes who are so far the national qualifications regulated by the NQF policy. The other two levels are conceptually connected to the NQF, which can enable policy articulation. In terms of governance, the NQF is articulated by the SETEC and its apex bodies, the professional network and the *National Education Council*. There are three main tools developed to organize the police: SISTEC – data base; CERTIFIC – certification policy; and the CNCT – index of programmes, who regulate curricular coherence. The competence-based curriculum is adopted as the NQF language of communication, but the outcome standards are designed based on occupations or professional profiles. For the execution, the NQF is supported on the schools' autonomy. The *Ministry of Education* is responsible for the schools' and programmes' accreditation, and the education providers responsible for planning the programmes and students' assessment and certification for work.

For the intentions, tension and mediations, the NQF is inclined towards promoting lifelong learning and inbred in tensions regarded to the articulation between TVET and basic education and its effect in work mobility, stakeholders' participation, professional profile orientation and informal economy. The mediation, when found in the institutional level, is made through the adoption of strategies other than the ones anticipated by the NQF policy – either by the non-observance of the NQF logics or based on the maintenance of stakeholder's articulation organized in mechanisms built in the context of the S-system foundation. In

SEBRAE's case, the competence-based curriculum and outcome standards based on professional profile were not adopted. Instead, the institution kept an empiric strategy of structuring training based on the demand/response logic and monitored the results based on the training impact on the students'/clients' economies. On that note, the approximation between education providers and employers designed by S-System institutions, although peculiar of those organizations, hints ways and strategies to be adopted by the NQF.

Two other tensions can be mentioned, they are related to funding and quality assurance. The reason why they are not listed in this chapter is since the difficulties identified in those dimensions are more a lack of strategy, then a tension raised by the way the strategy is characterized. While funding is a subject beyond this study scope, the quality assurance issue is addressed in the next chapter, which discusses the use of competence-based curriculum as a language of communication and other curricular articulations. It also explores both SENAI's and SEBRAE's strategies for assessment, evaluation and monitoring; and which contributions they can give for the Brazilian NQF.

6 Discussion

This chapter aims to extend the discussion on quality assurance based on the NQF curricular features and SENAI's and SEBRAE's strategies for assessment, evaluation and monitoring. The discussion begins with curricular articulators to secondary education and TVET and continues curricular based curriculum as a language of communication between government, employers and education providers. In conclusion, some ideas are presented on assessment, evaluation and monitoring strategies. In specific, their centralized/decentralized features and their learning outcomes' perceptions.

6.1 Curricular articulations

This subsection discusses the articulation between secondary education and TVET as it was shaped after the 1996's reforms, and its impact on quality assurance. It continues to discuss the possibilities and limitations of competence-based curriculum as a language of communication between stakeholders. As it was exposed during the contextualization (chapter 2), Brazilian professional education policy is historically influenced by the slavery social heritage. In reason of that, this policy is disregarded and delegated to the poor. A historical dispute was created when demand for qualification propelled policymakers to include professional and technical education in the basic education system and make it mandatory for all. Such dispute had generated back and forths in the scholar organizational structure (section 2.1) and shaped a curricular partition between secondary and professional education. Partition that is possibly aggravated by the adoption of competence curriculum oriented for labour, and on which the designed curricular articulators have limited impact.

6.1.1 Articulation between Secondary Education and TVET

The historical tension between TVET and basic education translates, on one side, a desire for propaedeutic curricula, with a view to high education, hence intellectual work and social

redemption. On the other side, it shows a demand for a professional education that can enable a mass of qualified workers to be adapted for new production modes. The dispute reflected on education reforms and curricula, resulting in the back-and-forth of designs. The current historical moment is marked by a dual educational system adopted in the most radical design experienced in terms of policy text. On the bright side, detached from secondary education, TVET policy was propelled to develop its own identity, pedagogical orientation and organizational devices with better adequacy to its particularities. But it also promotes curricular disarticulation and overloads students - as mentioned in the subsection 5.3.2.

This scenario disregards the secondary education reform approved in the beginning of 2017. It is estimated that some pilots will be run in 2019, and that only in 2021 the reform will be fully implemented (Senado, n.d). There is no guarantee that the reform will be implemented or any stablished standards for how the policy's final features will be. Anyhow, it is worth to mention that the reform intends to amplify the secondary education mandatory hours, decrease the general program hours and implement mandatory professional disciplines. (Law 1415/17).

Currently, according to the Brazilian Constitution and the *Education Law*, education is divided into three categories: fundamental, secondary and higher education. It also has some modalities: special education, education for adults, and TVET among them. TVET internally reflects the main education levels dividing themselves into professional, technic and technological levels. The access and certification in the two latter levels are bounded to students' Secondary Education achievements. Moreover, TVET connects with the broad national education policy as the modality responsible to habilitate for work, and as the one that can be offered concomitant to, separated to or integrated with secondary education. Beyond structural linkage, it is important to understand how the articulation between education modalities is translated to curricular elements themselves.

In the findings, a possible mismatch was exposed between the technological foundation in secondary education and the conceptual core used to elaborate the technological axes designed to promote NQF vertical mobility. This difficulty in articulating curricula is of special concern, since the country is currently attempting to unify professional and secondary education once again. The curricular external disarticulation can be related to the adoption of an independent competence-based curriculum for TVET programmes. Internally,

competence-based curriculum as a language of communication between stakeholders has achievements and limitations.

6.1.2 Competence Based curriculum and professional profiles

The competence-based contextualized curriculum is strategically adopted in the NQF as the language of communication. The national qualification programmes per se, the ones regulated by the NQF and included in the CNCT, are bound to build their pedagogical project based on competences. The qualification is modular, translated to learning itineraries – the strategy adopted to promote vertical and horizontal mobility. The learning outcomes standards are organized in professional profiles: a strategy for transparency and approximation to the market demand.

Despite the final described features, the CNCT creation was driven by another particular need. After 1996, when TVET became an independent education policy, policymakers began to gather data for diagnosis and policy planning. The scenario revealed a field overlapping in titles and curricula. A document from 2008 reports 2.700 different titles for 7.940 technical programmes offered in the country by 2005. The dispersion of titles was perceived as a hindrance, both for planning, and for transparency and communication with society. (CNE/CEB11/2008). The creation of a *National Index*, mandatory for the technical courses, was then justified as a way to promote transparency and alignment between education providers and market demand. But first and foremost, it was a strategy to unify information on existent qualifications. The policy texts addressing the CNCT (group 2 – subtheme curriculum) show an effort to gradually converge programmes and simplify the catalogue based on professional profiles or occupations. Parallel to it, the guidelines' documents (group 1) began to create orientation for curriculum and pedagogic projects based on competence core or knowledge domains.

There are two points of discussion here. Firstly, since professional profiles and competence cores were developed separately and linked together afterwards, the discussion is driven towards to what extent the education goals pursuit by a given competence set are translated to the outcome standards. The second point, on its turn, raises the question to what extent a competence-based curriculum can work as a language of communication between government

and institutions, since the CNCT is based on programmes developed before the NQF reforms. To better approach these two questions, further studies should be made on NQF achievements towards improving transparency and communications between stakeholders. Within this study scope it is only possible to indicate the potential difficulties generated by NQF features and implementing strategies.

 A third concern, approached in subsection 5.3.2, is related to professional profile descriptors and their capability of both unify national qualifications and represent competences needed in real job positions country wide. Professional competences are defined by the guidelines' documents as 'the capability of mobilizing for action values, knowledge and abilities necessary for – and effective and efficient performance required by – a certain work activity'. In this context, ability is defined as the capability to put knowledge in practice' and value is related to 'the judgment of action pertinence, ethics and social living'. Throughout these definitions, the intention of preparing for specific work activities becomes evident, at the same time it is unlikely that the learning outcome standards, described as professional profiles, can be relevant to work positions across the country. Since Brazil is a country of continental dimensions, it may be worth to consider the inclusion of local professional profile descriptors.

At last, the difficulties schools may face to implement competence-based curriculum in their programmes should be acknowledged. A document produced by the CNE reports an interesting passage on the impact of the NQF implementation in the institutional level. On the 29th of September of 2004, a *National Education Council* meeting took place in order to meet schools' and regional councils' demands for better explanation on how to implement competence-based curriculum. Specifically, its clarifications were demanded on standards for students' certification based on competence. (CNE/CEB 40/2004). The document reports doubts and uncertainties and indicates plural comprehensions on how to adapt institutions that had already implemented activities to the new standards. Since schools are responsible for the students' nationally recognized accreditation, the plural interpretations on how to structure a competence-based curriculum and how to assess learning outcomes lay questions on what students are qualified for.

In many literatures, competence-based systems are seen as a way of transferring bond of trust from institutions to the national system. (Allais, 2010, section 3.3). In the Brazilian case, however, this logic is not fully followed. Instead, schools' autonomy is imprinted as a strong

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policy feature, and institutions are part of a policy apex body, which hence makes them decision makers. It is impossible to determine to what extent institutions' autonomy is driven by education principles, and to what extent the reduced state apparatus ends up generating a sort of power balance. In this sense, institution autonomy conserves education providers' central role in the policy governance.

One negative consequence is the lack of transparency on which the set of competences is included in school programmes. It also remains unknown the criteria SETEC uses to approve projects submitted by institutions and how many different combinations of competence sets are considered coherent with the CNCT programmes descriptors. Quality assurance problems may be aggravated by giving too much autonomy to schools, in addition to the fact that professional profiles lose accuracy when applied as national descriptors. (Section 5.3.2). For all lack of structure debated, it becomes clear that talking about a quality assurance system in Brazilian NQF is not a matter of debating chosen strategies, but of recognizing the lack of systems and debating possible directions for its implementation.

What was meant to be punctuated in this section is the vulnerabilities in the articulation between secondary and professional education, and between professional education institutes and other stakeholders. Topic of special relevance, once the country is currently attempting to unify professional and secondary education. Articulation difficulties can be related to the adoption of an independent competence-based curriculum for TVET programmes. Internally, competence-based curriculum as a language of communication between stakeholders has achievements, namely the improvement of communication between government and education providers; and limitations mainly related to descriptors assimilation and transparency.

6.2 Assessment, evaluation and monitoring strategies

This section addresses SENAI´s and SEBRAE's systems for quality assurance. One based on learning outcomes, as defined by the pedagogical projects; and the other based on monitoring former students and evaluating the training impact on their lives – hence their learning

achievements. Furthermore, the two institutions, both operating on national scales, adopt different strategies when it comes to centralization/decentralization.

Almost all the NQF efforts to regulate national qualifications are focused on TVET's second level, namely the technical courses. Institutions must meet the national qualification criteria in order to habilitate their programmes. According to the NQF, the criteria are tenfold: purpose and justification; professional profile; curricular organization; prior learning recognition criteria; teaching and technical personnel; and certification. In other words, the programmes must respect the titles and descriptors provided by the CNCT, but students' certifications are issued by the institutional level. They are recognized by the *Ministry of Education* and, therefore, have national validity. Starting from the premise that the procedure adopted by the SETEC does not guarantee quality assurance, the question raised is what implementations could be made in order to build a relevant and transparent quality assurance system. This section discusses the strategies implemented in SENAI and SEBRAE, in a closer look into their difficulties and achievements that may hint ways for planning next NQF steps.

6.2.1 SEBRAE's evaluation and monitoring system

In SEBRAE's scope, according to informant B1, all education programmes, namely *Entrepreneur Education*, EMPRETEC and *Solution Portfolio* (section 2.2.2), can be grouped into three areas of knowledge or, as B1 refers to, into competitiveness pillars:

Entrepreneur education: leadership, market and financial strategies;

Technological innovation: technologies' updates made in order to improve production, and which are offered in partnership with technological institutes.

 Market: market access for the entrepreneur products.

The strategies and systems used for planning and monitoring trainings, when it comes to centralization/decentralization orientation, are described by B2 as "a mixture". At first, regional unities had independent and separated actions, after an attempt to create a unified national methodology was made. Later, it became clear for SEBRAE that the regional unities needed more autonomy to deal with local specificities. Effectively, the national unity began to

assume an articulatory function. There are still national programmes, but they are one option among others.

Informant B1 reports an effort to create a unified platform. Nowadays, there are several systems, national and regional, among which they have to search for programmes. The main concern, affirms B2, is that two or more unities can be working on the same solution. Therefore, the *National Unity* plays the role of putting unities together to save efforts and keep the institution's coherence: "we gained autonomy, but with a sensible approach". Still on the regional autonomy, some programmes are developed with local partners and cannot be used by other regional unities.

Methodologically speaking, during the interview with B2, regionalism came up as an issue for joint methodologies. Due to the country's size, diversity, economic activities and inequalities, programmes sometimes are developed in one geographical area and must be adapted when applied in another context. Though some of the programmes have the same educational goals, the approach developed for the far south, for instance, turn out not relatable in the country's far north. In that case, the national unity creates a unified methodology without the regionalist traces present in the original project. B1 also points out an upcoming effort to create S-System joint programmes: "it is not enough to work with the entrepreneur, I have to work with the employees at the same time.".

Monitoring and reports are also *National Unity*'s attributions. The unity oversees most evaluation and monitoring, made through different types of researches and surveys. As described by B1, the first monitoring approach is clients' reaction surveys, followed by data collection on clients' retention: four or five times a year these surveys are applied, and the results are replicated among regional unities. B1 also informs that keeping track of clients had been a major issue for the institution: "we are more about executing. Historically, we haven't had the concern of coming back to see if they had like it, since the survey made in classrooms are mainly driven by emotion (..). But if we come back after 30 days to check if he applied anything (…), we came to the conclusion that this type of evaluation [clients' reaction] didn't say much.". That is why monitor if, and how frequent, clients are coming back.

In order to generate adequate data, a third type of survey is applied based on the entrepreneur development: "either if he comes back, or if they grow. That's what I will measure." – B1 informs. He keeps on explaining a second monitoring approach based on clients' enrollment

in other SEBRAE's programmes and their profit incensement afterwards. Along the years, SEBARE's monitoring system progressed from focus on clients' satisfaction, to client's return, and finally to clients' profit assessment. Lately, SEBRAE is turning its attention towards monitoring entrepreneurs' competitiveness: when a project begins, they evaluate the participant to determine the "T.0"- the starting point of competitiveness - in terms of twelve criteria. Along the project execution, they assess the client growth within the criteria stipulated. The change from profit incensement to competitiveness growth, according to B1, happened due to the realization that it can take years until the programmes learning achievements show results in terms of profit. In order to take timing into consideration, SEBRAE began to monitor the clients based on entrepreneur skills – or competitiveness –, as a way to evaluate the process leading to profiting incensement. The change in approaches did not mean replacements. The set of evaluations complements each other in SEBRAE's system. Big projects, as EMPRETEC, also have their own surveys based on project's goals and features. For instance, the entrepreneur education evaluation and monitoring are, according to B2, focused on the teachers. The goal is to tool up schools with entrepreneur education methodologies.

The expectation expressed towards monitoring systems is that, with the new technologies, it will be possible to register entrepreneur's life more closely. B1 and B2 talk about successful cases, in which SEBRAE's actions had a deep impact on entrepreneur business and on productive arrangements. But that is not gathered in a systematic way. An example is the achievements of the entrepreneur education program. One unregistered result, narrated by B2, is the inclusion of the school's community: parents started to enroll in school's entrepreneur projects and teachers declare changes in their behaviour after enrolling in entrepreneur education programmes These results propelled project's replication in vulnerable communities. According to B2, such projects faced a lot of political obstructions that she was not willing to explain further, but that indicate potentials to be still explored. Another frontier for SEBRAE, described by B1 as a response to "clients' return" surveys, is the e-learning programmes, a possibility under-explored by the institution. Though they have an e-learning platform with a relative success in terms of access, the interviewed managers believe that the efforts will be concentrated there from now on.

SEBRAE's structure description points towards programmes and structures built from and for their clients' reality. Clients were being approached individually, in groups or articulated in

productive arrangements. In order to generate and evaluate results, SEBRAE adopted articulated decentralized actions, a nationally centralized evaluation and monitoring systems. In addition to that, SEBRAE's assessments are not oriented towards accreditation, since habilitation for work is not an entrepreneur concern, Instead, they focus on entrepreneurs' improvements. The interviews revealed a progression from assessing clients' satisfaction to asserting economic growth and finally monitoring learning achievements in terms of entrepreneur's skills development. In other words, the monitoring system is progressively taking into account program goals and learning outcomes without losing the focus on SEBRAE's impact on entrepreneurs' reality. As mentioned in subsection 5.3.3, this approach creates a distance between SEBRAE's body and external instructors. Ultimately, programmes' monitoring processes lose track of their classroom dimension, since the classroom actions are mainly developed by partners. Yet, their efforts to assure education program relevance, made by monitoring their clients' development closely, give important contributions to the quality assurance debate. Complementary contributions can be provided by a reversed approach: a centralized control of classroom activities, decentralized assessment and accreditation, and focus on learning outcomes as a pedagogical project content. This is discussed in the next subsection, that focuses on SENAI's strategies.

6.2.2 SENAI's evaluation and monitoring system

SENAI's methodology is designed in accordance with the Brazilian NQF logic: competence-based curriculum is oriented towards professional profiles; knowledge is contextualized; and courses are constantly renewed and structured in learning itineraries. It does not mean that SENAI has built its methodology after NQF. In fact, when asked about institutions' references, A1 answered that "we don't use references, we are the reference.". Indeed, SENAI's effort to create a unified methodology began with the institution's foundation in 1942 and precedes the governments' current efforts to organize TVET's policy after the 1996's reforms. However, beyond the question of who refers to whom, SENAI's methodology presents what can be perceived as a more detailed NQF, with descriptors for all procedures – from the course planning to the students' assessments – nationally unified.

Methodologically, the programmes' plan – as described in subsection 2.2.2 –, began with the determination of goals and professional profiles. From thereon, up to the choice of

competences based on learning itineraries, according to A2, those steps were nationally designed by the *Education Unity* and obliged school's unities in the whole country to follow them. The same informant explains that the schools' task is to develop the teaching methods and points to the "learning situations". The latter are perceived as the programmes' central piece, since it represents 80% of the teaching plan and consists of a contextualized challenge throughout which the student should develop the competences stipulated by the *Educational Unity*. The remaining 20% of the teaching plan are composed of complementary skills, such as oral and written communication, which A2 calls "basic knowledge". After the conception, the learning situation is dismembered in activities – by the end of which students are evaluated. There are forms for each learning situation, in which teachers write down all the contents, competences and abilities present in each one of the activities. They are used as the base for student's assessment and certification.

All the procedures described above are registered in an online platform. SENAI's monitoring in the school level is made through a combination of guidelines established by SENAI's methodology and results are registered and controlled though the platform. They are referred to by the teachers' coordinator and by teachers (A2 and A4), as "the book" and "the system". During the interview, A4 demonstrated a high level of satisfaction with the institution's organization: "the system is there, the pattern is there, the formulary is there, we just need to keep improving it. Update what we already have.". She also declared to be comfortable with the procedures for methodology alteration – which involve waiting for the *Education Unity* to "open the system", require an alteration and wait for an approval. A2, on the other hand, narrated that during the transition, teachers were resistant to apply such a tight methodology, especially the older ones. She reported an intensive work to create the acceptation for implementing what "we were told to do.". The used expression denotes the lack of school's autonomy in adopting the methodology steps. She also reported teachers' resistance against the evaluation formulary, described as the most challenging step in the planning process. The school's unity organization has shown, based on the informant's reports, a methodology nationally centralized and focused on competence-based curriculum and assessments, with little flexibility autonomy for school's organization.

The rigid structure described gives little space for local needs and adaptation. As far as the interviews could reach, the student analyst's work is – at least in the school level – where initiatives not anticipated by the methodology can be developed. A3, one of the student's

analysts working in the researched unity, describes her work as one that involves articulation with companies, teachers and students. According to her, the department was first thought as a way to avoid scholar evasion. But, through time, it began to incorporate legal and personal counselling, to monitor students' progression in internships, and collect feedback from companies about newly hired egresses, among others. When asked if those activities were inserted in "the system", A3 answered that the assessment registered in the system does not follow the complexity of her work: "the system is not thought to understand the competence development (…) so, I think that nobody has thought yet about a system capable of following this new thinking, which is not even that new, but it is new for them.". She also concluded: "it is such a pity, because when you quantify, you lose a lot.". Nevertheless, she reported that, though not part of "the system", her department contributes by developing a culture of "students' accommodation" in the school's community. According to her, it is a particularly important contribution, once the unity is placed in a poor and violent neighbourhood that receives students with difficult backgrounds. During her interview, A3 described how she monitors students' progression beyond classrooms and local companies' knowledge on Serbia's programmes and professional profiles. As perceived by A3, the industries acknowledge SENAI's program quality, but does not fully understand the professional profiles designed by their programmes.

It deserves to be framed that the monitoring system's focus on learning outcomes as a pedagogic project dimension may present difficulties to include employers' feedbacks and qualification impact on students' work mobility. In SENAI's case, due to the fact that the institution is managed by employer's organizations, a series of evaluations and decisions are made outside the schools' unities. The section 2.2.2 shows how the institutions are managed by commissions composed by SENAI's body, the government, and by employers' and employees' representatives. This representative system may be able to compensate the lack of flexibility showed in SENAI's monitoring strategies and should be taken into consideration as this model is nationally implemented. Nevertheless, adopting the detailed steps' descriptors from the programmes' conception to the students' accreditation – as SENAI's methodology does –, is a potential solution for the uncertainty on building curriculum and on assessments based on competences nationally detected and reported by the *National Education Council* (CNE/CEB 39 and 40/2004).

When it comes to evaluation and monitoring, both institutions, SEBRAE and SENAI, point towards interesting directions that are complementary to each other. While one is concerned with monitoring and assesses educational goals, the other concentrates on monitoring skills' development and application outside the classroom. A combination of both approaches may be an adequate strategy for improving Brazilian NQF in terms of transparency and quality insurance.

7 Conclusion

This study has shown, through a Critical Discourse Analysis, that a NQF is being implemented in Brazil. The process has been propelled by the 1996's education reforms and is not finalized, presenting lack of strategies, especially in regard to funding and quality assurance. Brazilian NQF features can be better characterized as a communication, than as a regulatory type. The adopted strategy is a linked QF, with its modules organized in itineraries, vertically divided in three levels and horizontally in technological axes. The NQF programmes are connected with basic education by the demand of secondary education conclusion – both to conclude the second level and to enrol in the third. Furthermore, it is tightly regulated in the middle level, the technical course, in which there are qualification programmes nationally determined. The other levels, professional and technological programmes, are articulated with, but not regulated by, the NQF.

When it comes to governance, the documental analysis pointed SETEC as responsible for coordinating the policy; the *National Council of Education* as the on in charge of regulated operation's issues and law interpretation; and a professional education network composed by autarchic public institutions as an apex body. The two main devices for framework management are the SISTEC, the database system, and the CNCT, the index of courses. competence-based curriculum is the language of communication adopted by the government and the institutions, and the outcomes standards are based on professional profiles' descriptors. The documental analysis also showed a large extent of school's autonomy: education providers are responsible for elaborating pedagogical projects, executing programmes, and for students' certification. SETEC is responsible for programmes' accreditation and national recognition.

The set of prioritized goals indicates that the intention of promoting lifelong learning is stronger than the set of promoting quality assurance. The explanation of Brazilian NQF features in relation to the tensions identified by Allais' (2013) studies on NQF implementation in developing countries led to three groups of tensions: the articulation between TVET and basic education and its effect on work mobility; stakeholders' participation; professional profile orientation and informal economy. The cross-sectioned

comparative analyses of SEBRAE and SENAI's educational praxis indicates mediations through curricular articulations between TVET and basic education. They are made in order to better integrate qualification. The institutions also showed that competency-based curriculum can work as a communication language to integrate educational levels, actors and pedagogical dimensions. Despite that, it still has limitations as an articulator between education providers and employers. Complementary strategies are developed in both institutions in order to accommodate articulatory dimensions not organized in the competence-based curricular logic. Finally, the NQF is internally challenged by the national professional profile's descriptors – that can be too generic to be relevant in the whole country. Externally, it is challenged by the unemployability rates and informal economy's size. In those cases, the mediations observed in the institutional level point towards a straightened relation between education providers and employers. They also suggest a look towards income incensement, instead of only employability.

The structure designed by policymakers after the 90's reforms mirrors the amount of resources and challenges they were facing. One clear achievement of Brazilian NQF is the improvement of TVET policy's identity and transparency, which enabled more funding for the sector and a better articulation with other policies. While NQF has improved TVET's internal articulation, the external articulation with national education policy brings up a question of whether the NQF is intending the right thing or not. In the *National Education*'s division of attributions, TVET role is "to habilitate for work". That inclines NQF more towards quality assurance goals than towards promoting lifelong learning. On this concern, policymakers should invest in a better definition of priorities and intentions and invest in quality assurance strategies.

Another issue, still related with TVET external connection, is the fact that a new reform is currently on motion. If implemented, it will, once again, include professional education in the secondary education curriculum. In that context, the curricular disconnection between the two educations will be aggravated. Before implemented, the reform would have to review curricular articulators and the integration of technological concepts and axes.

When it comes to NQF design and controls strategies it is not only a matter of autonomy versus transparency incensement. But also, a matter of losing important contributions: while rigid controls can suppress stakeholders' contributions to improve the system, loose controls can isolate practices and stakeholders. Similar continuum can be noticed between assessing

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knowledge in the classroom context versus monitoring workers' improvement in their work practices. While the first approach can lose relevance and adequacy in the perception of learning outcomes, the second approach cannot provide sufficient data to educational planning process, since it does not connect achievement with curricular or pedagogical dimensions.

For a TVET policy to better contribute to the economic policies, the informal economy should be somehow included in the policy scope. The plentiful employability premises guiding TVET policy should be revisited and combined with incoming generation policies. For all those innovations, the experience of pioneer institutions as the S-System can play a strategic role, since they already manage qualification frameworks nationally applied and monitored. In further studies, curricular elements, assessment methodology and generated results can be analyzed in-depth. Nevertheless, the findings presented here meet the research purpose of an analysis of Brazilian NQF features, of the tension inbred by the implementing process, and of how those tensions can impact and be mediated by institutions.

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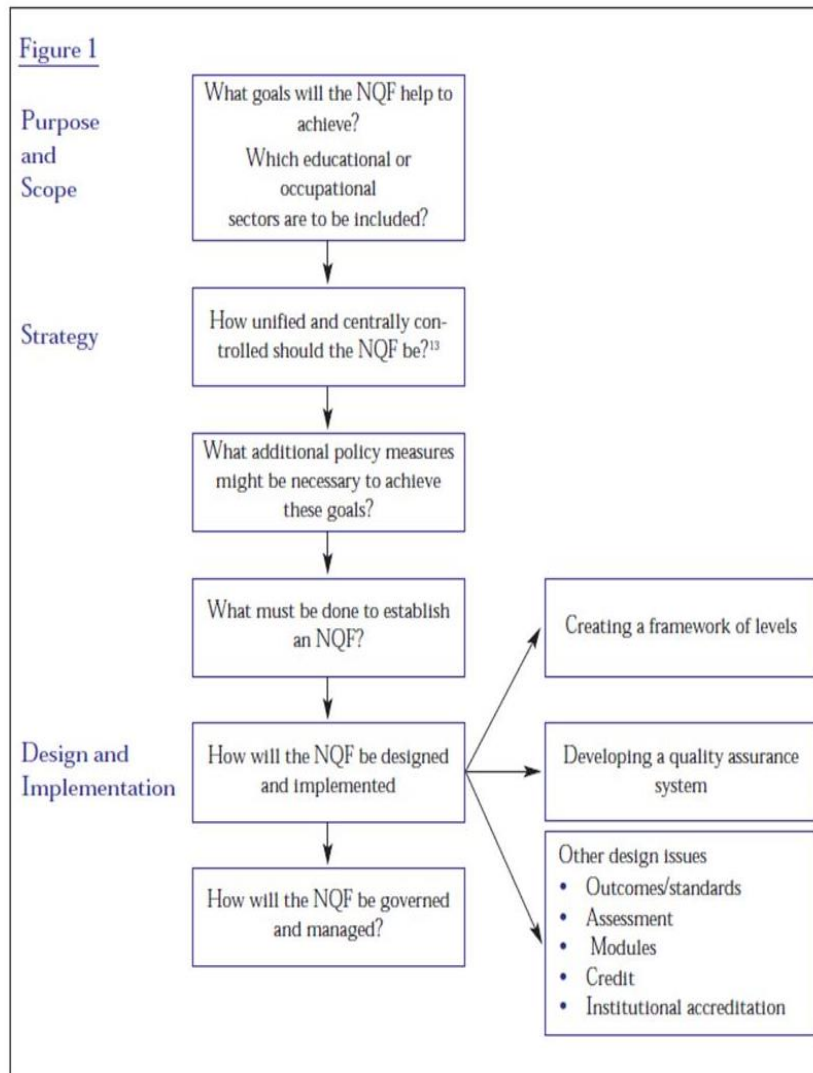Panke, D. (2018). Research design and method selection. SAGE publications LTD. London.

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Appendix 1: Tunk's (2007) Scheme for NQF

1.4 What overall approach should policy makers take to the development of an NQF policy?

There is no single best approach to NQF development. However, the flowchart below presents one way of conceptualising and implementing an NQF which policy makers should find helpful.

Figure 1

Purpose and Scope	What goals will the NQF help to achieve? Which educational or occupational sectors are to be included?	
Strategy	How unified and centrally controlled should the NQF be?[13]	
	What additional policy measures might be necessary to achieve these goals?	
Design and Implementation	What must be done to establish an NQF?	Creating a framework of levels
	How will the NQF be designed and implemented	Developing a quality assurance system
	How will the NQF be governed and managed?	Other design issues • Outcomes/standards • Assessment • Modules • Credit • Institutional accreditation

[13] A unified framework does not have separate qualification tracks but brings all provision within a single system

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Appendix 2: List of documents collected for the documental analysis

1. Resolução Nº 1, 3 de fevereiro de 2005
2. Parecer CNE/CEB Nº 16/99
3. Parecer CNE/CEB nº 17/97
4. Resolução CNE/CEB N.º 04/99
5. Resolução Nº 4, de 27 de outubro de 2005
6. Resolução Nº 6, de 20 de setembro de 2012
7. Catálogo Nacional de Cursos Técnicos, 3ª Edição
8. Constituição da República Federativa do Brasil de 1988
9. Decreto Nº 5.154 de 23 de julho de 2004.
10. Decreto Nº 9.057, de 25 de maio de 2017
11. Decreto Nº 8.268, de 18 de junho de 2014
12. Lei Nº 11.741, de 16 de julho de 2008.
13. Lei Nº 9.394 de 20 de dezembro de 1996
14. Parecer CNE/CEB Nº: 277/2006
15. Referenciais Curriculares Nacionais da Educacao Profissional de nivel Tecnico de 2000
16. Resolução CNE/CEB Nº 01, de 21 de janeiro de 2004
17. Resolução CNE/CEB Nº 01, de 03 de fevereiro de 2005
18. Resolução CNE/CEB Nº 03, de 09 de julho de 2008
19. Resolução CNE/CEB Nº 01, de 05 de dezembro de 2014
20. Parecer CNE/CEB Nº 11, de junho de 2008
21. Resolução CNE/CEB Nº 02, de junho de 1997
22. Resolução CNE/CEB Nº 02, de abril de 2005
23. Resolução/CD/FNDE Nº 29, de 20 de junho de 2007
24. Resolução CNE/CEB Nº 03, de 09 de julho de 2008
25. Resolução CNE/CEB Nº 03, de 30 de setembro de 2009
26. Parecer CNE/CEB Nº 39, 10 de novembro de 2004
27. Parecer CNE/CEB Nº 40, de 29 de setembro de 2004
28. Decreto Nº 5.840, de 13 de julho de 2006
29. Decreto Nº 6.302 de 12 de dezembro de 2007
30. Decreto Nº 6.635, de 05 de novembro de 2008
31. Decreto Nº 7.589 de 26 de outubro de 2011
32. Decreto Nº 8.268, de 18 de junho de 2014
33. Lei Nº 11.741, de julho de 2008
34. Lei Nº 11.788, de 25 de setembro de 2008
35. Lei Nº 11.892, de 29 de dezembro de 2008
36. Lei Nº 12.513, de 26 de outubro de 2011
37. Lei Nº 12.772, de 28 de dezembro de 2012
38. Lei Nº 12.816, de 05 de julho de 2013

39. Lei Nº 13.005, de 25 de julho de 2014
40. Resolução/CD/FNDE Nº 7, de 20 de março de 2013
41. Resolução/CD/FNDE Nº 19, de 24 de abril de 2009
42. Resolução/CD/FNDE Nº 23, de 30 de abril de 2009
43. Resolução CNE/CEB Nº 03, de 09 de julho de 2008
44. Resolução CNE/CEB Nº 02, de 26 de junho de 1997
45. Resolução/CD/FNDE Nº 08, de 20 de março de 2013
46. Resolução/CD/FNDE Nº 30, de 05 de julho de 2013
47. Resolução/CD/FNDE Nº39, de 10 de outubro de 2013
48. Resolução/CD/FNDE Nº 50, de 11 dezembro de 2013
49. Resolução/CD/FNDE Nº 66, de 25 de novembro de 2011
50. Resolução/CD/FNDE Nº 16, de 13 de abril de 2011
51. Resolução/CD/FNDE Nº 23, de 28 de junho de 2012
52. Resolução/CD/FNDE Nº 03, de 16 de março de 2012
53. Resolução/CD/FNDE Nº 04, de 16 de março de 2012
54. Resolução/CD/FNDE Nº 55, de 13 de dezembro de 2013
55. Resolução/CD/FNDE Nº 61, de 11 de novembro de 2011
56. Resolução/CD/FNDE Nº 62, de 11 de novembro de 2011
57. Referenciais Curriculares nacionais da educacao profissional de nivel técnico
58. Portaria Interministerial nº. 1.087, de 20 de novembro de 2009
59. Sistema Nacional de Certificação Profissional: proposta governamental

All texts were retrieved from:

http://portal.mec.gov.br/setec-secretaria-de-educacao-profissional-e-tecnologica/legislacao

Except for:

Text number 57, retrieved from:

http://portal.mec.gov.br/setec/arquivos/pdf1/introduc.pdf

Text number 58, retrieved from:

http://www.in.gov.br/materia/-/asset_publisher/Kujrw0TZC2Mb/content/id/51057186/do1-

2018-11-21-portaria-interministerial-n-17-de-19-de-novembro-de-2018-51057118

Text number 59, retrieved from:

http://portal.mec.gov.br/setec/arquivos/pdf/certifica_proposta.pdf

Appendix 3: Interview guide

Interview guide to semi-structured interviews

Area 1- NQF features

How would you relate your institutions' practices with the national professional education policy?

Area 2 - Institution structure

Could you describe your job position and attributions?

How would you describe your work routines?

Area 3 - Core ideas influencing the adopted methodology

Which methodologies are adopted by the institution?

Can you cite the referential used for the methodology's formulation?

Are there any institutional partnerships? How do they work?

Area 4 - Personal references adopted in their practices

How do you plan your practices?

Do you adopt any other references besides the institutions?

Area 5 - LO assessment and monitoring

Can you describe the steps used to assess and monitor students?

Do you consider the described strategy efficient? Are there any difficulties?

Area 6 - Program reforms

Who plans the programmes?

How are they evaluated and updated?

Area 7 – Program's impact on students' employment and incomes

In your opinion, in what extent do the programmes impact on students' employability and income improvement?

Area 8 - Relation between their practices in classrooms or management and the institution's guidance

In what extent are your practices influenced by the institution's methodologies and guidelines?