

# Vocational higher education and training in Brazil and quality control

## Cursos seqüenciais no Brasil e o controle de qualidade

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### Resumo

Este estudo tem como foco de pesquisa os cursos seqüenciais introduzidos no Brasil em 1999. Propõe-se discutir a educação vocacional no Brasil em relação às universidades brasileiras e órgãos representativos de classe e o controle de qualidade. A metodologia desenvolvida enfocou o desenvolvimento das estruturas destes cursos. Para essa discussão serão considerados alguns fatores, tais como: (i) a falta de ligação entre o Ministério da Educação e o Ministério do Trabalho; (ii) diferentes pontos de vista dos órgãos representativos de classe; e (iii) as controvérsias sobre o papel das universidades na oferta de cursos seqüenciais.

**Palavras-chave:** Educação vocacional. Cursos seqüenciais. Força-de-trabalho.

### Abstract

*The focus of this research is on sequential courses. The aim of this study is to show the development of sequential courses. The methodology is presented through the theoretical background. There are several important points to consider in relation to how the different parties, for instance, (i) the lack of links between the Ministry of Education and the Ministry of Labour; (ii) the different points of view of trade unions; and (iii) the controversy among universities concerning whether it is or not their role to offer sequential courses in addition to regular undergraduate degrees.*

**key words:** Vocational Education. Sequential course. Workforce.

## 1 Introduction

The focus of this part is to review the literature on vocational education and training, the so-called sequential courses, a form of higher education qualification recently introduced in Brazil. Due to their recent approval by the Ministry of Education, these courses are still in their infancy and there have not been studies to determine if the specific skills these courses claim to develop meet job market demands, which is one of the main objectives according to the Ministry of Education (BRASIL, 2000). For this reason, the idea of implementing such courses is subject to debate. Both the assessment of their effect and acceptance by higher education institutions and unions permeate this study, which aims to investigate to what extent sequential courses meet students' expectations in relation to the development of the specific skills required by the labour market, in the context of social, economic, political and cultural transformations (PARANÁ, 1996) in the University under study, in Paraná State, South of Brazil.

The Brazilian legislation establishes that sequential courses can only be offered by higher education institutions (BRASIL, 2000). According to the World Bank (2000) the higher education system consists of three basic elements: (i) the individual higher education institutions (public and private, whether profit or non-

profit; academic and vocational; undergraduate and graduate; on-site and distance-based, etc.) including their faculties, students, physical resources, missions, and strategic plans; (ii) the organizations that are directly involved with financing, managing, or operating higher education institutions, compromising a range of both public and private bodies; and (iii) the formal and informal rules that guide institutional and individual behaviour and interactions among the various sectors. Therefore, the decision of offering or not sequential courses, as well as their implementation and development, are subject to these three elements.

This section is divided into five parts. They are: (i) presentation of an overview of the evolution of vocational education in Brazil; (ii) description of the development of sequential courses and their structure considering why, when and where sequential courses were created in Brazil, how many there are and what their purposes are; (iii) description of the current situation of the sequential courses in the Brazilian Higher Education Institutions; (iv) the representative institutions and sequential courses considering market demands and proposal of the unions and councils on workforce; and (v) presentation of an overview of vocational education in three European countries as well as in Brazil. It is important to mention these aspects in order to have a clear idea of where the research is heading to and what

the present situation of higher education in Brazil is and whether sequential courses meet students' expectations in their working areas.

## 2 Vocational Education In Brazil

In the early 1940's there was a great industrial growth in Brazil as well as changes in the production system. Fordism, also known as mass production system, which is characterized by workers producing similar products in large scale, was the main system in Brazil at that time. The links between education and production systems become clear once in a globalised context workers have to be better prepared to meet the demands and quality standards of the market.

In the 40's, private initiative, which consisted of owners of industries and commerce, created SENAI (Serviço Nacional de Aprendizagem Industrial) in 1942 and SENAC (Serviço Nacional do Comércio) in 1946, which were special schools to train workers for industry and commerce, in order to meet the demands for qualified workers. Also, already existing secondary schools became Federal Technical Schools in 1942 (SAVIANI, 1999a; KUENZER, 1997). With these changes, the educational system consolidated and produced two distinct kinds of workers resulting from the technical and social division of work; these were (i) intellectual workers, who had studied the humanistic curriculum and therefore would eventually be in charge of the political, social and economic development of the country and (ii) instrumental workers, who had studied particular curricula depending on the work field they were supposed to perform, thus learning only the skills needed in that field.

External financial aid was directed towards the preparation of specialists and those who were expected to lead the process of changing educational structures. Courses and scholarships were provided for the training of personnel in the various technical aspects of educational management.

In 1971, an educational reform, LDB 5.692/71, determined that all students at secondary level, after the age of 14 years, should be qualified for work. Thus, they were required to choose a vocation when starting their secondary studies. All courses acquired technical characteristics whose objectives were to conform to the needs of the local labour market. This proposal was articulated with the political and economic model of Dictatorship as it aimed (SAMPAIO, 2000) to: (i) diminish the number of students at higher levels in order to weaken the students' organization of the late 60's; (ii) keep secondary students away from politics through a technical curriculum, and (iii) prepare the workforce to meet the specific demands of the productive process of the time, which meant preparing workers to work in big and middle sized companies and produce in large scale. According to Wallenborn (2001) education was understood as a group of pedagogic actions that took the student to a wide framework of knowledge. On the other hand, vocational education is understood as qualification/re-qualification of young and adult workers and as the continuing educational process, which aims

at overcoming the idea that it is mainly "training" (MANFREDI, 2002).

Such knowledge could be followed by learning either at university or on the job. Therefore, students did not necessarily need to go to higher education; this suited the government at the time because of the lack of vacancies at that level and the financial difficulties to expand them (BARBA, 1998; KUENZER, 1997).

The dictatorship ended at the end of the 1980's and there were minor changes in the Brazilian educational system as Brazil faced economic stagnation. This decade was known as "the lost decade" as this stagnation affected all sectors of the Brazilian economy and education was not a priority. Concerns with the qualification of the labour force were high due to international pressures caused by the beginning of globalization, which required internationally standardized products that enabled the country to fight for competitiveness abroad. Finally, in 1996 a special law known as LDB 9.394 (Lei de Diretrizes e Bases da Educação Nacional) was passed, leading for the first time to innovations in higher education in Brazil (SAVIANI, 1999b; BRASIL, 1996). One of the most important innovations was the creation of vocational education in higher education institutions, the so-called sequential courses.

Sequential courses came as a consequence of the consolidation of industrial capitalism in 1990's, which had been characterized by the expansion of the metal-mechanic and electro-electronic industries, business sectors, technological innovations, automation, and finally, reengineering. Several adverse factors, however, as the weak dynamism of the world economy, financial crises, politics of high interests, and exchange rate, affected the revenue and employment rates in the industries reducing them respectively in 8,6% and 4,9%, in the period 1997/1998, with restrictive measures of production and employment (LOURENÇO, 1999, DEDECA, 1997, ALVES; VIEIRA, 1995, AZEREDO; RAMOS, 1995).

According to Lourenço (1999) vocational education in Brazil can be divided into three phases: (i) the beginning of industrialization and the reorganization of the States in the 1940's; (ii) the expansion of the import model of industrialization in the 1970's; and (iii) the consolidation of industrial capitalism in the 1990's. These phases reflect the close connection between the development of the vocational education system and industrial development in Brazil. The reflection of these phases in education was the beginning of privatization of vocational education where employers qualified their workers with short-term courses, the beginning of the sequential courses in the middle school and finally the implementation of sequential courses in universities.

## 3 The Development of Sequential Courses

Sequential courses were created in Brazil to improve vocational education and training at a higher level, as they use practical work experiences and theory to prepare students for the labour market as skilled workers in recognized vocations (CAMPBELL, 1996). These

courses, which fit into UNESCO's (2000) proposal for vocational education originally adopted by them in 1974, provide flexibility and diversity of graduate formation, and the institutionalization of non-permanent courses made it possible to expand spaces and opportunities for local demands and create new didactic-pedagogical experiences.

UNESCO (2000), World Bank (2000) and Lemmer (1999) affirm that most countries expect vocational education to produce economic invigoration and increase international competitiveness and better-educated and skilled workforce. They also specify that vocational education should aim at meeting the nation's need for a highly qualified workforce and citizens' demands for education at higher level.

In 1995 the World Bank (2000) had already emphasized that changes in the labour market could bring economic reform, and that the integration of the world economy, technological changes, and technology migration would have important consequences for education. International trade and workforce have not only contributed to growth but also led to changes in the employment structures in developing countries. Work tasks have become more abstract and more distant from the actual physical processes of production, requiring less and less human involvement. The changing world of work presents a number of challenges that need to be faced: stronger competition from local and overseas markets, reduction in the number of employees, increasing focus on quality standards, introduction of new technologies, restructuring of industrial production systems, and a greater focus on skills development (MAWER, 1999). Sequential courses emerged from the need for better-qualified workers that growth and development imposed on society.

Both undergraduate courses and sequential courses are taken after secondary level education. They are distinguished from each other in the sense that the undergraduate courses require longer, academic study and in-depth knowledge of a professional field as they prepare students to perform in varied social, political and economic functions, while the sequential courses provide qualifications in specific job skills, with shorter duration and with a more specific pedagogical plan (BRASIL, 1999). They do not confer titles such as BA or BSc, which are obtained as an outcome of traditional undergraduate degrees. Rather, the students are given a certificate or a diploma in specific job skills.

Two-year sequential courses began in Brazil in 1999 in order to improve vocational qualifications and to meet the needs of the high proportion of young adults (over 16 years) and older adults who want to acquire vocational and specific job skills. There has been an increasing interest in sequential courses (BRASIL, 2002a), as indicated by recent statistics, which have shown that the number of sequential courses offered nationally is increasing steadily, as it increased from 178 in 2000 to 612 in 2002. Student numbers were 2,850 in state or federal universities and 10,580 students in private universities in 2002 (BRASIL, 2002b). The number of

students enrolled in sequential courses in 1999 was 863, whereas in 2002 it was 24,116, corresponding to 357 per cent growth.

However, the expansion of sequential courses in state or federal universities has faced some resistance from the academic community. Only 29 per cent of the sequential courses are in public universities due to their resistance towards these courses. Most of the resistance comes from teachers' associations, which were against the proposal to create 90 sequential courses in São Paulo state universities. Their arguments were based on the belief that universities needed undergraduate degree courses and teaching of good quality (GÓIS, 2002; SCHWARTZMAN, 2002; ZERBINATTI, 2000). On the other hand, there is a strong competitive educational market, which offers courses of acceptable quality in private universities, and the area of sequential courses is evidently a niche that begins to be widely explored (DOMENICH, 2000; MARBACK NETO, 2002; VADAS 2002). The State of São Paulo, for instance, has had an explosion of implementation of sequential courses.

The vocational education in sequential courses involves general education, the study of technologies and related sciences, as well as the acquisition of practical skills, attitudes, understanding and knowledge related to occupations in various sectors of economic and social life. According to Wright et al. (2001), the World Bank (2000) and UNESCO (1996), there are four major purposes behind the implementation of vocational education: (i) an increase in the number of secondary school students who are trying to acquire undergraduate degrees; (ii) the limited number of places available in traditional higher education courses, which have been unable to meet the demand generated by the increasing number of secondary education leavers; (iii) many countries are changing their higher educational systems into more diversified systems, and Brazil is following suit; (iv) since the early 1990s high rates of unemployment, particularly amongst young people, have contributed to the development of vocational education, since it represents a way to enter the labour market quickly through short training in specific skills. Sequential courses are therefore an alternative higher-level education for students who do not wish to or do not need to have a full undergraduate course.

#### 4 Structure of the Sequential Courses in Brazil

The sequential courses were created by LDB (Lei de Diretrizes e Bases da Educação Nacional) nº 9.394, in 1996, following the concept of diversity that should permeate the higher education system. In these courses students who have completed secondary school can extend their education through vocational qualifications (BRASIL, 1996). The sequential courses were created in order to improve vocational qualifications that would increase the proportion of young adults (over 16 years old) and adults who want to acquire academic and specific job skills.



A sequential course receives different names according to specific fields of knowledge within the area it focuses on, for example, "Sequential Course on Management of Human Relations for Small Businesses" or "Sequential Course on Electronic Text Editing" and so on (BRASIL, 2001). It does not confer titles, such as BA or BSc, which are obtained as an outcome of traditional undergraduate degrees. Rather the students gain a certificate or a diploma in specific job skills.

Different kinds of skills are often offered in Sequential Courses such as sales techniques, selection of candidates for jobs, organizing files, preparing the organization of events, etc, which are academic skills common to a particular occupation. Specific job skills relate to the process applied to work where there is the opportunity to learn from direct experience, where the students and facilitator share the responsibility for learning. Rehm (1994) expresses the view that if vocational education is to become an emancipating form of formal education, it must have a critical way of thinking about working life and teach empowering work practices among students.

In Brazil, there are two types of vocational education within sequential courses: (i) the sequential course for complementary studies intended for individual students or groups, leading to a certificate and (ii) the sequential course for occupational studies intended only for groups, leading to a diploma (BRASIL, 2000, GUSMÃO, 1999). These types of sequential courses will be explained in the diagram below.

## **5 Sequential Courses for Complementary Studies**

Complementary studies is a form of sequential course that can be offered by any higher education institution to individual students or groups who are already taking an undergraduate course and that wish to complement their main studies or add more qualifications in formal skills and specific job skills. To gain a certificate the students do not need to go through any kind of selection process and are required to study at least six subjects in the sequential courses.

In order to create complementary studies as a sequential course, the higher educational institution must have an officially recognised undergraduate degree to which the sequential courses are linked. It is also necessary to have enough number of places in the undergraduate degree related to the intended certificate so that the students take up vacancies on pre-existing courses. Thus, the sequential course makes use of an infrastructure that is already available in the university.

However, if the student is not taking an undergraduate degree but needs vocational education the other option is to take a sequential course for occupational studies, which is described next.

## **6 Sequential Courses for Occupational Studies**

Sequential courses for occupation studies were created for students that do not have any qualifications at higher education level and need vocational education and

training for specific job skills. According to Mallet et al. (1997), occupations are a category of employment with related characteristics in terms of the contents of the work performed, usually with reference to the degree of complexity of tasks, the specialized field involved and, less frequently, relating to the sector of activity or the worker's status.

The proposal of a sequential course for occupational studies is always directed to groups and subject to recognition and authorisation procedures by the higher education institution itself and approval by the Ministry of Education (BRASIL, 2002a, 2002b). Higher education institutions that already have autonomy, such as universities, are exempt from such recognition and permission procedures. A higher education institution wishing to offer these sequential courses must already have on offer recognized undergraduate courses somehow related to the area of knowledge of the sequential course intended for implementation, such as Business Administration, Computer Sciences, Tourism, etc. Teaching hours should be not less than 1,600 hours and must be completed in not less than 400 days.

In the case of the independent colleges wishing to submit a proposal for a sequential course for occupational study to the Ministry of Education (BRASIL, 2002b), apart from having an undergraduate degree course to which the sequential course will be related, they must observe important requirements such as having a pedagogical plan providing details about the occupational profile of the students, facilities, such as the number of classrooms available, description of the laboratories to be used by the course and library resources, assessment programme by semester or full year, number of places, whether full-time or part-time, number of students allowed in each class, and teaching resources regarding level of qualification, number of staff, and occupational experiences both in teaching and other areas. These requirements, which are already part of the structure of the Universities, will determine the feasibility of the implementation of a sequential course in independent colleges.

The next section will provide information about the current offer of sequential courses in Brazil.

## **7 Sequential Courses in Brazilian Higher Education Institutions**

This section brings considerations on the offer of sequential courses in Brazil and their current situation in higher education institutions.

## **8 The Current Situation of the Sequential Courses in Brazilian Higher Education Institutions**

Considering the previous discussion, it can be said that the universities have been led to reassess their role in vocational education. Two alternatives can be outlined here: (i) the concentrated model, which tries to bring the country up to international standards by revitalising science and technology in certain sectors of society and exclude large social areas; and (ii) the inclusion model,

which says that development must be equally centred on the principle of citizenship as a universal asset, allowing all citizens to take part in the achievements (BRASIL, 1999).

The diversification of the Brazilian higher education system would constitute a referential landmark for meeting the social demand of vocational education. Diversity is not part of the traditional mentality of public higher educational institutions and, as mentioned before, there has been resistance to that. Even where there is acceptance, decision making will depend on the demand for and supply of skilled workers, as put forward by Campbell (1996) and Claassen (1999).

Just to have an idea of how Brazilian universities have been dealing with the issues related to sequential courses, it is interesting to have an overview of the three most important kinds of institutions – Federal, State and Private.

As an example of the situation in Federal universities, it is known that the Federal University of Paraná has not implemented sequential courses, although it has studied the possibility of doing so. On the other hand, the Federal University of Pernambuco, the Federal University of Ouro Preto and Rio Grande do Norte approved and implemented well-structured sequential courses in September 1998, February 1999 and July 1999, respectively, in the Management area (BRASIL, 1999).

As for the State Institutions in Paraná, the scenario is similar. The State University of Londrina (ZERBINATI, 2000), for example, discussed sequential courses extensively in 1999, but did not approve them as sequential courses are not part of their vision, mission and aims and they do not feel the need to change their constitution to add this kind of formal education, which would give the university a more diverse approach to higher education courses. The State University of Maringá has been discussing the issues for about three years, but no approval has resulted so far. On the other hand, the State University of Ponta Grossa and UNICENTRO – State University of the Centro Oeste approved and implemented sequential courses in 1999 and 2002, respectively.

Private institutions, on the other hand, are open to the implementation of many sequential courses in any areas, as long as there is demand. Among many examples in Brazil, it is important to mention the cases of University Anhembi Morumbi (State of São Paulo), UNOPAR (State of Paraná) and UNIVALI – University of Vale do Ivaí (State of Santa Catarina), that are the three biggest institutions in number of sequential courses offered.

## 9 The Offer of Sequential Courses

The offer of sequential courses by higher education institutions depends on their mission, vision and aims. When they opt to have sequential courses as one more choice for their students, their mission reflects their wish to change the profile of the future employees they will have performing in the labour market. This option belongs exclusively to the institutions according to Brazilian

legislation. Some universities have chosen not to implement sequential courses until now, while others have been offering approximately 60 sequential courses. Although there is a diverse understanding in relation to implementing or not sequential courses by universities, there is a strong need for training of the workforce.

Higher education is understood as all forms of education developed after the secondary education (SAMPAIO, 2000). In Brazil, it is structured around state and private universities, comprising 1.320 higher education institutions (BRASIL, 2002a, 2002b). It can be accomplished through three main types of courses: undergraduate, technological and sequential courses. Currently, higher educational institutions offer 22.828 undergraduate courses (GOIS, 2002), which require longer academic skills and deep formal knowledge of a professional field. Technological courses provide students with knowledge in technological areas, for instance, computer sciences. Sequential courses provide qualifications in specific job skills.

Only higher education institutions can implement sequential courses, as they are the only legal institutions in Brazil allowed to offer them. Both private and state or federal higher education institutions offer sequential courses. Therefore, the universities took over the responsibility to create sequential courses and thus carry out vocational education. Due to an increasing expansion in demand for higher education, a significant number of private education institutions have been built, which caused a cultural gap between the two types of institutions: state and private (SAMPAIO, 2000).

The diversification of the Brazilian higher education system would constitute a referential landmark for meeting the social demand of vocational education. Diversity is not part of the traditional mentality of state educational institutions and there is some resistance to changes. Private institutions seem to accept changes in their systems more easily and, even when there is acceptance of changes, decision making will depend on the demand for and supply of skilled workers for the labour market, as put forward by Campbell (1996) and Claassen (1999).

As stated in the description of the development of sequential courses in Brazil, both private and state higher education institutions can offer sequential courses and thus carry out vocational education. The government-funded state universities can be either at federal or state level. Private colleges and universities are kept and administered with private funds. Due to an increasing expansion of the demand for higher education, private education institutions have mushroomed and created a gap between the two types of institutions. Although the exact scale of the private sector expansion is difficult to determine, the numbers reveal dramatic increase in Latin America. Nearly 60 per cent of Brazil's tertiary-level students are currently enrolled in private institutions, which comprise nearly 80 per cent of the country's higher education system (WORLD BANK, 2000).

Having these facts in mind, it is necessary to think of ways in which public universities could redefine their

role as they go through development changes and review their mission and objectives when adopting a model that relates to sequential courses. These institutions should wish to bring the country up to international standards by revitalizing science and technology in certain sectors of society and forcibly accepting the role of incorporating excluded layers of society. They should also aim at equal development throughout, which is centred on the principle that human beings are universal assets (BRASIL, 1999).

Higher education institutions are autonomous to make decisions regarding their governance. This includes external governance, which refers to relations between individual institutions and their supervisors, and internal governance, which refers to authority hierarchy within institutions. The private and the state-funded sectors, however, differ in their approaches to sequential courses. Depending on the institutions' interest to offer sequential courses, these will be more or less in accordance with what students expect.

Traditionally, state higher education institutions provide better quality education. Because of the history of education in Brazil, where universities are relatively young, it is the state sector that has become the reference of quality for the whole of the national system, as well as at regional level. The privately funded universities were, in general, created very recently, and therefore do not constitute a homogeneous body which can serve as a reference for the national system (BRASIL, 1999).

One important issue yet to be solved is the gap between certification and recognition of sequential courses (SILVA, 2000). While regular undergraduate courses enjoy institutional recognition and full acceptance by the labour market, the sequential course has not reached such level at all. The Brazilian legislation is not clear about the legal status of the sequential courses and Brazilian students in general are unaware of their implications. Students risk going through a course under those conditions and find out at the end that the diploma does not have the same value as one from an undergraduate course. The only organ that recognizes sequential courses in Brazil is the Ministry of Education, while undergraduate courses gain recognition from unions, regional council, federations and confederations. Although students receive a diploma at the end of the sequential courses, they are considered illegal for the representative institutions and the labour market. This situation is the consequence, once again, of the infancy of sequential courses.

The expansion of sequential courses in public universities, where there are 29% of the sequential courses, has faced resistance from the academic community. Most of that resistance comes from teachers' associations, which were against the proposal of creation of 90 sequential courses in São Paulo state universities. Their arguments rest on the belief that universities need undergraduate degree courses and teaching of good quality (GÓIS, 2002; SCHWARTZMAN, 2002), which, for the universities, would mean a four to five year curriculum and studying areas of

knowledge. On the other hand, there is a strong competitive educational market, which is offering courses of acceptable quality in the private universities, and the segment of sequential courses is, evidently, a niche that begins to be explored by Brazilian authors such as Domenich (2000), Marback Neto (2002) and Vadas (2002).

## 10 Professional Representative Institutions and Sequential Courses

This section presents a brief description of the relationship between sequential courses and representative institutions (Unions, Regional Councils, Federations, Confederations and others). They are the only institutions that work as mediators and regulators of the relationship between employees and employers, mainly concerning issues about working conditions and salaries.

### 10.1 Market demands and proposals of the unions on workforce

The importance of workers' qualification has been significant since the beginning of the century. In the 1940's workers from the State of São Paulo started a campaign for the recognition of the Brazilian metal workers and for more investments in their qualifications (FORÇA SINDICAL, 1993; CUT, 1995). This was the beginning of the strongest Union in Brazil.

The industrial model, predominant in the following four decades, was followed by the unions' initiative for the improvement of the qualification considered essential to the workforce required by the Fordism Model (DIEESE, 1996).

Presently, the issue of qualification has been a frequent topic in the unions' agendas since the need for the worker's better understanding of the changes that constantly take place in the automation and technological process is very important. A new professional profile has been defined in the labour market.

DIEESE (Departamento Intersindical de Estatística e Estudos Sócio-Econômicos) has been promoting debate programs for unions on the implementation process of the productive and technological structure in the country, taking into consideration that the new forms of production demand a different type of qualification for the worker. In this context, one would naturally expect that such representative institutions discussed the implementation of sequential courses to qualify their workers, but this has not been happening, as described in the next section.

### 10.2 The Unions' point of view about Sequential Courses

Although DIEESE suggests a discussion about the improvement of the education in Brazil, Unions, Regional Councils, Federations, Confederations and others seem to agree with some institutions when they do not approve sequential courses as part of their formal knowledge, or when they do not see a sequential course student as a professional. At the same time that this is their view, no proactive suggestion is made to either replace sequential



courses with something else or to implement what already exists in terms of educational institutions. Unions seem to have a negative critical point of view about the sequential course but do not make any proposal.

Not having the recognition of the unions leads to a lot of insecurity for the institutions, for they may be offering courses which might not be recognized in the future. Although the recognition of the sequential courses is a legal issue in Brazil, if unions do not see sequential courses as legal, the future workers coming out of these courses will not have the support that unions normally give to workers that have this recognition. Up to now, only the Federal Council of Management has accepted the implementation of sequential courses (BRASIL, 1999). Many others are against them (SILVA, 1999), for example, the National Federation of Journalists, which did not approve sequential courses and requested MEC to limit the implementation of sequential courses in their area; in case some institutions offered these courses, SESu guaranteed that they would not be legally recognized. Another example is the Federal Council of Social Service, which is prepared to face legal battle in case any institution intends to qualify students for activities and functions which are part of social services undergraduate degree courses, as they feel that two years and specific knowledge are not good enough conditions to prepare a professional in this area accordingly. Also, the Federal Council of Veterinary Medicine, which considers these courses harmful to the Brazilian people, as sequential courses can produce fake professionals that lack competence to work on any specific activities; and the Federal Council of Engineering, Architecture and Agronomy, which does not see sequential courses as an undergraduate degree course, therefore not preparing students for lifelong studies. They believe sequential courses refer to specific skills and not areas of knowledge. A final example is the Federal Council of Pharmacy, which did not approve sequential courses either. It is interesting to notice that the health area has been the strongest in terms of rejecting any kind of sequential courses.

Unions and Councils have reasons for and against the regulations of professions in general because of the implications that the professionals' rights and responsibilities have on their performance. The arguments in favour of job regulations are: (i) better quality of services; (ii) set up of training ethics; (iii) set up of technical rules; and (iv) labour description. On the other hand, when it comes to sequential courses, some of the arguments against job regulations are: (i) the diploma from sequential courses does not guarantee quality; (ii) technical rules and ethical code could be established without the regulations of the labour market; and (iii) the possible existence of corporativism. These factors should also influence students when they reflect on whether sequential courses meet their expectations or not since, once they are enrolled, they are also involved in these issues. Kock and Reuling (1998) show that some criteria need to be followed in order to achieve a high standard qualified

professional in vocational education and training.

## 11 Quality Control of the Brazilian Vocational Education Based on International Experience

Having in mind that changes in higher education geared towards the qualification of the workforce in Brazil are influenced by the experiences of developed countries, this section will introduce some of those experiences taking into account the autonomy higher-level institutions have to implement sequential courses. It will be interesting to show and consider how the quality control of such implementation is done in other countries.

Among the many nations in the so-called First World, Germany is the best example of apprenticeships under the dual system, which has made them important to a far larger section of the economy than companies. The majority of apprentices are in the trade and industry sectors, which are linked with sectors related to skilled trades, liberal professions, civil service, agriculture, home management, and shipping (THIELE, 1994; WOLF-DIETRICH, 1994). In France, there are the ideal standards oriented towards requirements of modern large companies, and in the United Kingdom, in the British system of National Vocational Qualifications (NVQs), the qualification defines the whole set of skills belonging to a job structured on levels, Standards for assessment / examination oriented towards good practice of a sector (DAKERS, 1996; MITCHELL, 1995; MERLE, 1977; RAGGATT; WILLIAMS, 1999; QURESHI; 2001). There is a concern with training millions of people, guaranteeing continuous education and constant updating of their respective workforces, promoting productivity and competitiveness of their economical activities (MAURICE, 1993; WRIGHT; CAMPBELL, 2001).

Considering that the concept of sequential courses in Brazil is recent if compared with other countries' vocational education and training experiences, it is interesting to have an overview of what these countries have been doing in the public quality control of vocational education. After getting to know how the public quality control is carried out in Germany, France and the United Kingdom, the identification of the institutional framework of quality control constituting the Brazilian education model will be done, which has been influenced by the experience of the countries verified. Only by conducting such identification will it be possible to place sequential courses into perspective in relation to the quality control that is required in Brazil.

Considering that each country has different social, cultural, economic and political aspects, an overview of such comparisons will be presented following the eight criteria, which focus on institutional aspects, established by Kock and Reuling (1998) as a reference point for this study. They are: (i) guiding principles behind training; (ii) training standards; (iii) regulations of training certificates; (iv) organization; (v) proportion of general subjects; (vi) length and regulation of in-company training; (vii) examination; and (viii) quality control.

### **11.1 Guiding principle behind training**

When analyzing vocational education in older countries such as Germany, France and the United Kingdom, it is possible to observe that the guiding principles behind training are basically related to the development of abilities, i.e., competences and technical preparation for occupational activities, or specific work functions, i.e., competencies to carry out specific work functions (COLLINS, 1993; WOSSNER, 1999; MINDEROP; PRÖHL, 1999, 2000). These seems to be the same guiding principles underlying the implementation of sequential courses in Brazil, although Brazilian institutions seem not to worry so much about the relationship between the skills developed and the labour market.

### **11.2 Training standards**

In Germany, France and the United Kingdom, training standards are oriented towards meeting the requirements of common company practices or good practices of a particular sector. Brazilian sequential courses, on the other hand, have intensively focused on the practices of sectors related to the management area because these are the only sequential courses legally accepted by the unions.

### **11.3 Regulations of training certificates**

In European countries the firms are directly involved in the training process because certificates are obtained on the basis of combined on-the-job and off-the-job training largely financed by the firms themselves, preparation by employer-dominated national training organizations, and accreditation by State institutions (RAGGATT; WILLIAMS, 1999). In Brazil the students receive a diploma or a certificate. The vocational educational systems of the analyzed countries award either a certificate or a diploma but do not include the possibility of offering both for vocational education and training. Sequential Courses in Brazil have been influenced by some of the components of the other countries' systems. There is a fundamental difference, though. Vocational courses in other countries offer formal qualifications in their own right for specific job skills in which they have been assessed and which are widely recognized (WINCH, 2000). As it has been mentioned before, unions and councils do not respect the diplomas and certificates offered by sequential courses. However, certification should enable employers to identify appropriate and qualified workers.

### **11.4 Organization of the vocational education**

In European countries there is no regulation concerning organization, although there are strong links between companies and vocational schools. In Brazil there is neither regulation of the organization of the institutional framework nor links between companies and vocational schools. That means that the majority of the institutions do not recognize sequential courses as an instance of higher education.

### **11.5 Proportion of general subjects**

The Brazilian sequential courses are closer to the German model as presented by Thiele (1994) and Wolf-Dietrich (1994), as general subjects represent nearly one third of the whole 2-year instruction. According to Green, Wolf and Eney (2000), Germany is the best example of apprenticeship, which has made them important to a far larger section of the economy. In my mind, considering the Brazilian reality, this proportion is too high, as students are made to spend too many hours studying subjects that are not directly related to the aimed skills to be developed (QURESHI, 2001; PRETORIUS, 1999). On the other hand, some general subjects are very important for the development of specific occupational activities and should be offered in their sequential courses. These issues still need to be discussed and analyzed carefully.

### **11.6 Length and regulation of in-company training**

In Europe, in-company training is an essential part of the vocational education (STABL, 1998). In Brazil, however, there is no in-training company as part of the normal curricula of the sequential courses. During the period when students are taking sequential courses in Brazil, all their lessons are inside the classroom as there are no National Curriculum Guidelines for sequential courses as to how long it should be spent in the classrooms and in training. On the other hand, the students taking sequential courses in Brazil usually work in the area and have the opportunity to apply new knowledge in their jobs. Therefore, there is no regulation concerning length and place of in-company training.

### **11.7 Evaluation process of the vocational education**

Unlike some European countries, in Brazil the Ministry of Education mainly carries out the evaluation process of sequential courses. However, the assessment is done in the same way for sequential and undergraduate degree courses, considering neither links between the labour market and development of specific job skills nor the different nature of the sequential courses.

### **11.8 Quality control of the vocational education**

In Germany and France the control of the quality has been handed over to professional bodies and school supervision. In the United Kingdom there is internal and external control of quality management and State inspection of colleges. In the case of sequential courses in Brazil, there has been no concern yet with the control of their quality, possibly due to their short existence in the higher educational system. Besides, the number of existing sequential courses is very small compared to other higher education courses and there has not been a significant impact on the productive system caused by the sequential courses. Therefore, there is no institution in charge of such control.

The present study is justified as it aims at investigating the current situation of students' expectations in relation



to sequential courses in Brazil. Before carrying out such investigation, it is essential to understand the changes that took place in the labour market and the effects they had on skills demand.

## 12 Concluding Remarks

In many parts of the world sequential courses have proven to be of great value to students and employers. The great majority has the support of governments that recognize these courses as part of individual's higher education. In developed countries students get the opportunity to experience on-the-job training during most of the course length, which means that it has positive results for the production system.

The Brazilian universities that offer sequential courses need to look at these countries' experiences closely because until now they have just considered very superficial ideas in their implementation. The links between the several bodies involved are very strong in the countries analysed, whereas in Brazil these links are practically non-existent. The divorce between the Ministry of Education and the Ministry of Employment, for instance, makes it even more difficult to establish those connections. Some unions have regarded the students from vocational education and training as illegal workers in the job market. The employers do not know about sequential courses and have some difficulties in training their workforce, thus affecting the quality of their production and reducing competitiveness. As we have been frequently told, a globalised world requires better quality products.

The sequential courses in Brazil can improve the skills of workers, leading to a direct impact on economic growth, or at the very least, to major contributors to economic performance. Formal schooling is often the factor, which determines a country's human capital, but on-the-job training may be at least the one to determine productivity and should not be taken for granted. Most lines of businesses require specific skills, which cannot be provided by general-purpose education. Similarly, new technologies require continuous learning, best accomplished by workplace training. It is therefore not surprising that policy makers are often interested in issues of worker training. For example, training of less skilled workers was a major policy initiated at the first Clinton administration, and the current Labour government in Britain has similarly made training and skills a key policy issue. Company training is also directly or indirectly subsidized in many countries.

Brazilian current federal administration is looking at other countries' administration and is trying to diversify the Brazilian Higher educational system with sequential courses in order to prepare students for the labour market. Maybe in a not very far away future, our Government will give priority to this kind of education.

Although federal administration has been offering sequential courses as a form of diversification of the higher education, in all of the accomplished readings at

universities it was found that the unions, the employers and the students know very a little about this new high education system. The articles written about sequential courses allow us to verify that for the higher education institutions this is a way to increase their income and also their number of students. The sequential courses have been offered in the areas of management and design. As for the students, these see the possibility to obtain a university diploma paying a lower monthly fee when compared with the undergraduate courses. The unions have been investigating if the qualified workers from sequential courses will not be exercising their activities irregularly. The employers have not come forward in this matter, because they know little about sequential courses. In Brazil there is still the culture in which workers teach their activities to their colleagues in the company.

Many steps have to be given yet to the consolidation of sequential courses in Brazil. And many adjustments need to be made in order to have them implemented following their aim and purposes. It would not be wise to have sequential courses implemented just for their own sake. After reading some material about them and going through literature on the Brazilian economy relation with education, it becomes clear that there needs to be serious involvement between government and institutions if both want to go forward in the pursuit of this new form of education.

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