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**LANGUAGE INSTRUCTION IN
VOCATIONAL EDUCATION
SWITZERLAND AND SINGAPORE
COMPARED**



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CHAPTER 1 — THE LIVE PROJECT IN THE CONTEXT OF THE SIX-NATION EDUCATION RESEARCH PROJECT¹

CHAPTER SUMMARY

This introductory chapter briefly reviews the origins of the LIVE (Language Instruction in Vocational Education) project, its international background and its relevance to Swiss education policy.

1.1. GENERAL BACKGROUND

The SNERP is a broad project whose federating theme is the link between education and economic performance as reflected in macroeconomic indicators such as employment and growth.

On the initiative of the Graduate School of Education (GSE) of the University of Philadelphia, a week-long conference placed under the generic theme “Education and Economic Growth” took place in the USA in December 1993. Six countries were represented: China, Germany, Japan, Singapore, Switzerland and the USA.

After an exploratory conference in Philadelphia in May/June 1995, the then called “Six-Country Education Project” took off. A “Steering Committee” was created with the aim of holding the whole project together and coordinating the different projects if need be.

In September 1997, a second Steering Committee meeting took place in Zurich, Switzerland. The project was renamed “Six-Nation Education Research Project” (hereafter SNERP). After this meeting, the research fields for the participating countries were distributed as follows :

- ◆ China Educational Evaluation, Outcomes and Economic Indicators
- ◆ Germany Generic Skills for Economic Growth
- ◆ Japan Higher Education
- ◆ Singapore Language Education and Literacy (LEL)
- ◆ Switzerland Vocational Training and Education (VTE)
- ◆ USA Mathematics and Science Education

Switzerland's primary involvement in the SNERP is through the VTE project (Vocational Training and Education, hereafter VTE). VTE has a more precise focus and will examine one particular tier of the education system, namely

¹ The authors thank the Federal Office for Vocational Training and Technology for its financial support.

vocational training, particularly as it is organized in Switzerland, i.e., under the so-called “dual system” (*cf.* Section 1.3.).

At the same time, Switzerland has become actively involved in Japan's project on “Higher Education” (see Weber, Harayama & Grin, 2001) and in Singapore's project on “Language and Literacy (LEL) — which was later renamed “Pedagogical Processes in English Language Education” (PPELE). This report is the result of Swiss involvement in the LEL, then PPELE project. It is, however, also anchored in the Swiss VTE project, hence the acronym LIVE, for Language Instruction in Vocational Education.

Generally, the SNERP is characterized by four aspects : (1) a tight cooperation between both the scientific world (university) and policy makers (government representatives) ; (2) each project aims at involving Eastern and Western countries ; (3) each country takes over the coordination of the research project it has proposed itself ; (4) the type of research is defined as applied research as opposed to theoretical research.

By 1997, Switzerland was beginning to recover from the most serious economic downturn it had experienced in the whole period after World War II. The crisis led to an in-depth questioning of the efficiency of the education system, in particular the “dual system” through which about two thirds of young people in Switzerland are educated after completing their obligatory school time, and where training is a matter of both private firms and schools. Under these circumstances, it was obvious that a research placed under a generic theme such as “Education and Economic Growth” could only be of great interest to the Swiss federal administration responsible of vocational training at that time, the Swiss Federal Office for Industry and Labor².

1.2. ABOUT THE VTE PROJECT

Given the interconnections between projects, it is useful to present here some basic information about the VTE project, as distinct from LIVE.

According to the general purpose of the SNERP, the VTE project focuses on the importance of vocational training and education for economic growth. The VTE research group concentrated on two main questions : (1) Vocational training as a way of preparing young people for the workplace, excluding the academic tracks. (2) Links to the economic issues are narrowed down to labor market aspects.

One general leading question in the VTE project is : “what can the participating countries learn from each other” in order :

- ◆ to understand differences and similarities between the systems of VTE in each country
- ◆ to transfer results of analysis as recommendations to each country
- ◆ to develop core elements of a common VTE model, as far as this seems possible and makes sense.

² From 1st January 1998 on : Swiss Federal Office of Vocational Training and Technology. N.B. : The French name of this new federal office is “Office Fédéral de la Formation professionnelle et de la Technologie” (OFFT), in German “Bundesamt für Berufsbildung und Technologie” (BBT). The English translation used above has no official character so far.

However, such a complex relation between the type of VTE and employment must be addressed by a multidimensional set of research questions :

- ◆ How far are there common concerns with regard to economic growth, employment and education, mainly VTE (e.g. availability of jobs for young adults) ?
- ◆ Are there common factors which determine the productivity of firms and, through this channel, of the economy as a whole (e.g. investment in the selection of human resources, years of schooling of employees, use of computer technology, turnover of human resources) and which of these factors are most relevant to VTE ?
- ◆ What kind of VTE is most promising, under which circumstances and conditions ?
- ◆ What would an appropriate model explaining the similarities and differences between VTE systems look like ?

This set of questions is addressed in the VTE project by combining qualitative methods, with mutual visits and case studies in the participating countries, and with quantitative studies using data already available in the different countries. Table 1-1 shows the draft model used as a guide for the qualitative and quantitative analyses. The exact nature of potential interrelations was addressed in the qualitative analyses.

Table 1-1
Working model VTE

VTE ↔ Employment	
History of education	<ul style="list-style-type: none"> • general education • vocational education • role of state, workplace and family
Fundamental values of society	<ul style="list-style-type: none"> • equity • income • social security • welfare • goals of education (socialization, knowledge) • quality of processes and products at the workplace and on the market • professionalism • mobility • satisfaction of workforce
Economic system	<ul style="list-style-type: none"> • state of development • market forces and structures • natural and human resources • incentives to invest in young people • social responsibility of the economic system
Educational system	<ul style="list-style-type: none"> • responsibility of the public sector for education • relation business – schools • responsibility of the economic system for the educational system
Political system	<ul style="list-style-type: none"> • decision making processes • planification • centralization/decentralization • incentives to invest in young people

1.3. ABOUT THE LIVE PROJECT

The LIVE project, also funded by Switzerland's Federal Office of Vocational Training and Technology, has less sweeping objectives than the VTE project. It is linked to the VTE project because it focuses on vocational training, and investigates similar age ranges and institutions in the education system. However, it is also directly connected to the project developed by Singapore as part of SNERP (PPELE).

The LIVE project pursues three main goals :

- ◆ to assess second language (hereafter L2) instruction in vocational training in Switzerland ;
- ◆ to provide the elements of an *external efficiency* evaluation ;
- ◆ to derive the corresponding policy implications for the use of various actors in the system, primarily institutional (government authorities) ; school authorities , teachers) but also users (students, workers, and employers).

In accordance with standard terminology in education economics, “external efficiency” refers to the fact that the prime focus of the study is on inputs and outputs that occur outside the education system proper. In other words, the study does not examine teaching materials, teaching methods, in-class evaluation methods or other aspects of the didactic/pedagogical process. Rather, the emphasis is on the time and money resources invested in L2 instruction under vocational training, and on the effects of the resulting L2 skills on market and non-market outcomes.

Market outcomes include L2 use and profitability on the workplace, as well as competitiveness. Owing to the particular position of Switzerland as a multilingual country, attention must also be paid to non-market outcomes (the importance of which has regularly been stressed by political and education authorities) such as use of L2 skills outside the workplace, effect of L2 skills in inter-group representations, etc. Comparison with Singapore proves particularly interesting at these various levels, since Singapore also is a small, multilingual, and export-oriented country.

The LIVE project focuses on *second* language instruction in vocational training, where language education has been the object of relatively less attention so far. This means that first language instruction is not studied here ; “first language”, in this context, means the official language of the region where training and education take place³. In the overwhelming majority of cases, particularly for Swiss citizens, this coincides with one's native language. Exclusion of first language(s) from the study reflects the fact that

- ◆ the teaching and learning processes as well as the subsequent use of linguistic skills is very different when first as opposed to second language(s) are considered ;

³ In a bilingual location like Biel/Bienne, “first language” means the pupil's first language or (particularly in the case of foreign residents) the language of schooling during the previous years of residence in Switzerland.

- ◆ second language instruction has particular strategic importance, given the generally high marketability of second language skills, Switzerland's multilingual character, and its reliance on foreign trading partners.

“Second language”, in this context, means any non-first language or, almost synonymously, any “foreign” language. In other words, people engaged in vocational training may have more than one “second language”. To most intents and purposes, the languages concerned are French, German, English and Italian, to the extent that these are taught as part of the curriculum in vocational education. However, the possible role of additional languages is occasionally mentioned, particularly if research reveals that skills in such languages (i) is said to be useful in professional life, whether from the standpoint of trainers, trainees or potential employers, or (ii) are actually being used (e.g., in the case of young foreign residents who find out that their language of origin is proving useful).

LIVE aims at assessing the convergence — or discrepancy — between three elements of second language instruction in vocational training : (1) the type and level of foreign and second language skills required by employers ; (2) the foreign and second language skills actually possessed by apprentices and employees having been trained through the vocational education stream ; (3) the foreign and second language skills taught by the system. To our knowledge, these questions had never been addressed before, and had certainly not been in the perspective of education economics or language economics. This confirms the exploratory nature of this research project, whose main aim is to provide a first orientation into this set of issues, and to identify broad trends and relevant questions. One further goal, however, is to use the knowledge gained in the LIVE project to reassess some features of vocational training in Switzerland, and to call stakeholders' attention on the role of language skills in vocational training. This question is among those that need to be addressed in the context of the currently ongoing drafting of a revised Federal Act on Vocational Training⁴.

An exploratory research such as the LIVE project can only aim at identifying the most visible discrepancies between L2 needs and L2 instruction ; it does not claim to offer a thorough evaluation of Swiss vocational training. Detailed and differentiated aspects of L2 instruction and needs will have to be examined in future studies at a larger empirical scale.

1.4. ABOUT THIS REPORT

This consolidated report continues the successive “progress reports” (PR) No. 1 to 5 produced in the course of the LIVE project since 1997. For the most part, the contents remain unchanged. However, a few additional footnotes mention developments that may have occurred since then (particularly in Chapter 2 of this report, which corresponds to the initial PR No. 1). Moreover, some considerations have occasionally been moved to the respective concluding sections of the erstwhile PRs to the “Concluding remarks” of this consolidated Report.

⁴ Loi fédérale sur la formation professionnelle/Bundesberufsbildungsgesetz.

The rest of this report is therefore organized as follows : Chapter 2 presents the key features of multilingualism in Switzerland. Chapter 3 discusses methodological dimensions. Chapter 4 reports and analyzes interview results for Switzerland. Chapter 5 lays the ground-work for a comparison between Switzerland and Singapore. Chapter 6 reports interview results from Singapore — and analyzes them in “outsider” perspective. Chapter 7 contains brief concluding remarks. Various background materials are presented in the Appendix.

CHAPTER 2 — SWISS MULTILINGUALISM : KEY FIGURES AND ISSUES IN LANGUAGE TEACHING POLICY

CHAPTER SUMMARY

This chapter presents background information about multilingualism in Switzerland, how this multilingualism is reflected in the education system, particularly as regards second language instruction, and the most important ways in which second language instruction represents an important issue from the standpoint of the SNERP. Some of the statistical results reported here make use of a recently collected data set designed precisely to evaluate the external efficiency of second-language instruction in Switzerland¹.

2.1. INTRODUCTION

Switzerland's multilingualism is often mentioned as a defining characteristic of the country. Volumes have been written on the subject ; it would be a hopeless task to attempt to summarize them, and equally meaningless to duplicate existing work. Hence, this chapter aims at providing a balanced coverage of the subject while confining itself to the essentials. Its main goal is to describe the backdrop of Swiss language teaching policy. For the interested reader seeking more extensive information, references — which necessarily straddle several disciplines — are provided throughout.

This chapter is organized as follows. In Section 2.2., we present basic demolinguistic and geolinguistic information on Swiss language make up ; Section 2.3. is devoted to a discussion of the key institutions of Switzerland, such as federalism, and how they impact on language education generally. Section 2.4. provides an overview of language education in Switzerland, including indicators of inputs (hours taught and financial resources allocated to second language instruction) and outputs (levels of skills and “valorisation” (to use the convenient French term) — more on this term later — of the latter outside of the education system). In Section 2.5., we will present some issues and problems raised by multilingualism in Switzerland and discuss the conceptual and methodological orientations in which these questions are handled in the LIVE project. Finally, in a sixth and concluding section, the information and conceptual framework developed in Sections 2.2. through 2.5. are used to generate questions in the context of vocational education.

¹ Since the first version of this chapter was published as PR 1 (1997), several studies on the value of language skills in Switzerland have appeared, in particular Grin, 1999b ; Grin, 2001 ; Grin, Rossiaud & Kaya, 2000.

2.2. ESSENTIAL DEMO- AND GEOLINGUISTIC FEATURES

Switzerland is conventionally regarded as having four language communities. Their languages respectively are (in decreasing order of numerical importance) German (63.6% of the population), French (19.2%), Italian (7.6%) and Romanche (0.6%) ; they are recognized as national languages and as official languages — although Romanche only enjoys limited officiality. In addition, fully 8.9% of the resident population declare a non-official language as their main language or mother tongue ; for the most part, these “allophones” (using standard Canadian terminology) are foreign residents. The share of allophones is negligible when only Swiss citizens are considered ; however, a large number of foreign residents speak one of Switzerland's official languages, namely, Italian. In other words, there is no clear correspondence between foreign resident status and speaking a non-national language. The distribution of the population (total population, then citizens and foreign residents taken separately) by language is presented in Table 2-1 ; the reader is referred to Lüdi & Werlen (1996) for an extensive presentation of linguistic data from the 1990 Census.

Table 2-1

Distribution of resident population by first language, percentages, 1990 Census

	ALL	SWISS CITIZENS	FOREIGN RESIDENTS
GERMAN	63.64	73.40	19.56
FRENCH	19.23	20.53	13.33
ITALIAN	7.62	4.07	23.69
ROMANCHE	0.58	0.68	0.09
SPANISH	1.70	0.23	8.32
SLAVIC (a)	1.86	0.19	9.43
PORTUGUESE	1.36	0.09	7.14
TURKISH	0.89	0.01	4.86
ENGLISH	0.88	0.41	3.04
OTHER I.-E.(b)	1.16	0.23	5.38
OTHER	1.06	0.15	5.17

(a) : mostly from former Yugoslavia

(b) : Indo-European languages, including Albanian-speaking Kosovars from former Yugoslavia

The long-run demolinguiistic trends reveal a fairly stable position of German, French and Italian ; as regards the percentage of Romanche-speakers in the resident population, it has always been low, and the apparently modest drop of half a percentage point over this century (from 1.1% in 1910 to 0.6% in 1990) must not hide the fact that these figures represent a precipitous decline. By contrast, the increase in the allophone population is quite striking, particularly since the end of the second world war. These trends are reported in Table 2-2.

Table 2-2

Evolution of language groups in Switzerland, percentages of total population

Year	German	French	Italian	Romanche	Other
1910	69.1	21.1	8.1	1.1	0.6
1950	72.1	20.3	5.9	1.0	0.7
1960	69.4	18.9	9.5	0.9	1.4
1970	64.9	18.1	11.9	0.8	4.3
1980	65.0	18.4	9.8	0.8	6.0
1990	63.6	19.2	7.6	0.6	8.9

Source : Ticino, 1993.

One key feature of Swiss multilingualism is the geographical distribution of speakers. The French-speaking region (known as “Suisse romande” — *not* to be confused with the *Romanche*-speaking areas) is located in the western part of the country ; the Italian-speaking part is located in the south (Canton of Tessin and a few valleys in the southern part of the neighboring Canton of Grisons, referred to as *Grigioni italiani*) ; the Romanche-speaking areas, also located in the Canton of Grisons, are in the easternmost part of Switzerland. The rest of the country (i.e. center, north and east) is German-speaking.

If this pattern of geographic distribution appears to be simple enough, it is precisely because it has been simplified. A large amount of literature has been written on the subject (see for example Département Fédéral de l'Intérieur, 1989 ; Institut National Genevois, 1988 ; Knüsel, 1994 ; McRae, 1983 ; Schläpfer *et al.*, 1985 ; Vouga & Hodel, 1990), and it would not be possible to do justice to it in this paper. Four important points, however, need to be made.

First, as regards the Romanche community, it is very small in numbers, and scattered over eastern valleys. No less than five written standards are used, not to mention *Rumantsch Grischun*, a synthetic version of the language drawing on all five variants. Its purpose is to provide a cost-effective way to use Romanche in those situations where the diversity of standards would have led to the language not being used at all — because using all five versions would have been too costly, and selecting one or two not politically acceptable. At this time, and probably since the 1950s, it can hardly be claimed that there exists a full-fledged Romanche language *region* comparable to the other three (Decurtins, 1976 ; Furer, 1994). The long-term survival of the language is now a serious concern, and current debate revolves around the possibly inadequate character of measures taken in its favor (Grin, 1992, 1993 ; Cathomas, 1996). Consequently, language teaching problems are highly specific, reflecting the particular issues at stake. It follows, among other things, that Romanche very rarely enjoys the status of an actual L2. Hence, the case of Romanche will not be further discussed in this paper.

Second, although German is one of the official languages in Switzerland, and is, in theory, its dominant language, a clear distinction must be made between *standard* German, used in writing, and Swiss German *dialect* (Schwyzertütsch), used throughout “German-speaking” Switzerland (or rather, this latter term being a misnomer, “Alemannic Switzerland”) in oral communication. Schwyzertütsch is distinct enough not to be directly understandable by native speakers of standard German. Dialectologists will rightly insist that there is no such thing as *one* Schwyzertütsch, but rather a collection of distinct local dialects

(none of which has an established written standard). However, there is enough of a Swiss German *koine*, as revealed by effortless intercommunication between speakers from various parts of the language region, to warrant the use of the term. Swiss German dialect has progressively conquered all but a few domains of oral communication. It is used extensively on TV and on the radio, except for official news ; it is commonly used by elementary school teachers throughout Alemannic Switzerland. Secondary school teachers are expected to use standard German in class, but plentiful anecdotal evidence indicates that these admonitions go unheeded most of the time. The result is a well-known diglossic pattern that has been presented as an archetype, for example by Fishman (1967), and is the subject of permanent debate in Switzerland (e.g. recently, Altermatt, 1997 ; Ghisla, 1997).

The diglossic pattern of Alemannic Switzerland raises an important L2 teaching issue which may be summed up briefly as follows : should Schwyzertütsch be taught as (one, among other) L2(s) in French- and Italian-speaking Switzerland ? The problem is that the German taught there as L2, though not useless, is quite insufficient for natural interaction with the Alemannic Swiss, who may be quite content to use standard German in writing, but often find using it orally artificial and contrived.

Third, the three (main) language regions in Switzerland do not display the same degree of linguistic homogeneity, as shown by the figures reported in Table 2-3. Alemannic Switzerland emerges as the most linguistically homogeneous part of the country ; abstracting from the very small Romanche-language valleys, French-speaking Switzerland clearly has the most diverse linguistic environment, with French being the main language of 77% of residents, while 12.4% speak a non-national language such as Spanish, Portuguese, etc².

Table 2-3

Main language of resident population by language region, percentages 1990 census

language region →	GERMAN	FRENCH	ITALIAN	ROMANCHE
main language ↓				
GERMAN	85.7	6.2	9.7	21.1
FRENCH	1.6	77.1	1.9	0.3
ITALIAN	4.3	4.2	83.0	2.1
ROMANCHE	0.4	0.1	0.1	73.3
OTHER	8.0	12.4	5.2	3.1

Source : Lüdi & Werlen, 1996.

Fourth, Italian is in a very peculiar position. On the one hand, it is one of Switzerland's national languages. However, more than half of the speakers are foreign residents, reflecting the longstanding presence of a large immigrant community from Italy. Moreover, a little over half of the total number of Italian-speakers do not live in the Italian-speaking region. The majority of Italian

² It should also be noted that the geographical distribution of allophones is not region-neutral. For example, speakers of Turkish and Kurdish are mostly concentrated in Alemannic Switzerland, speakers of Portuguese in French-speaking Switzerland, etc.

speakers outside their language region is made up of foreign residents, but this correspondence is far from being absolute (see Table 2-4). All this results in Italian having a fairly ambiguous *status* — in the sense of Kloss's (1969) well-known distinction; this is reflected in the fact that Italian, though official, is frequently sidelined in federal government business, and enjoys only a modest position as an L2 in school systems.

Table 2-4

Distribution of Italian-speakers by language region and by nationality, 1990
Census

	Language region		
	French ^a	German ^a	Italian
Swiss citizens	11'000	29'000	189'000
Foreigners	57'000	182'000	56'000
Total	68'000	211'000	245'000 ^b

^a : Source : Bianconi, 1995.

^b : Source : OFS, 1991 ; Bianconi, 1995.

The above factors impact on patterns of language use. To all intents and purposes, it is perfectly possible in Switzerland to be monolingual; “the need to be proficient in another language in administrative and legal contexts exists mainly in the bi- or trilingual cantons and at the level of the federal state” (Notter, 1996 : 115).

2.3. INSTITUTIONAL ASPECTS

Swiss institutions are embedded in a historical tradition that stretches back — as the conventional date goes — some 700 years. Quite apart from the historical emergence of the institutions that characterize present-day federal Switzerland (see Favez *et al.*, 1982/1983), much could be said about the Swiss representations of their country, and how these have influenced, and have been influenced by, a set of institutions (Froidevaux, 1997 ; Grin, 1997a), as well as on the workings of these institutions (Linder, 1994 ; Kriesi, 1995). We shall, however, confine ourselves to a brief account of essential features.

Switzerland is made up of 26 cantons and half-cantons. While most can be assigned to one language region or another, three of them are bilingual (Berne, Fribourg, Valais) and one trilingual (Graubünden). In other words, there is no correspondence between political boundaries and language boundaries. This reflects the fact that Swiss language regions (contrary to the Belgian case) have no legal standing or substance. Owing to the way in which Switzerland progressively emerged through slow accretion, the country has remained very decentralized. The power of the federal and cantonal government is restrained by the institutions of “direct democracy”, whereby a small number of citizens, if they collect enough signatures in support of the idea, can force any law passed by parliament to the ballot box, or have new proposals (affecting legislation or the Constitution) put to the vote. Courts enjoy, in international comparison, a high degree of autonomy from the executive. The political culture is decidedly

pluralist, and no single political party has ever enjoyed an absolute majority in the federal parliament.

What little explicit language policy there is inferred from three guiding principles, namely *territoriality*, *liberty* and *subsidiarity*.

The TERRITORIALITY principle means that there is a one-to-one correspondence between language and territory. This is why, within any of the language regions, one and only language is used by federal, cantonal and local authorities. There are a few exceptions to this rule, e.g. the Romanche-speaking areas and a few communes that have been designated as bilingual along the French-German linguistic boundary.

The LIBERTY principle recognizes individuals' right not to be constrained in their choice of language ; in other words, the private sphere, including commerce or business, is governed by the liberty principle, which implies that any language (national or not) can be used anywhere. There are, however, some limitations to this rule, and territoriality sometimes takes precedence. For example, cantonal authorities may regulate language use in commercial signs, billboards, etc., in order to ensure the presence of the local language. They may also restrict attendance, by children from another language region, of schools teaching through the language of these children — which, in such a case, is *not* the local language. These restrictions are meant to guarantee the linguistic homogeneity of language territories, because homogeneity, fostering a sense of cultural security, is seen as a condition of linguistic peace (Département Fédéral de l'Intérieur, 1989 ; Grin, 1997a ; Rossinelli, 1989, 1991).

The SUBSIDIARITY principle, which is quite independent of linguistic matters, is commonly encountered in many federal structures. It means that all authority not explicitly given to the federal government remains vested in the cantons. Hence, cantons are in charge of education, and there is no such thing as a federal department (ministry) of education. Cantons have agreed to entrust some promotional and support duties to the federal government (such as university-level research, or supervision of vocational education programs) ; they have also set up a web of intercantonal agreements which may cover all or some cantons ; for the most part, however, education is a cantonal matter. In the same way, language issues remain within the purview of cantonal authorities. Some modest promotional duties in favor of Italian and Romanche have been delegated to the federal government, as a result of a Constitutional change adopted in a referendum held in March 1996 ; all other areas of language policy are among cantons' prerogatives ; one canton (Graubünden) has devolved authority on language matters to the more local level of communes, which means that in this part of the country, each village can decide for itself what its official language will be.

The revision in 1996 of article 116 of the Federal Constitution (the only one that bears upon language) has caused heated debate, often revolving around the relative virtues of territoriality and liberty. It is now possible to observe an evolution towards a more relaxed approach to the territoriality principle, and a correspondingly increasing interest, within limits, for the liberty principle. This will make it easier, among other things, to encourage experiments into bilingual education and immersion classes, which are gaining in popularity.

2.4. OVERVIEW OF SECOND LANGUAGE EDUCATION : STRUCTURE, INPUTS AND OUTPUTS

Language education reflects the diversity of education systems, which in Switzerland are placed under cantonal jurisdiction. Descriptions of education systems in Switzerland (decentralization would make it incorrect to talk of *the* education system of Switzerland) can be found in official publications such as OFS (1991, 1995b) and OECD country reports, and we shall forgo any general description of these structures. Second language instruction is equally multifaceted ; it is described in Gretler (1988) or Notter (1996). However, we shall not discuss the considerable literature on second language didactics in Switzerland, reviewed e.g. in Py (1994). This choice reflects the priorities of the LIVE project, which is concerned with matters of *external* efficiency (more on this in Section 2.5. below).

For our purposes, no distinction shall be made between *second* and *foreign* language instruction. The following points, however, must first be made clear :

- (1) We shall assume that most people have little or no difficulty in identifying their *main language*. While it is true that there are some people with equivalent competence in two languages (people which we would, in this paper, describe as *bilinguals* if their proficiency in both is native or near-native), this seems to be the case for a small segment of the population. A recent survey of language competence among 2,400 randomly selected residents (Grin, 1995) has shown that only 3% of the sample indicated more than one “main language”. Though theoretically questionable, the concept of “main language” remains perfectly operational empirically.
- (2) To avoid repetition, “mother tongue” will sometimes be used instead of “main language”. Of course, there are cases where the two do not coincide. However, empirical evidence from the above mentioned survey suggests that in an overwhelming majority of cases, the two expressions can be treated as synonyms, even allowing for the definitional issues raised by both.
- (3) Hence, a *second* or *foreign* language is whatever language is *not* one's main language or mother tongue. It follows that people can have more than one “second” language ; we will therefore often talk of second languages in the plural.
- (4) Of the second languages taught in Swiss schools, most are national languages which are majority languages in a region other than that where the school considered is located ; these languages are French, German and Italian. One of these second languages, however, is “foreign” in the strict sense of the word, and this language is English. Recall that English is not a national or official language of Switzerland, and that it is spoken as a main language by less than 0.9% of the population. Other non-national languages are taught (e.g. Spanish, less frequently Russian, Chinese, Japanese, Hebrew), but the numbers of students concerned are negligible.
- (5) Finally, classical languages (mainly Latin and ancient Greek), though their teaching plays an important role in secondary schools, will not be discussed here.

Owing to inadequate school statistics, it is very difficult to estimate the ACTUAL NUMBER OF STUDENTS attending instruction in a given subject (e.g., English), let alone attending specific courses in it (e.g., “8th grade [introductory] English”), as shown by recent work on the expenditure on second language instruction (Grin & Sfreddo, 1997). We report below estimates by Notter (1996), which (in the light of the study on expenditures), might be considered as biased slightly upwards as regards Italian, and downwards as regards French, German and English.

In Alemannic Switzerland, Notter estimates that 90% to 95% of the students are taught French between grades 5 and 9 ; the first two, in most cantonal education systems, are part of primary education, and the latter three of lower secondary education. In upper secondary education (grades 10 to 12 or 13, depending on canton and stream of education), about 50% are taught French. This figure is presumably obtained by including all streams, including non-academic, since academic-type schooling will typically include relatively more second language instruction, and practically all students have to take French and English. In all cantons apart from Uri, Italian is only an optional L2 ; Notter estimates that 10% of the students take Italian courses.

In French-speaking Switzerland, all students must take German between grades 4 and 9 (last three years of primary school plus the usual three years of lower secondary education). In the upper secondary tier of the system, about half of the students continue to be taught German, depending on the type of schooling they are enrolled in. As regards Italian, it is an optional subject available from grade 8 ; an estimated 10 to 20% of the students learn it. English is introduced at the lower secondary level for some 20% of the students ; in higher secondary education, the rate is (again, somewhat optimistically) estimated by Notter at 70%³.

Finally, all pupils and students in Italian-speaking Switzerland between grades 3 and 9 learn French ; more than half continue being taught French at the higher secondary level. All students have German in lower secondary (grades 7 to 9), and some 60% keep learning it into higher secondary. These figures presumably exclude vocational education and training. Owing to this important effort put into learning the two main official languages of Switzerland, students in the Italian-speaking region get a little less exposure to English, which is estimated by Notter (presumably, all streams included) at 40%.

TIME ENDOWMENTS to L2 instruction vary considerably ; no synthetic overview was available until a recent time, and reports were usually based on a generalization from one particular case (e.g. in Gretler, 1988, whose discussion of secondary education relies on the three types of secondary schools found in the Canton of Aargau as an exemplary case). Synthetic tables covering primary schools, lower secondary schools (excluding special education and pre-vocational streams) and upper secondary schools (excluding various forms of vocational education) have recently been drawn up by Grin & Sfreddo (1997). The corresponding weekly endowments are reported in tables 2-5, 2-6 and 2-7 ; it must be borne in mind that one “period” does not necessarily have the same duration everywhere, particularly in primary school, where it varies between 45 and 60 minutes. The heterogeneity of the system is such that short of engaging in a detailed case-by-case description, only the most general features can be reported.

³ Our estimate is a lower figure if all education streams are included, and a higher one if only academic-type schools (“gymnasium”) are taken into account.

Table 2-5

Second language instruction in primary schools, by canton⁴, hours per week, 1993/94⁵

School-year	French						German						Italian						Romanche						Class duration (minutes)	
	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6		
AG						-																				-
AI					2	2																				45'
AR					2	2																				50'
BE fr.										2	3	3														45'
BE al.					3	3																				45'
BL				1.5	1.5	-																				60'
BS					-	-																				-
FR fr.										2	2	2														50'
FR al..				3	3	3																				50'
GE										1.3	1.3	1.3														60'
GL					2	2																				50'
GR al.																	2	2	2	2	2	2	2			50'
GR rom.										4	5	5														50'
GR it.										6	5	5														50'
JU										2	2	2														45'
LU					2	2																				50'
NE										2	2	-														45'
NW					2	2																				45'
OW					2	2																				45'
SG					2	2																				50'
SH					2	2																				50'
SO				(2)	2	2																				45'
SZ					2	2																				45'
TG					2	2																				45'
TI			1	1.5	1.5	-																				60'
UR																	2	2								50'
VD										0	-	-														-
VS fr.										2	2	2														60'
VS al.					1.7	1.7	1.7																			60'
ZG					2	2																				45'
ZH					2	2																				45'

Notes : a hyphen (-) indicates that the 5th or 6th school year is not part of primary school in the cantons concerned. Abbreviations in the left-hand column of the table refer to the 26 cantons and half-cantons (e.g., GE : Geneva, ZH : Zurich, etc.). In the case of multilingual cantons, distinct school systems are in place ; language regions are denoted by lowercase indications, namely "fr." : French-speaking ; "al." : Alemannic ; "it." : Italian-speaking ; and "rom." : Romanche-speaking.

Source : Grin & Sfreddo, 1997.

Instruction into one national language at PRIMARY SCHOOL level has been introduced over recent years almost everywhere, exceptions being the Alemannic cantons of Aargau and Basel-Landschaft. This evolution has occasionally met with some teacher resistance, particularly in Alemannic Switzerland. Early

⁴ These (standard) abbreviations for Switzerland's 26 Cantons and half-Cantons stand for : AG : Aargau ; AI : Appenzell/Innere Rhoden ; AR : Appenzell/Aussere Rhoden ; BE : Bern ; BL : Basel-Land ; BS : Basel-Stadt ; FR : Fribourg/Freiburg ; GE : Genève ; GL : Glarus ; GR : Graubünden ; JU : Jura ; LU : Luzern ; NE : Neuchâtel ; NW : Nidwalden ; OW : Obwalden ; SG : St.Gallen ; SH : Schaffhausen ; SO : Solothurn ; SZ : Schwyz ; TG : Thurgau ; TI : Ticino ; UR : Uri ; VD : Vaud ; VS : Valais/Wallis ; ZG : Zug ; ZH : Zürich.

⁵ At the time of writing, an update of these figures is in preparation.

German and early French are therefore only conceived, at this time, as preparatory, in the sense that failure in those subjects *at primary school* cannot be a reason for failing pupils (contrary to, say, mother tongue or arithmetics).

Table 2-6

Second language instruction in lower secondary schools, pre-academic streams,
by canton, hours per week, 1993/94

School-year	French					German					English					Italian					Romanche						
	5	6	7	8	9	5	6	7	8	9	5	6	7	8	9	5	6	7	8	9	5	6	7	8	9		
AG	-	4	4	4	4						-	-		3	3	-	-		3	3						choice E/I	
AI	-	-	5	4	4						-	-		2.5	2.5	-	-		2.5	2.5						choice E/I	
AR	-	-	3.5	3.5	4						-	-				3	-	-		3						choice E/I	
BE fr.						-	-	4	4	4	-	-		3	3	-	-		3	3						choice E/I	
BE al.	-	-	3	3	2						-	-	2	2	2	-	-	2	2	2						choice E/I	
BL	-	6	5	4	4						-		3	3	3												
BS	-	3	3	3	3																						
FR fr.						-	-	4	4	4	-	-		2	3	-	-		2	3						choice E/I	
FR al.	-	-	5	4	4						-	-		3	3												
GE						-	-	5	5	5																	
GL	-	-	5	5	4																						
GR al.	-	-	2	2	2											-	-	2	2	2						choice F/I	
GR rom.	-	-	4	4	4	-	-	4.5	4.5	4.5						-	-	4	4	4						choice F/I	
GR it.	-	-	3	3.5	3	-	-	4.5	4.5	4.5																	
JU						-	-	3	3	3	-	-	2	2	2	-											
LU	-	-	4	4	4	-	-			4	-	-			4											choice E/I	
NE						-	3	4	4	4	-			3	3	-			3	3						choice E/I	
NW	-	-	4	4	4																						
OW	-	-	4	4	4																						
SG	-	-	4	4	3						-	-		3	3	-	-		3	3						choice E/I	
SH	-	-	5	4	4						-	-		3	3	-	-		3	3						choice E/I	
SO	-	-	4	4	4						-	-		3	3	-	-		3	3						choice E/I	
SZ	-	-	5	5	4						-	-		2													
TG	-	-	5	5	5																						
TI	-	4	4	3	3	-	-	2	3	3																	
UR	-	-	5	4	4																						
VD						4	5	4	4	5				3	3	4											
VS fr.						-	-	5	4	3																	
VS al.	-	-	4	4	4																						
ZG	-	-	5	4	4																						
ZH	-	-	4	4	4						-	-			3	-	-			3						choice E/I	

Note : a hyphen (-) indicates that the 5th or the 5th and 6th school year are not part of lower secondary school in the cantons concerned. "Choice E/I" indicates that students can choose between English and Italian as a second L2, and "Choice F/I" that the choice is between French and Italian. For other abbreviations, see note at bottom of Table 5.

Source : Grin & Sfreddo, 1997.

Second-language instruction is a pivotal aspect of LOWER SECONDARY education, where one national language (French in Alemannic⁶ and Italian Switzerland, German in French-speaking Switzerland, both in Italian Switzerland) is normally taught for 3 to 5 periods per week (requirements are lower, and may even be absent from pre-vocational streams in some cantons ; only a negligible percentage of children, however, completely eschew L2 instruction). As regards

⁶ The exception is the Canton of Uri where the first L2 is Italian.

the second L2, the usual practice is to offer pupils a choice between English and Italian (except in the Italian-speaking regions — Tessin and *Grigioni italiani* — whose students already have to cope with French and German, and where English is an additional option, not a required subject). Anecdotal evidence consistently suggests that there is a clear preference for studying English among students. The age at which it is introduced, however, can vary considerably from one canton to another.

Table 2-7

Second language instruction in upper secondary schools, pre-academic streams
(preparation for type B “maturité”), by canton, hours per week, 1993/94

School-year	French					German					Italian					English					Romanche				
	9	10	11	12	13	9	10	11	12	13	9	10	11	12	13	9	10	11	12	13	9	10	11	12	13
AG (1)	-	4	3	3	3						-	3	3	2	3	-	3	3	2	3					
AI	-	3	3	4	3						-	3	4	3	3	-	3	4	3	3					
AR *	(4)	4	3	3	4						3	4	3	3	3	4	4	3	2	2					
BE fr.						-	3	3	3	3.5	-	3	3	3	3.5	-	3	3	3	3.5					
BE al. (2)	-	3	3	3	3						-	4	3	3	4	-	5	4	3	4					
BL	-	3	3	3	3											-	3	3	3	3					
BS	-	4	4	4	4											-	4	4	4	3					
FR fr.						-	4	4	4	4	-	4	4	4	4	-	4	4	4	4					
FR al.	-	4	4	4	4						-	4	4	4	4	-	4	4	4	4					
GE (3)						-	4	4	3	3						-	4	3	3	3					
GL	-	3.5	3	3	3.5						-	3.5	3	3	3	-	3.5	3	3	3					
GR al.	-	3	3	3	4						-	4	4	4		-	5	4	4		-	2	2	2	2
GR rom.																									
GR it.																									
JU						-	4	3	4	-	-	3	3	4	-	-	3	3	4	-					
LU (4)	-	3	3	3	3						-	3	3	3	3	-	3	3	3	3					
NE	-					-	4	3	4	-						-	4	3	4	-					
NW	-	3	3	3	3											-	5	4	3	3					
OW	-	3	3	4	4						-	5	3	3	3	-	5	3	3	3					
SG	-	4	4	3	3						-	4	4	3	3	-	4	4	3	3					
SH	4	4	4	3	4						4	4	3	3		4	4	3	3						
SO *	-	3.5	3	3.5	3.5						-	3	3	3	3	-	3	3	3	3					
13th year :					4										3										3
SZ (5)																									
TG *	3.5	4	4	4	4						3	4	4	4	4	3	4	4	4	4					
TI*	-	2	2	3	3	-	3	3	3	3						-	(2)	(2)	3	3					
UR	-	3	3	4	4											-	4	3	3	4					
VD						-	4	3	4	-						-	4	3	4	-					
VS fr.						3	3	3	3	3						3	3	3	3	3					
VS al.	3	3	3	3	3											3	3	3	3	3					
ZG	-	4	4	4	2						-	4	3	3	2	-	4	3	3	2					
ZH * (6)	4	3	3	3	3						4	3	3	3	3	4	3	3	3	3					

Notes : (1) Kantonsschule Aarau - (2) Bern-Kirchfeld - (3) Some differences between schools may occur - (4) Gymnasium of the City of Lucerne - (5) Distribution over the 4 school years may be different between schools - (6) Kantonsschule Oerlikon.

A hyphen (-) indicates that the 9th or the 9th and 13th school year are not part of pre-academic upper secondary school in the cantons concerned. An asterisk (*) indicates that the last school year includes only one semester. For other abbreviations, see note at bottom of Tables 5 and 6.

The gray lines indicate that in these cantons, pupils can chose between English and Italian as L2.

* : in the Canton of Ticino, English or Italian are taught from 3rd onwards.

Source : Grin & Sfreddo, 1997.

In UPPER SECONDARY education (meaning here academic-type schooling like the “gymnasium”), L2s also play a major role, with an equal time endowment for one national language and an additional L2, normally English — or Italian for those who have chosen it instead of English ; some streams require all three L2s). In

the Italian-speaking Canton of Tessin, three L2s are required, albeit with a slightly lower endowment to each, notably English.

The fairly complex pattern summarized in tables 5, 6 and 7, however, is not an exhaustive portrait of L2 instruction in Switzerland — even if we abstract from private schools, whose role in Switzerland is minor, and whose L2 offer is generally similar to that of public sector schools. Some streams (like vocational education) have not been investigated, nor have the variety of optional subjects which may include languages like Spanish and Russian. Finally, this tells us little about the substance and the quality of teaching. This, of course, harks back to a well-known issue running through the evaluation literature in the education sciences, particularly the economics of education.

Switzerland may be one of the first countries to have carried out an estimation of EXPENDITURE on L2 *by language*, in the aggregate as well as by tier, by language region and by student. The estimation procedure will not be described here, and the reader is referred to the study for extensive results (Grin and Sfreddo, 1997). Table 2-8, however, provides essential figures, showing how total *per student* spending on L2 instruction is apportioned among the various L2s.

Table 2-8

Yearly per capita expenditure on second language instruction, by language and language region, all pre-university level. Amounts in current CHF and percentage allocated to each second language, 1993/94

	AL.		FR.		IT.		CH
	Exp./st.	%	Exp./st.	%	Exp./st.	%	Exp./st.*
French	778	48.9			792	46.2	778**
German			905	61.8	646	37.7	869
Italian	88	5.5	90	6.2			88
Romanche	8	0.5					298
English	696	43.7	465	31.8	265	15.5	624
Spanish	22	1.4	3	0.2	10	0.6	17
TOTAL	1'592	100	1'463	100	1'713	100	1'571

Notes : AL. : Alemannic Switzerland ; FR. : French-speaking Switzerland ; IT. : Italian-speaking Switzerland. Exp./st. : "Expenditure per student".

* Expenditure per student in those region where the language considered is taught as a foreign (second) language. Romanche is taught as such only in the Italian- and German-speaking parts of the Canton of Graubünden, etc.

** : Expenditure per student on French in non-French-speaking regions equals the value computed for Alemannic Switzerland alone. This reflects the fact that per capita spending in Italian-speaking Switzerland is close to the value observed in Alemannic Switzerland (792 instead of 778) and the fact that Italian-speaking Switzerland accounts for a small share of non-francophone regions. A symmetric reasoning holds for estimates of expenditure on the teaching of Italian.

Source : Grin & Sfreddo, 1997.

All this language teaching activity must, or so one hopes, be reflected in RESULTS, which can be evaluated in a variety of ways. One would be success and failure rates in standardized tests ; this, of course, would raise tricky comparability issues, given the variety of L2s and L1 settings. A crucial element in an

evaluation process, however, should focus instead on out-of-school COMMUNICATIONAL COMPETENCE in L2s. Such competence may or may not be due to in-school language instruction, because second languages are also acquired in a variety of different ways ; estimating the contribution of school itself is one strand of the evaluative work currently going on as part of the “Foreign Language Competence in Switzerland” project (Grin, 1997b).

Estimates of competence in L2 were traditionally based on tests by young men doing their military service (Girod *et al.*, 1987). However, the information retrieved is inadequate for at least three reasons. First, young recruits are asked fairly general questions, which do not tell the researcher very much about their competence ; second, the sample contains only one narrow age band and excludes women ; third, data retrieved in this context are notoriously unreliable, because individuals’ resistance to the military structure to whose authority they are subjected during their army stint may lead them to give deliberately biased answers.

The alternative is a pilot study conducted during under the FLCS project. The representative sample of 2,400 in all three language regions includes only respondents aged 18 to 62 for women and 18 to 65 for men, and who work at least 6 hours per week in paid employment. Detailed questions about the type (oral/written, active/passive) and the level of competence in L2 were asked in a telephone survey, where a four-level “Competence Matrix” made up of examples of communicative acts in L2 was used by pollsters to ensure the comparability of answers ; on the rationale for structuring the questionnaire in a certain way and on the use of the Competence Matrix, see Grin (1997b, 1997c). Key results (from Grin, 1997c, 1997d) are reported in tables 2-9, 2-10 and 2-11, providing an unusually detailed picture of the level and type of L2 skills by language group.

It is difficult to engage in international comparisons, because of the lack of similar data from other countries⁷. Still, we can make the following observations on the basis of *average scores* (reported in the last line of each panel in the following tables).

Table 2-9

Distribution of second language skills of native speakers of German, percentage respondents per level (weighted sample)

	French	Italian	English
Fluent	13.8	4.0	16.1
Good	28.7	8.7	30.0
Basic	29.0	20.2	22.6
None	28.6	67.1	31.3
Average level	41,0	17,7	42,3

Note : unweighted ; N = 771

Source : Grin, 1997d.

SPEAKERS OF GERMAN have a similar level of proficiency in French and English with an average score between 40 and 45 points ; this corresponds to a level of

⁷ Detailed surveys on the type and level of language skills as well as socio-economic variables are surprisingly few. One interesting recent exception is a large-scale survey conducted in Lebanon in late 1993 (Abou, Kasparian & Haddad, 1997).

competence at the top end of basic interaction, and only a few points below the range where the language can be used efficiently in professional life. By contrast, their competence in Italian is limited to basic interactions.

Table 2-10

Distribution of second language skills of native speakers of French, percentage respondents per level (weighted sample)

	German	Dialect	Italian	English
Fluent	16.4	12.1	10.3	13.3
Good	17.9	10.1	8.1	22.6
Basic	28.7	10.2	14.9	17.3
None	37.0	67.6	66.7	46.9
Average level	37.3	23.0	22.7	33.3

Note : unweighted N = 511

Source : Grin, 1997d.

SPEAKERS OF FRENCH have a roughly similar level of competence in German and English, with a slight advantage in the former. However, being the middle of the thirty-point range, their scores reveal lower overall L2 competence than for speakers of German. This means that on average, francophones are comfortable using German and English when interaction is simple and its contents fairly predictable ; however, this average value is at least 15 score points away from the level where use of the language in professional life would pose no particular problem. As was the case for native speakers of German, speakers of French have limited competence in Italian.

Table 2-11

Distribution of second language skills of native speakers of Italian, percentage respondents per level (weighted sample)

	German	Dialect	Italian	English
Fluent	33.9	34.9	25.6	6.0
Good	13.6	7.8	35.5	6.9
Basic	20.0	7.4	23.7	18.9
None	32.4	49.8	15.2	68.2
Average level	49.3	42.7	53.7	18.0

Note : unweighted ; N = 490

Source : Grin, 1997d.

Turning now to native SPEAKERS OF ITALIAN, we observe their high value of average competence in French ; at 58 points, it indicates capacity to function in French even in a professional context. Average competence in German is far from negligible : at 37.4, it is slightly above that of francophones. On the other hand, their competence in English is the lowest of all. It should be borne in mind that the Italian-speaking sample contains a fairly high proportion of resident foreigners, who presumably were not schooled in Switzerland ; hence, these

figures are much less indicative of the output of the Swiss education system(s) than was the case for native speakers of German or French.

Obviously, more refined interpretations could be suggested on the basis of the distribution of L2 skills over the four competence levels used in the survey. For reasons discussed elsewhere (Grin, 1997b, 1997c), it is not possible, in the context of a telephone interview, to handle a larger number of levels ; on self-evaluation procedures, see North, Schneider & Richterich (1997). However, in line with the rationale of the LIVE project, the main focus is not *internal*, but *external* effectiveness and efficiency. In other words, we are not so much concerned with outputs in terms of skills as with the exploitation of the latter — the French word “valorisation”, referring to the way in which something is used or transformed to make it valuable, is well suited to describing this process, and it shall be used hereafter for lack of a comparable term in English.

“Valorisation” can take many forms and generate value in different ways. However, talking about value implies that we have some definition thereof. The one used in this project is rooted in economic analysis (Grin, 1997e) and applied to language matters, as developed in the economics of language (Grin, 1996a ; Grin & Vaillancourt, 1997). Generally, a distinction must be simultaneously made between market v. non-market value, and between private and social value. Hence, at least four types of value associated with language skills can be defined, and then — at least in theory — evaluated. In this section, we will only discuss *private market values* created by second language skills. This is not to mean that the others are any less important. However, private market values are a bit less tricky to evaluate ; they make up the largest part of the empirical literature in the economics of language and language education ; and there are good reasons to believe that it constitutes one of the key factors that determines investment in second-language skills.

Private market value is mostly made up of earnings differentials accruing to those people that have second language skills (or *higher* language skills) as opposed to those who do not (or have *lower* skills). Estimating these earnings differentials requires a fairly extensive body of good quality data covering language skills and earnings, but also other variables such as schooling, age, sex, type of professional activity, region of residence, etc. To our knowledge, the Swiss data base mentioned here is one of the most detailed ever collected to evaluate returns to language skills, not just in Switzerland but internationally.

The first two variables (L2 skills and earnings) can be used to yield estimates of *gross earnings differentials*. These are reported in table 2-12 below. They show a clear correlation between the existence of L2 skills and earnings (converted here into full-time equivalent in order to smooth interpersonal differences in hours worked per week). Obviously, these earnings gaps may not necessarily *result* from L2 skills, because those people that have higher language skills typically also have higher levels of education and training. It could even be the case, in theory, that language skills have negligible market value, and that what matters is strictly schooling or professional experience⁸.

⁸ For example, age is a very important influence in the determination of earnings in Japan, and young people with high L2 skills may be earning less, all things being equal, than monolingual elder workers. To check whether L2 skills yield monetary value, one would have to *control* for age.

Table 2-12

Mean labor income by linguistic attributes current CHF, 1994, and index
(weighted sample)

	Men and Women		Men		Women	
	Francs	Index	Francs	Index	Francs	Index
G. phones	5776	100	6450	100	4516	100
F. phones	5577	96.6	6023	93.4	4844	107.3
I. phones	4698	81.3	5063	78.5	3921	86.8
G. unilingual	5322	92.1	5915	91.2	4276	94.7
F. unilingual	5237	90.7	5549	86.0	4806	106.4
I. unilingual	4188	72.5	4630	71.8	3313	73.4
G. bilinguals*	6218	107.7	7390	114.6	4879	108.0
F. bilingual§	6257	108.3	7048	109.3	5151	114.1
I bilingual§	4778	82.7	5059	78.4	4299	95.2
I. bilingual*	4791	83.0	5265	81.5	4153	92.0
I. trilingual‡	5877	101.8	7023	108.9	4501	99.7
TOGETHER	5640	97.7	6136	95.1	4564	101.1

Notes : labor incomes in full-time equivalent. G. : German, F. : French, I. : Italian

* : Fluent or good competence level in French.

§ : Fluent or good competence level in German or Alemannic dialect.

‡ : Fluent or good competence level in German or Alemannic dialect as well as in French.

Source : Grin, 1997d.

To circumvent this difficulty, it is customary to resort to multivariate analysis and to use the method of ordinary least squares ; earnings regressions with language variables on the right-hand side are a staple of quantitative language economics (Vaillancourt, 1996, 1997). Neither methodology nor extensive results will be presented here and the reader is referred to the monographs and articles quoted earlier. Suffice it to say here that a complex pattern emerges, whose salient features are the following :

- ◆ Second language skills are generally profitable, sometimes very much so. High-level skills in L2, even controlling for other determinants such as education, experience, sector of economic activity and profession, can yield earnings premia in excess of 30%.
- ◆ Even when public expenditure on second language instruction is taken into account, the *social rates of return* are considerable, making the teaching of second languages a profitable investment from the standpoint of the state.
- ◆ The magnitude of the earnings premia accruing to people with L2 skills is sensitive to the L1 sample considered. For example, similar competence levels in English with an identical set of control variables yields much lower returns for francophones than germanophones. These discrepancies can

only in small part be explained away by *regional* factors, that is, by the fact that speakers of different languages (as L1) live in distinct language regions, each with its own economic fabric.

- ◆ Therefore, it is justified to examine these earnings differentials at closer range, before more specific policy guidelines can be formulated.

These observations, against the backdrop provided in the preceding sections, will now be used to discuss research priorities and the specific questions to which they give rise.

2.5. SECOND LANGUAGE EDUCATION AS A PUBLIC POLICY ISSUE

Language education in Switzerland is the object of considerable concern, although researchers from social sciences other than linguistics or the education sciences often fail to realize its relevance to the issues studied in their respective discipline. In addition to articles and books mentioned below, the interested reader is referred to successive issues of the journal *Babylonia*, which is entirely devoted to second language teaching and learning in Switzerland, and includes contributions bearing upon policy problems.

In what follows, we shall not so much list issues or propose solutions as much as we will discuss one rationale in which these issues can be usefully analyzed. In so doing, we shall clarify some of the main orientations of the LIVE project.

The most fundamental question about language teaching that any education system must ask may well be the following: "What languages do we wish to teach, to whom, and to what level of competence?" This question, probably among the most fundamental of any school system where second languages are taught, is implicit in evaluation and policy documents (such as CDIP/EDK, 1987); it is never considered in most of the literature produced by language teaching specialists, but there is little doubt that it turns up logically upstream from any analysis of language didactics. In short, why bother about the proper ways to teach second languages unless it has first been established that the endeavor itself is justified? This fundamental policy issue can be broken down into smaller ones; however, what we wish to stress here is that it also raises a crucial methodological issue bearing upon a distinction between *effectiveness* and *efficiency*. This distinction will be approached with the help of an example.

There is general agreement that for reasons of national unity and inter-group harmony, some competence (ideally, nothing short of proficiency) in *at least* one other national language should be acquired. Needless to say, a majority of the Swiss is still quite a distance away from this goal. To some extent, innovations in teaching methods and materials can improve the competence levels achieved with a given investment in time and money. However, this is only part of the story, for two different reasons.

One is that effectiveness in language teaching is not a matter that should be measured only *internally*, that is, *inside* the education system and its institutions. In other words, we are not concerned only with didactics and teaching materials. Effectiveness also has an *external* sense, where inputs typically include the financial resources used, and outputs are made up of the

resulting benefits, such as (among other benefits) better inter-group harmony made possible by the fact that people from different language groups have learned each other's language⁹. Improving effectiveness would then mean achieving the same degree of harmony with fewer resources, *or* better harmony with an equivalent amount of resources.

The second reason is that increasing the *effectiveness* of the system is fine and well, but from the economic perspective that informs not just the LIVE project, but the SNERP as well, what matters is not effectiveness, but *efficiency*.

Efficiency is not just a matter of making sure that a given input of resources is not wastefully used ; it also requires a reexamination of the type of outputs that the system means to produce — hence the need to question whether a certain degree of inter-group harmony, which *may* be enhanced through the current system of teaching national languages plus English, really represents an appropriate societal goal. Depending on the goals considered, it *might* be the case (as some people hastily claim, taking it for a certainty) that teaching English as sole L2 could be sufficient¹⁰ ; on the contrary, some might be tempted to make the case that the Swiss education system should concentrate on national languages and concentrate resources on linguistic and non-linguistic subjects other than English — in the belief, presumably, that those actors who find it in their interest to know it will make the out-of-pocket investment needed themselves. Other possibilities could be considered, such as teaching no “natural” second languages at all, and teaching each and everyone Esperanto only, an option which could make sense if adopted internationally.

The quest for efficiency requires an evaluation of each scenario. From a policy analysis standpoint, some variant of cost-benefit analysis should be carried out. This has been advocated more than a quarter of a century ago in the context of language planning by Thorburn (1971) ; it was not until recent years that the identification and measurement problems were analyzed more closely (e.g. Grin, 1994b ; Grin & Vaillancourt, 1997). Essentially, each outcome resulting from the adoption of one or another language teaching policy can be described in terms of a *linguistic environment*, characterized by the relative positions of all languages in contact in a given “polity”. Hence, a full description of linguistic environments comprises demolinguistic, sociolinguistic, institutional, etc. factors (for a more extensive discussion, see e.g. Grin, 1997e).

Let us consider “sets” made up of the following elements : a given linguistic environment, characterized by relevant linguistic, political, economic, sociological, geographical, institutional, etc. indicators ; a policy (or specific policy measures) aiming at modifying the received linguistic environment, or at maintaining it ; an alternative linguistic environment that could be expected to emerge as a result from the implementing the policy. In theory, a shift from one linguistic environment to another can be associated with costs and benefits. The benefits are none other than the four different types of value mentioned earlier (private market, private non-market, social market, social non-market). The aggregation of these values (which is analytically different from a mere addition) yields total value, which can then be compared to costs — particularly, for the

⁹ This is a typical example of a non-market benefit, whose value can only in part be captured privately ; for the most part, it must be assessed a social non-market value.

¹⁰ The discussion on the importance of English as compared to official languages as L2 has been going on for the last ten years, yet in 2000, the debate turned into a broader political issue at national level. For details, see Chapter 4, Subsection 4.2.2, and Watts & Murray (2001).

issue at hand, those associated with the teaching of a more or less broad array of second languages. Costs include those associated not just with the results, but the implementation of the policy. In theory, the “set” that has the highest net value (benefits minus costs) is the best, in a policy analysis perspective.

Obviously, such a construct is theoretical and reductionist ; however, it provides (as all abstract models are supposed to) a point of reference that helps to structure the approach to real policy problems. It must be made clear, therefore, that reference to this construct does not imply an endorsement of the technocratic (as opposed to democratic) outlook it could appear to justify ; on the contrary, theoretical explorations into extensions of the model in order to combine *policy* and *politics* are necessary (Grin, 1996b).

Hence, the efficiency analysis that provides conceptual thread running through the LIVE project is chiefly used for its heuristic value. Using the model therefore implies that the various results that will emerge from research work will have to be *interpretable* in terms of the logical framework presented here, not that they will have to be fitted into a grand construct and yield something as questionable (or potentially manipulative) as a handful of figures.

A policy analysis approach to the policy question asked above requires that the benefits, and ideally the costs, associated with current patterns of second language instruction be analyzed and evaluated ; in the context of the LIVE project, of course, the benefits and costs considered are those that pertain to language instruction *in vocational education*. This may lead us to question the role given to national languages and English respectively (including the modesty of this role), and to examine possible alternatives.

The key point, however, is that the answer to this major policy question, whether it is asked about the education system as a whole or specifically about vocational education, will probably depend on region, sector of economic activity, etc ; analyzing the interplay of these variables is a central task of the LIVE project.

2.6. KEY QUESTIONS ABOUT LANGUAGE INSTRUCTION IN THE CONTEXT OF VOCATIONAL EDUCATION

The foregoing sections have argued in favor of a public policy approach to second language instruction, particularly in the context of vocational education. Our focus on this particular segment of the student population hinge on a variety of reasons, the main one being the integration of the LIVE project in the broader VTE. However, there are additional justifications for studying the teaching of second languages in the context of vocational education.

The first is that, in terms of *external* evaluation, relatively little attention has been paid to the teaching of potentially “academic” subjects in non-elite education streams, particularly under the “dual system” of vocational education currently used in Switzerland. The dual system relies heavily on apprenticeships, and apprentices spend about 70% of their time in (modestly) paid employment, the remaining 30% being devoted to formal in-class instruction, where “academic” subjects play a rather secondary role. The picture is a complex one, and there are some cases of vocational training (such as electronics) taking place in a school environment only ; for an introduction to vocational training in Switzerland, see e.g. Wettstein *et al.*, 1989 ; Wettstein, 1994. Still, the strategic importance of such

subjects should not be in doubt, at a time when employers and economic pundits are continuously extolling the virtues of flexibility — flexibility being the euphemism frequently used to suggest that individuals should be ready to retrain themselves regularly and move from one professional occupation to another in the course of their working life. Generic skills, which can be put to use in a variety of professional occupations and are presumably taught mostly in the context of “academic” courses, should therefore play a crucial role in equipping individuals with such flexibility. Second language instruction stands out as one of the most strategically useful of such generic skills.

The second is that available evidence shows that second language competence is an important factor in the determination of earnings ; as shown in Section 2.4., the *market rates of return* to second language skills are considerable, and are systematically higher than the average return on one additional year of schooling — a standard indicator in the economics of education. Withholding access to such skills from students engaged in non-elite education streams could therefore be criticized as a way to worsen their socioeconomic status once they enter the labor market.

Thirdly, circumstantial evidence strongly suggests that second language skills do not only influence earnings, but employment rates. In other words, a good command of one additional language may well make the difference between employment and the dole queues. This is a matter of importance, at a time when unemployment figures in Switzerland have reached a all-time high of 5.7%, with some cantons confronted with rates above 8%.

Fourth, anecdotal evidence indicates that employers often bemoan the lack of L2 skills among their staff or among candidates applying for vacant positions. This suggests that the existence of such skills is considered important for a proper execution of tasks, which is not surprising in a multilingual country whose share of exports in GDP is close to 50%.

For all the above reasons, an investigation of second language instruction in vocational education seems timely. The questions to be investigated are chiefly the following arranged here under seven major headings :

A/ Description of language instruction in vocational training

- ◆ What are the second languages (L2s) currently taught as part of VTE in Switzerland, overall and by type of training and language region ?
- ◆ What level of competence in L2 is achieved ? How variable are competence levels according to type of training, region of training, students' first language, students' school and non-school background ?
- ◆ How much resources (time and financial) are currently being spent on language instruction in VTE ?
- ◆ How is the total amount of such resources spread over specific L2s, across types and levels of training, and according to language region ?

B/ Actual use of L2 skills in working/professional life

- ◆ What patterns of L2 use can be observed in professional/working life ?

- ◆ What is the effect of economic sector, language region, hierarchical position, location of clients, and other worker or employer characteristics ?

C/ Effects of L2 instruction (in general, and with emphasis on people having completed vocational training) : individual level (workers)

- ◆ What kind of economic effects in general do second language skills have in professional/working life ?
- ◆ What are the observable patterns of L2 skills according to economic sector of activity, language region, and a set of worker characteristics ?
- ◆ Do L2 skills affect employability, actual employment, promotion, flexibility or other aspects of work history ?
- ◆ Do L2 skills affect earnings ?

D/ Effects of L2 instruction (in general, and with emphasis on people having completed vocational training) : employer/firm level

- ◆ What kind of economic effects in general does the existence of second language skills in the workforce have on firms ?
- ◆ What are the observable patterns of L2 skills according to economic sector of operation, firm structure, language region, and a set of employer characteristics ?
- ◆ Do L2 skills affect profitability, domestic or international market advantage ?

E/ Demand for L2 skills

- ◆ Of the L2 skills currently provided under VTE, which are seen as particularly important by employers ? By workers ? By students ?
- ◆ Of the L2 skills currently provided under VTE, which are seen as particularly useless by employers ? By workers ? By students ?
- ◆ How do the answers to the above questions vary according to economic sector of activity, language region, enterprise structure, and other worker, student or employer characteristics ?
- ◆ Of the L2 skills *not* currently provided under VTE, which are seen as potentially useful, necessary or profitable by workers, by students and by employers ?
- ◆ How does the answer to the above questions vary according to economic sector of activity, language region, enterprise structure, and other worker, student or employer characteristics ?
- ◆ To what extent do *non-professional* (non-market) uses of L2 skills matter, to workers, students and employers ?

F/ International comparisons

- ◆ How do Swiss patterns converge or contrast with observations made elsewhere (in other countries) ?
- ◆ Is Switzerland unique ? Are distinguishing traits likely to be retained or to fade over time, particularly with globalization ?

G/ Policy implications

- ◆ Which L2s should *ideally* be taught to whom, according to economic sector of activity/type of training, language region, etc. ?
- ◆ What is the level of skills that should *ideally* be aimed at, according to the same variables ?
- ◆ Can *feasible* (as opposed to ideal) objectives be defined ?
- ◆ Is it possible to estimate the respective costs of various language teaching policies — to the state, to employers, and to learners themselves ?
- ◆ Can the answers to the above questions be integrated into a strategic second language instruction policy for vocational training and education ?

The fact that these questions emerge as strategically important as a result of our overview of Swiss multilingualism does not mean that all will be examined during the LIVE project, nor that all the relevant questions have already been identified.

CHAPTER 3 — INVESTIGATING L2 REQUIREMENTS AND USE IN VOCATIONAL TRAINING : METHODOLOGICAL DIMENSIONS

CHAPTER SUMMARY

This chapter presents the methodological background for the empirical stage of the LIVE project in Switzerland, consisting of qualitative interviews with a small number of apprentices and human resource managers working in Swiss firms. These interviews aim at evaluating the use of and demand for L2 skills in Swiss firms and represent an exploratory step towards future research in this field. The questionnaire presented here is based on four relevant economic dimensions of the Swiss case, as well as on general findings of studies on the relationship between L2 skills and economic activity.

3.1. INTRODUCTION

The key questions listed in Chapter 2 cover an extremely broad range of issues. Some (particularly under category C, and to some extent category B as well) can be addressed using existing data (some of which have already been put to use in Chapter 2) ; others will require additional data gathering. In this chapter, we are primarily interested in the procedure for gathering those qualitative data

However, available quantitative information, although it can tell us important things about the effects or results of L2 skills, convey little information regarding the actual processes through which L2 skills emerge as something useful (from the standpoint of employer and trainee/employee alike), as well as something that is used by trainees and ex-trainees in the course of their vocational activity. This information is essentially of a qualitative nature, and Sections 3.3. to 3.6. are devoted to the presentation of the survey procedure that was applied to collect this information.

Section 3.2. presents the particularities of the Swiss vocational training system, which we have respected in our procedure. Section 3.3. describes the selection of interviewees (that is, what type of actors should be interviewed, given the type of information we wish to gather) ; Section 3.4. is devoted to the selection of firms (that is, what is the type of firms where interviewees should be picked, given in particular the fact that L2 skills are likely to have more or less importance according to firm characteristics). In Section 3.5., we briefly confront our selection criteria with those that could be inferred from the (very small) scientific literature on the micro-level aspects of L2 use on the workplace. Section 3.6. contains the preliminary questions which were developed in a first stage.

The information so gathered was mainly used to answer questions from series B through E. International comparisons (series [F] questions) are handled in Chapter 6, in relation with the Singaporean case, from which pointers regarding the [G] series of questions are also derived.

3.2. THE FUNCTIONING OF SWISS VOCATIONAL TRAINING

3.2.1. GENERAL STRUCTURE

Statistics show that after nine years of compulsory schooling¹, a majority of students choose a profession in which they will receive on-the-job training for two, three or four years. The apprenticeship is divided into work and practical training three to four days out of five, the rest of the time being dedicated to formal in-class teaching of the theoretical knowledge specific to the trade, as well as to general education. Apprentices are employed under a work and training contract, which is not a standard employment contract ; however, by virtue of being a contract in the first place, it symbolizes the fundamental integration of Swiss VTE in the labor market. Apprenticeship contracts are regulated by the 1978 Federal Vocational Training Act (*Loi fédérale sur la formation professionnelle ; Bundesgesetz über die Berufsbildung*).

The standard apprenticeship system — called dual system — is organized as follows : the firm and the vocational school are the two places where instruction is provided. The vocational schools are under the responsibility of the cantons or the municipalities. However, some trade associations have their own school ; namely in the German-speaking region, most of the vocational commercial schools are run by the local branch of the Swiss association of office clerks (*Société suisse des employés de commerce*) (Wettstein 1994 : 37). Since 1978, another variant of the dual system, which could be called “tripartite”, has been set up ; in addition to the firm and to the vocational school, a third type of institution — a training center — is also called upon to provide part of the instruction. These training centers are specialized institutions teaching introductory courses during several weeks that are part of the curriculum for all the apprentices following a given apprenticeship. The training centers are in general set up and run by the relevant trade association. In parallel to the dual system coming in these two variants, the option also exists, in certain trades and professions, to attend full-time or part-time vocational schools ; in such cases, vocational training takes place very much in the same way as in countries such as France, Britain, or the United States. In the LIVE project, the emphasis is on the on-the-job training option.

After passing the final exam, the apprentice obtains the nationally recognized Federal proficiency certificate (*Certificat fédéral de capacité, Eidgenössisches Fähigkeitszeugnis*), which is certified by the canton. Cantons finance vocational schools, whereas curricula are largely determined by employers, who must, however, comply with federal regulations. Each apprentice is assigned to an apprenticeship supervisor (*Maître d'apprentissage, Lehrmeister*) within the firm,

¹ In 1996/97, 163,478 young people were engaged in an apprenticeship in a firm, 23,500 attended a full-time vocational school, 2,961 others a part-time vocational school (OFS, 1998b : 426).

whose task is to guide the youngster in his daily work². In small firms, this task is usually taken over by the owner himself, while in large firms, it will generally be delegated to the apprentice's (trained) colleagues or specialized training personnel.

Concerning the cost of vocational training for firms, a survey of some 2,000 firms by Hanhart & Schulz (1998) shows that costs vary according to economic sector and firm size. For example, small firms invest on average CHF 12,000 in the training of apprentices, whereas large firms invest some CHF 35,000. By accepting low wages during the years of apprenticeship, the apprentices cover part of the cost of their training themselves, because their work (mostly in the last year of their training) creates value added, only a part of which is compensated by wages. This effect, it should be pointed out, is distinct from the standard "opportunity cost" of education in terms of forgone earnings. Data collected by Hanhart & Schulz confirm that after the first year, apprentices' productivity generally increases, suggesting that the apprentices' contribution through low wages is in the region of CHF 12,000 to 15,000. Small firms therefore get the incentive of having access to cheap labor, especially in the advanced phase of an apprenticeship, since they often cannot afford to hire (on regular contracts) all the apprentices they have trained. In large firms, high training costs are recouped through the fact that training ensures a continuing supply of skilled employees.

Introductory courses take place in training centers or in workshops run by the employers. Depending on the apprenticeship chosen, apprentices must attend a few compulsory general education courses (the number of such compulsory general education classes can vary). In industry and crafts, these cover basic business economics, first language (L1), civic instruction and arithmetic. In commercial professions and sales, general education is oriented towards management, accounting, shorthand, type-writing and personal computer use.

L2 teaching is compulsory only in a limited number of training streams, particularly for office employees and clerks. In most cases L1 and L2 courses are given by teachers with a university degree. We will come back to L2 instruction in Subsection 2.2. L2 teaching is of great importance as optional subject in vocational training at the upper secondary level, as well as for post-secondary forms of vocational training taking place in advanced vocational colleges (*Ecoles professionnelles supérieures*; *Berufsmittelschulen*). The latter are institutions established in 1968; they offer diploma programs over three years full-time or four-years part-time for apprentices who wish to improve their vocational skills and general culture. In many cases, these colleges are equivalent to university programs in other countries (OECD, 1997: 88). Admission is conditional on passing an entry examination; the final examination (*Maturité professionnelle*, *Berufsmatura*) opens access to (university) tertiary education. Advanced vocational colleges have technical, crafts, artistic, agricultural and commercial sections, for example the advanced technical college, the advanced social service college, the advanced applied arts college, advanced college for management in public and private sector administration (Wettstein *et al.*, 1989: 138; Wettstein, 1994: 49).

The ten vocational categories most chosen by learners are listed in the following table.

² In what follows, we shall use the pronouns "he" and "him" as well as the adjective "his" to denote both female and male actors, irrespective of gender.

Table 3-1

Total number of learners in vocational training (apprenticeship, full-time/part-time vocational schools) by economic sector, 1996/97

Economic sector	Total number of learners in vocational training³
office work	44,683
metal processing	43,968
medical care	15,292
sales	14,484
graphical design , technical professions	12,191
wood processing	8,452
hotel and catering business	8,218
construction	5,208
artistic professions	4,620
food industry	4,426

Source : OFS, 1998b : 426

Given this distribution of apprentices across trades, we aimed at investigating current use and demand, as well as potential economic implications of high L2 skills. This procedure aims at clarifying the specific economic needs of the different professions and constitutes a contribution for the assessment of the economic significance of Switzerland's main languages (German and Swiss-German, French, Italian) as L2 in the two other language regions. We assumed that firms tend to establish privileged commercial contact with firms on the national and international level which speak the same language. Thus, the transaction costs are minimized.

3.2.2. YEARLY ENDOWMENTS FOR LANGUAGE INSTRUCTION IN VOCATIONAL TRAINING

As mentioned in Subsection 3.2.1., L2 instruction is compulsory only for office workers and sales clerks. Language instruction is organized as follows : one and a half days per week the apprentice attends various courses in a vocational school. Apprentices working in large firms often attend these lessons directly at their working place, since the employing firm is more likely to have the appropriate infrastructure.

Each profession has different apprenticeship regulations, and L2 instruction is optional or not required at all in most of them. This results in extremely diverse patterns of L2 instruction. In Table 3-2 below, we take the Canton of Geneva as an example.

³ For further data on apprenticeship and vocational training, refer to the appendix, table A-1 to A-6.

Table 3-2

Compulsory and optional L2 and L3 instruction according to professions*,
Canton of Geneva, 1996/97

Apprenticeship	Language instruction	
	L2	L3
Assistant in food, catering and hotel business	German, Italian or English	none
Printing and publishing assistant	German	optional LO or English
Hardware dealers ; postal employee ; hotel assistance	German	none
Documentary information assistant	German for special purposes or Italian for special purposes	"Technical English"
Dental care assistant	German or English	none
Domestic/homemaking services, pharmacy assistant, truck driver, sales administrator, sales clerk	German or Italian	none
Railroad worker, office clerk	German	Italian or English
Railroad dispatching/routing employee, lab assistant (biology, chemistry, physics)	German	English
Mechanic, computer services assistant	"Technical English"	none
Maintenance agent for computer equipment	"Technical English"	none
Window dresser/decoration	English	none
Bookshop assistant	Optional : German or Italian	none
Waiter	German or Italian or English	

* : apprenticeships not listed imply no L2 requirements.

Source : DIP & Office d'orientation et de formation professionnelle, 1998.

Table 3-2 is a telling example of the complexity of L2 and L3 organization in the Swiss apprenticeship system, where language teaching is adjusted to the nature of the different trades — in addition to the fact that, of course, "L2" has a different meaning according to the language region concerned. However, one important point needs to be assessed: does current organization still meet economic needs? To investigate this point, let us now turn to the profession which attracts the highest number of apprentices, as shown in Table 3-1, that is, office work. Apprenticeship regulations for (clerical) office workers (DFEP/OFIAMT, 1987) provide further insight into the organization of L2 instruction during apprenticeship. These regulations stipulate the yearly distribution of L2 and L3 instruction periods as shown in Table 3-3.

Table 3-3

Yearly endowments of language instruction during apprenticeship for office workers (whole of Switzerland)

Language instruction	Number of periods per year (period of 45 minutes)			Total
	1 st year	2 nd year	3 rd year	
Compulsory language instruction				
Mother tongue	80	80	80	240
Second official language	80	80	80	240
Third official or foreign language	80	—	—	80
Optional language instruction				
Third official or foreign language	—	80	40	120

Source : DFEP/OFIAMT, 1987 : 13

As shown in Table 3-3, language instruction occurs in three forms, namely, L1, L2 and — for a few — L3. It must be pointed out that L1 may not represent the mother tongue of students. This reflects not so much domestic migration between Switzerland's language regions (because this type of mobility has been decreasing in recent years), as international migration, resulting in a high proportion of foreign residents, whose children may have a non-national language (that is, neither French, nor German, nor Italian, nor Romanche) as a mother tongue. Although there are no figures on the enrollment of apprentices by mother tongue, it is safe to assume that the percentage of "allophones" (following the Canadian usage, we use the term "allophone" to describe precisely those persons whose mother tongue is none of the official languages of the country of residence) is higher in vocational training than on average in the Swiss education system. Hence, in this paper, L1 refers to the official language of the region where a school or firm is located. As we have seen in PR1, there is in Switzerland a one-on-one correspondence between language and location, known as language territoriality ; only a small number of municipalities are designated as bilingual.

Although L1 is not the focal point of the LIVE project, it is interesting to observe that exposure to L1 at school (as a subject) is the same as exposure to L2, if measured in terms of hours of courses per year, i.e. 80 hours per year — lessons of 45 minutes. Subtracting holidays and exam periods, this amounts to two hours per week. However, L1 is the medium of instruction for all non-language courses.

As regards L3, when it is featured in the syllabus (either as a compulsory or as an optional subject), the apprentice can normally choose between a third official language or a foreign language — in practically all cases, English. There is much less emphasis on the third language, which is taught for 80 hours in the first year of apprenticeship only. It is well-known that subjects taught at the beginning of one's education are most easily forgotten if not practiced regularly later on. Generally, an apprentice will have a choice between pursuing L3 as a subject into the second and third year of the apprenticeship, or to take subjects like economics, law, social sciences or personal computer use.

The explicit objectives of second language teaching enounced in the federal apprenticeship regulations (DFEP/OFIAMT, 1987) are threefold : oral

comprehension, oral expression, and reading. The apprentice must be able to express himself clearly in everyday and work-related situations. He must also be able to transcribe statements. More precisely, in order to obtain the federal proficiency certificate, the apprentice must be able to :

- ◆ demonstrate mastery of elementary grammar ;
- ◆ understand conversations about personal and work-related questions, both in their general meaning and in detail ;
- ◆ understand texts about personal and work-related questions, both in their general meaning and in detail, and summarize their contents in L1 (which, as pointed out earlier, may not be his mother tongue) ;
- ◆ express himself clearly in such situations ;
- ◆ interpret a text orally and take an active part in discussion about it ;
- ◆ take dictation relating to professional matters ;
- ◆ use a bilingual dictionary.

As regards L3, learning objectives are the same as for L2. However, since L3 is compulsory only during the first year of apprenticeship, one can expect the apprentice to master only the basics of his L3, unless he chooses to keep taking L3 classes for the last two years.

In short, in the dual VTE system, L2 (and occasionally L3) instruction plays (alongside physical education and quantitative skills) an important part as compared to other “generic” skills such as civic instruction, management, personal computer use, L1 correspondence. From the above, we can infer that decision-makers in the field of VTE are generally aware of the crucial role languages have in business and trade. Yet, a point that deserves examination is that of the possible gap between the actual situation and the ideal one, particularly from the standpoint of firms who wish to hire young people with a certain level of L2 and L3 skills. Addressing this question is among the goals of the LIVE project, in which we evaluate the L2 needs of some ideal-typical⁴ firms in Switzerland.

3.3. SELECTION OF INTERVIEWEES

The Swiss economy is characterized by regional and structural differences which are crucial for the choice of the firms to be interviewed, since they are likely to have different needs in L2 skills depending on economic sector, make up of client portfolio, geographical market orientation, size, etc.

Since we intended to look at the use of, demand for, and economic impacts of L2 skills, it is necessary to interview the key actors mentioned in Subsection 3.3.1., and to confront the results to apprentices’ viewpoint. It was also useful to interview a small number of actors in charge of teaching and organizing language instruction, in order to evaluate the concrete problems of L2 instruction. Such

⁴ We refer to the notion of ideal-type (*Idealtyp*) defined by the German sociologist Max Weber (Weber, 1990 : 10). Weber set up this theoretical construction able to reduce complex social reality by dividing it into categories which have general characteristics that are easy to work with.

information could be used in further research on the gap which may exist between the actual distribution of L2 skills on the one hand, and demand for such skills on the other hand.

3.3.1. PERSONS TO BE INTERVIEWED

A/ Apprentices

In Section 3.2., we have underlined the greater or lesser importance of apprenticeship in firms in various sectors, as well as the fact that certain apprenticeships are more frequently chosen by learners. This background information provided a useful guide to interviews. The main questions to be put forward included the apprentice's native language, the additional languages he uses in his daily work, and the specific activities for which they are used, and how frequently. A more precise list of questions is presented in Section 3.6.

B/ Instructors and full-time teachers

As pointed out later in this chapter, the large majority of firms in Switzerland are of small or medium size. These firms are not directly involved in language instruction, which is provided in vocational schools themselves. In larger firms, a distinction can be made between two types of persons in charge of apprentices' training ; some authors actually speak of three levels (e.g. Wettstein *et al.*, 1989 : 117), that is, instructors, full-time teachers and persons in charge of the training department. For our purposes, however, we regrouped the first two, since they hold the same function in vocational training : Instructors and teachers can provide information on the second languages taught in the firm and the way in which this instruction is organized. They are also in a good position to comment on what may be missing from current programs, and to pass judgement on the competence level reached by most apprentices.

As regards the assessment of competence levels, we shall make frequent reference to the Competence Matrix presented in Table 3-4 ; this matrix was developed and tested in the context of the FLCS Project ("Foreign language competence in Switzerland") discussed in Chapter 2.

Table 3-4
Competence Matrix

Level of competence	Type of competence			
	Oral comprehension	Oral expression	Reading	Writing
“fluently or almost”	Easy listening and comprehension, without effort, in all circumstances.	Discussions on the phone without problems ; able to use humor.	Reading texts without difficulty and dictionary.	Writing without difficulty texts, letters, articles, notes.
“good”	Follow a discussion or a TV program with a certain effort.	Discussions and conversation on the phone with a certain effort.	Reading texts of all kinds, but not as easily as in one’s mother tongue.	Writing letters of uncommon content which have to be corrected.
“basic”	Comprehension if the person speaks slowly, simple subjects. Not able to understand TV programs (except from simple ones, e.g. weather forecast).	To be understood in daily situations (e.g. which train goes to... ?).	To understand what the subject is, understand a poster, a sign, newspaper titles, letters with a common content.	Be able to write simple sentences (greetings, informal notes).
“none or almost”	Do not understand a sentence (e.g. an announcement in a station).	Do not speak a word (cannot ask one’s way).	Do not understand texts or posters, menus in a restaurant, etc.	Not able to write a message, even a simple one.

Source : Grin, 1999b : 76.

C/ Human resources managers

Persons in charge of the training departments, or human resources director(s), are often responsible for formulating and implementing a firm’s education and training policy, defining the objectives of the courses, and determining the planning of the apprentices’ assignment to different tasks in the firm. The human resources director(s) in particular may also have an influence on the definition of L2 requirements in the selection of employees. These persons can provide information about the strategic orientation of the firm in language terms, as well as about the L2 skills required in positions normally held by people who have completed the federal proficiency certificate. This information is useful in evaluation the extent to which there is an actual matching process going on between prospective employees’ language skills and the profile of positions in the firm that need to be filled. In small and medium firms, by contrast, we would normally turn to the owner of the business or his lieutenants.

Core questions to be asked pertain to the level of L2 skills required in the most frequent position(s) for which ex-apprentices are hired ; the extent to which L2 instruction influences the subsequent hierarchical position an apprentice will be able to obtain in his vocational career, and whether an ex-apprentice can do without L2 skills by demonstrating other competences, or whether a certain level of L2 skills is an absolute prerequisite for promotion — again, limiting ourselves to the case of federal proficiency certificate holders. A more extensive interview outline can be found in Section 3.6.

3.3.2. TYPE AND CONTENTS OF INTERVIEWS

The nature of the interviews reflects the chief goals of this research, that is, assessing the significance of L2 skills in the VTE context, particularly in terms of its associated economic dimension, such as use of these skills, relevance of these skills as conditions for employment, and relevance of L2 skills in the operations of the firm⁵. One firm was chosen for each of the four or five profiles defined with respect to several criteria discussed below. In each firm, in-depth interviews were carried out with the different actors mentioned in the preceding subsection, namely apprentices, instructors and trainers and (for small and medium firms) the owner or his representative, or (in large firms) the director of human resources and/or officers in charge of the training department. Concerning apprentices learning their trade in large firms with several distinct departments, those working in occupations where L2 skills are likely to have particular importance were selected. For example, we were led to prioritize apprentices involved in administrative tasks, correspondence, etc.

3.3.3. RELEVANT EMPLOYER INFORMATION

One important set of data, in order to interpret the specifically language-related information, has to do with the employer or the firm itself, the general structure of the firm, and its activities, whether or not they are related to training and/or to language. Through semi-directive interviews with the third set of actors identified in the preceding subsection, we intended to compile essential information on :

- ◆ General description of firm : main activities and products of the firm, annual volume of sales, number of full-time and part-time employees on pay-roll, in total and by department /division, reasons for geographical location of firm or branch.
- ◆ Training practices : there are three types of firms ; some train but do not hire once the apprenticeship is finished ; others hire trained apprentices, but do not provide vocational training for multiple reasons ; others still (particularly large ones), invest in apprenticeship in order to have skilled labor force at their disposal. This suggests gathering information on the number of apprentices trained each year in the firm ; whether this number has been stable and if not, for what reasons ; participation of apprentices in compulsory and optional L2 instruction ; explicit emphasis (if any) on L2

⁵ By contrast, data allowing for the estimation of the rates of return to second language skills were not collected in this study ; gathering such data is a very costly and demanding process.

skills by firm management of officers in charge of training and human resources.

- ◆ Hiring practices : because a great variety of hirings for apprentices with different types of training can occur within the same firm (particularly if it is a large one), it is impossible to cover every possible case of correspondence between one particular form of training and hiring practices. Hence, we will focus on a “modal” value, that is, the case type of position to which holders of a federal proficiency certificate are most frequently hired within a given firm. This generates questions on the linguistic criteria applied for the selection of candidates ; the extent to which L2 skills for this “modal value” position vary according to economic activity and market orientation ; the weight of L2 skills in the hiring decision, relative to other competences and skills required for the position.
- ◆ Suppliers : location, nationality and language profile of main suppliers ; (linguistic) patterns of communication with them. We shall also ask if language aspects have led to the decision to prioritize some suppliers while rejecting others.
- ◆ Markets : location, nationality and language profile of main clients ; (linguistic) patterns of communication with them ; we shall also ask if language aspects have led to the decision to target some markets more intensively while ignoring or abandoning others.
- ◆ Internal communication : official language in the firm (e.g. for documents, meetings, correspondence) ; language use among employees of same and different language background ; hierarchical differentiation of patterns of language use and language accommodation.

3.3.4. SPATIAL DISTRIBUTION OF INTERVIEWS

Across Switzerland's language regions (French-, German-, or Italian-speaking), the relative weight of firms belonging to one or another broad economic sector is roughly similar. More precisely, the share of firms in the tertiary (services) sector and respective shares for the secondary (industrial) sector are fairly similar from one language region to the next ; as can be seen in Table 3-5. In other words, it is not the case that most of the services activities are concentrated in one language region, while industrial production would be concentrated in another.

Table 3-5

Distribution in % of employees according to sectors and cantons, 1995

Sect. 2	AG	AI	AR	BE	BL	BS	FR	GE	GL	GR	JU	LU	NE
		41	40	41	29	41	29	33	18	50	29	46	34
Sect. 3	NW	OW	SG	SH	SO	SZ	TG	TI	UR	VD	VS	ZG	ZH
		36	40	40	40	42	40	46	32	42	24	31	33
Total for Switzerland : 31													
Sect. 3	AG	AI	AR	BE	BL	BS	FR	GE	GL	GR	JU	LU	NE
		59	60	59	71	59	71	67	82	50	71	54	66
Sect. 3	NW	OW	SG	SH	SO	SZ	TG	TI	UR	VD	VS	ZG	ZH
		64	60	60	60	58	60	54	68	58	76	69	67
Total for Switzerland : 69													

Source : OFS, 1998a

As shown in Section 3.4., a northern belt running across Switzerland (the "Plateau" area, stretching from southwest to northeast between the Jura and the Alps) attracts most of the economic activity, and this is where the economic fabric of the country has the highest density, apart from two other areas of relatively high economic activity in the Rhone valley (Valais, Wallis) and in Ticino. The highest concentration of firms in both industrial and services sectors can be found in and around the major cities, in decreasing order of density Zurich, Basle, Geneva, Berne, Lausanne, St-Gallen, and Lugano (OFS, 1998b). We therefore prioritized firms in proportion to the economic weight of the region, and took into consideration especially the tertiary sector, in which L2 skills are used more frequently than in the secondary sector, since communication plays a more central role.

A/ The German-speaking region

As economic activity is concentrated mainly in and around cities and towns such as Berne, Basle, Zurich, Lucerne, Olten, Aarau, and Winterthur. Two firms in the industrial (secondary) sector and three in the services (tertiary) sector were selected. Two points deserve particular attention in the German-Swiss case. First, to what extent do firms in the German-speaking region really need L2 skills in national languages and for intra-national trade, given that German-speaking Switzerland represents a clear linguistic majority of 63.7% ; second, on the international level, how is communication with non-German-speaking trade partners handled ?

B/ The French-speaking region

As this region is composed of six cantons (Geneva, Jura, Vaud, Neuchâtel, bilingual Fribourg, and bilingual Valais), we held interviews in four firms in the services sector, and one in the industrial sector. Particular attention was devoted to identifying patterns of L2 use for firms operating in this linguistic minority area, which nonetheless uses a language that retains a significant international position. This required a close look at the choice of trade partners ; for example, do French-speaking firms establish more contacts with French firms, or is their market orientation only modestly influenced by language considerations ?

C/ The Italian-speaking region

Italian-speaking Switzerland is in a linguistically particular position, being the second linguistic minority of the country. Italian is not frequently learned by non-native speakers, while it is a very wide-spread language among immigrants. Native speakers of Italian tend to invest in L2 acquisition much more than other Swiss do. In their case, it is practically a forgone conclusion that L2 skills are extremely important. While this does not diminish the interest of an investigation of L2 instruction in VTE in this particular region, it would arguably require a study with a specific design ; hence, Italian-speaking Switzerland will not be considered in this study.

3.4. FOUR RELEVANT ECONOMIC DIMENSIONS IN THE SELECTION OF FIRMS : GENERATING HYPOTHESES

In order to sharpen the focus of the interviews, we used four selection parameters based on factors that characterize the Swiss economy. They helped us to define different categories of firms. At the same time, it was appropriate to focus on economic sectors and professions in which the proportion of apprentices and ex-apprentices among the work force is relatively high. Let us briefly review the four key economic dimensions of the Swiss economy we used :

1/ Economic sector

Federal statistical office data (OFS, 1998a) show that 50% of all apprentices are trained in firms of the tertiary sector (a majority as office clerks), 45% in industry, especially metal processing and mechanical engineering, the remaining 5% being trained in agriculture. With respect to firm size, data confirm the predominance of small and medium firms in several specific economic sectors, as shown in Table 3-6.

Table 3-6

Number of firms by economic sector and size
(in number of employees), 1995

	1-9	10-49	50-99	250-499
retail, maintenance	67,306	5,774	531	72
various services to firms (real estate, R&D, computer business)	52,572	3,196	242	19
construction	25,315	6,097	639	50
hotel and catering business	20,004	3,287	198	18
metal processing	5,947	1,394	211	24
wood industry	5,757	935	44	1
paper, printing and publishing	3,982	746	117	24
micro-mechanics, optics, electric and electronic equipment industry	3,905	847	187	64

Source : OFS, 1998b : 205

Assuming that the demand for and use of L2 is more prevalent in the tertiary than in the secondary sector — because services depend on communication — what are the services sector professions where L2 skills are likely to be essential, and which level of proficiency would be required in there ? Do the currently available streams or arrangements for the acquisition of L2 skills adequately meet the needs of apprentices and their prospective employers ? Or should overly detailed planning be avoided, under the assumption that the kind and level of L2 skills needed can only be established once in the job ?

2/ Firm size

The Swiss economy is built on small and medium firms. Almost three out of four jobs in 1995 were found in firms⁶ with less than ten employees.

Table 3-7

Percentage of firms established in Switzerland according to size, 1995

<10 employees	10-50 employees	>50 employees
87.9%	10.1%	2.1%

Total exceeds 100% mark due to rounding up of numbers higher than 0.55.

Source : OFS, 1998a

The size of firms active in services tends to be small. More than three out of four jobs in this sector in 1995 were found in firms with less than ten employees. In the car and repairs business, 51% of firms employed fewer than ten employees ; in the real estate sector, this was the case for 54% of firms (OFS, 1998a).

⁶ Here, a firm is defined as the smallest independent legal entity, according to private law. A firm can have one or several establishments ; in general, an establishment consists of a building or another entity limited in space. In the industrial sector, the number of firms is 10% lower than that of establishments, in opposition to the services sector, where the difference is of 30%, due to the importance of branches. In the public sector, the notion of firm is problematic, therefore the census considers the size of establishments. The tables speaking of firms do not consider their branches (OFSb, 1998b : 206).

This data is based on the September 1995 edition of the “Census of businesses”, which is carried out every ten years (since 1991, there are also intermediary surveys held every three years). This census covers all private and public firms in the secondary and tertiary sector in Switzerland. Firms are contacted by letter, and answering is compulsory. The goal of the business census is to collect data about the essential characteristics (employees, firms, local entities where at least one or more persons work 20 hours or more per week, etc.) of the entire production structure of Switzerland. The 1995 census shows the following distribution of apprentices in firms :

Table 3-8

Percentage of apprentices according to size of firm, 1995

0-9 employees	10-99	100-499	>500
31%	33%	16%	20%

Source : OFS, 1998a

Half of all Swiss apprentices are trained in small and medium firms. These firms were given particular attention because of their importance in the Swiss economy and because over half of apprentices get their training in firms of this size.

Size raises the following questions : in which way does the size of a firm really influence L2 use and demand ? Do some small firms for which L2 operations may be too expensive — whether in terms of human resources or training — tend to target markets where L2 skills can be dispensed with ? This would imply a correlation between size and market orientation. Are there products or markets where L2 skills are unimportant and if so, in which economic sector ? To what extent and for which reasons (e.g. less administrative work, less communication problems in other languages) do firms have an incentive to work with intermediaries who handle distribution and export ?

3/ Market orientation

On the global level, Switzerland holds the second highest position of external trade volume per capita, right after the Netherlands (OFS, 1998b : 217). The high level of exports to OECD countries, especially Germany, is confirmed by OECD data (OECD, 1997 : 157-158). According to federal statistics (OFS, 1998b : 217), Switzerland exports 79% of its goods and services to OCED countries ; from this volume, some 61% go to the EU (European Union). Switzerland's export surplus mainly comes from trade with Portugal, Spain, Greece, Eastern European countries, the USA, Japan and developing countries, the most industrialized EU-countries except Great Britain, as can be seen in the following table.

Table 3-9

Swiss commercial flows in % of the total of exports/imports, 1996

	exports to	imports from
Germany	22.7	31.4
France	9.3	11.6
Italy	7.5	10.7
Great Britain	6.3	6.4
Remaining EU countries	14.9	18.9
USA	9.3	7.1
Japan	4.2	2.7
Rest of the world	25.3	10.9
Total	99.5 ¹	99.7 ¹

¹ : Total is below 100% due to rounding down of numbers under 0.55.

Source : OFS, 1998b : 218.

These percentages suggest that languages must play a very important role in the Swiss economy, simply by virtue of the fact that Switzerland is a country overwhelmingly dependent on its trade with countries all over the world. As regards exports by type of product, the difficulty of calculating the amount of services exported explains the relative lack of data in this field. Some activities (e.g. receipts from tourism) are not systematically included in services exports. However, relevant evidence exists (OFS, 1998a), indicating that the most export-oriented activities in the tertiary sector are the airline business, banking, travel business and transport, R&D, and services linked to the banking and insurance business.

By contrast, data on industrial production is more detailed. The shares of four groups of industrial products in total exports give us a rough approximation of the importance of different economic sectors.

Table 3-10

The four most intensively exported product groups in % of the total of exports, 1990/1996

	Machines, electronic equipment	Chemicals	Precision instruments, watches and jewelry	Metal processing products
1990	29.0	21.5	15.0	8.5
1996	28.4	26.3	14.9	8.3

Source : OFS, 1998b : 218

Surprisingly, very little research has been done on language in the economy of plurilingual Switzerland, be it for communication in the country or internationally. Independently of language issues, vocational training has been decidedly under-researched, with the exception of the recent study by Hanhart & Schulz (1998) quoted earlier.

As regards commercial exchange in relation to linguistic practices — a central aspect of our research, since it points to firms, economic sectors and geographical

areas where L2 skills can be expected to be particularly relevant — information is not available. The federal administration has information neither on the economic flows between cantons nor on those between the latter and other countries. The cantons' respective chambers of commerce have data on the productivity and growth of the different economic sectors, but this data does not deal with the economic flows according to administrative entities, destinations and economic sectors, which would have enabled us to identify actual language zones of economic activity. Apart from general data on the balance of payments and volume of exports and imports, the economics literature reveals a similar lack of research and information.

Hence, we had to resort to assumptions. We assumed that in a plurilingual environment (i.e., taking Switzerland as a whole), firms whose activity requires an emphasis on customer relations and after-sales services are much more dependent on L2 skills than firms focusing on production alone, and which hand over distribution and sales to other, specialized firms. In the latter case, contacting potential business partners and the first negotiations establishing the rules of the contract represent major steps for the producing firm, but once these steps are achieved, trading partners can get by with a minimum of L2 skills.

4/ Geographical location

The Swiss economic fabric is characterized by two main types of disparity that have direct geographical significance. The first disparity is the difference between mountain regions and other (i.e., “non-mountain”) areas. The so-called “golden triangle” between Berne, Basle and Zurich (entirely in German-speaking Switzerland) is an economically strong region concentrating an over-proportionate share of economic activity. This can be shown through various indicators, and eloquently represented in maps (see e.g. maps published by OFS, 1998c, with data from the business census). Another relevant distinction is one between cantons themselves, reflecting structural differences in their respective economic fabric. Using the same census data, they can be assigned to three groups, namely :

- ◆ cantons with a relatively high share of agricultural activity (up to 15%) : AI, AR, FR, LU, NW, OW, SZ, TG⁷ ;
- ◆ cantons with a developed industrial sector (over 45%) : GL, JU, TG ;
- ◆ cantons with an important tertiary sector (over 50%) (AG, BE, BL, NE, SG, SH, SO, SZ, UR, VD), based especially on tourism (GR, TI, VS) or related to strong urbanization (BS, GE, ZH).

These various characteristics were used jointly for the definition of “firm profiles”. Another key ingredient in this exercise is a list of economic sectors of activity (at a more disaggregated level than the usual “primary”, “secondary” and “tertiary” sectors). The assessment of the relative importance of these sectors rests not only on their weight in total value added, but also, for our purposes, on the number of apprentices who elect to get their training in these sectors.

⁷ The sources used in this chapter never indicate a full attribution of cantons to these three categories. In the case of the Canton of Thurgau, attribution to both the first and to the second category could be justified.

Given these economic dimensions of the geographical setting, what is then the relationship between location and L2 demand and use? For example, does the proximity of a language border significantly influence L2 demand and use? The “borders” that make sense here are internal language borders rather than national borders with surrounding countries, since in most cases, the language spoken across the border is the same as that spoken on the Swiss side (i.e., Italian-speaking Switzerland is next to Italy, etc.). Exceptions are :

- ◆ the half-Cantons of Basel-Stadt (Basle-City) and Basel-Land (Basle-Country) bordering on both France and Germany ;
- ◆ the Canton of Valais/Wallis is bilingual (French/German), and its French-speaking part borders both Italy and France, while its German-speaking part borders Italy ;
- ◆ the trilingual Canton of Graubünden (German/Romanche/Italian) is, again, a special case, where some German-speaking pockets are contiguous to Italy and Romanche-speaking areas (which are currently shrinking due to long-term attribution) are contiguous to Italy and to Austria.

Clearly, the microcosmic nature of these cases of geographical language contact forbids generalization ; at the same time, short of engaging in “micro-micro” analysis, it was not possible to do justice to all this complexity. We assumed that location proper (that is, other variables such as the language of clients) influence the use of and demand for L2 skills mainly through proximity with an (internal) linguistic boundary). However, proximity with Switzerland’s trading partners, especially the EU (and particularly Germany) may reinforce the role of L1 in relation not just to Switzerland’s official languages, but to foreign languages such as English.

On the basis of the four economic dimensions identified above, we defined four profiles of Swiss firms relevant for the LIVE project. The following table considers the size and economic activity of the firms, as well as the linguistic factor (in which language region the firm is established).

Table 3-11

Profiles of relevant firms (ideal-type examples)

	German-speaking region		French-speaking region	
	Small and medium firm (<50)	Large firm (>50)	Small and medium firm (<50)	Large firm (>50)
Tertiary sector (services)	Real estate firm in the Canton of Zurich	Computer business in the Canton of Basle	Editing firm in the Canton of Fribourg	Hotel business in the Canton of Vaud
Secondary sector (industry)	Firm producing chemical products in the Canton of Lucerne	Catering firm in the Canton of Thurgau	Railroad maintenance in the Canton of Geneva	Biological laboratory in the Canton of Neuchâtel

3.5. POINTERS FROM THE ECONOMICS LITERATURE ON L2 SKILLS ON THE WORKPLACE

The preceding considerations suggest that we can safely assume that L2 demand, use and economic implications on both sides involved in vocational training — apprentices and employers — vary according to a very wide range of different possible contexts. One concept that can be of help in handling these questions is that of the possible matching between the position held by an individual in a firm and his language skills. Remarkably little is known about this aspect of the labor market.

The notion of matching is more or less explicitly used in the economic analysis of the process by which individuals are assigned to a particular position (or set of tasks in the firm) according to their particular skills and the subsequent effect on productivity that these skills may have. However, the specific role of linguistic competence in a matching process has often been ignored. One pioneering paper is that of Sabourin (1985), whose theory of “linguistic environments” proposes an explanation of the distribution of employees according to their linguistic skills over the different economic sectors and in the different firms and jobs available.

Although we shall not discuss Sabourin’s theory in detail (which would require a presentation of the formal modeling used in it), it is useful to recall two of the chief assumptions made in it. First, in a given environment defined both in linguistic and vocational terms, the language skills of different individuals, never being exactly the same, are never completely interchangeable ; second, the utility an employee derives from his job varies not only according to earnings, but also in proportion to the absence of discrepancy between the level of his language skills and the level of skills required to perform his/her tasks. These assumptions yield a model where employee productivity depends on a proper matching between the employee’s language skills on the one hand, and the language competence required for an efficient discharge of duties, on the other hand. Taking account of such factors represents a sharp departure from standard labor market theory, where language is simply assumed away in the (implicit) representation of matching taking place in the labor market. The offshoot of Sabourin’s theory is that language will be taken into account in the organization of production — not just by employees trying to maximize their utility, but also by employers trying to maximize the difference between an employee’s cost (that is, the wage rate paid to him) and the benefits to the employer.

This affects the processes whereby the labor market reaches equilibrium. Given a certain supply of workers, who can be rank-ordered by decreasing level of L2 skills, the less bilingual ones are more likely to remain unemployed. This implies that Sabourin does not assume a standard neo-classical market-clearing model where any excess supply or excess demand would always end up disappearing through wage rate or price fluctuations ; the model assumes a fixed (or inelastic) demand for labor at least in the short run. By the same token, among employees of a same linguistic group (that is, sharing a given L1), the more bilingual ones will tend to occupy positions requiring a higher level of L2 skills. This, of course, is a partial equilibrium analysis, as it takes into consideration only one (or a limited number of) market(s) ; however, it proposes a very insightful explanation of wage differentials in a plurilingual environment.

Another family of contributions linking economy and language was commissioned by the Australian government in the late eighties and early nineties. The

Australian Language and Literacy Council (ALLC) has carried out research (on behalf of the National Board of Employment, Education and Training) on business and industry needs for languages other than English, usually called LOTES (see ALLC, 1994). Of course, the results of the Australian research do not automatically carry over to the Swiss case, as the social, cultural and geographical contexts are completely different, and English (the main language of Australia) is precisely the most widely used language for international trade and communications. However, the Australian studies can give us some useful indications on employers' views on the significance of L2 skills in business and industry.

Findings pertaining to the particular case of trade with Asia (the single most important trading region taken into consideration in the Australian study) shows that establishing strong personal relations with trading partners is of great importance for economic success. Might this be the case too for Switzerland's foreign trade, which is primarily oriented towards Europe? In this case, is language proper at stake, or should cultural (as opposed to linguistic) competence be given credit for facilitating trade? The Australian study points to several direct and indirect contributions of languages skills to trade and industry, although the relationships mentioned in the surveys remain fairly general and imprecise. The most direct contribution mentioned is the capacity to communicate when trading requires direct contacts between individuals. However, there is no agreement on how significant L2 skills are as direct contributors to success in trade (e.g., the signing of a contract). A more precise identification of such effects belongs to chief aims of the LIVE project, with a view to identifying some of the concrete needs of firms. It is interesting to note, that despite fairly inconclusive findings in terms of the identification of specific cause-and-effect relationships, the Australian studies generally conclude that L2 skills are important and valuable; in particular, they suggest including workers' language skills in the specification of vocational skills. They also make a series of policy recommendations on the development of language skills in education and continuing education. The underlying idea is that a future generation of workers skilled in more than one language will be better able to lead the export drive, and to reinforce the international competitiveness of the Australian economy.

Concerning the language skills used by firms, the authors mention a European study⁸ which can be considered relevant to the Australian case regardless of differences between the respective geographic, linguistic, cultural and economic contexts. The seven main points about the need of language skills in firms are the following :

- ◆ the higher the employee's function in the organization, the more important the role of foreign language skills ;
- ◆ certain activities require more language use than others ; this is the case for marketing and sales staff, management, secretaries and technical staff, researchers ;
- ◆ L2 skills are most frequently used for telephone calls, reading documents, one-to-one conversations, as well as for travelling, attending meetings, receiving guests and writing correspondence ;
- ◆ oral skills are the most important, before listening, reading and writing ;

⁸ Hagen, S., 1992. "Foreign language needs in the European workplace", *Australian Review of Applied Linguistics*, 15 (1): 107-124.

- ◆ oral skills also are the main source of problems, which tend to bear more heavily on smaller firms ;
- ◆ relatively few firms have their own training and translation units ; most buy services from outside agencies ;
- ◆ relatively few firms place advertisements mentioning language skills for appointments.

The ALLC's work had been preceded by another research (Department of Employment, Education and Training 1990) on the relationship between international trade and linguistic competence. This study was commissioned by the Australian Advisory Council on Languages and Multicultural Education (AACLAME) in order to encourage debate on the role of linguistic and cross-cultural policy in improving Australia's economic performance.

Two fundamental inconsistencies emerge in the analysis of economic actors' statements collected for this study. First, there is a frequently expressed view that it is possible to get by in many countries without knowing the local language. However, the authors state that business is precisely not about just "getting by", but about being more competitive than others. Being competitive translates into the capacity to perform a variety of highly linguistic actions, such as reading a business journal, understanding client negotiating styles, providing information in a language that clients can feel confident they understand, etc. The second inconsistency is the incapacity to act upon the recognition that access to market is practically impossible without local language knowledge including knowledge of culture. The authors of the AACLAME report, however, point out that language skills and business skills can be seen as different sides of the same coin (Department of Employment, Education and Training 1990 : 60). For example, if one does not have adequate mastery of the local language during negotiation, there is a significant risk of being left out of the negotiation and to become overly dependent on a translator's way to present things.

On the basis of our considerations on the general economic and linguistic context of Switzerland, and taking account of the pointers provided by the relevant economics literature, we made the following six hypotheses about the use for and demand of L2 skills in Swiss firms.

- [H1] The significance of L2 skills on the Swiss labor market is likely to be very high, with L2 skills influencing not only earnings, but access to employment as well ; this is likely to be reflected in firms' requirements, recruiting and hiring practices. Language skills are also an essential dimension of professional flexibility, both as a condition and as a proof of this flexibility.
- [H2] In some sectors, there may be a gap between apprentices' L2 skills and firms' needs in terms of the L2 skills of employees. It may be possible, at least in part, to explain this gap by the fact that L2 instruction in VTE does not integrate the economic significance of L2 skills in terms of productivity and/or competitiveness.
- [H3] The type and level of L2 skills needed varies greatly according to the nature of the economic activity performed, and this variation is insufficiently specified and taken into account in L2 instructions programs in VTE. In particular, firms in the tertiary sector generally have much higher needs in terms of L2 skills than firms in the industrial sector. In the same way,

firms whose activity entails a high component of customer relations and after-sales services are much more dependent on L2 skills than firms focusing on production and leaving distribution and sales to specialized firms.

- [H4] The more export-oriented a firm, the more important the L2 skills of its apprentices and former apprentices, unless it exports mainly to a country of the same language.
- [H5] Given their organizational and financial resources, large firms can invest into additional L2 instruction of their apprentices. Large firms therefore gain a competitive advantage over small- and medium-sized ones through language skills.
- [H6] In a context of globalization (which is particularly manifest in terms of international trade), one could imagine that English is perceived as gaining in importance for economic exchange, by comparison with Switzerland's official languages. Whether this is the case or not in everyday production activities is a point that needs to be assessed, particularly in cases where clients and suppliers are located in another language region in Switzerland itself.

3.6. PRELIMINARY QUESTIONNAIRE

Rather than specific questions, the following must be seen as a list of topics to be addressed during the interviews.

A/ Apprentices

- ◆ What is your native language ?
- ◆ Which other language do you use in your work ?
- ◆ How frequently (daily, weekly, from time to time) ?
- ◆ For what tasks (answering the phone, correspondence, meetings, contacts with superiors in and outside the firm) ?
- ◆ Which type of competence (listening, speaking, writing, reading) do you have in this language ?
- ◆ Do you think that the L2 instruction you receive is sufficient/insufficient for the tasks you have to perform in your work ?
- ◆ Do you think that higher (listening, speaking, writing, reading) L2 skills would enable you to occupy a position with more responsibilities ?

B/ Instructors and full-time teachers (for firms with in-house language instruction)

- ◆ What are the second languages taught in the firm ?
- ◆ How is the instruction organized (theoretical knowledge, practical exercise, level and type of competence to be reached) ?
- ◆ How many apprentices (of which department) attend compulsory/optional L2 instruction ?
- ◆ According to your experience, does the level of skills (according to the Competence Matrix) reached by the majority of apprentices reach the level required in the “modal value” position ?

C/ Human resources officer or the director (small firms)

(a) General description of firm or branch

- ◆ Which is/are the principal activity/ies of the firm ?
- ◆ What is the annual turnover ?
- ◆ How many employees work there ; how many in each department ?
- ◆ Why is the firm established in its actual location ?

(b) Training practices

- ◆ How many apprentices are trained in the firm each year ?
- ◆ Has the number of apprentices trained in the firm been stable over the last ten years ? If not, for what reasons ?
- ◆ Have the apprentices all started their apprenticeship in the firm ?
- ◆ Do some receive compulsory or optional L2 instruction in partner firms or in vocational training institutions ?
- ◆ For the “modal value” position, what type of L2 skills (listening, speaking, writing, reading) do you emphasize during the apprenticeship training ?

(c) Hiring practices

- ◆ Which linguistic criteria (mastery of one or more L2, level of skills, emphasis on one or more types of competences) are applied in the selection of applicants for the “modal value” position ?
- ◆ In the hiring decision, do L2 skills compensate for other skills required in the given profession ?
- ◆ Can an ex-apprentice dispense with L2 skills altogether by displaying a high level of other competences, or is a certain level of L2 skills indispensable in the “modal value” position ?
- ◆ Are there financial advantages (earnings) of having good L2 skills in the “modal value” position ?

- ◆ Which level and type of L2 skills could influence the hierarchical position an apprentice will be able to obtain in his/her future professional career ?

(d) Suppliers

- ◆ In which language region or country (for suppliers established in other countries) are your principal suppliers established ?
- ◆ If they are established in another language region, does the language factor complicate trade transactions ?
- ◆ At the “modal value” position level, in which language does communication take place during contacts with these suppliers (established in another language region) ?

(e) Markets

- ◆ In which language region are the main national commercial partners established ?
- ◆ In which language does communication with commercial partners take place ?
- ◆ Have some potential markets been abandoned or not taken into consideration due to communication problems ?
- ◆ Do you think that more developed L2 skills in apprenticeship might open new markets ? If so, what level and type of L2 skills do you think of ?

(f) Internal communication

- ◆ What is the “working” language in the firm (e.g. for documents, meetings, correspondence) ?
- ◆ Which language(s) is/are employed at the upper hierarchical level ?
- ◆ Are there material and/or non-material advantages for apprentices and ex-apprentices to using some L2 other than the firm’s working language in internal communication ?

The preliminary questionnaire was used as a basis for the structuration of two types of interview outlines : one for apprentices, and the other for apprenticeship supervisors or human resources directors. We chose not to elaborate a third type of questionnaire specifically for instructors and full-time teachers, as the two outlines already contained questions on L2 teaching methods and the vocational level of competence aimed at in lessons at vocational school.

At the same time, additional questions addressing the specific situation of a particular firm were introduced. The list of questions above structured, but did not constrain the investigation. A degree of flexibility allows to better identify the specifics of different profiles, as well as possible recurring problems. Table 3-12 provides a summary overview of the issues discussed during interviews.

Table 3-12

Identifying L2 instruction and use in VTE

	Apprentices	Instructors and teachers	Human resources officer or director
Acquisition	Which language ? How many hours per week ? Effectiveness of instruction : is the program clear, step-by-step ?	—	—
Skills	Description of skills with the help of one matrix per apprentice and second language.	Which gap between the skills of your apprentices and those they should ideally have according to the teaching program ?	According to the firm's activity, what are the oral, written and comprehensive skills required for the most frequent position ?
Use	Which language in which activity, at what frequency ?	Which skills for the most frequent position ?	With higher L2 skills of apprentices, could the firm develop its activities ? What is the orientation for the future regarding L2 skills as an element of the firm's strategy ?

CHAPTER 4 — SWISS INTERVIEWS AND RESULTS

CHAPTER SUMMARY

In this chapter, the empirical results of the LIVE project are presented and analyzed according to the central research questions. In a first stage, we report the qualitative interviews which concern the nature of second language taught during vocational training, teaching methods, firms' specific needs, and future challenges on the labor market. In a second step, we confront interview results with our theoretical assumptions.

4.1. INTRODUCTION

Employers place certain demands on the education system. As mentioned in a study on competitiveness between industrial countries (OECD, 1991 : 40)¹, "...knowledge, learning, information and skilled intelligence are the new raw materials of international commerce". This statement summarizes much of the arguments which justifies the importance of research projects on education policies. The latter determine the institutional basis and contents of programs which prepare young people for professional life, thus influencing the quality of future labor force.

In this chapter, we will interpret the empirical findings collected during the interview phase from March to May 1999 in the German- and French-speaking parts of Switzerland. We contacted about thirty firms ; those willing to participate in our project were about thirteen, of which we selected ten presenting the most suitable profile.

In Section 4.2. the detailed results of the 22 interviews (11 apprentices, 11 apprenticeship supervisors or human resources directors, including the two pre-test interviews) will be presented, structured according to eleven topics mentioned in the two kinds of questionnaires, of which a German and French version can be found in appendix C. The eleven topics of the two questionnaires were developed according to the key questions addressed in the LIVE project :

- A/ Which are useful types and levels of L2 competence for apprentices to acquire during apprenticeship ?
- B/ How does this usefulness show : through higher employability, career perspectives, more interesting terms and conditions, higher earnings, increased capacity for mobility ?
- C/ Which of the L2 skills acquired by apprentices are most useful for the firms which train and/or employ (ex)apprentices ?

¹ Quote from the National Commission on Excellence report (United States) *A Nation at Risk*, 1983.

- D/ How does the usefulness of L2 skills show for firms : greater economic efficiency, or market share expansion ? If this is the case, is it because the L2 skills of (former) apprentices make for easier contacts with suppliers or other firms, and to attract potential customers speaking different languages, or because L2 skills increase internal communication in a firm with branches in different language regions of Switzerland, or because the mastery of L2 skills allows to access others cultures and therefore to gain new markets ?
- E/ Where is the utility of L2 skills for firms more visible : in purchasing or in sales ? However, as already explained in PR 2, in Swiss vocational training, second languages are taught as compulsory subjects mainly in apprenticeships preparing for professions in the tertiary sector — the office clerk apprenticeship is the one most frequently chosen by young people. As the tertiary sector is oriented towards sales and is very dependent on customer contact, the distinction between purchasing and sales is not excessively relevant in the case of our sample.

In Section 4.2., we present interview results on the eleven questionnaire topics according to firms, apprentices' and human resources managers' points of view. The topics are broken down according to the different levels of analysis, which are summarized in our hypotheses. The detailed interview results outline the main problems apprentices and firms are confronted with concerning L2 instruction and use. We will examine the skills transmitted in lower secondary and in vocational schools as well as shortcomings in L2 syllabus and pedagogical methods. However, the main question has to do with the use and efficiency of L2 skills of (future) employees following the on-the-job-training option in firms located in Switzerland. An overwhelming majority of respondents identifies the same major problems, which concern the teaching methods and the objectives aimed at by vocational schools, independent from language region.

Section 4.3. is dedicated to the general interpretation of empirical findings. In Subsection 4.3.1., we examine the gap between the real situation of L2 teaching and use in vocational schools and firms and the education policy goals set for vocational training by Swiss authorities. In Subsection 4.3.2., the major empirical results will be confronted with our hypotheses.

4.2. PROBLEMS REGARDING METHODS AND OBJECTIVES IN L2 INSTRUCTION

Although the number of interviews is small for a qualitative survey (22 in our case), we can observe a clear convergence in the statements of apprentices and employers. All firms — except one having a strictly local activity confined to one language region — are confronted with the same problems revolving around the lack of adapted teaching methods and objectives, obviously with slight differences depending on their specific area of activity. The convergence concerns two broad aspects which are closely related to each other : on the one hand, the type and level of L2 competence used and needed by apprentices on the workplace ; on the other, the problems concerning L2 teaching methods before and during apprenticeship itself.

In short, our results, though drawn from a small qualitative sample, show a clearly similar pattern of L2 use and demand across firms. There is almost unanimous agreement that L2 instruction methods should be reformed, as well in secondary schooling as during apprenticeship, in order to adapt L2 instruction to the daily use in a firm. The role of attitudes towards languages is also a key aspect on which language and education policy should work.

Interviews were in general made with one apprentice — except at CFF (two apprentices), Manor department store in Geneva (a class of six learners) and SAP Systems (none, as the firm does not train apprentices) — and with the apprenticeship supervisor, or the person responsible for training in the whole firm (or human resources manager). In two firms, we interviewed the director (Régie Braun, Kuoni : Berne city center branch). All apprentices were trained to become office workers, except for the CFF (travel agent, railroad dispatching employee and railway station administrator) and Manor department stores (sales clerks). Table 4-1 summarizes the set of interviews by firm and language region.

Table 4-1Interviews per firm² and language region

	German-speaking region	French-speaking region
Swisscom (telecommunications)		- one office clerk apprentice - one apprenticeship supervisor
Nationale Suisse Assurance (insurance for persons and property)		- one office clerk apprentice - one apprenticeship supervisor
Régie Braun (real estate management)		- one office clerk apprentice - director
Manor (department store)	- one sales clerk apprentice - training director Switzerland	- six sales clerk apprentices - apprenticeship supervisor
SAP Systems (business software and computer training)	- human resources manager	
CFR (public railways)	- one railway station administration apprentice - one railroad dispatching employee - training director for central Switzerland	
Interhome (realtor)	- one office clerk apprentice - human resources director	
SAir-Group (air travel industry, catering, handling)		- one office clerk apprentice - apprenticeship supervisor
Givaudan-Roure (perfumes and industrial flavorings)		- one office clerk apprentice - apprenticeship supervisor
Kuoni (travel agent)	- one office clerk apprentice - branch director	

The qualitative analysis of interview results has been structured according to ten major topics relevant in terms of the LIVE project hypotheses. A summary of interview answers is given in the following subsections. In order to make the analysis as clear as possible for the reader, the topics, the type of interviewee as well as the topics' sequence are listed in Table 4-2. On most topics, individual opinions (in addition to replies to our questions) were offered by both apprentices

² For detailed description of interviewed firms, see appendix B.

and employer/apprenticeship supervisors. If the responses of these two categories of interviewees differ from each other, this is specified in the text. For two topics only, such perspective is given by one category only, and this is explicitly mentioned in the title and introductory text of the subsection.

Table 4-2

Interview results : structure of interview topics analysis

Topic No.		Apprentices' point of view	Employers' point of view
1.	Levels and types of skills taught in the school system (prior to apprenticeship)	Section 4.2.1.	
2.	Choice of L2 taught during apprenticeship	Section 4.2.2.	
3.	Level of L2 skills at time of survey	Section 4.2.3.	Section 4.2.4.
4.	Relevance of L2 skills for future needs of business firms	Section 4.2.5.	
5.	Methods for L2 instruction	Section 4.2.6.	
6.	Interregional differences in L2 needs	Section 4.2.7.	
7.	Comparison between English and national language skills acquisition and use	Section 4.2.8.	
8.	Employment and career perspectives in the training firm	Section 4.2.9.	
9.	Languages in internal communication	Section 4.2.10.	
10.	Impact of L2 skills on Swiss firms' market shares	Section 4.2.11.	

Detailed interview results are not presented in this document, since they contain confidential information. In what follows, we present the results of the interviews with respect to the questions listed in Table 4-2.

4.2.1. EVALUATION OF THE LEVEL AND TYPES OF SKILLS TAUGHT AT SCHOOLS BEFORE APPRENTICESHIP

In the two types of interview outlines, several questions³ deal with the level and types of L2 skills taught at secondary I level. A coherent evaluation of L2 instruction in vocational training requires an analysis of the preceding school level, in order to examine a possible gap between the syllabus of secondary I school, and those of respective vocational schools, as well as the differences between cantons reflecting the existence of 26 different school systems. In some cantons, the syllabus of vocational schools are an explicit building up on the level achieved at the end of ninth grade, while in others there may be repetition or overlap.

As a reminder, all firms set as a prerequisite for beginning an apprenticeship a "passing" GPA at the end of compulsory school. Yet, some firms such as Givaudan Roure have internal tests for the assessment of language and other skills. Applicants have to pass these tests successfully to be eligible for an

³ In the apprentice outline, 6a) and b), 8 taken in a broad sense, and 10 ; in the employer outline, questions 11 and 20.

apprenticeship. In general, most learners come directly from lower secondary school, although some have already tried other options such as the “School of commerce” (*Ecole supérieure de commerce, Handelsmittelschule*), the *Ecole complémentaire générale* (a general secondary II school without preparation to the bachelor exam) or other institutions. In the interview answers, a dual tendency emerges :

- [1] The current teaching methods (learning by heart, emphasis on grammar) as well as the syllabus for the national L2s and English on the secondary I level are not adapted for young people who pursue their education in vocational training. Apprentices have to deal with everyday situations, which require effective oral expression and comprehension on a basic level : simple sentences, basic vocabulary and grammar necessary for simple but clear sentences.
- [2] Secondary I school not only does not prepare well pupils who begin a practical on-the-job training ; it also follows a syllabus which overlaps with language teaching during apprenticeship. The different programs are not adapted to each other.

4.2.2. EVALUATION OF THE CHOICE OF L2S

According to federal regulations on the syllabus and weekly endowments for L2s during apprenticeship, rules are set out as follows for language instruction in the office clerk apprenticeship — which is the center of our interest, even if two large categories of apprenticeships are also considered in our sample : sales clerk and three types of apprentices in the railway branch : travel agent, railroad dispatching employee, and railway station administrator.

Office clerk apprentices have to learn the second national language for three years, with a weekly endowment of two hours per week. This means that apprentices in the German-speaking part learn French as their first L2, and English as their second L2. Apprentices in the French-speaking part of Switzerland learn German. The third language taught — the third national language or English — is compulsory only in the first year. Apprentices can choose to keep this subject or not in the second and third year. If not, they take another branch instead such as economics & law or “computer use”. It is taught for two hours per week in the first two years, and for one hour per week during the last year. All the office clerk apprentices interviewed had chosen to keep the second optional L2 in the second and third year. All of them have taken English instead of Italian, which is also offered as second optional L2.

For sales apprentices, L2 instruction during apprenticeship is organized according to a similar principle, apart from the fact that pupils can choose their compulsory second national language. In other words, it need not be the language of one of the two larger language groups (German or French). English is optional, but none of the apprentices interviewed chose it, as lessons were scheduled in the evening, after office hours.

The situation is slightly different for apprenticeships at the Swiss federal railways, in sales or in administration. The two other national languages are compulsory, and English is an option for the last two years.

The interview answers reveal a deep-seated ambivalence concerning the importance of national languages compared to English. This ambivalence has been growing since the eighties, in parallel with the increasing internationalization of commercial exchanges and the development of communication technologies. English has developed from being an international language to a global one, in other words, it has a position no language has ever reached before (Grin, 1999b). It is the dominating language of commerce and finance, even in countries where it has no legal status, and has an official status in about sixty countries. It also has a clear first position in science and technology.

For some years, there has been a heated debate in Switzerland over the priority of national languages compared to English in the education system. Some cantons want English to be the first compulsory second language, followed by an optional national language. For instance, in 1998, the education department of the Canton of Zurich decided to make English the compulsory second language, and to reduce the number of French lessons. Strong reactions, especially from the Board of cantonal education directors (*Conférence des Directeurs cantonaux de l'Instruction Publique*) resulted in the postponement of the decision. At the same time, a survey published in the Alemannic weekly *Facts* in November 1997 revealed that a majority of people in the French- and German speaking parts of the country thought that English should be taught as the first foreign language, thus gaining priority over national languages (Grin, 1999b).

Apprentice interviews confirm the conflict over the meaning of Swiss plurilingualism :

- [1] Most consider English more important than national languages for their career prospects, and observe that in their daily work, except in the tourism industry, they can get along quite well without national languages.
- [2] As distinct from perceived usefulness, motivation and ease of learning also rate higher in the case of English than national languages.

4.2.3. EVALUATION OF APPRENTICES' L2 SKILLS BY APPRENTICES

In this subsection, we summarize the evaluation apprentices give of their own L2 skills during apprenticeship, considering the daily tasks they have to accomplish. The first language of the apprentice is mentioned in brackets as well as the city in which the firm is located — if the apprentices' first language does not correspond to the official language in the region concerned, this is explicitly mentioned. We divide the evaluation into four types of skills for each second language the apprentice has learned or is still learning during apprenticeship : oral expression, oral comprehension, written and reading skills. All learners had a clear view of their type and level of skills, and talked frankly about their problems with second language acquisition.

The interview findings can be summed up by the following statements :

- [1] Apprentices tend to have a low to average mastery of one national language as well as English, and say so themselves.
- [2] Oral comprehension and expression are the two most useful types of skills.

- [3] However, these skills are those that are taught the least, because vocational schools put the emphasis on written skills, grammar and learning vocabulary by heart without practicing it. Consequently, the level of oral comprehension and expression is evaluated as very low.
- [4] Oral comprehension and expression in English are considered easier by most, as the language itself is considered less difficult than French or German, and positive attitude towards English increases motivation.

4.2.4. EVALUATION OF APPRENTICES' L2 SKILLS BY EMPLOYERS

In this section, we report on employers' point of view on apprentices' L2 skills, in order to compare them with results from Subsection 4.2.3. Results show that employers' observations converge with the apprentices' view and that reality in vocational training is far from the "Swiss model" in which each person should be able to use his / her language, provided it is one of Switzerland's national languages, and be understood by his interlocutors. In other words, people having grown up in plurilingual Switzerland should have passive mastery of the other national languages. This is clearly not the case for young people having gone through vocational training. Once again, the following observations based on interview answers can be made :

- [1] Apprentices can hardly understand clients or colleagues using what is a second language for the apprentices, and answering in the second language (active skills) is even more difficult.
- [2] As to the type of L2 knowledge, apprenticeship supervisors and human resources directors all point out that grammar and dictation are overemphasized at the expense of conversation and productive capacity in typical working situations, such as direct or telephone contact with clients, being able to understand what the conversation is about, and being able to answer in a simple and clear way.
- [3] In addition, mental blocks⁴ hinder attempts to venture into using French or German as second languages. A clear preference for English in both language regions can be observed.

4.2.5. RELEVANCE OF L2 SKILLS WITH RESPECT TO PROJECTED NEEDS

In recent years, discussions on the discrepancy between the organization of vocational training and the evolving needs of the labor market have increased (OECD, 1991 ; Grin, 1997a). Trades and professions are modified by the development of new technologies, means of communication and changes in the global economic fabric. Critics⁵ say that the courses offered, both for specialized topics and language instruction given by vocational schools, are no longer adapted to current economic needs. In this context, in 1998, the permanent Board

⁴ Mental blocks are based on stereotypes of a people and its culture. They are closely linked to both one's evaluation of the degree of difficulty of a L2, and of one's motivation of learning it (De Pietro, 1994: 103 ; mentioned in Ogay Barka, 1999: 33).

⁵ See for example the study of Dubs (1989) on vocational training, which provided a basis for a reform project of apprenticeship (Apprentissage 2000).

of cantonal education directors mandated an expert commission to develop a new language concept for language teaching in the Swiss education system.

As our interview outline contains questions referring to the current situation and from which the interviewees developed arguments on firms' and apprentices' future needs⁶, we present in detail this language concept in Subsection 4.3.1. For the moment, it is useful to mention its core content.

The language concept highlights the challenges the economy faces in a plurilingual country which is largely involved in international trade, and makes suggestions going in the same direction than the ones mentioned by the persons interviewed, that is, to impart at least one national second language as well as English and to coordinate teaching goals and syllabus endowments across cantons, in order to encourage young people to become truly multilingual. Secondary I school should have the stimulating function of imparting basic knowledge of languages. The latter should be easily developed by individuals wishing to do so later on. As languages are important subjects in vocational schools and gymnasiums, intersections between institutions should be examined. This requires intercantonal coordination, as pupils often have (or want) to change cantons to continue their education. The report emphasizes the fact that language teaching should be formulated in a coherent way across the different levels, including non-compulsory options such as secondary II and tertiary level.

The interview results concerning current L2 instruction with regard to future needs reveal concrete problems due to the gap between the goals of the new language concept and reality in vocational training. We can conclude that :

- [1] The organization of L2 instruction and the skills aimed at cannot meet the current and future needs of the Swiss economy.
- [2] The goals listed in the 1998 language concept are not reached, as we will show in Subsection 4.3.1.

These observations lead us directly to attempt at a rough assessment of L2 instruction methods. These require a closer examination, since pedagogical choices, the organization of courses and the possible organization of language stays reveal a lot about political and economic priorities regarding L2 instruction during vocational training.

⁶ Questions 12, 15, 17, 18, 19, 20 in the interview outline for human resources directors and apprenticeship supervisors, and questions 6, 7, 8, 9, 10 for apprentices.

4.2.6. EVALUATION OF L2 TEACHING METHODS (INCLUDING LANGUAGE STAYS)

The term “teaching methods” will be used here to denote the number of classes and their distribution over the weekly timetable, the materials used, the emphasis on different skills, the levels aimed at, the possibility of language stays offered during apprenticeship, and the size of classes. Once again, the answers and comments of persons interviewed stress several aspects which should urgently be changed in order to improve the efficiency of L2 instruction. We first report answers before taking a closer look at the question of language stays, which has been recently addressed through the “Apprentissage 2000” project.

The *Apprentissage 2000* (Apprenticeship 2000) project is an innovative attempt at reforming the most frequently chosen apprenticeship (i.e., that of office clerk). We briefly summarize here its principal objectives, and focus on the language aspect.

This pilot project applying innovative measures to the office clerk apprenticeship was initiated through a partnership between public and private institutions (administrations and schools) and firms at the beginning of the nineties, following propositions of a working paper on the future of commercial apprenticeship⁷ in Switzerland⁸. The proposals for reforming office clerk apprenticeship aimed mainly at improving the effectiveness of courses taught at vocational schools, in order for apprenticeship to represent a competitive alternative to other forms of education.

The central idea of this project was a restructuration of the traditional education system with hierarchical options. The new organization should allow vocational training pupils to access postsecondary education⁹, through, a “professional degree” exam (*maturité, Matura*). The challenge consisted in preparing apprentices during five years to the “maturité” level, for which pupils in the gymnasium and commercial school are prepared through a four years full-time syllabus. For this purpose, the effectiveness of courses at vocational school had to be improved. Six major modifications were suggested :

- 1/ portable computers for each apprentice ;
- 2/ introductory courses at the beginning of the apprenticeship ;
- 3/ concentrating courses over a short period of time ;
- 4/ language stays in two different countries ;
- 5/ emphasis on key skills ;
- 6/ Practical examination at work.

Points 3/, 4/ and 5/ are of central interest for the LIVE project, as they deal with second languages during apprenticeship. We will therefore not elaborate on the three other points. Language stays are organized at the end of the second and at the beginning of the third year, with the final exam in second languages scheduled right after the return of apprentices from their language stays. Four

⁷ We use the term “commercial apprenticeship” (a direct translation from the French) to denote training in sales, business and commerce generally.

⁸ Dubs R., 1989, *Une formation professionnelle commerciale pour l'avenir*, Zurich: SSEC and UBS, quoted from Amos (1999: 9).

⁹ As a reminder, the tertiary degree comprises university, other superior institutions, teacher training, advanced colleges, and advanced vocational schools.

weeks each are spent in Great Britain, and Germany or France (depending on which is the second language of apprentices).

The authors of the study turned to the Swiss Federal Office of Industry and Labor (OFIAMT) for support. The project was initially developed for the Alemannic region, but the OFIAMT set two basic conditions : its extension to the French-speaking region, and a supervision by research institutions in each canton. There are two reasons for this : one is that the Swiss education system is already extremely fragmented, since education falls within the cantons' area of competence. The second reason is that, as already mentioned in Chapter 3, from an economic point of view, the Alemannic region, with more firms with a high productivity and lower unemployment rates, was not the region with the greatest need for efficiency gains.

One central feature of the project was the cooperation between all the actors concerned by vocational training : public administrations, public and private schools, research institutions, and representatives of employers and trade unions.

As to the costs of language stays, the firm has to do without the apprentices' workforce during their absence. The question of who should finance language stays is a delicate one. For the *Apprentissage 2000* project, financing was organized as follows : the apprentice and the firm each paid 400 Swiss francs, the vocational school paid the habitual subsidy of 100 (which is normally destined for a trip at the end of the third year) ; and school fees were paid by the Vocational training funds (*Fonds pour la formation et le perfectionnement professionnel*). In this project, several teachers from the vocational schools accompanied the apprentices to Germany or France and Great Britain, and had therefore to be replaced during their absence.

Obviously, as the *Apprentissage 2000* project was a first attempt to innovate in vocational training, several points can be improved in the future, if an overall reform of this type is to be considered. However, keeping in mind our central research question of L2 instruction in vocational training, we will not elaborate further on the *Apprentissage 2000* project as a whole. We will take the case of the Canton of Geneva (Anthamatten, 1998 ; Amos, 1999) to illustrate the innovative measures concerning second language instruction. Language stays were offered to two cohorts of apprentices, one beginning their vocational training in 1994, ending in 1997 ; the other beginning in 1995 and ending in 1998. Once again, as apprenticeship supervisors of *Nationale Suisse Assurances* and *Givaudan Roure* observe, on the pupils' side, individual motivation is the key factor for L2 learning, on the condition that teaching methods be reasonably good.

This statement is confirmed by the studies made by Lambert, Gardner *et al.* in the 1960ies in the United States on the roles of attitudes and motivation in second-language learning (in Fishman, 1968 : 472-491). The authors took three samples of high-school students in Louisiana, Maine and Connecticut to measure attitudes of different language communities from a social-psychological point of view. They found that pupils who integrated stereotypes on the French-speaking community have more difficulties in learning this language. Negative attitudes are not the only inhibiting factor, but they play quite an important role in motivation. This fact needs to be taken into consideration by Swiss public authorities when developing education programs and pedagogic methods in this country with four official languages (French, Italian, German, Romanche) and one majority language community (Alemannic Switzerland).

It is clear that one cannot directly transfer results obtained in another cultural and historical context to the Swiss situation, but the general message is plausible : a language is closely related to a cultural context and the people speaking this language. This means that attitudes towards, and stereotypes of other language communities intervene in L2 learning in a more or less intense way, depending on the type of attitudes and the political and historical relationship between communities. In our interviews, the role of attitudes between the French-speaking part and Alemannic Switzerland is extremely present in L2 instruction, especially in the French-speaking population. The latter has a very negative image of Alemannic communities, their way of life and their language. These stereotypes are not only mentioned in all interviews by apprentices and confirmed by their supervisors as being a great obstacle in German language courses, but it is a well-known problem in the interregional relationship of multicultural Switzerland.

The recurring observation, by interviewees on language learning capacity according to age refers to the widely held belief that languages, even more than other skills, are much more easily acquired until the age of about twelve. A certain number of American and Canadian studies examine the ideal age for beginning the apprenticeship of second languages (Brohy, 1998 : 3) and observe that there is a clear tendency to begin around the second or third year of primary school. Even if these results refer to immersion projects aiming at bilingualism, their general conclusions based on the acquisition of a language can also be applied to second language learning as a whole, aiming at a basic or medium mastery of L2s.

The duration of apprenticeship is a factor enhancing the impact of L2 learning during childhood. Brohy notes that a child needs about five years to develop good skills in a second language. Considering that L2s in Switzerland begin, at the earliest, at the end of primary school, it is clear that it is almost too late to acquire a good level during the following years. During apprenticeship, young people between 15 and 20 reach a basic level of L2 skills, according to the evaluation made by apprentices themselves and their supervisors. Recurring remarks during interviews reveal that :

- [1] at that age, current weekly endowments for L2 classes are not enough to ensure the basic to medium level required by firms ;
- [2] as language stays in the *Apprentissage 2000* project have shown, a one-month stay in the apprentice's second language environment (immersion) improves the apprentices' L2 skills from half a grade to one full grade, and learners lose a large part of their mental block (Anthamatten, 1998). Knowing that language acquisition becomes more and more difficult after childhood, short language stays represent an efficient way to strengthen L2 learning during apprenticeship¹⁰.
- [3] organizing language stays demands complex organizational and financial solutions, therefore most of the interviewed apprenticeship supervisors, even if they are aware of the positive consequences, hesitate to call for one or more compulsory language stays during apprenticeship.

¹⁰ Several studies reveal that language stays, if accompanied by pedagogical measures, are a very effective means for developing learners' knowledge of L2 (Saudan, 1997, quoted in Ogay Barka, 1999: 34).

4.2.7. INTERREGIONAL DIFFERENCES IN L2 NEEDS

This subsection summarizing questions 6, 7, 8, 19 a) and b) of the employers' interview outline and questions 9 a), b) and c) of the apprentices' interview outline is useful for determining if firms' L2 needs vary according to the language region, and if so, which factors could explain the difference. The firms' L2 needs differ according to the four economic dimensions previously identified in PR 2 : economic sector, firm size, market orientation, and geographical location. Depending on the firm's principal activity, L2s are given an importance ranging from little to indispensable :

- [1] The tourism sector and sales firms in large cities visited by tourists from all over the world — independently of geographical location — belong to the latter category.
- [2] Firms exporting a lot and / or having commercial contacts with another language region of Switzerland assign a relatively high importance to L2s.
- [3] Small firms, which very often cater mostly to a local or regional clientele, require a minimum of L2 skills.

4.2.8. COMPARISON BETWEEN ENGLISH AND NATIONAL LANGUAGES (WEEKLY ENDOWMENTS, MOTIVATION, FIRMS' NEEDS)

We already mentioned in Subsection 4.2.6. that the stereotypes and perceptions of a people, its history and mentality, often crystallizing around language, influence the choice of L2s, their acquisition and their use. At work, employees will develop strategies to avoid using a certain L2, which, in most cases, is the other main national language (German or French). In Switzerland, regardless the fact that in a majority of firms, L2 skills permit to evolve in one's work and responsibilities, a large number of employees choose to limit their use of the other main national language whenever possible.

- [1] Responses show a strong preference for English as a second language, as well for its acquisition, because of its usefulness in professional contacts.
- [2] Widespread negative attitudes towards L2s, especially the other main national L2 (French in Alemannic Switzerland, German and Alemannic dialects in the French-speaking part), slows down progress in L2 learning.

4.2.9. EMPLOYMENT AND CAREER PERSPECTIVES IN THE TRAINING FIRM

This question relates to the importance of L2 competence for young people's career perspectives after having accomplished an apprenticeship. Are L2s indispensable for jobs requiring a Federal apprenticeship certificate, or can the former apprentice discharge his or her future duties without a basic knowledge of one or several L2s ? What importance is given to L2s for jobs with more responsibilities ? For most firms, the situation for apprentices is the same :

- [1] If learners finishing their apprenticeship are motivated and have an adequate overall level at vocation school, some vacancy can generally be found in the firm. L2 skills are not determining factors in the selection of

future employees ; a very basic level of L2 is sufficient for most jobs, except in the tourism sector.

- [2] A career is facilitated if good or excellent L2 skills complement qualitatively high professional competence. Yet, in some firms, such as SAir-Group, CFF, and Manor, L2s are an essential condition for career perspectives, not to mention the tourism branch (Kuoni).
- [3] In medium to large firms, it is recommended to have a good level of L2 skills, because at equal professional competence, an applicant with a good mastery of L2s will always get priority. In the small firm we interviewed (Régie Braun), the clientele is local or regional, and consequently, L2 skills can be largely dispensed with.

4.2.10. INTERNAL COMMUNICATION

This aspect concerns medium and large firms, as well as firms with branches in different language regions. For small firms with up to 20 employees, internal communication is not a determining factor. Our sample contains only one small firm (Régie Braun), therefore we devote this subsection to this aspect of language in firms. Summing up interview answers, we conclude that :

- [1] Internal communication between apprentices and other colleagues does not depend on well-developed L2 skills. Apprentices rarely receive internal documents, and it is even more rare for those to be written in a language other than the national language spoken in the region ;
- [2] Things get more complicated at a higher hierarchical level ; indeed, at the managerial level, L2s are regularly used for internal communication, and in some large firms active all over Switzerland and beyond (e.g. SAir-Group and Swisscom), they are indispensable. However, few are the former apprentices who reach these echelons.

4.2.11. IMPACT OF L2S FOR SWISS FIRMS' MARKET SHARES

One question in the interview outline mentions the potential role of L2 skills in the expansion of the firm's activities to new markets, and in productivity gains. This question draws attention to the importance of L2s for the economic potential of a firm. In other words, are high L2 skills essential for commercial development, or are they merely one additional advantage among others ? The type of clientele and the proximity of language borders determines the importance of L2s.

- [1] In the tourism sector and for department stores located in cities visited by tourists from within and outside the country, L2s are indispensable.
- [2] For other economic activities, developed L2 skills would be an additional, but not a necessary asset for expanding a firm's market shares or increasing productivity.

4.3. GENERAL INTERPRETATION OF EMPIRICAL FINDINGS

Much of the LIVE project can be assigned to language economics, which is a relatively little-known field in economics. Within language economics, the issues addressed in the LIVE project are part of a more specific sub-field often described by the heading “language and economic activity”. This, however, remains the least structured sub-field in the economics of language, which makes it difficult to relate our findings to established analytical concepts. As a consequence, the aim of this concluding section is to generalize from our observations in order to arrive at some working hypotheses.

4.3.1. CONTRADICTIONS IN SWISS VOCATIONAL TRAINING

The dual system of vocational training, in which apprentices spend about one and a half day per week at vocational school, and the rest of the time in a firm, with a formal contract binding them to their employer, remains the most wide-spread form of post-compulsory education in Switzerland (ages 15 onwards), particularly in the German-speaking part of the country ; nationally, 60% of young people in the 16-19 age bracket undergo an apprenticeship.

According to a questionnaire returns from some 3,500 firms polled by Hanhart & Schulz (1998 : 113), twelve possible arguments for training apprentices can be identified. Three of them are considered important or very important by the firms themselves : the training of a workforce with precisely targeted skills ; better-quality training than what would be offered in full-time vocational schools ; improvement to the local or regional offer of educational options. Seven arguments are judged as moderately important : the lack of adequately skilled workers on the labor market ; history — that is, a tradition of training that belongs to the specific corporate culture or to the overall labor culture of the country ; more efficient hiring procedures ; smoother school-to-work transition ; positive effects for the public image of the training firm ; better adaptation to technological change ; lower risk at hiring, since the apprentice is already known to the employer. Finally, two arguments were regarded as having a low importance, namely, the lower cost of training an apprentice than a “normal” employee ; and the gains associated with the fact that low-wage apprentices can do some of the work of an employee paid at the going labor market rate. From the standpoint of apprentices, the “dual” system provides two advantages : first, they gain early on an actual experience of working life, which is seen as a way to foster a sense of responsibility ; second, they earn some money earlier than their counterparts who go on to “pre-academic” types of schooling streams, leading to university, full-time technical college or other vocational college.

On the face of it, the dual apprenticeship system has many virtues. However, the system is undoubtedly in crisis, as a result from several contradictions or shortcomings of the system — most of which are not related to language instruction.

One frequently-voiced criticism is that the system is too costly. More precisely, the direct and indirect (opportunity cost) expenditure on the system is excessive with respect to the average level of skills achieved (among which L2 skills play a decidedly secondary role). Yet, according to Hanhart & Schulz (1998), the apprenticeship system as a whole can still be seen as “efficient”. In terms of the output of the system, one indicator is that 90% of apprentices (1990-1994 period)

succeeded in obtaining the “Federal certificate” corresponding to the apprenticeship chosen. The cost of the system is covered by the state (43% of total cost), firms (26%) and by the apprentices themselves (31%) in the form of forgone earnings corresponding to the difference between their estimated productivity and their salaries. The nature of the cost to firms is largely defined by legislation. The firm must employ specialized apprenticeship supervisors or, in smaller firms, give an employee a weekly time endowment in order for him to supervise apprentices. Part of the cost to employers also stems from the fact that apprentices spend one day and half per week at vocational college, that is, away from work. In certain sectors, employers contribute financially to the cost of introductory courses ; in such cases, training is organized by the union of employers in the economic branch concerned (*Dachverband*).

Despite the fact that according to the above figures, employers benefit from the situation — particularly in small to medium-size enterprises, in which the actual expenditure in training is low, but apprentices nonetheless provide cheap labor, there is a general decline in the offer of apprenticeships by firms (from 1985 to 1995, the decline is estimated at 12% in the secondary sector (industry) and at 7.6% in the tertiary sector (services)), particularly among the larger ones. In other words, it appears that firms are reducing their investment in vocational training, expecting the state (that is, the taxpayers) to cover the cost of apprenticeships *and* yet to keep training learners precisely in accordance with the very specific needs of future employers.

Pressure is also exerted by the trainees and their parents. Apprenticeship is increasingly considered (particularly in the French-speaking part of the country) as a low-prestige form of education ; the lower theoretical component of the training received (by comparison with full-time vocational training) may allow for a very good adaptation to actual company needs, but this advantage may be of little value if the training firm no longer guarantees employment, let alone life-long employment. In this context, the relative importance of generic skills, or of technical skills that are transferable to employment in another firm, becomes much higher. The internationalization of markets and increased competition with workers from abroad (particularly in the context of European integration, even though Switzerland is not, at this time, part of the European Union [EU] or of the European Economic Area [EEA]) also requires the degrees obtained to enjoy recognition on par with those awarded to vocational trainees in other countries ; again, the comparatively low “theoretical” component of vocational training in the dual system works to the detriment of Swiss apprentices.

The situation of the dual system of vocational training is therefore one of a system confronted with considerable problems, and the fundamental problem is to decide if the system can be reformed, or if it should be ditched altogether, in order to move to a system of full-time vocational schools for all apprentices. The goal of this study is not to provide answers to this question (which, in any case, goes far beyond the issues of language instruction discussed here). However, by shedding light on the problems encountered in one specific component of vocational education, namely, L2 teaching, we hope to provide useful informational elements in the evaluation of whether the system can be improved and reformed (in order to retain the advantages listed above) or whether it is beyond repair. Before summarizing our findings on L2 teaching in vocational education, it is useful to refer to the ongoing debate on L2 instruction in Switzerland across all educational streams.

4.3.2. CHALLENGES IN SECOND AND FOREIGN LANGUAGE INSTRUCTION IN SWITZERLAND

As noted in Chapter 2, the Swiss approach to second and foreign language teaching is complex and decentralized, owing to the linguistic make-up of the country and to its particular history. However, it is also at a turning point. Inadequate skills in national languages as L2s, the growing popularity of English with the associated de-legitimization of national languages, inter-community exchange and interest at a low ebb, all suggest that the approach is in serious need of a major overhaul. The decision by some cantons to give priority (if not formally, at least practically) to English over national languages in school syllabi has prompted a generalized reconsideration of the missions of second language instruction, in relation with national identity.

A group of experts was commissioned in 1997 by the Federal board of cantonal education directors to work on a new language concept, which proposes a number of guidelines concerning the syllabus and organization of language lessons up to secondary I level, and is based on the following assumptions :

- ◆ Quadrilingual Switzerland has become multilingual due to migrations and tourism.
- ◆ Linguistic and cultural plurality is part of Switzerland's heritage.
- ◆ Languages are becoming indispensable as a professional asset in the context of international mobility and globalization.
- ◆ Studies confirm that for individuals having identical professional qualifications, those with higher L2 skills tend to have higher labor income.
- ◆ For a plurilingual country, second language learning is a normal feature of citizenship.

The report contains four mandatory goals that should be implemented by cantons :

- 1/ All pupils learn at least one other national language as well as English, in addition to their local national language. They must also be offered the possibility to learn an additional national language, as well as other languages. This goal is justified by a three-fold argumentation. Knowledge of national languages, especially German and French, has political, economic and cultural importance. Furthermore, English as an international language for economic, science and communication technology has become a necessity on the labor market. Finally, knowledge of other languages as an element of human capital represents an important resource for a country like Switzerland, which is deprived of raw materials. However, this goal raises the problem of priorities in L2 teaching. Giving equal importance to national languages and English means prioritizing former apprentices' mobility in the different Swiss language regions and abroad in the neighboring countries. Besides, giving priority to English would run against European language policy as stated in 1995 by the European Commission: Europe will develop towards a multilingual information society, thus offering new professional and cultural opportunities to European citizens.

Thus, proposing a second national language and English as a minimal offer of language instruction clearly reveals the Swiss government's intention to establish individual, though not societal plurilingualism all over Switzerland. Despite its positive image abroad, Swiss language policy has major shortcomings (Grin, 1993 ; Grin, 1994c ; Altermatt, 1997), as residents mostly speak their local language, but have difficulties understanding the other national languages, let alone speaking or writing them.

- 2/ Cantons guarantee coherence of L2 teaching by coordinating their decisions for the obligatory school years and the general objectives of L2 lessons, without fixing weekly endowments and syllabuses. Learning objectives (level and types of skills) are described by a Competence Matrix with international validity, which is also used for language certificates. The guidelines stipulate that a higher level must be achieved in the second national language than in English, in order to increase cultural understanding and communication among Swiss. In English, a basic level is aimed at, which can then be developed during vocational training or in academic streams. For the second national language offered as L2, the level of skills should enable people to achieve adequate skills in oral comprehension and expression. The report underlines the possibility for bilingual or plurilingual cantons and schools to develop these standards beyond the minimum level required.
- 3/ According to the experts' request, the L2 to be offered is French in the German-speaking region, German in the French-speaking region, while the Cantons of Ticino (Italian-speaking) and Graubünden (a trilingual canton, with German-, Romanche-, and Italian-speaking regions) can develop more varied and flexible syllabi. Special arrangements can also apply in parts of cantons located close to a language border.
- 4/ Cantons must respect and promote other non-national languages spoken by their school population, and integrate them in the syllabus.

Among the twelve measures suggested to reach these four overarching goals, we will only mention those with a direct link to our central research question — L2 instruction during vocational training in relation with firms' needs — as the other measures refer to pedagogical aspects. The interviewees' answers listed in the previous sections are quite similar, in some key aspects which concern teaching methods (content of lessons, material used, language stays) and attitudes towards the different L2s, which hinder or facilitate learning. The following measures mentioned in the new language concept highlight aspects of L2 instruction which should be introduced or improved :

- ◆ Pupils should have their first L2 lessons at the beginning of primary school, learning of the second L2 should start in fifth grade, and of the third one in seventh grade. However, an important financial and human investment is necessary to implement this upgrading of L2 instruction. The report as well as other sources (Brohy, 1998 ; Perregaux, 1998) underline that learning several languages during childhood is not harmful for pupils, contrary to a widely held belief that the more languages a child learns, the less intellectual capacity remains for other subjects.

Early contact with other languages should awake awareness and curiosity for other languages and cultures, and teach children that learning languages is not an obstacle and that it can be fun. The quality of teachers highly influences the success of lessons. Therefore, quality assurance in teaching skills is essential. Variation in teaching methods (bilingual lessons, language stays) can prevent pupils from getting tired of a L2.

- ◆ Cantons define the order of L2 introduction through intercantonal agreements. The objectives to be achieved at the end of obligatory schooling are independent of the order of L2 introduction. In other words, the second L2 can be taught more intensively, even if introduced later.
- ◆ To assure efficient transition between primary and secondary I school, cantons elaborate, for each L2 and each type of skill, the goals to be reached.
- ◆ Teaching methods should include stimulating a positive attitude towards other languages and cultures, thus reducing stereotypes.
- ◆ All pupils should have the opportunity to take part in exchange programs or language stays, thus getting to know other cultural and socio-economic contexts.

Though far from perfect, the “language concept” can be considered as an active step towards resolving some of the challenges that Switzerland is confronted with. Swiss language policy (to the extent that there is one) has evolved over time, but is no longer capable of guaranteeing a stable and living quadrilingualism. The language concept of 1998, as well as the recent reform of the 1938 version of the federal constitution’s article pertaining to the status of languages, reveal a growing interest in language matters. The findings presented in the LIVE project must therefore be seen against this backdrop.

4.3.3. CONFRONTING THE RESEARCH ASSUMPTIONS WITH EMPIRICAL RESULTS

Let us now confront the interview findings with the six hypotheses of the LIVE project.

- [H1] “The significance of L2 skills on the Swiss labor market is likely to be very high, with L2 skills influencing not only earnings, but access to employment as well ; this is likely to be reflected in firms’ requirements, recruiting and hiring practices. Language skills are also an essential dimension of professional flexibility, both as a condition and as a proof of this flexibility. ”

Earnings are influenced by L2 skills only insofar as career prospects are concerned. For positions requiring a federal certificate, the mastery of L2 makes no systematic difference in earnings. Employer pay no particular attention to L2 skills. It is rare for a firm to organize additional language exams testing the L2 skills of its future apprentices or employees. However, at the manager level, L2 skills can represent an important asset with salary impact.

Second languages are essential for employees who wish to work in another language region, which is not the case of a majority of interviewed apprentices. Working in another language region implies a solid level of

oral comprehension and expression in the national language concerned, while gaps in reading and writing competence can be overcome with colleagues' help.

- [H2] "In some sectors, there may be a gap between apprentices' L2 skills and firms' needs in terms of the L2 skills of employees. This gap reflects, at least in part, the fact that L2 instruction in VTE does not integrate the economic significance of L2 skills in terms of productivity and/or competitiveness."

Interview responses overwhelmingly reveal a considerable gap between L2 instruction and firms' needs. The causes of this gap have been identified by apprentices and their supervisors as being inadequate teaching methods and wrong priorities. L2 lessons are concentrated on the same day, consequently, sometimes apprentices mix up the vocabulary and grammar of the different L2s they are learning. The teaching materials are obsolete and therefore not motivating. Language stays in another Swiss region or abroad are sometimes offered at the firm's initiative. Results are very positive, but financial and organizational problems do not allow this practice to expand.

L2 instruction is based on written skills and grammar, contrary to practical needs in firms, where mainly oral comprehension and expression at a basic level are required from apprentices¹¹. L2 instruction during apprenticeship is defined in terms of school-oriented criteria instead of actual future need at work.

- [H3] "The type and level of the L2 skills needed varies greatly according to the nature of the economic activity performed, and this variation is insufficiently specified and taken into account in L2 syllabi in VTE. In particular, firms in the tertiary sector generally have much higher needs in terms of L2 skills than firms in the industrial sector. In the same way, firms whose activity entails a high component of customer relations and after-sales services are much more dependent on L2 skills than firms focusing on production and leaving distribution and sales to specialized firms."

This hypothesis corresponds entirely to the economic reality of firms in our sample, which consisted mainly of firms in the tertiary sector, for the simple reason that in apprenticeships in the secondary sector, L2s are almost always optional or not even part of the program. In the tertiary sector, customer relations require a basic level of L2, as apprentices in office works and sales are regularly in direct and phone contact with clients. Written contact is much more rare.

- [H4] "The more export-oriented a firm, the more important the L2 skills of its apprentices and former apprentices, unless it exports mainly to a country of the same language."

Indeed, firms' L2 needs vary considerably according to the four economic dimensions (economic sector, firm size, market orientation, geographical location). Insofar [H4] is concerned, market orientation seems to be closely linked to the firm's size. In our sample, most firms are of medium or large size, and most of them have regular contacts with other countries, be it

¹¹ By "basic level", we mean a level permitting comprehension and expression using simple sentences on recurring work-related subjects with clients or commercial partners.

suppliers or customers. Therefore, employees active in administrative or sales departments, which come mostly from the vocational training option, must have a basic level of L2 skills.

The relation to geographical location becomes visible in customers' profile : firms located in border cities (next to a country where another language is spoken, e.g. Basle next to the French border) or cities with a high proportion of foreign residents and/or tourists (e.g. Zurich, Berne, Geneva, Lucerne) have an increased demand of L2s. One could consider that products and/or services destined to customers speaking a non-national language are a form of export. For national languages things get more complicated. Nevertheless, a firm selling its products partially or totally in another language region must integrate L2 skills in its market strategy.

- [H5] "Given their organizational and financial resources, large firms can invest into additional L2 instruction of their apprentices. Large firms therefore gain a competitive advantage over small- and medium-sized ones through language skills."

This assumption is by and large confirmed. Comparing the efforts made in language matters for apprentices in small and medium firms to the large ones such as SAir-Group, Givaudan-Roure, CFF, Kuoni, or Swisscom, it is obvious that large firms have more leeway for investing in evening courses, private lessons or internally organized language exchanges and stays. However, medium and small firms need not be disadvantaged by a lack of financial and organizational resources, as their L2 needs are often less developed owing to their market orientation — at least it is the case in our sample. The only small firm in our sample (Régie Braun) has no real need for L2 skills, as it has only local customers.

- [H6] "In a context of globalization (which is particularly manifest in terms of international trade), English is perceived as gaining importance for economic exchange, by comparison with Switzerland's official languages. Whether this is the case or not in everyday production activities is a point that needs to be assessed, particularly in cases where clients and suppliers are located in another language region in Switzerland itself."

Indeed, interviews highlight a conflict of priorities between the different second languages taught during apprenticeship. English is perceived by apprentices as more interesting than national languages due to its status in youth culture, and they also see it as more important for commercial contact. Yet, this perception might be influenced by the first aspect, which is linked to the frequently negative attitude towards other national languages.

Directors of firms whose suppliers and/or customers are partly located in another language region state that they need basic language skills in the corresponding language. It is market orientation which determines the importance of English over national languages, meaning that if a large part of business partners and customers speak English, it gains priority over national languages. Except for the tourism industry, firms with contacts in another Swiss language region require skills in the corresponding national language. Nevertheless, English has a leading position in computer related sectors, and in some fields, specialized terms in English (technical terms, air travel industry, chemicals, tourism) are often used instead of the first language of the concerned region.

CHAPTER 5 — INTERNATIONAL COMPARISON OF SECOND LANGUAGE SKILLS : SINGAPORE AND SWITZERLAND

CHAPTER SUMMARY

This chapter is intended as a concise presentation of the background for carrying out, in Singapore (and at a smaller scale), research on language instruction in vocational training, corresponding to the comparable investigation carried out in Switzerland. Although it does not aim at a similar degree of detail, it summarizes key facts and outlines the operationalization of data collection in Singapore, as seen by the Swiss research team.

5.1. INTRODUCTION

We can now proceed with the SNERP's next phase, namely *International comparisons*. This consists in establishing links with other partner countries of the SNERP — in this case, Singapore. Switzerland should set up research guidelines based on its empirical findings and adapted to the Singaporean case. These guidelines take account of some important similarities between the respective economic fabric, language patterns and education system of the two countries.

Here, we focus on two central questions dealing with the comparison of the Swiss and the Singaporean cases :

- ◆ How do Swiss patterns converge or contrast with observations made in Singapore ?
- ◆ Is Switzerland unique ? Are distinguishing traits likely to be retained or to fade over time, particularly with globalization ?

Before addressing these questions, it is necessary to identify the specificity of Singapore's language situation with respect to vocational training, more precisely, the use of language competence in Singapore. For what type of professional situations, in which economic sectors, are second languages necessary ? This perspective requires examining second languages as element of economic activity, in terms of :

- A/ Organization of production : considering that Singapore has four main ethnic communities, how does comprehension between the language communities at work take place ?
- B/ Import/export : Singapore's economy being export-oriented, what is the role of the different languages on the labor market ?

5.2. SPECIFICITY OF THE SINGAPOREAN ECONOMY

5.2.1. THE HISTORICAL CONTEXT

In 1959, when Singapore obtained independence from Great Britain, it faced nine major problems (von Alten, 1993) :

- ◆ unemployment rate of 13.5% ;
- ◆ low level of education ;
- ◆ small domestic market, no hinterland ;
- ◆ economy based mainly on trade ;
- ◆ political instability ;
- ◆ multi-ethnic society ;
- ◆ demographic growth of 4.4% per year from 1947-1957.

In 1965, Singapore separated from Malaysia after 23 months of sometimes rocky federation¹ and becomes an independent country. Its economic development since ceasing to be a British colony can be divided into four phases (von Alten, 1993) :

- ◆ Inward-looking policy (1959-1967), with import substitution and protective tariffs for a range of consumer goods such as soaps, detergents, paints, tobacco, petroleum, liquor.
- ◆ Basic development policy (1968-78), i.e. reduction of tax rates on export profits from 40 to 4%, exemption of taxes on interest earnings on approved foreign loans, reduction of tax rates on royalties and fees paid to foreigners as incentives to investors.
- ◆ Restructuring policy (1979-86), i.e. corrective wage policy, skill development policy, phasing out of guest labor policy.
- ◆ Post-recession liberalization policy (1987 to the present), i.e. reducing operating costs, privatization of government-owned enterprises, reduction of corporate and personal income tax rates, wage restraints for two years, introduction of investment allowances.

Singapore is considered as one of the four “little dragons” of Asia, next to Taiwan, Malaysia and Hong Kong, and thus classified as a newly industrialized economy. Since 1992, real GDP change in per cent has remained around the 6% mark (1992 : 5.8%; 1994 : 6.2%; 1997 : 6.8%) (von Alten, 1993 : 1).

From a socio-historical point of view, the small city-state's population of 3.865.600 (in 1998) is made up of a majority of Chinese with a confucianist cultural heritage, emphasizing hierarchy, cooperation and subordination of the individual to the state. Singapore is a multi-ethnic society composed of about 76% Chinese (42.2% Hokkien, 22.4% Teochew, 17% Cantonese, 7% Hakka, and 7% Hainanese), 15% Malays, and 7% Indians (Blanadet, 1992 ; Afendras & Kuo, 1980).

¹ Federation of Malaya, Singapore, Sarawak and North Borneo.

5.2.2. KEY ECONOMIC SECTORS

At the end of the seventies, the decline of competitiveness in the assembling industries moved the Singaporean government to design and implement a “second” industrial revolution oriented towards investment in high technology (e.g. computer industry, biotechnology, precision mechanics, aeronautical construction). However, after the economic crisis of 1985, when the annual growth of the GDP fell to -1.5% in 1985, the economic fabric was reoriented towards the tertiary sector, with a particular emphasis on finance and shipping services, accounting for about 60% of the GDP in 1998². Let us take a brief look at the main activities in the tertiary sector :

- ◆ Shipping : With a traffic reaching 170 million tons in 1998³, Singapore's port is the sixth most important one in the world.
- ◆ Finance and insurance : Singapore is the most important financial platform in South-East Asia, with about 200 banks, of which nine out of ten are foreign companies. Its stock market has an excellent reputation. Furthermore, a large number of insurance and reinsurance firms are located in Singapore.
- ◆ Tourism : In 1990, 5.3 million tourists spent 7 billion SGD, which is the equivalent of 12% of export income for that year.
- ◆ Petrochemicals and petrol industry : Singapore is the third largest refining center in the world after Houston and Rotterdam.
- ◆ Electronic and electrical devices industry : These two branches employ one third of the work force in the industrial sector and produce high quality products (e.g. integrated circuits, household sound equipment, color television tubes, video players, computers, refrigerators, generators, precision mechanics, medical equipment, optic lenses, lasers, aeronautical construction). 80% of the total investment in these sectors comes from foreign firms which delocate their production to Singapore.

As regards trade flows and business partners, Singapore's economy is very dependent on export markets, as shown in Table 5-1. Its main export products, by order of importance, are office machines, petroleum products, telecommunications equipment, generators and clothing⁴. Imports in order of importance are office machines, crude petroleum, telecommunication apparatus, generators, petroleum products, scientific and optical instruments, motor vehicles and industrial machinery. The balance of trade with Malaysia is balanced, with Malaysia providing natural resources and food products. Trade with Japan is in favor of the latter, in contrast to trade with the USA, to which Singapore exports more than it imports from.

² [Http://www.gov.sg/mti/mti2.html](http://www.gov.sg/mti/mti2.html).

³ [Http://www.singstat.gov.sg/FACT/SIF/sif14.html](http://www.singstat.gov.sg/FACT/SIF/sif14.html).

⁴ [Http://www.singstat.gov.sg/FACT/SIF/](http://www.singstat.gov.sg/FACT/SIF/).

Table 5-1

Singapore's main export destinations, in %, 1998

	exports in \$ billion
Japan	12.1
Hong Kong	15.4
Malaysia	28.0
Western Europe	36.5
USA	36.5

Source : <http://www.singstat.gov.sg/FACT/SIF/>.**Table 5-2**

Singapore GPD by industry, in %, 1960, 1992

	1960	1992
agriculture, fishing	4.0	0
manufacturing	18.0	27.0
utilities (gas, water, electricity)	2.0	2.0
construction	6.0	6.0
commerce	25.0	16.0
transportation & communication	9.0	14.0
financial and business services	15.0	25.0
other services	21.0	10.0

Source : von Alten, 1993 : 14.

On the labor market, full employment has been reached during the seventies. Immigration policy follows market evolution, immigration of skilled and unskilled workers (with different working permits) is encouraged, when there is need of foreign labor force⁵. Since the end of the seventies, the education system, including the tertiary level⁶, has been developed and improved, allowing the education of a skilled, mostly bilingual labor force. The distribution of the labor force in 1998 was the following : 404,400 workers in manufacturing, 131,300 in construction, 400,100 in commerce, 206,400 in transport and communication and 292,800 in financial and business services⁷.

⁵ Skilled foreign workers function as transmitters of technology and management know-how to a young economy, their employment pass is valid for three years, including their family. They are encouraged to become permanent residents, whereas unskilled workers are only given a working permit for two years, without their family.

⁶ The university of Singapore has eight faculties and emphasizes engineering and computers. The Technological Institute of Singapore and the Ngee Ann Institute (engineering and computers) are facing competition from private schools financed by foreign investment from large firms (e.g. from France, Germany and Japan).

⁷ [Http://www.singstat.gov.sg/FACT/SIF/](http://www.singstat.gov.sg/FACT/SIF/).

5.3. SINGAPOREAN LANGUAGE PATTERNS

Singapore being a small multi-ethnic state, it is crucial to look at the country's language patterns as a prerequisite for analyzing the links between the vocational training system and second language instruction. The linguistic situation can be summarized by three features (Afendras & Kuo, 1980 ; Gopinathan *et al.*, 1994 ; Chee, 1990), which will be dealt with in the three following subsections :

- 1/ linguistic plurality ;
- 2/ bilingualism ;
- 3/ diglossia patterns⁸.

5.3.1. LINGUISTIC PLURALITY

The government designated four official languages in the Republic of Singapore Independence Act of 1965 : Mandarin, Malay, Tamil and English. The first three were selected as a compromise considering the three major ethnic communities, whereas English was included because of its international status and historical presence in Singapore due to its colonial background. All four official languages are supposed to be treated on an equal footing. However, this is not the case in practice. Since independence, English has become a working language for many. The use of English is seen as linked to economic progress. On the other hand, it is a non-native language, which means that its use does not discriminate against any of the major ethnic groups. English as a “neutral” language is expected to suppress any interethnic conflict based on the language and culture issue.

One should bear in mind the role of language policy for building up national identity in a young multi-ethnic state (see also Grin, 1999d, on the importance of multilingualism in nation-building in Switzerland). Multilingualism in mass media, the education system and in other daily contacts between people can help prevent language and cultural cleavages. Official expressions of respect for the different ethnic cultures and values represented in the country contributes to building up Singapore's specific multi-cultural national identity (Afendras & Kuo, 1980 : 59). The Singaporean mass media also reflect a plurilingual pattern : there are more than ten daily newspapers, most of them in English or Chinese, one in Malay, two in Tamil, and one in Malayalam. Radio Singapore is government-owned and managed by the Broadcasting Department (Ministry of Culture). Languages used are English, Malay, Tamil, Mandarin, and six other Chinese dialects. Television Singapore runs two channels in the four official languages.

⁸ The definition of diglossia according to Ferguson (1959 : 325-40, quoted in Afendras and Kuo, 1980) : “Two varieties of a language exist side by side throughout the community, each serving different functions, the low variety often being confined to areas such as home, everyday activities, friendship. The High one acquired by speakers later than the low one, reserved for use in fields of education, religion, administration, etc.”. This definition was later applied by other scholars (e.g. Gumperz ; Fishman) to any functionally differentiated languages (for example, Spanish and Quechua in Peru).

5.3.2. BILINGUALISM

Bilingualism, the second pillar of Singapore's language policy, is visible in daily contacts among individuals, at work and at school. People in general speak and understand one of the four languages at a medium level of competence, in addition to their first language. Bilingualism reached 46.5% in 1990 against 38.6% in 1980, according to surveys⁹ (Chee, 1990 : 65). English is the language associated with prestige for official, formal or business functions, such as communication in government offices, during public speeches, at University and schools, as well as among executives. It also facilitates access to scientific and technological know-how developed abroad and usually available in that language. The Chinese as the largest ethnic group present a more diversified pattern in language competence. Hokkien has long been the major language ; however, Mandarin is becoming increasingly important. With the implementation of the bilingual education program, it is expected that the percentage of Chinese speakers competent in Mandarin will continue to grow. Ethnic Indians are highly competent in Malay, Tamil, and English. The non-Tamil Indians constitute approximately a third of the total Indian population in Singapore, and understand Malay and English.

⁹ These data are taken from the comparison between results of the 1980 and the 1990 census on language, which both focused on the language use of persons in private households. Questions related to the ability to read (and understand) newspaper articles in the different official languages and Chinese dialects.

Table 5-3

Resident private households by ethnic group household and predominant household language spoken, 1990

Ethnic group household / predominant household language spoken	1990, in per cent
Total	100.0
English	20.8
Mandarin	23.7
Chinese dialects	38.2
Malay	13.6
Tamil	3.0
Others	0.7
Chinese households	100.0
English	21.4
Mandarin	30.0
Chinese dialects	48.2
Others	0.4
Malay households	100.0
English	5.7
Malay	94.1
Others	0.2
Indian households	100.0
English	34.3
Malay	14.1
Tamil	43.5
Others	8.1

Source : Chea *et al.*, 1997 : 7.

The implementation of a bilingual policy in the educational system explains the existence of schools in four different language streams at the primary and secondary levels. Each student must learn two official languages from the first grade of primary school on — usually English and one of the three ethnic languages. Both compulsory languages are examination subjects for education certificates at various levels. In some English-medium schools, some subjects are taught in the mother tongue of the pupil. The four types of language stream schools deliver the same certificate. When leaving primary school, the final exam (Primary School Leaving Examination (PSLE)) gives twice as much weight to the two languages as to mathematics or science. Pupils are exposed to the second language for about 40% of the time spent in class. Schools have quite a margin concerning weekly endowments and second language exposure. However, this

language policy is criticized by some for its neglect of pedagogic consequences for pupils, as behavioral objectives or details on the types and levels of language skills to be acquired are inadequately specified. One research direction which merits attention is the nature and scope of plurilingualism in Singapore, as well as the influence of the school system on the former.

In Singapore, none of the four official languages (Mandarin, Malay, Tamil, English) is spoken by more than two-thirds of respectively the three ethnic communities (Chinese, Malays and Indians). Concerning English, several sub-varieties are used in Singapore : American, British, Australian, Yorkshire, New Zealand, Indian and Singaporean English (the local diglossic form of the English language in Singapore), however, the two varieties institutionalized in business and governmental functions are American and British English. In Asia, English has a predominant role, being the official language in the Philippines, Singapore, Malaysia and India, serving as an auxiliary language and even a *lingua franca* in Burma, Pakistan and Bangladesh. It is complementary in Sri Lanka, and privileged among foreign languages in Indonesia, Thailand, Taiwan, Japan, South Korea, and even in the People's Republic of China. It has also been designated as the working language of the member-countries of the Association of South-East Asian Nations (ASEAN). Yet, some scholars¹⁰ insist that Singapore educate young people to be proficient in other foreign languages such as French, Japanese, German, and Spanish, with regard to future development as a commercial and diplomatic base for South-East Asia.

In the case of Chinese, continuing effort has been made to strengthen the status of Mandarin as a *lingua franca* among the ethnic Chinese in everyday situations. The historical prevalence of Chinese dialects such as Hokkien, Teochew, Cantonese, Hakka and Hainanese, had long made English a "link" language. The *Speak-Mandarin campaign* was launched in 1979. Since then, some changes in language policy occurred, especially at the Primary One level. Since the beginning of the nineties, the principle of equal treatment for all official languages which had already been affirmed in the 1956 *All-Party Report on Chinese Education*, is being rebalanced, after years of predominance of English. Mandarin is beginning to be recognized as a highly valuable language on the labor market, since China opens up to trade and builds up a market economy. Yet, this creates a risk of Mandarin being privileged as the language of the largest ethnic community, along with English as a global language, to the detriment of the two other official languages, Malay and Tamil.

Studies quoted in Gopinathan *et al.* (1994 : 175-200) reveal that Tamil is not seen as useful by young people in professional life, in which English is seen as the principal language. Thus, the use of Tamil at home becomes crucial for this language's continuity. It is likely that Tamil will continue to be spoken widely by Indians in jobs with low income and responsibilities, and therefore be trapped in a lower status. The same goes for Malay. Malay-speaking ethnic Indians represent about 12% of the population, and use it especially in informal situations.

¹⁰ e.g. Dudley de Souza, in Gopinathan *et al.*, 1994 : 203-232.

5.3.3. DIGLOSSIC PATTERNS

The forms of diglossia in Singapore are very complex. There is no single one high prestige and low prestige language, but a variety of high prestige, medium and low languages with different status depending on the pair of languages considered. According to Ferguson (1971, quoted in Afandras & Kuo, 1980), a major language is defined as a language which (1) is spoken by more than 25 per cent of the population or by more than one million people in the society; (2) is an official language of the nation; or (3) is the language of education of over 50 per cent of the secondary school graduates of the nation. By contrast, a minor language (1) is spoken as a native language by no more than 25 per cent of the population and by either more than 5 per cent or more than a hundred thousand people; or (2) is used in school as language of instruction on the primary and secondary levels. According to these criteria, there are five major languages in Singapore — the four official ones and Hokkien, which is a native language for over 25 per cent of the population.

More precisely, English, Mandarin and Malay are spoken with various degrees of pidginization according to the type of situations. With regard to the other Chinese varieties, one can distinguish subvarieties of Hokkien and Cantonese accents originating from different southern provinces in China. In Singapore, there are two vernaculars — Teochew and Cantonese — spoken by about 15% of the population as native minor languages. Yet, scholars (Afendras & Kuo, 1980 : 47) note that these varieties have more similarities than differences from a linguistic and cultural point of view. In the Chinese community, Hokkien is used in daily contact for communication with other Chinese-dialect speakers, whereas Mandarin serves for more formal or official functions. Hokkien is the language understood by the highest proportion of the Singaporean population. For a majority of those Singaporeans who are proficient in Hokkien, it is not their first language. Hence Hokkien can be seen as the *lingua franca* among the various Chinese language varieties. Mastery of Mandarin varies according to whether or not the speaker attends a Chinese- or English-medium school. In short, most people in Singapore speak two or more languages which are used in distinctive spheres of daily life.

Malay's pidginized variant "Bazaar Malay" is used by people from different ethnic backgrounds in daily situations (e.g. in the neighborhood, on the market). Many older Singaporean Chinese have skills in Bazaar Malay, while younger Singaporeans in general have some competence in English.

However, one should be aware that the impact of Singapore's language policy to further the notion of a small plurilingual country is not without limitations. By comparison with Switzerland, Gopinathan (Gopinathan *et al.*, 1994 : 175-202) states that the separation of Singapore's ethnic communities according to language and culture is reinforced by ethnic and religious cleavages. In Switzerland, ethnicity is not a relevant concept, while religious belief and language cleavages do not coincide, at least not in a significant way. In Singapore, Chinese, Tamil, and Malay not only have a communication function ; they also symbolize ethnicity, rooted in a historical and cultural tradition and accentuated by the search for identity in a post-colonial society. One can therefore say that the language issue is much more politicized (at least potentially) in Singapore than in Switzerland.

5.3.4. SECOND LANGUAGES IN VOCATIONAL TRAINING AND THE SINGAPOREAN LABOR MARKET

Singapore's education system is organized along lines roughly similar to the Swiss system, as far as vocational training and second language teaching are concerned. All pupils complete at least ten years of compulsory schooling. In the fourth year of primary school children are directed towards four different language streams depending on their cognitive skills. The EM1 stream provides English and mother tongue lessons at a higher level, the EM2 stream is intended for the majority of pupils, aiming at a solid level in English and in the mother tongue, whereas the EM3 aims at a basic proficiency level in English. Since 1993, children directed towards EM3 can also choose the ME3 option which consists of using the mother tongue for all subjects and learning English by emphasizing oral skills, conversation, reading and listening comprehension.

After six years at primary level, young people can choose a technical education option in the normal stream of secondary school, which lasts four years, like other secondary level options. After completing the obligatory ten years of schooling, they can continue in a post-secondary program with apprenticeship schemes or, for pupils with higher qualifications, register at the Polytechnic Institute for diploma courses. All the institutions of vocational training are under the responsibility of the *Institute of Technical Education*¹¹ (ITE). The ITE provides full-time vocational training for young people as well as continuing education for adults. The vocational training schemes offered are the Industrial Technician Certificate, the National Technical Certificate Grade, the Certificate in Business Studies and the Certificate in Office Skills, all of which last two years, except for the latter, which lasts one year.

The different types of apprenticeships function in the same way as in the Swiss system : apprentices are assigned a qualified trainer, they are paid a monthly fee of Singapore \$ 550 to \$ 700, and sign an apprenticeship contract with the firm. The ITE is responsible for the regulation and supervision of all apprenticeships ; the lessons for the 60-odd programs in 20 trade areas are given either at the Approved Training Centre, the Approved Training Provider, or an ITE technical institute. In contrast with Switzerland, where some apprenticeships begin during secondary school, young people in Singapore have to complete their ten years of compulsory schooling before beginning an apprenticeship at the age of sixteen.

Table 5-4 provides an overview of the educational profile of Singaporean residents, showing that vocational training retains fairly constant attractiveness across generations, and that the young generation (age class 15-24 years) chooses to pursue its education either in secondary II level or tertiary education.

¹¹ The former Vocational and Industrial Training Board (VITB).

Table 5-4

Educational Attainment for residents, in %, 1998

	15-24 years	25-39 years	40-54 years
No Qualification	25.6	8.2	23.3
Primary level	22.8	21.4	30.7
Secondary level	25.5	32.2	27.0
Post Secondary level (here including apprenticeship, Institute of Technical Education, Junior Colleges)	8.2	9.7	7.5
Polytechnics	8.0	11.5	4.2
Universities	10.0	16.9	7.3

Source : [Http://www.singstat.gov.sg/FACT/SIF/](http://www.singstat.gov.sg/FACT/SIF/).

Table 5-5 indicates government investment in different types of education levels and options. Universities are clearly the most costly form of education, whereas investment in Junior College, vocational training, and polytechnics respectively is about the same.

Table 5-5Government recurrent expenditure on education per student, in Dollars¹, per year

	1993	1997	1998
Primary schools	2,254	2,960	2,865
Secondary schools	3,412	4,469	4,516
Junior colleges	5,178	7,052	6,489
Institute of Technical Education	5,212	8,942	7,384
Polytechnics	6,990	8,856	8,466
Universities	15,450	19,926	16,462

¹ On the website, it is not specified if current or constant dollars, and if Singapore or US dollars.

Source : [Http://www.singstat.gov.sg/FACT/SIF/](http://www.singstat.gov.sg/FACT/SIF/).

Table 5-6 provides an overview of the proportion of pupils in the different education streams. We note that the proportion of Singaporean young people involved in vocational training, i.e. 14.4% of the total number of students in the 16-to-19 age class (students in the ITE, Polytechnics and Pre-University level), is lower than in Switzerland, where approximately 60% of young people in the same age class go to vocational training. Apart from the importance of the apprenticeship option from a quantitative point of view, another difference is the importance of Singaporean full-time institutional courses (Industrial Technician

Certificate, National Technical Certificate Grade, Certificate in Business Studies, Certificate in Office Skills) by comparison with in-company training.

Table 5-6
Students and Teachers, 1998

	Institutions	Students	Teachers
Primary schools	193	288,311	11,406
Secondary schools	147	178,795	9,141
Pre-University	16	23,692	1,705
Institute of Technical Education¹	13	13,337	1,280
Polytechnics	4	55,316	3,446
National Institute of Education	1	3,350	377
Universities	2	42,971	2,611
Total	376	605,772	29,966

NB : Figures for primary, secondary and pre-university education do not include private schools. Figures for institutions of higher learning include part-time students and teachers.

¹ Refers to full-time teaching staff and students.

Source : [Http://www.singstat.gov.sg/FACT/SIF/](http://www.singstat.gov.sg/FACT/SIF/).

If we examine the relationship between language use and household income in Singapore, a positive correlation between English as the predominant household language and high income (proxied by the type of residence — condominiums and landed properties for high incomes) comes to light. In the \$5,000-and-above income category, 38% of households speak English — in other words, a higher use of English at home is associated with higher incomes. Yet, in the \$5,000 and above category, 37% of households use a Chinese dialect. This fact can be explained by three reasons : 1. the members of these households also have high English competence, which they mostly use in professional situations ; 2. in certain so-called *non-formal* economic sectors such as small and medium size trades, dialect speakers can earn high incomes, English not being indispensable ; 3. the household is often made up of two or three generations ; monthly income is therefore higher than for a one-generation household (Chee, 1990 : 46-49). In short, those with high incomes belong to two groups : a) those who declare English as most spoken household language; b) those who are highly competent in English but prefer to use dialects or one of the other official languages at home.

5.4. IDENTIFYING INTERVIEW QUESTIONS AND FIRMS FOR THE SINGAPOREAN EMPIRICAL STAGE

After having briefly described Singapore's economic fabric, vocational training system and language patterns, we now proceed with the identification of the type of questions which should be included in the Singapore interview outline for firms and apprentices in Singapore. The most important economic sectors from which firms should be selected are listed below. Since language use varies according to the tasks employees must carry out, the exploratory interviews with trainees / apprentices should focus on these economic sectors in which two or more languages are, presumably, needed :

- ◆ travel / tourism (airlines, travel agencies, hotels) ;
- ◆ banking / finance ;
- ◆ industrial activity with significant international involvement, either on the import or on the export side (e.g. office machines ; petroleum products ; telecommunications equipment ; generators ; scientific and optical instruments ; precision engineering, electronic equipment assembling; maintenance and repair workshops) ;
- ◆ mechanical engineering (production processes, mechanical design, machining technology, etc.) in industry
- ◆ retail sales
- ◆ administration (accounting, secretarial work).

Singapore and Switzerland have plurilingualism in common. However, the Singaporean case is somewhat different from the Swiss one, as can be seen when taking a closer look at the language pattern. Singapore has three out of four official languages closely related to ethnic backgrounds ; issues revolving around language are highly politicized ; the fourth official language, English, functions as a “neutral” language and has a dominant role in professional life. In addition there is a widespread diglossic pattern among the population, as shown in Subsection 5.3.3. Considering the specificity of the Singaporean case, the interview guideline used in Switzerland should focus on the following aspects :

- A/ Actual level of L2 skills¹² of apprentices and young graduates from full-time vocational schools, according to the Competence Matrix ;
- B/ Level of L2 skills required to perform well in the job(s) for which apprentices or graduates are being/have just been trained ;
- C/ Type of tasks (oral communication, written correspondence, communication with colleagues) for which L2 skills are required, and at which frequency (daily, weekly, from time to time) ;
- D/ Discrepancies between the actual level of L2 taught during vocational training and the firm's needs, from the point of view of trainee, trainer and employer ;
- E/ Discrepancies between L2 skills according to vocational schools and in-company training ;

¹² That is, the language(s) spoken by the trainee at work, apart from his / her first language, which in most cases is the language corresponding to his / her ethnic background.

- F/ Proposals for changes regarding the goals of L2 instruction (actual goals : being competitive in a global economy dominated by English, and more specifically with Asian trade partners such as Malaysia or China through Malay and Mandarin ; building up a national identity by preserving ethnic diversity and enhancing communication between language communities) ;
- G/ Degree of adaptation of L2 lessons to the situations apprentices are confronted with in professional life ; proposals for changes regarding contents ;
- H/ Organization and emphasis of L2 instruction in vocational training (vocational schools, apprenticeship) and in preceding education levels (primary and secondary school)¹³ ;
- I/ Frequency and use of English, Mandarin, Tamil, and Malay at work, according to different kinds of situations and considering the youngster's ethnic background ;
- J/ Use and frequency of diglossic forms of English (Singaporean English), Mandarin (Chinese dialects), and Malay (Bazaar Malay) at work by apprentices and vocational schools graduates.
- K/ Linguistic criteria applied when hiring vocational schools graduates or apprentices, and their weight compared to other skills ;
- L/ Languages used for communication with the main trade partners of the firm.

In Switzerland, interviews focused on persons pursuing an office clerk apprenticeship, which is the most frequently chosen one, as well as one of the few apprenticeships offered in which second language instruction is compulsory. In the Singaporean vocational training system, full-time vocational schools outweigh “dual system” apprenticeships. Hence, it may not always be possible to find firms in the above-mentioned sectors training apprentices. Consequently, firms will sometimes have to be replaced by vocational schools preparing learners for domains in which languages are relatively important. Yet, the procedure aims at finding about eight institutions with two “discussion partners” in each, in order to reach a total number of sixteen interviews.

¹³ To some extent, this aspect could also address the issue of teaching methods, but this is not central to the Swiss research design.

CHAPTER 6 — AN OUTSIDER PERSPECTIVE ON THE SINGAPOREAN EXPERIENCE

CHAPTER SUMMARY

Firstly, we present the results of interviews carried out in Singapore. Secondly, according to the SNERP's research design, these results are compared to Swiss findings in order to identify common aspects and problems concerning language instruction in vocational training. This procedure should allow to set up guidelines for possible future research on language skills in vocational education in Switzerland.

6.1. INTRODUCTION

This chapter presents the results of a round of interviews carried out in Singapore in July 2000, in accordance with the design of the LIVE project¹.

Comparison between national situations has been defined as one of the central goals of the SNERP. This also applies to the LIVE project, first in order to assess the degree of generality or specificity of the problems encountered in terms of the goals and procedures of language instruction in vocational education, and second in order to generate new insights into possible paths for improvement in the effectiveness of vocational education. Given the exploratory character of this study, comparison between cases is organized along flexible lines, and cannot be shoehorned into rigid analytical categories. Rather, the comparison and commentary of the information collected proceeds from the issues that have spontaneously come to the fore during the interviews. This is manifest in the case of the investigation of the Singaporean experience by Swiss visitors : whereas our “interview guidelines” for Singapore had been prepared with reference to the issues encountered in fieldwork in Switzerland, it quickly became clear in Singapore that other issues (and hence other questions and analytical categories) were more relevant. In particular, two issues have turned out to be centrally important and have therefore guided information gathering in Singapore : first, the relationship between language skills and communication skills, as well as the role of “Singlish” (which may be described as a local English-based code with significant imports from Mandarin and Southern Chinese dialects).

¹ The information presented in this report is the result of a round of interviews which took place in seven locations in Singapore from July 17 to July 22, 2000. The interviews were carried out by LIVE project leader François Grin and by the Head of International Affairs at the Swiss Federal Office for Vocational Education (OFFT-BBT), Jean-Etienne Berset. The interviews were organized in Singapore by our local partners. It is not possible here to thank all the persons who have contributed to making this survey possible, but special thanks are due to our friends and colleagues at the Institute of Technical Education (ITE) who have prepared contacts with firms and training institutions, provided technical support, as well as supplied invaluable information themselves ; at the Ministry of Education ; at the Singapore Polytechnic ; and at the National Institute of Education (NIE), which steers the LEL (“Language Education and Literacy”) project to which the LIVE project is connected in the context of the SNERP.

In Singapore itself, we have visited schools and training institutions as well as firms training apprentices or hiring apprentices trained at vocational institutions. The variability between contexts, as well as of the varied profiles of the informants interviewed and the diversity of issues that have come up during these interviews would have made it difficult (even artificial) to impose a rigorously parallel structure in each interview report. The reader is invited to remember that information gathering in the LIVE project operates with interview *guidelines*, rather than with set questionnaires. These interview guidelines were sent to Singapore for distribution to the institutions (firms, schools, etc.) of the future interviewees several weeks ahead of the visit, along with the express specification that they did *not* constitute full-fledged questionnaires, but should rather be seen as a framework or a check-list.

The following interview reports therefore comprise three “constant” sections found throughout (Introduction ; Language skills ; Skills v. needs), but these sections are broken down in subsections whose headings and contents can vary, of course within limits.

From July 17 to July 22, the research team visited the following institutions and firms : the Institute of Technical Education (ITE) ; the Centre for Tourism-Related Studies (CTRS) ; the Oversea-China Bank Corporation (OCBC) ; Spindex Industries Ltd ; the Singapore Polytechnic ; Rotary Engineering Ltd ; and C.K. Tang Department Stores. Interviewees' profile could vary from case to case and included teachers, school authorities, human resource officers, representatives of management, students and apprentices, or a combination. This series of interviews was preceded and followed by work meetings with our colleagues from the National Institute of Education (NIE) of Nanyang Technical University (NTU), who carry out the LEL project with which the LIVE project is closely connected.

In this chapter, the contents of all interviews are presented in chronological succession. This is followed by an “assessment” section (Section 6.9.) which evaluates the main issues, and is organized in discrete, yet interrelated topics. Of course, we can in no way claim to have done more than scratched the surface of the very complex Singaporean reality, but certain points kept recurring, allowing us to formulate some hypotheses to propose an interpretation of this reality. This interpretation will no doubt look simplistic to the Singaporean reader ; yet it must be remembered that this report is not intended as a monograph on the Singaporean case, but as a set of informational elements, gathered by outsiders, with a view to reassessing some elements of the *Swiss* approach to language instruction in vocational training.

6.2. INTERVIEW REPORT NO. 1 : INSTITUTE OF TECHNICAL EDUCATION (ITE) BISHAN

Interviewees : Panel of instructors followed by three students.

6.2.1. CONTEXT

The Bishan Institute of Technical Education (ITE Bishan) is one of some ten vocational training institutes in Singapore and as such is part of the country's mainstream vocational education system. Bishan, along with ITE Clementi, is

one of two institutes focusing on business studies (accounting and secretarial skills) and office skills ; it also offers the National certificate of nursing. Bishan therefore delivers four different types of certificates, most of which can be acquired after two years of study (one year for the certificate in office skills). Students are mostly full-time and aged approximately 16 through 18 ; a small proportion of students are apprentices also employed in firms. Enrolment at Bishan stands at around 1,700 students, receiving instruction from a staff of some 88 teachers. The normal syllabus is complemented by several programs such as “in-plant attachment” (placement in a local firm) and “overseas assignment programmes” (placement in a firm abroad). Most students are said to have found employment within three months of graduation.

Instruction is provided in English, and languages themselves are not subjects, although language is a central element in courses such as Business Communication I and II.

6.2.2. LANGUAGE SKILLS

Competence levels in English

English is considered to be the “first language” of about half of the students. Trainers describe the students’ competence level in English as “good” to “basic” in oral comprehension and reading. They tend to be lower for oral expression, while the picture as regards writing is somewhat contradictory. At first, instructors rate their students’ writing skills in English as “basic” to “good”, but as the interview goes along, this assessment is revised downwards to “basic”.

Irrespective of the type of skill, the level characterized as “fluent or almost”, however, is considered exceptional, since the majority of students have Mandarin as a “mother tongue”, with a large proportion of Malays (about 30%, which implies significant over-representation of this particular community)². Also across types of skills, the average language competence of office skills students is considered lower than that of business studies and nursing students.

The notions of “mother tongue”, “first language” and “second language” are less clear-cut in Singapore than in other countries such as Switzerland, where “mother tongue” largely refers to heritage and ethnicity ; hence, somebody can have a relatively low degree of competence in his “mother tongue” — an almost oxymoronic proposition in Europe ; at the same time, a person may describe as his or her “first language” a language that he or she does not master with complete fluency. The adjective “first” applies because it is the language he or she : (i) uses in the largest number of situations ; (ii) uses *a priori* with strangers, unless it has been established that a “heritage language” such as Mandarin can be used ; (iii) uses for “H” functions (as opposed to “L” functions in the Fergusonian sense of diglossia)³.

This form of “appropriation” of English by people, including by those who have a non-fluent command of it, may in part explain why students assess their own competence levels rather confidently. In particular, they evaluate their own and their peers’ degree of oral comprehension at “good” to “fluent”, namely a full

² Malay is the predominant household language of some 13.6% of residents, according to 1990 Census returns.

³ H = high ; L = low.

notch above the evaluation by their teachers. Their self-assessment of oral expression stands at “basic” to “good”, whereas instructors would on average assign them more to the “basic” than the “good” level. As regards receptive or productive written skills (reading and writing), students’ and instructors’ evaluation converge on “basic”.

One other element complicating the language pattern of Singaporeans is the prevalence of Singaporean English, often referred to as “Singlish”. Instructors characterize Singlish as a grammatically simplified form of English, in which meaning is conveyed with a striking economy of terms considered non-essential. However, from a linguistic standpoint, Singlish might be something else than simplified English, and may be considered a pidginized, yet functional linguistic code offering, at least internally, a fully valid alternative to English. We therefore consider it a task for linguists (and hence one that goes well beyond the scope of this report) to assess the range and adequacy of Singlish as an actual alternative to English. Questions to be addressed include, in particular, whether the alleged syntactical economy of Singlish is such that effective communication in it may be confined (or not) to the transmission of relatively non-abstract notions, and hence to use in clearly circumscribed contexts, implying that communication at a more abstract level would need to take place in English, Mandarin, or some language other than Singlish. It would then be a task for sociolinguists to comment on the adequacy of Singlish in the broader ecology of languages. In any event, the discrepancy between the instructors’ evaluation and the students’ self-evaluation of their oral skills in English may be due to the fact that teachers are aware of the difference between English and Singlish, while the students are not (or to a lesser degree).

Competence levels in Mandarin

Both the receptive and productive oral skills of students in Mandarin are rated as “fluent or almost” by instructors ; reading skills range in general from “good” to “fluent”, while writing skills in Mandarin are described as “good”. Mandarin is described as the language of “day-to-day communication” or “informal interaction” for students of the Chinese community (generally, members of the Malay community are not expected to speak or understand Mandarin, and inter-community communication, whether formal or not, takes place in English)⁴.

Students’ self-assessment of their own skills in Mandarin converges with that of the teachers, with one exception : they are much more critical of their own reading skills, assigning them to the level “basic” rather than “good” (let alone “fluent”, as some instructors suggest).

The role of Chinese dialects (particularly Cantonese) is underlined, although it is clear that the students’ level in these languages (which are not taught at primary or secondary school, and which the government actively seeks to replace by Mandarin) is very low. At best, “understanding” skills are at the “basic” level ; the other three skills are at the “none or almost none” level. Typically, dialects will be used by some for communication with grandparents who are not comfortable with Mandarin and speak no English. This pattern is therefore likely to disappear, for sheer demographic reasons, within one generation.

⁴ Staff, however, reportedly use only English among themselves.

Competence levels in other languages

Malay students are reportedly fluent in the four skills in Malay (with the exception of writing, where skills may be lower). Apart from a small number of Tamil students, there seems to be virtually no case, in the school, of students having a command of another language.

6.2.3. SKILLS V. NEEDS

Language requirements

In the case of English, the level of language skills required in the future occupation is extremely case-dependent, ranging from “fluent” to “basic” (“none”, however, is ruled out). By and large, the level of skills needed appears to be somewhat higher than the skills actually possessed. This applies in particular to oral comprehension and expression, where the level “fluent or almost” is considered necessary, even though students can on average be described as merely “good”. Given the trades taught at Bishan, the level in reading considered necessary for future working life is “good”, and “basic” for writing skills; in other words, the level necessary and the level actually reached by students is equivalent in the case of written skills (however, this latter statement has to be qualified, in the light of teachers’ comments regarding improvements in language teaching at primary school). Nonetheless, this general evaluation converges with that of the students, who also express a relative deficit in oral language skills.

As regards the potential need for Mandarin language skills, the case-dependency also exists, but it appears to be related far less to the nature of the job than to the profile of clients. In any activity that puts a worker in contact with a predominantly Chinese clientele, Mandarin will be necessary. However, this need does not need to be filled by every worker in an office (say, a branch office of a bank), since it is enough if one or two workers in the branch office are reasonably fluent in Chinese, in order to be able to serve customers who speak no English. Teachers, nevertheless, point to a growing demand for workers with bilingual English-Chinese skills in the services sector. Students systematically evaluate the need for Mandarin as less than the need for English, although the difference between respective degrees of need, which is considerable for written skills, is fairly narrow for oral skills (particularly comprehension); again, however, much depends on the context of the activity.

Students suggest that in the future, there will be a need for some to learn Japanese, French or German.

Language use in employment

Generally, informants stress that language skills as such are not a major issue in terms of job access. Access to employment is largely determined by students’ technical skills, and good language skills are an added plus. Besides, it is the embodiment of language skills in communicational skills (oral and written) that counts, making the role of language difficult to tease apart from that of other factors.

It seems clear to all interviewees that English will be used daily in any job, while the use of Mandarin will be firm-specific, predominantly oral, and may in specific

cases be a written one (for example, in the written correspondence of a Chinese-run firm with specific clients or suppliers).

Students think that better language skills make no difference in terms of access to particular positions, or in terms of future earnings ; however, they expect better language skills (also in terms of English-Mandarin bilingualism) to facilitate job mobility (and hence access to better employment conditions).

Teachers report that employers have occasionally pointed out some deficits in the level of students, but this hardly seems to be a major issue ; in any event, vocational schools are not responsible for language instruction, which is provided at primary and secondary school. Generally, language skills are not the object of a formal or systematic assessment by firms upon hiring, and the school receives little feedback on this topic from employers, despite fairly regular meetings (on average every three months) between employers and school principals.

Performance of school education

Some instructors point out that schools could do better in imparting language skills, improving in particular students' grammar and spelling (a somewhat surprising contention, given the fact that English writing skills had been characterized, earlier in the interview, as sufficient at "basic" level, and not crucially necessary anyway). There is a rising trend towards higher language requirements, where the quality of bilingualism expected is higher. This, according to teachers, is a task for schools, and vocational schools can build on this later, for example in the context of "business writing" courses.

Students, however, express themselves in favor of introducing English as a subject at vocational school, while also pointing out that English-language instruction at primary and secondary school was not fully satisfactory ; their memories of the quality of language instruction received then are mixed. They consider that to some extent, there would be cause for introducing Mandarin as a subject at vocational school too. The levels aimed at should be higher for English than for Mandarin, and stress communication skills (including writing). Teaching materials throughout the education system should be more closely related to everyday life and youth concerns.

The rise in the expected level of bilingualism may explain the development of university programs such as MBAs taught through the medium of Chinese — but this, of course, is in the realm of elite education, and less relevant to the students undergoing vocational training.

6.3. INTERVIEW REPORT NO. 2 : CENTRE FOR TOURISM-RELATED STUDIES (CTRS)

Interviewees : Director of CTRS ; manager of CTRS.
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6.3.1. CONTEXT

The CTRS is the training arm of the National Association of Travel Agents (NATAS), which owns the CTRS. It is endorsed by the Singapore Tourist Board (STB), the Board of Airlines (BAR), the Institute of Technical Education (ITE), in

particular. Its mission is to “upgrade the professionalism, service and productivity of the travel and tourism trade”. The CTRS offers very targeted courses such as “air fares and ticketing”, and delivers a broad range of certificates, notably (with ITE endorsement) the National Certificate in Travel Service (NCTS), and two diplomas on behalf of the IATA (International Air Travel Association), the STB-CTRS Tourist Guide. Short, specialized training modules are also offered. The NCTS entails approximately one year of study, including formal courses and on-the-job training with a travel agent. The CTRS staff includes 3 full-time and some 70 part-time (often external) instructors.

Its trainees include a minority (approx. 20%) of fresh school leavers with O or A levels and some 80% of persons already in gainful employment who attend courses for skills development. Total enrolment stands at some 1,200, of which 800 are studying towards certificates, the rest in shorter modules.

6.3.2. LANGUAGE SKILLS

Competence levels in English

Trainees' competence in English is important, and a “pass” mark in English when leaving secondary school is an absolute requirement. All courses are taught through the medium of English, with the exception of courses for Tourist Guides, which owing to the structure of demand (in this case : the range of nationalities of tourists visiting Singapore) may be taught in Mandarin, Japanese and Korean. For the most part, the trainees following courses in those languages live in Singapore, either as citizens or foreign residents.

Trainees' oral skills are expected to be at “fluent” level ; reading and writing skills are expected to be fluent for those destined for managerial positions ; travel assistants, however, can get by with a “good” level in reading and a “good” or even “basic” level of writing. English is the “first language” of the majority of trainees. English is, without question, the dominant communication language in the profession.

Competence levels in mother tongue (MT)

In most cases, the trainees' “mother tongue” is Mandarin. It may, however, be known at a lower degree of competence than the “first language” (see interview No. 1). Typically, oral skills in Mandarin are at level “fluent”, and written skills at level “good”.

Competence levels in other languages

With the exception of persons undergoing Tour Guide training and who may receive instruction (at this time) in Japanese or Korean, other languages have negligible importance. This is due to the fact that 75% of arrivals are from the Far East, and much of the rest of the market is made up of anglophones from Australasia, North America and the British Isles. English is generally used with the comparatively lower numbers of continental European visitors, who as a rule do not visit Singapore as a group (contrary to visitors from the PRC, Taiwan, Japan or Korea). Mention was made of Russian as a possibly relevant language of

training for Tour Guides, given the development of Russia as a possible market ; no other need is predicted for the next five years.

6.3.3. SKILLS V. NEEDS

Language requirements and language use in employment

Generally, the profession requires oral skills in the various languages concerned ; only a minority of workers need high-level written skills in English, for example for work at the STB ; the STB, however, occasionally recruits staff with university education. In travel agencies, only managers actually need to write correspondence. Because of the entry requirements into the profession in general, and to CTRS courses in particular, the problem of inadequate English-language skills never arises⁵.

In some travel agencies located in neighborhoods with a high share of (mostly) Chinese-speaking population, Mandarin is necessary, but not all staff need to know it, since it is considered sufficient, out of staff of, say, 10 workers, for one or two to be proficient in Mandarin. Even in those agencies, routine travel work like ticketing is performed in English. The relative use of English, Mandarin (or possibly other languages) is therefore extremely case-dependent, both in terms of the work location and position held.

There are, however, no formal language competence requirements apart from English and, as the case may be, some degree of competence in Mandarin. Despite the importance of languages in the profession, technical skills are what matters most for many jobs. In terms of career progress, high-level bilingualism in English and Mandarin is definitely an advantage. Even though language skills as such do not carry direct material benefits, they may be associated with higher earnings precisely because they give access to higher positions. They also favor mobility, which can in turn be used to improve material prospects.

Performance of school education

The performance of schools is therefore regarded as adequate. According to our informants, room for improvement and future development may exist at two levels. First, despite adequate language skills as such, there is a need for better communication skills, which of course require language proficiency. However, the emphasis should be on “soft skills” generally, including abilities of oral and written communication. In due course, the opening up of the Chinese economy may reinforce the relevance of a good command of Mandarin. The level of teaching of Mandarin may need to be improved in schools, and courses through the medium of Mandarin may need to be introduced at the CTRS. The latter development, however, would be hampered in the short run by the fact that all teaching materials exist in English only.

⁵ This converges with results obtained in Switzerland, where persons with insufficient language skills automatically self-select out of the profession.

6.4. INTERVIEW REPORT NO. 3 : OVERSEA-CHINESE BANKING CORPORATION LTD (OCBC)

Interviewees : Three human resources officers ; one apprentice studying towards a COS.
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6.4.1. CONTEXT

The OCBC offers a complete range of banking and financial services, including commercial banking, loan syndication, asset management, and retail banking. It has 90 branches in 13 countries, namely Singapore, all South-East Asian countries, the People's Republic of China (including one in Hong Kong), Australia, New Zealand, the United States (New York and Los Angeles), and Britain. Of its total staff of about 5,000, 4,000 work in Singapore and the rest abroad. Pre-tax profit in 1999 amounted to a little over SGD 900m, of which 80% was realized in Singapore, 14% in other ASEAN countries, 5% in the rest of the Asia-Pacific region, and less than half a percent in the rest of the world.

Apart from professionals in banking with specialist background, the OCBC hires young people having completed a COS or CBS (see interview No. 1), which make up 100 to 200 of its total clerical population, as well as people having left school with O levels. New employees receive general training for an average of three days upon hiring, and then receive specific training depending on the department to which they are attached ; the duration of this training may vary but averages one week per year.

6.4.2. LANGUAGE SKILLS

Competence levels in English

The competence level of staff is described as generally "good" for reading, "good" or "basic" for oral comprehension, oral expression, and writing. These competence levels are systematically described as slightly *lower* than competence needs, although not by much (e.g. when actual competence straddles "basic" and "good", the level of competence needed straddles "good" and "fluent"). However, the adequacy of language skills cannot be evaluated as a whole, but only within categories of posts.

Competence levels in mother tongue (MT)

The most common "mother tongue" of OCBC staff is Mandarin by far. On average, the competence level of employees in Mandarin is described as "good" to "fluent", that is, *higher* than for English ; the spread of competence in Mandarin, however, is larger for written skills, with many employees having only "basic" reading and writing skills.

Competence levels in other languages

Singapore's national languages may be used by employees from minority descent with a high degree of fluency. Malay-speakers reportedly tend to use Malay for than English among themselves, while Tamil-speakers would use English rather than Tamil among themselves. The relatively low number of cases, however, makes generalization difficult. Other languages, however, play a negligible role.

6.4.3. SKILLS V. NEEDS

Language requirements and language use in employment

The main language of the company is undoubtedly English. However, there are numerous specific circumstances during which other languages may be used — quite apart from the language requirements reflecting to the location of branches abroad. Even in those foreign branches, however, English is said to play a dominant role, including in the PRC, although PRC branches will typically have a more frequent use of Mandarin for internal and external communication. All branch managers of OCBC are Singaporean nationals, and of course competence in Mandarin is regarded as an advantage for a posting in the PRC, while the same applies to competence in Malay for a posting in Malaysia.

In Singapore, Mandarin and Chinese dialects may be used with some customers, particularly those who have insufficient command of English. Internal communication among employees is characterized by a high degree of code-switching and code-mixing between English and Chinese, and a frequent resort to “Singlish” for informal interaction.

The competence needs of OCBC employees are very different depending on their position at the bank. Some departments which stress language skills will not only interview applicants orally, but require them before hiring to write an essay, in order to assess their writing abilities. Symmetrically, some positions do not require English to be given much weight, and workers with comparatively low skills can for example be assigned to back-office positions. In such positions, the relative importance of Mandarin for communication will be higher.

Other languages are of course needed to serve customers in specific branches (e.g. in Cambodia or Thailand), but other languages of wider communication seem to play no role at all in the OCBC's human resources management.

Language skills can be an asset in an employee's career. Although the level and extent of language skills make strictly no difference (for example in terms of salary) at hiring, they can contribute to a more rapid promotion, with correspondingly higher benefits. However, compensation packages, which are largely performance-based, set relatively little store by language. In a very tense labor market, not just pay, but also the working environment and the challenges offered to employees are used to retain them.

Performance of school education

Informants indicate that there is a general gap between competence levels and expectations, particularly for English. Strangely (to the eyes of the interviewers), the question was apparently never raised by the company (for example through informal contacts its executives may have with government officials, allowing more or less direct access to the Ministry of Education) of whether primary and secondary schools were actually achieving their language training goals. The OCBC simply accepts that courses are needed to upgrade the language skills of some employees, and 3% to 5% of newly hired employees are sent to internal courses (where the lecturers, however, are hired from the outside). Such courses last two to three days. Typically, it is not possible to expect a three-day course to significantly change a person's competence in a language, which suggests that these courses are narrowly focused, for example on work-related terminology.

No comparable improvement courses are offered for Mandarin (even with the opening up of the PRC's economy, the "pool" of competent users of Mandarin at the OCBC is considered sufficient) or other any other language. Generally, the bank considers that the promotion of languages (including Singapore's national languages) is not a matter of concern for its own development, and is purely a matter for government policy.

Rather than better language skills, better communication skills, both oral and written, appear to be particularly necessary. This was confirmed by the apprentice, who indicated that school should provide more training in English, emphasizing communication skills ; she also noted that the teaching of language at school had been too bookish and formal.

6.5. INTERVIEW REPORT NO. 4 : SPINDEX INDUSTRIES LTD.

Interviewees : Managing Director ; Operations Manager ; Manufacturing Manager.
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6.5.1. CONTEXT

Spindex Group employs some 450 employees (150 in Singapore, and 150 each in plants in Malaysia and the PRC respectively). It produces precision machine equipment, office automation, domestic appliances, consumer electronics, medical equipment, etc. It had a turnover of some SGD 37m in 1999, of which over 54% is exported.

Spindex is characterized by a high proportion of foreign workers (which reaches 35% of the workforce in the Singapore plant, thereby reaching the legal limit). Of these 35%, 5% are Malaysian Chinese, while the remaining 30% come from further away (almost exclusively PRC and India).

Spindex used to train apprentices studying for two years towards a certificate in "precision machining", but discontinued the practice, on the grounds that apprentices were unreliable and often seemed unsure about their real objectives. Spindex now hires freshly promoted vocational school leavers and offers them on-the-job training. New employees are first given two basic, entry-level courses to make them familiar with the equipment used in the company (which is more sophisticated than the equipment used at school). This is followed by 6 training modules (totaling 40 hours of instruction) on more specialized skills. These courses are taught in English or in Chinese, given the high proportion of employees from the PRC. The courses are approved by the Institute for Technical Education (ITE).

6.5.2. LANGUAGE SKILLS

Competence levels in English

The oral command of English of *Singaporean citizens* in the workforce is described as "good" to "fluent" ; the same applies to the Indian nationals, who usually come from the Tamil community. Instructions at work are given in English to these workers (although they may also be given in Mandarin to Chinese Singaporeans). Their written command of English, however, sometimes proves insufficient for correspondence with customers. This limitation is said not

to apply to university-trained engineers, but may apply to engineers trained at the Polytechnic.

By contrast, Malaysian Chinese were described as having “basic” English, while Chinese from the PRC have “basic” or no English ; instructions at work are always provided in Mandarin. PRC Chinese are sent to basic English classes, at the expense of the company.

Singaporean Chinese workers may also be sent to an external English class, also at the expense of the company (although such expenditure can largely be recouped through government grants. These courses, however, take place during the workers’ off-time.

Competence levels in mother tongue (MT)

In the course of this interview, little time was devoted to discussing the case of MT skills. Non-Singaporeans are considered fluent in their respective native tongue ; Singaporeans are said to display any possible degree of competence in their MT, such as Mandarin, the general observation being that oral skills are better than written skills, and receptive skills better than productive skills.

Competence levels in other languages

Foreign workers (e.g. from India or Malaysia) normally have full competence in other languages (usually Tamil and Malay), but these are not relevant at Spindex.

6.5.3. SKILLS V. NEEDS

Language requirements and language use in employment

English is considered the most important language, and “broken English” (in the very words of the informants) is considered sufficient to operate in the firm and outside of it (e.g. for commercial contacts, “even with the Japanese”). Good English is considered indispensable at management level.

No English is expected from the Chinese employees coming from the PRC or from Malaysia ; there is no language testing for them, since English is simply considered as not necessary to the tasks they perform. This implies that the internal operations of the company are therefore routinely bilingual, owing in particular to that large Chinese presence in the workforce.

Competence in Mandarin is considered an asset for two specific types of positions in the firm : instructors of Chinese-speaking employees, and sales representatives, either locally or abroad, particularly in the PRC.

Performance of school education

Informants point to a general improvement in English language skills, and school is credited for this progress. However, they observed that school should stress communication skills (which are apparently perceived as distinct from “language” skills), because these are not taught as such at school. The government seems to be aware of this need. Although the company is not directly concerned, it can forward remarks directly to the educational sphere through personal contacts with the ITE Board (of which the managing director of Spindex is a member).

6.6. INTERVIEW REPORT NO. 5 : SINGAPORE POLYTECHNIC

Interviewees : Principal, Deputy Principal, Director and Deputy Director of Language and Communication Department, Director of Department of International Relations, International Relations officer ; four students⁶.

6.6.1. CONTEXT

The Singapore Polytechnic, established in 1954, is a tertiary institution providing technical education to students having completed their O levels. Three other polytechnics were added in 1982, 1990 and 1992. The 23 programs offered last three years. In addition, some part-time diplomas can be earned in five years during evening classes ; there also exist some two-year advanced diplomas, typically taken part-time.

The staff of Singapore Polytechnic numbers 1,500, including 900 teaching staff. Current student enrolment stands at about 17,200. Training at the Polytechnic includes two periods of two months spent in a company (ITP), requiring the Polytechnic to arrange an average of 7,000 placements every year. After their diploma, students enter the labor market or may enter university, directly accessing the second year.

6.6.2. LANGUAGE SKILLS

Competence levels

The information reported in this section primarily applies to the case of the four students interviewed.

Angela (22) is a Chinese Malay with Mandarin as her first language ; Rachel (21) is a Singaporean Chinese who considers herself bilingual in English and Mandarin ; Vincent (21) is Singaporean of Indian descent whose first language is English, but who indicates that he speaks good Penjabi and Malay (which he had to take as “mother tongue” at school) ; he also has some basic competence in Chinese ; Mike (19) speaks English but no Mandarin ; he also studied Malay at school⁷.

⁶ The four students (two female, two male) were aged 19 to 22. The two female students were studying architectural technology and the two male students, mechanical engineering. All were third-year students, described by their teachers as more articulate than the average student, and as such good sources of information in a pilot study such as ours, which does not aim at ensuring the *representativeness* of observations.

⁷ Students' first names changed for confidentiality.

The four students consider themselves fluent in English, and report no deficit. Angela and Rachel consider their oral Mandarin fluent, but evaluate their written Mandarin at a lower level; Vincent and Mike offer a similar characterization of their command in Malay, although they point out that school stressed written rather than oral Malay.

In conversation without the students, however, teachers indicate that students have a tendency to overestimate their productive command of English, largely because they do not realize how far away Singlish is from standard, international English. Accordingly, their written skills are considered deficient.

Language use at the Polytechnic

All courses are given in English, except some specific language courses. In addition to optional courses (see following subsection on “other languages”), this normally refers to very targeted instruction like “Business Chinese”, which is an “elective” (optional, but credit-giving) course.

All four students describe English as by far the most important language of interaction between students, with Mandarin being very useful for social purposes. However, it’s considered a “plus”, rather than a necessary or essential asset. Malay is described as “a bit” useful, essentially to establish communication⁸.

Competence levels in other languages

The direction and teachers of the Polytechnic indicate that L3 competence does not hurt, but is not a critical factor of professional success, since it can be useful only in specific niche markets; one informant observes that students “have enough problems with two languages”, suggesting that acquiring an adequate degree of command of these two languages may not be unproblematic in the first place. In the case of “closing a deal” with a potential client or supplier speaking another language (for example other than English or Chinese), a minimal level of competence to establish “phatic” communication is considered sufficient.

Some students take additional (“enrichment”, that is, non-credit) courses in other languages, particularly Japanese (with 800 participants), distantly followed by French, German and Bahasa (Indonesian). Japanese was introduced at the Polytechnic at the explicit request of the Ministry. The course costs SGD 217 for 60 hours of instruction.

As regards the four students interviewed personally, Vincent reports good competence in oral, but not written Penjabi, and mentions French as a useful language to learn.

⁸ One intriguing point made at the end of the interview is that prosperity may reduce exposure to linguistic diversity, since more affluent people tend to move to linguistically homogeneous housing estates.

6.6.3. SKILLS V. NEEDS

Language requirements and language use in employment

All informants stressed the importance of developing communication skills as distinct from language skills.

Competence in English is taken for granted (both as an asset students have and as a requirement of the labor market). Competence in Mandarin *vis-à-vis* work is treated by students just like it is with respect to social interaction, namely, as a “plus”, but not as an essential asset. What really matters in their eyes is the combination between high-level technical skills and good communication skills (which the most multilingual of our informants agrees are ultimately language-based), although they see the relevance of bilingualism for some activities (which are not necessarily “niche” ones, such as “technical servicing”). Somewhat paradoxically, the importance of bilingualism is considered higher for work in the local than in the multinational sector, because the latter is expected to function in English anyway (which is apparently taken to mean in English *only* for all the tasks that matter). Students do not expect language skills to result in higher labor income, but agree that these skills broaden access to the labor market and can enhance professional mobility.

Performance of school

The management and teachers of the polytechnic are critical of the proficiency levels of most students, suggesting that schools could perform better, since improving language skills for all students exceeds their own remit.

Students, however, indicate that school has given them enough instruction in English, Mandarin and Malay, and expect no language-based deficit in their future work.

There is intense and regular communication between the Polytechnic and employers, and the latter would have ample opportunity to voice complaints about the inadequacy of students communication skills ; yet such complaints are hardly ever made, because effectiveness at work appears to be seriously hampered by linguistic deficiencies only beyond a certain job level, at which people need to write reports, etc.

The Department of Language and Communication of the Polytechnic therefore carries out regular surveys on graduates’ communicational abilities and needs with the firms who hire these graduates, getting a (very good) 20 to 30% response rate. The survey results are said to be “unsurprising”, but they provide grounding for what is already known. This information is used in the course reviews taking place every five years, under the supervision of a panel which includes representatives of business. This monitoring system has led to a shift in the focus of a course (LC 0702 EIC, “Effective interpersonal communication”), which now emphasizes “emotional intelligence”.

6.7. INTERVIEW REPORT NO. 6 : ROTARY

Interviewees : Corporate communication officer ; two apprentices aged 19 and 21.
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6.7.1. CONTEXT

Rotary is a company specialized in civil and structural engineering, which includes the supply of equipment and parts for a broad range of industries, as well as the maintenance of the products supplied by the company or by others ; supply comprises the design of the equipment, which may for example include tanks for the oil and gas industry, etc. Rotary employs approximately 1,150 persons and had a turnover of SGD 105m in 1999.

Rotary regularly trains apprentices, a maximum of ten at any given time. Apprentices earn SGD 750 per month throughout their three-year training. The two apprentices interviewed, Ron (19) and John (21)⁹ completed their N levels and went into apprenticeship to earn a diploma in civil and structural drafting. They take classes at the ITE one day per week. Normally, Rotary likes to keep the apprentices it has trained.

6.7.2. LANGUAGE SKILLS

Competence levels

Both Ron and John report “fluent” oral comprehension, and “good” oral expression, reading and writing skills in English. However, their activity requires oral much more than written skills.

Both view Chinese as their mother tongue *and* their first language, clearly making Chinese the language they consider to know best. However, Ron describes his competence levels in Mandarin and Hokkien as equivalent, whereas John consistently reports higher competence in Mandarin than Hokkien. Hokkien is largely used by both as a family language, although they sometimes use it with each other and with co-workers.

Oral command (productive and receptive) of Mandarin and Hokkien is described as fluent by both ; as regards written competence, they describe their reading skills as “good” and their writing skills as “basic” — although Mandarin is, as noted above, their first language.

Neither reports any competence in additional languages, although Ron indicates a strong interest in learning Japanese, possibly in order to study in Japan later, but also because Japanese culture is regarded as “in” in the Singaporean youth¹⁰.

However, the company employs an important proportion of foreigners speaking Malay and Tamil.

⁹ First names changed for confidentiality.

¹⁰ Coincidentally, this point found confirmation in the issue of the weekly *The Economist* published the following day. See “Advance of the amazonesu — Japanese pop culture is turning into a money spinner across Asia”, *The Economist*, July 22nd, 2000, pp. 67-68.

6.7.3. SKILLS V. NEEDS

Language requirements and language use in employment

From the standpoint of the company, only English language skills, in principle, are required. However, there is a tendency to recruit personnel who also speaks Mandarin.

English is used in contacts with supervisors, in particular the section head, as well as with all non-Chinese speaking co-workers. Generally, English is said to be the only language used in work-related activities. Ron and John use Mandarin, occasionally Hokkien, in social and interpersonal contact. They also suppose that Chinese is relevant for members of the Rotary staff who have to work abroad, particularly in the PRC.

All informants note that language skills are of little, if any consequence in a career path, and that what matters most (or “only”) is performance. A human resources officer agrees, pointing out that in this particular industry, language skills beyond simple communication are not necessary for most workers. Better language skills have no effect on earnings. However, they may favor mobility between different sectors of the firm, and possibly allow for an activity in the international instead of the domestic sector.

Performance of school education

Both apprentices complain that the school does not bring them to an adequate level of proficiency in English. They point to the environment, at school and out of school, which is not conducive to practicing and improving their English. Both agree that English could be introduced as part of their vocational training, but that the emphasis should be on conversation, in order to develop communication skills, whether listening comprehension or speaking abilities. The teaching style of English at school has room for improvement, through more entertaining and stimulating materials. Ron also suggests offering Japanese as a subject for apprentices.

6.8. INTERVIEW REPORT NO. 7 : CK TANG

Interviewees : Assistant executive at Human resources development ; one apprentice, aged 19.
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6.8.1. CONTEXT

C.K. Tang is a major department store in central Singapore, which realizes 90% of its turnover in retail sales, and the remaining 10% in its restaurants. Turnover in 1999 was almost SGD 140m. In addition to its store in Singapore, which employs some 550 people, C.K. Tang has a branch in Kuala Lumpur.

C.K. Tang has two sales clerks apprentices in its Singapore staff ; in any one year, the number of apprentices never exceeds ten. Apprenticeship is approved by the ITE and lasts for one year. Two days a week are spent at school, three in the store. Normally, a job is offered to the apprentice at the end of his or her training, with a monthly salary of SGD 850 to 900 — representing barely a 10% increase over the salary earned as an apprentice. Total pay is performance-based, allowing (reportedly significant) bonuses to be added to the basic salary.

6.8.2. LANGUAGE SKILLS

Competence levels in English

The HR officer describes the competence level in English of the staff, on average, as “basic” throughout (that is, for all four skills) ; “basic” oral skills correspond to the requirements of the employer.

Laurie (19) is in apprenticeship at C.K. Tang towards a Retail Sales Assistant (RSA) diploma. She defines both English and Mandarin as “first languages”, although she also indicates that her competence in Mandarin is better than her competence in English (which, in the opinion of the interviewers, should actually rank between “basic” and “good” for receptive and productive oral skills).

Competence levels in mother tongue (MT)

Among employees who have Chinese as their mother tongue, the level of Mandarin is evaluated by the HR officer as “good” for the four skills ; for others (normally, employees of Chinese descent, who, however, would describe English as their “first” language ; occasionally employees from another ethnic background), competence in Mandarin is described as “basic” throughout the four skills.

Competence levels in other languages

Among the Singaporean Malay or Malaysian Malay workforce, oral competence in Malays (active and passive) is assessed by the HR officer as “fluent”, reading and writing competence as “good”. Some staff members have competence in Japanese thanks to training provided by the firm (see below). Our interviewee Laurie reports no knowledge of any additional language.

6.8.3. SKILLS V. NEEDS

Language requirements and language use in employment

C.K. Tang has no systematic policy of preference for bilinguals. English is an absolute requirement, but only at a basic level ; bilingualism is considered a plus, but does not translate into salary bonuses. However, some employees can be selected by the supervisor and sent to a 14-hour course (at the expense of the employer) in order to improve their English. The program, which is destined to employees who lack communication skills (on average, some 20% of the workforce), is run by ITE. Needs of course vary greatly depending on whether a staff member works as a sales clerk or in administration.

English and Mandarin are used to negotiate with suppliers. Although our informants indicated that this could be a “big advantage”, particularly in the case of dealings with suppliers in the PRC or Taiwan (in which case a competence in Hokkien could also prove to be an asset), they were not in a position to suggest an order of magnitude substantiating their perception that the advantage is a “big” one. Surprisingly, bilingualism was said *not* to be a condition for working as a buyer for the company.

Internal communication in the company may take place in Mandarin or English, as well as, of course, a combination of them. Laurie indicates that Singlish is the

dominant language of interaction at work, although she quite naturally slips into Mandarin for interaction with her supervisor.

As regards contacts with clients, English (often in its Singlish version) and Mandarin were said to be the useful languages, while nothing stopped sales clerks who know those languages to use Malay or Tamil with a customer. Because of the high number of Japanese tourists visiting Singapore, using Japanese with customers was considered an advantage. C.K. Tang selects a small number of sales clerks for training in Japanese classes. These classes take place during working hours. Normally, the course aims at bringing learners up to a “good” level of Japanese (given some a significant degree of overlapping in writing between the two languages, this is considered a realistic goal) ; employees having learned some Japanese usually work as cashiers, a relatively “central” position on a sales floor, and one to which Japanese customers can be referred.

Promotion at C.K. Tang is based strictly on performance, and language skills as such are not rewarded.

Future economic evolution, including the opening up of the Chinese economy, does not, in the HR officer’s opinion, call for any particular policy with respect to the language skills of the workforce, other than a continuing effort at improving the general command of English.

Performance of school education

The HR officer indicates that school does not bring people to a “good” level of English. The insufficiencies translate as poor communication skills ; somewhat paradoxically for the interviewers, the informant does not mean that the schools’ performance is at issue. Even if schools are not failing in their mission, they should be required to teach more English, both oral and written, and to emphasize communication skills.

It was not possible to get the apprentice’s opinion on this point, since she did not seem to understand the question (which, however, never posed a problem with the apprentices interviewed in other companies).

6.9. OVERALL ASSESSMENT

In this section, the main points of the seven interviews are presented and summarized in an overall assessment of language instruction in Singaporean vocational training.

The general impression produced by the interview at the **Institute of Technical Education (ITE) Bishan** is one in which language skills are hardly an issue for vocational education. Language may be mentioned in a curriculum mission, but it is a problem largely assigned to the level of the national government and its ethnic and linguistic policy, as well as at the level of primary and secondary schools, which are entrusted with the implementation of this policy, through language education.

Furthermore (and irrespective of whether Singlish is to be considered as a linguistically and sociolinguistically adequate alternative to English), the overall evaluation of students’ command of “English or Singlish” (hereafter : E/S)

appears to be one in which this command is viewed as sufficient, hence the relative lack of urgency of recommendations, by teachers, regarding possible improvements in the teaching of English as part of young people's education.

However, the foreign outsider listening to Singaporean young people, and comparing their command of English with that displayed by their British, American or Australian counterparts, cannot but notice a difference. The level of standard English of Singaporean young people, even among those who define English as their "first language", may, *from this outsider's perspective*, be described as lower. Singapore cannot be described as an anglophone country in the same sense as the three other countries just mentioned. Again, the validity of our perception needs to be checked in various ways, particularly against the adequacy of Singlish.

At the **Centre for Tourism-Related Studies**, the general pattern is one in which language-related issues have been solved through stiffer entry requirements, some degree of language competence-based self-selection into the profession, and the fact that school imparts an adequate level of skills. As for the ITE's informants, "Singlish" is not perceived as an issue, in the sense that the use of non-standard English is not considered as affecting efficiency in information processing and exchange; on the contrary (particularly given the fact that tourists arriving in Singapore are liable to compare the level of English there with what they have encountered in other Far Eastern countries), the use of "Singlish" may be perceived as a positive "touch".

The **Oversea-Chinese Banking Corporation Ltd (OCBC)** hires, as part of its workforce, a relatively low proportion of persons having undergone vocational training. Hence, a large part of its staff has pursued studies at a level in which language skills (particularly in English) have been well-developed. As regards its clerical staff, which has typically undergone vocational training, a slight, but reportedly non-problematic deficit in English is reported.

Beyond what appears to be a fairly simple and unproblematic situation with respect to language skills, requirements and use, some *ambiguities* appear, which pertain to the actual communicational abilities of workers, particularly those who have not undergone high-level (e.g. university-level) training.

The interviewed apprentice (studying towards an Office skills certificate) described her command of Mandarin as "good or "fluent" for oral, but not for written skills. This pattern suggests that there is *no language in which she is fully at ease*, which in turn raises the question of what is to be understood when all the persons interviewed say that higher communicational skills would be desirable. Communicational skills, ultimately, are language-based, and it is difficult to reconcile informants' apparent lack of concern over language skills with their concern over communication abilities.

At **Spindex Industries Ltd.**, technical skills are a must for employees, and command of languages definitely play a minor role, which is probably due to its industrial activity. However, as at OCBC, informants insisted that communication skills¹¹ were an issue, and that this needed to be developed in the future. Interestingly, informants stated that the development of employees' communication skills is a duty of company, and is not part of the missions of schools. As already observed in the OCBC interview, it is unclear to the

¹¹ These skills are defined as the ability to talk to people, to present oneself, and "how you get along".

investigators if communication skills can be significantly improved *independently* of an improvement of language skills, aiming in particular at raising the workers' command of the "standard" language.

Informants of the **Singapore Polytechnic**, particularly at the top of the hierarchy, generally estimated that a large proportion of students display language-related deficits, which cannot be entirely subsumed in terms of communication. In particular, those students who have neither fluency in English nor fluency in their "mother tongue" (which often means Mandarin, despite the fact that the learners concerned often come from historically Hokkien, Cantonese, Teochew, etc. households) may not dispose of a linguistic register adequate for meeting all their needs. This is defined by informants as a "diffuse" problem which can hamper "conceptual innovation", in which the use of Singlish does not constitute a valid alternative.

In interpersonal situations, such limitations are overcome through extensive code-switching and code-mixing (which appear to constitute one of the central defining strategies of Singlish), along with mutual empathy between interlocutors. Empathy and attention are said by some informants to make up for the insufficient terminological clarity of Singlish. Singlish, however, seems to be uniquely effective at the local level for establishing an interpersonal rapport, including in business contexts. The positive side of this evolution is that Singaporeans are becoming less inhibited, less perfectionist, more adventurous; this is reflected in their willingness to entertain a broader range of forms of communication, even without perfect command of the linguistic instrument.

Although they are notably more satisfied with Singlish than their teachers are, students admit that some subjects may be difficult to discuss in Singlish, requiring the use of a more formal language¹². Students' relatively low assessment of the relevance of Mandarin for the labor market is surprising, considering the fact that a significant proportion of job ads in Singaporean English-medium newspapers (*The Straits Times* and *The New Paper*) require "bilingualism" or "fluency in English and Mandarin" — this suggests that contrary to what many of our informants claim, Mandarin is not just a vague "plus", but a genuine asset on the Singaporean labor market.

Apprentices at **Rotary** who clearly identify Mandarin as the language they know best do not seem to be confronted with a problem markedly different from that of apprentices in other countries, for whom L2 is an element of human capital they may possess to a greater or lesser degree. The specificity of Singapore, in this case, is that primarily X-speaking apprentices are expected to perform their work in language Y (where X stands for Mandarin, and Y for English).

At **CK Tang**, once again, the highly relative meaning of "first language" in Singapore is underlined, which means that a language reported as "first" can actually be known at a rather modest level of competence.

Given such a richly varied pattern of language use, language skills and language requirements in Singaporean firms and training institutions, it is of course difficult to provide an assessment of, let alone pass judgement on, the respective

¹² This harks back to the complex question of the actual nature of Singlish. Informants at the National Institute of Education (that is, professors teaching English to future teachers) point that a difference must be made between the distinct realities of "Singlish" and "bad English", noting that the latter was often described as the former, whereas the two phenomena are different. Samples of "Singlish" in written exams at the Polytechnic supplied by professors at the Polytechnic were considered as cases not of Singlish, but of bad English by professors at NIE.

role of different languages in Singapore, and the importance that they ought to be given in its vocational education system.

However, a number of observations can be highlighted. They all point to possible paradoxes in the relationship that Singaporeans apparently maintain *vis-à-vis* the languages that they use. It is unclear to us if such paradoxes can be resolved, or simply brushed aside, just by alluding to the unique experience of Singapore in terms of linguistic diversity, or falling back on the notion (in itself, a perfectly valid one) that distinct domains, in the sociolinguistic sense, naturally give rise to different patterns of linguistic interaction.

1. By and large, skills in languages other than English are given little explicit or manifest importance by employers and learners alike ; yet a large share of our interviewees eventually concede that such language skills *are* a plus, all other things being equal ; this is borne out by the importance of bilingualism in job ads in Singaporean newspapers. The **first issue** is therefore : are foreign language skills important for employment in Singapore or not? *Our view is that this importance is higher than is generally acknowledged by interviewees other than teachers.*
2. At first, most interviewees indicate that English language skills are *not* a problem, implying that competence levels achieved are generally sufficient (although inadequate language skills are often mentioned) ; yet interviewees (teachers more than employers, and employers more than learners) often agree that many students have limited *English* language skills, and that their actual competence often is in *Singlish* rather than English. The **second issue** is therefore related to Singapore's official aim to be (or become) a fully English-speaking society, even if English is used in partnership with other languages. *Our view is that once the prevalence of Singlish as distinct from English is acknowledged, only segments of Singaporean society can be described as actually or potentially anglophone.*
3. Most students (and to some extent other categories of interviewees) often start out by stating that Singlish is a perfectly adequate medium of communication ; yet other interviewees (particularly teachers) point to the inadequacy of Singlish (usually, because of its elliptic or schematic character), with some informants even suggesting that excessive reliance on Singlish deprives learners of a linguistic instrument for formulating complex thought. The **third issue** is therefore related to the development of Singlish as a "natural" or "spontaneous" code for informal communication. *In our view, it is far from clear if such a code is sufficient even for generic information transfer ; furthermore, Singlish may often be inadequate as an instrument for abstraction or other complex functions.*
4. Much is made in official discourse about Singapore's objective to become a "knowledge-based" society ; this evolution would represent, in a sense, a third stage of economic development, following industrialization in the sixties and seventies, and the move to the production of high-tech, high value-added goods and services by the Singaporean economy in the eighties and nineties (Gopinathan, 1999). Achieving such a goal undoubtedly requires a high *average* level of communication skills ; yet it is unclear to us if "communication" as a skill can be divorced from *language* skills proper, starting with vocabulary and syntax. This issue arises independently of that of the language or languages (that is, English, Mandarin, and/or others) through which communication takes place. The **fourth issue** is

therefore : does the frequently mentioned goal of improving “communication skills” constitute an appropriate characterization of the challenges to be addressed in order to equip Singaporean society with the tools needed to meet its economic ambitions? *In our view, initiatives developed in the field of communication skills should explicitly acknowledge that the problem is, to a large extent, a linguistic one.*

The role of language in Singaporean education, including in the context of vocational training, therefore echoes its importance in the Swiss case, although for different reasons. This point is taken up again in the concluding chapter.

CHAPTER 7 — CONCLUDING REMARKS

7.1. SWITZERLAND

Education policy has major importance in a country such as Switzerland for a number of reasons. First, as a country deprived of natural resources and whose size does not allow for the development of large-scale industry, economic prosperity is largely dependent on high value-added goods and services. These can only be produced efficiently if the average training level of the workforce is high ; this, in turn, requires a major investment in education and training for the entire population.

Second, Switzerland's very specific linguistic and cultural structure places additional demands on the educational system. In particular, a strong case can be made that Switzerland's comparative success as a multilingual and multicultural nation is dependant on a carefully nurtured *habitus*, in which linguistic diversity, instead of being seen as a problem to be overcome, is viewed as a defining trait of national identity. For such a perception to be widely held, however, proactive policies are required, and many of them address the education sector. Both reasons speak in favor of a strong presence of second or foreign languages as subjects taught in the school system — or, possibly, as a medium of instruction, in cases where school authorities are experimenting with immersion schooling.

Switzerland likes to portray itself as a country in which L2 acquisition is not, and is not perceived as, an elite pursuit — contrary to a widely-held view in other countries, particularly linguistically “large” countries (the United States, Britain, Germany and France being, of course, prime examples). However, actual investment in L2 acquisition is extremely different depending on the educational stream. Vocational training is not in an enviable position in this respect, and some apprentices may feel short-changed by the system. On the one hand, a large proportion of apprentices receive virtually no L2 instruction. Among those who do, most seem dissatisfied with the level of skills achieved, the type of skills imparted, the teaching methods used, the goals pursued, or all of the above. This negative assessment by apprentices themselves is matched by the very critical assessment of apprentices' skills made by trainers and employers. By and large, L2 instruction in vocational training is at best a qualified success, and many would not hesitate to describe it as a failure.

Although the sample used in this study is a small one with no claims to representativeness, it provides a basis for identifying some problems calling for attention. First, the order of priorities between English and national languages in the syllabus needs to be addressed, but this cannot be done strictly with respect to short-term goals. It must be integrated in the wider context of the political and cultural significance of languages in multilingual Switzerland. The “Language Concept Report” of 1998 described in Subsection 4.3.2. partly side-steps the issue, in that it requires L2 skills levels reached at the end of schooling to be at least as high for one national language as for English, while at the same time allowing cantonal authorities to introduce English first in order to meet the demand expressed by large segments of society (particularly the young, particularly in German-speaking Switzerland). In terms of the macro-level

objectives of language education policy, it is important to stress the fact that different L2s do not exclude each other, and that there are some appreciable material gains to language skills in L2s other than English, as shown elsewhere (e.g. Grin, 1999b).

Independently of the languages taught in vocational training, there is general discontent with the way in which they are taught. In particular, the often bookish and stilted character of the didactics applied generate strongly negative reactions, which further de-legitimize foreign languages, except in the case of English, whose image is boosted by its role in youth culture and its massive presence in the overall linguistic environment (for example, in advertising). This further nurtures a surprisingly “a-critical” view of the role of English in historically non-anglophone societies such as Switzerland. The problems generated by a strong emphasis on written skills and grammar, apart from its inherent lack of appeal to learners (particularly in non-academic streams like vocational training) are compounded by lack of practice during language classes, the use of obsolete materials, and the absence of clear relevance to the language contexts that learners encounter in their current (or future) professional activity. Lessons need to be more interactive (which, according to several respondents, may require a change in teachers’ attitudes), fresher pedagogical material should be used, and complementary language learning resources (for example, language stays in other language regions) should be made available for more eager learners. In addition, much more attention needs to be devoted to the transition from pre-apprenticeship to apprenticeship in order to allow learners to capitalize on earlier language acquisition.

There is no doubt that despite its modest role in syllabi and, very often, in hiring criteria, L2 skills are important to employers and employees ; and there is much to suggest that their importance can only grow in stride with current evolutions in the labor market. All these reasons speak in favor of a structured and concerted effort to reform language instruction in vocational education. Five priorities emerge from our study :

- ◆ updating teaching materials in order to make them culturally relevant for learners ;
- ◆ adapting L2 course contents to the specific needs of apprentices with respect to their current activities in apprenticeship, while also giving them a basis for later investment in continuing language education, according to changing professional requirements (with the same or another employer) ;
- ◆ emphasizing oral expression and comprehension ;
- ◆ including language stays as an option during apprenticeship ;
- ◆ adapting teacher training in order to better equip instructors with the specific needs of apprentices in the L2 acquisition process.

All this, of course, requires a significant investment in pedagogical research and training ; it is only realistic to point out that in the case of a school population relatively less inclined to scholastic work, the challenge can only be met if adequate resources are made available. However, we believe such an investment to be an absolute necessity, irrespective of the ways in which the overall organization of vocational training may evolve.

The shortcomings of L2 instruction and the acute need for reforming it could be matters of limited concern under “normal” circumstances, in which the Swiss system of vocational education is chugging along as it has for decades. However, our findings on the state of L2 instruction in vocational training dovetail with the perception of a general crisis of vocational education, as described in Chapter 3. Given the strategic importance of languages, particularly in Switzerland, the shortcomings of L2 instruction need to be mended, irrespective of whether this takes place in the context of a general overhaul of the traditional dual system, or of a progressive drift towards full-time vocational schools. Much can probably be achieved within the current structure ; this would offer the advantage of preserving a deeply-rooted tradition in the Swiss working culture, which has also proved its virtues in terms of efficient school-to-work transition, precisely targeted acquisition of technical skills, etc.

In any event, there is little doubt that the continuation of the current “dual” system requires a major investment in the field of L2 instruction. The strategic importance of L2s in modern labor markets is an established fact, which our findings can only illustrate one more time ; deep-seated changes in the operations of labor markets, together with globalization, reinforces this fact. A generalized upgrading of L2 instruction in vocational education, addressing issues of goals and methods, appears indispensable. To the extent that employers would also benefit from a linguistically better trained workforce, it is far from clear that the corresponding burden should rest solely on taxpayers. Consequently, firms ought to be encouraged to shoulder part of this investment ; an appropriate schedule of tax breaks for firms who do so (for example, by offering language courses or language stays for their apprentices) could constitute useful incentives.

7.2. SINGAPORE AND SWITZERLAND : CONTRASTS AND PARALLELS

Comparisons between countries are part of the SNERP's research design. More precisely, in the LIVE project, two levels of analysis underpin the empirical studies on Switzerland and Singapore. The first level is the assessment of the degree to which the problems encountered in Singaporean vocational education can be transposed to the Swiss context. The second level refers to possible lessons Switzerland could learn from the Singaporean case concerning the effectiveness of its vocational training system.

As regards the first issue, the extent of comparability between the two countries must first be assessed. Switzerland and Singapore have three important points in common : a small territory, plurilingualism, and an economy dependent on exports and high value-added products, for which communicational skills are indispensable. However, one must not forget that there are differences in L2 instruction and use during vocational training in the two countries. Three differences emerge from interview results :

1. In Singapore, most of the young people choosing vocational education are trained in vocational schools, contrary to Switzerland, where the majority of vocational education students undergo in-firm-training.
2. Singapore's language pattern is characterized by the importance of “ethnic background”, since three out of its four official languages (Mandarin, Tamil, Malay) are associated with quite specific ethnic groups. Language policy is

much more politicized than it has been in Switzerland in the past. However, this may be changing in Switzerland. For instance, a heated debate¹ on the priority of English or national languages is taking place in the media and in the political sphere, as a result of the decision by the Canton of Zurich's education director to introduce English as the first L2 in primary schools. The public debate goes beyond language issues, and it probably affects economic discrepancies coinciding with the borders of the three main Swiss language regions, and Zurich's economic dominance in Switzerland.

3. A majority of interviewees in Singapore agree that L2 skills are not a central issue in vocational training, since language matters are handled through the government's language and ethnic policy. The opposite tendency can be observed in Switzerland, where interviews have revealed that L2 skills are recognized as important in daily working life (obviously with slight differences according to economic sector), and where no national-level language policy exists as yet, beyond very general constitutional provisions.

The second issue regards the effectiveness of the vocational training system. It is particularly interesting for Switzerland, which is currently revising its Federal Act on Vocational Training. The initial act came into force in 1980 and was drafted with the context of the secondary sector (industry) in mind. The necessity of a reform is acknowledged by public authorities, actors involved in vocational training, and public opinion. The law needs to adapt to the changing constraints on the labor market. The suggested draft stresses life-long learning, more transparency in the financing of vocational training, and a distribution of the apprenticeship time on the vocational school and the firm which would be specific to each profession, allowing differentiated programs to respond better to changing conditions on the labor market.

The Singaporean case holds useful lessons for Switzerland. For small countries whose economy rests on high value-added activities, communicational skills are crucial and should therefore be developed during the entire school system, including vocational education. In Switzerland, a country with four official languages, all apprentices should learn at least their L1 and one L2 (the choice of which being a separate question) to an appropriate level of competence in order to be able to communicate without problems in these two languages. The new Federal Act on Vocational Training should integrate the issue of communication effectiveness instead of restricting the contents of vocational training to professional skills only. Vocational training should provide a solid general education allowing learners to progress through their working life, as well as equip them with professional and language skills.

Future research on Switzerland's vocational education system with a focus on language skills could be very useful for ensuring the overall effectiveness of the system.

¹ e.g. in *Die Weltwoche*, a Swiss weekly newspaper, September 21st, 2000.

7.3. PRIORITIES FOR FUTURE RESEARCH

LIVE being a pilot project, its goal was chiefly to identify the most important problems and challenges confronting L2 instruction in the Swiss dual system. The next step should consist in a set of research projects on the patterns of actual language use in a variety of precisely defined work situations (production, commerce, etc.). From a methodological point of view, these research topics should be addressed in the perspective of “micro-micro economics”² and should include both quantitative and qualitative studies, in order to assess the particularities of each case.

For future quantitative research on the economics of language to meet criteria of statistical relevance, it must use, for the Swiss case, a much bigger sample of firms.

Qualitative studies should focus on specific personal conditions under which foreign language skills are used at work, in particular (but not exclusively) by former apprentices.

When evaluating certain types of public policy (i.e., in our case, education policy, precisely vocational training policy and language policy), comparative studies are essential, whether at the intra-national level (i.e. comparison between cantons) or at the international level (i.e. comparison of Switzerland with countries which also have a dual system, like Germany or Austria, or with countries with comparable similar linguistic and /or economic patterns like Singapore).

The concept of “matching” between the language profile of a worker and the language characteristics of a position may well represent the most strategically useful concept to use in this research work, since neither side in a matching process are static, because both people and jobs change over time, the role of the education system, in this dynamic context, is to ensure that social actors are equipped with the means to use this matching process for maximum satisfaction.

² Micro-micro economics is a plane of economic research devoted to the analysis of processes of production, consumption and exchange with a degree of detail greater than in mainstream economic analysis.

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APPENDIX

A. Tables

Table A-1

The Swiss education system

Continuing education

TERTIARY DEGREE

University and other superior institutions	Teacher training (diploma)	Advanced colleges (diploma)	Advanced vocational schools
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HIGHER SECONDARY EDUCATION (10-14 YEARS OF EDUCATION)

“Maturité” certificate Teaching certificate Diploma Federal proficiency certificate

Schools preparing for the “maturité”	Schools preparing for the “brevet” (teaching certificate)	Schools preparing for the “diplôme”	Vocational training
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PRIMARY EDUCATION, LOWER SECONDARY EDUCATION (1-9 YEARS OF EDUCATION)

Compulsory education

PRESCHOOL LEVEL

Kindergarden, nursery school

Source : Wettstein 1994 : 13 ; OECD 1997 : 142

Table A-2

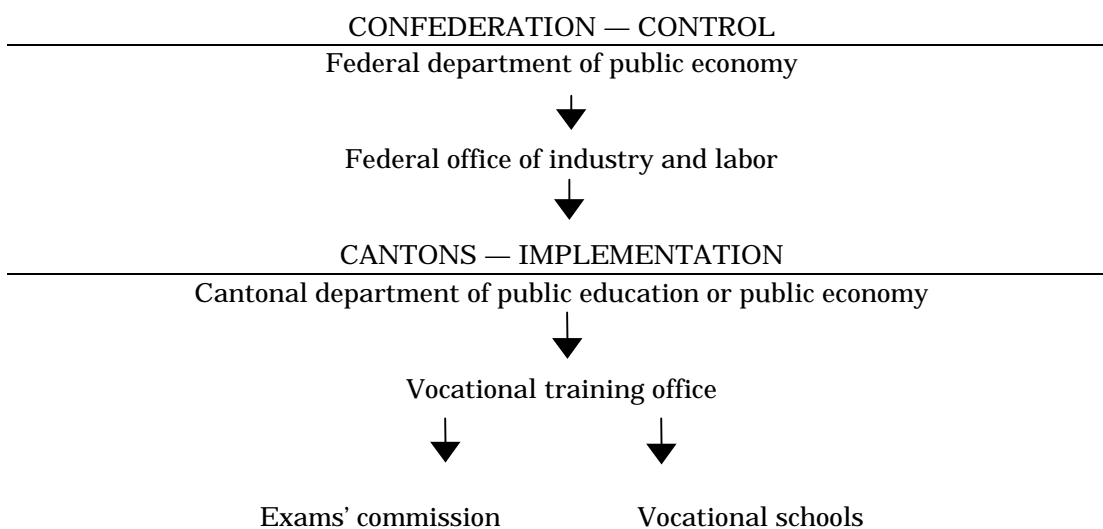
Competencies of the Confederation, the Cantons and the municipalities concerning education

Competency for ↓	Type of education				
	Preschool	Compulsory school	Vocational training	Preparing the "maturité"	Advanced college, University
Legislation	Cantons	Cantons (Confederation)	Confederation : industry, trade, commerce, agriculture and domestic service. Cantons : teaching, health care, social services, the arts.	Cantons (Confederation)	Cantons Confederation
Implementation	Cantons Municipalities	Cantons	Cantons, trade associations	Cantons	Cantons, Confederation
Responsibility	Municipalities	Municipalities	Cantons, trade associations	Cantons, municipalities, private institutions	

Source : Wettstein 1994 : 12 ; OECD 1997 : 140

Table A-3

Implementing the Federal Vocational Training Act of 1978



Source : Wettstein 1994 : 21

Table A-4

Vocational training options in Switzerland, 1996/97

	Total	of which : women %	non-Swiss citizens %	attending private schools %	Variations according to the year before %
Year of training					
First	68,716	46.5	18.8	8.1	1.4
Second	56,027	44.0	18.0	3.2	1.0
Third	46,324	37.6	16.4	1.2	0.1
Fourth	15,882	12.4	13.8	0.6	-1.0
Unidentified	2,990	51.6	30.6	25.1	1.4
Duration of training					
One year	6,698	65.1	18.1	50.6	-3.1
Two years	14,242	72.6	26.7	7.4	-14.7
Three years	99,595	52.8	17.9	3.1	4.8
Four years	66,414	13.1	14.9	0.6	-0.7
Unidentified	2,990	51.6	30.6	25.1	1.4
Vocational training option					
Apprentice- ship	163,478	38.3	17.1	0.4	1.0
Full-time vocational school	23,500	56.6	21.5	26.1	-0.3
Part-time vocational school	2,961	56.2	26.2	65.9	-5.7

Source : OFSb 1998 : 426

Table A-5

Proportion of higher secondary education-attending in the age class of 16-26,
1996/97 (%)

Age	16	17	18	19	20	21	22	23	24	25	26
Men											
"Maturité" certificate school	14,2	16,6	16,3	12,9	4,9	1,5	0,6	0,4	0,3	0,3	0,2
Vocational training	39,4	61,4	62,3	47,8	21,7	9,2	5,4	3,7	2,6	1,9	1,6
Other (secondary and tertiary education)	56,4	22,0	21,4	39,3	73,4	89,3	94,0	95,9	97,1	97,8	98,2
Women											
"Maturité" certificate school	17,2	19,4	18,3	12,5	4,1	1,1	0,4	0,3	0,3	0,2	0,2
Vocational training	27,4	43,6	44,3	29,2	15,3	8,7	5,0	3,2	2,1	1,7	1,3
Other (secondary and tertiary education)	55,4	30,7	37,4	58,3	80,6	90,2	94,6	96,5	97,6	98,1	98,5

Source : OFSb 1998 : 428

Table A-6

Mother tongue for learners in vocational training, 1996/97

Pupils in the whole of CH	German	French	Italian	Romanche	Spanish	Southern Slavonic	Portu- guese	Other
190'077	126'297	32'628	13'577	820	3'145	3'199	2'733	7'678

Source : OFS 1997b : 25

B. Company profiles

◇ 0 (pretest)

February 19, 1999

Swisscom, Geneva

- Telecommunications

Swisscom Geneva is the local branch for the Canton of Geneva. Swisscom has until 1998 held a national monopoly in telecommunications and postal services. It now has to compete with other firms in telecommunications.

Its annual turnover in the country in 1997 amounted to 9.842 million Swiss francs.

- 1,000 employees in Geneva

Three apprentices begin their training each year.

- Interviews :

- apprenticeship supervisor

- one apprentice in the second year of office clerk apprenticeship.

◇ 1

March 9, 1999

Nationale Suisse Assurance, Geneva branch

- Insurance

Insurance for persons and property. The head office is located in Basle, the representative office for the French-speaking region is a separate office in Geneva. The interviewed branch has a mostly local market, and works essentially in the Geneva region.

The annual turnover for the firm in 1997 was 500 million Swiss francs.

- 60 employees in this Geneva branch.

Two apprentices begin their training each year.

- Interviews :

- apprenticeship supervisor

- one apprentice in the third year of office clerk apprenticeship.

◇ 2

March 29, 1999

Régie Ed. Braun, Lausanne

- Real estate management

This small firm has a local market in and around the region of Lausanne ; its turnover in 1997 amounted to 4 million Swiss francs.

- 26 employees

Every three years, three apprentices start their training in the firm.

- Interviews :

- director

- one apprentice in the second year of office clerk apprenticeship.

◇ 3

March 29, 1999

Magasins Manor, Geneva

- Department store

Manor has 69 local branches in the whole of Switzerland (the name changes according to the language region : 37 *Manor* stores in German-speaking Switzerland, 11 *Innovazione* stores in the Ticino, and 21 *Placette* stores in the French-speaking part). The department stores usually include mostly non-food goods, as well as a supermarket. Depending on the location, the stores represent one of the most important employers in the region, with up to 1,000 employees.

The head office and distribution center is located in Basle. Manor has offices in Hong Kong, Shanghai and Bangkok, working with an agency network to represent Manor

with providers abroad. Manor has a 47% market share in large department stores in Switzerland.

The annual turnover of all the department stores in the whole of Switzerland in 1997 amounted to 2.680 billion Swiss francs, 70.4% of which in non-food goods.

- 1,520 employees
Three to five percent of the total number of employees have to be apprentices. In 1998, in Geneva, there were 20 apprentices trained across the three years of apprenticeship, of which 16 are sales clerks, 4 decorators (office clerks are rare).
- Interviews :
 - apprenticeship supervisor
 - six apprentices in the third year of sales administrator apprenticeship.

◇ 4

March 30, 1999

SAP Systems, Bienne

- Business software and computer training
SAP Systems has its head office in Walldorf, Germany, and about one hundred branches on five continents. In Switzerland, it has offices in Zurich, Biel and Lausanne. It produces business software for fields such as accounting, sales administration, human resources, and data warehousing. SAP also dispenses continuing education for firms wanting to change and improve their software system. The annual turnover in 1997 of SAP Systems Biel was 150 million Swiss francs.
- 300 employees.
SAP Systems Biel does not train apprentices. It only has trainees for one year, since it does not have the appropriate infrastructure to guarantee training to apprentices.
- Interviews :
 - human resources director

◇ 5

March 31, 1999

CFF, Lucerne

- Public railway transport of persons and goods. The CFF is the national company. The main commercial contacts are with the neighboring countries (Germany, Italy, Austria and France).
The 1997 turnover was 6.316 billion Swiss francs.
- The total number of employees in Switzerland is 31,792, of whom 18,975 are in sales and production, 3,955 in construction, 3,975 in material maintenance, and 934 in other departments. The three main apprenticeships are sales and office clerk, railroad dispatching employee, and railway station administrator. For the 1998 school year, in central Switzerland (in which Lucerne is the head office) 29 young people began a railroad dispatching apprenticeship, 26 a railway station administrator apprenticeship, and 8 an office clerk apprenticeship.
- Interviews :
 - director of training center for central Switzerland
 - one apprentice in the second year of railway station administration apprenticeship
 - one apprentice in the second year of railroad dispatching employee

◇ 6

April 6, 1999

Magasins Manor, Basle

- Department store
(See interview No 3)
- 477 employees
In 1998, there was a total of 22 apprentices in the three years of apprenticeship.
- Interviews :
 - training director Switzerland
 - one apprentice in the second year of sales apprenticeship.

◇ 7

April 7, 1999

Interhome, Zurich

• Realtor

Interhome Zurich belongs to an international firm for holiday accommodation rentals. Zurich is the head and sales office for Switzerland, with another large branch in Geneva and small offices in major ski resorts. Interhome Zurich works closely with other branches outside of Switzerland. Most are located in Europe, or in English-speaking countries such as Canada and the United States. The annual turnover in Switzerland in 1998 was 47,5 million Swiss francs.

• 76 employees.

Per year, one to two office clerks apprentices begin their training.

• Interviews :

- human resources director

- one apprentice in the second year of office clerk apprenticeship

◇ 8

April 20, 1999

SAir-Group, Geneva

• Airline business (air travel industry, catering, handling)

SAir-Group is a holding company, including different firms in four main sectors : SAirLines, SAirServices, SAirLogistics, SAirRelations.

The 1997 turnover for the whole of Switzerland amounted to 10,556 million Swiss francs.

• Markets : Due to its activity in the airline industry, SAir-Group has international markets. However, certain activities such as for Gategourmet (catering services) in Geneva limit their contacts to the (French-speaking) region.

• SAirLines has about 10,000 employees in Switzerland, in Geneva about 2,500 employees. Per year, six office clerk apprentices begin their training.

• Interviews :

- apprenticeship supervisor of SAirLines, Geneva.

- one apprentice in the third year of office clerk apprenticeship

◇ 9

May 5, 1999

Givaudan Roure S.A., Geneva

• Perfumes and industrial flavorings

Two business units of which one (fragrance) located in Paris, France, and the other (flavor) in Dübendorf near Zurich, Switzerland. The Geneva site houses headquarters and a production site which contains about 130 types of technical equipment for the production synthetic substances. The Geneva site is organized in different departments : finance ; legal department, data processing, marketing, quality department ; controlling ; sales department, security ; acquisition ; conditioning ; human resources.

The 1997 turnover was about 2 billion Swiss francs for activities in Switzerland.

• Markets : Givaudan is a leading firm in this sector and exports around the world.

• 700 employees in Geneva.

Per year, two applicants are accepted for beginning an office clerk apprenticeship.

• Interviews :

- instructor

- one apprentice in the third year of office clerk apprenticeship

◇ 10

May 18, 1999

Kuoni AG, Berne

• Travel agency

Kuoni is the largest travel agency in Switzerland, with over 110 branches all over the country. Its main product line is travel arrangements for foreign guests in Switzerland, and for Swiss residents vacationing abroad. Travel arrangements and tours are developed in Zurich. Kuoni has contacts with firms in the car rental, air travel industry and hotel business.

The annual turnover for 1998 for Kuoni Berne was of about 22 million Swiss francs, and 1,845 million Swiss francs for Kuoni Switzerland.

- Markets : Kuoni organizes travels in countries all over the world and has contacts with international travel agents and other firms in the tourism sector. Accordingly, it has providers and clients from different countries.
- 22 employees in the branch located at Bärenplatz 6-8 in Berne, of which 4 apprentices.
- Interviews :
 - director
 - one apprentice in the first year of office clerk apprenticeship

C. Interview outlines

Interview outline for apprentices (French)

Average duration of the interview : 15 minutes.

QUESTIONS POUR L'APPRENTI

N° Enquêteur :

1. Entreprise ; nom de l'apprenti ; date de l'entretien :

2. Type d'apprentissage ; année d'apprentissage :

3. Langues ; fréquence d'enseignement :

Langue maternelle

Langue secondaire nationale (LNAT) :

Anglais :

Autres :

4. Séjours linguistiques ou cours supplémentaires prévus pendant l'apprentissage :

5. Pour quelles tâches et à quelle fréquence utilisez-vous la L2 ?

	LNAT	Anglais	Autres
Compréhension orale			
Expression orale			
Ecrire			
Lire			

6. a) Estimez-vous que l'école secondaire (le cycle d'orientation ou une autre institution) vous a bien préparé en langues secondaires ?

b) Votre employeur vous demande-t-il un niveau plus élevé de connaissances linguistiques que celui qui est enseigné ?

	LNAT	Anglais	Autres
Compréhension orale			
Expression orale			
Ecrire			
Lire			

7. Pour l'accomplissement de votre travail, quelles compétences vous paraissent particulièrement utiles (des compétences que vous avez déjà acquises ou à acquérir) ?

	LNAT	Anglais	Autres
Compréhension			

orale			
Expression orale			
Ecrire			
Lire			

8. Estimez-vous que, malgré les cours de L2 que vous suivez pendant votre apprentissage, il vous manque certaines compétences linguistiques pour accomplir votre travail ?

	LNAT	Anglais	Autres
Compréhension orale			
Expression orale			
Ecrire			
Lire			

9. A votre connaissance, dans cette entreprise, des compétences plus élevées en L2 permettent-elles :

- a) d'accéder à des postes à responsabilité ?
- b) d'obtenir un salaire plus élevé ?
- c) d'avoir davantage de mobilité au sein de l'entreprise/ au niveau suisse ?

10. Aimerez-vous rajouter quelque chose (par rapport à l'enseignement p.ex.) ?

Interview outline for human resources directors or apprentice supervisors (German)

Average duration of the interview : 30 minutes.

FRAGEN FÜR DEN LEITER DES PERSONALWESENS ODER DEN LEHRMEISTER

N.B. : Die Fragen beziehen sich auf die Stelle, für die am meisten Lehrlinge ausgebildet und/oder eingestellt werden.

N° Erhebende Person :

1. Unternehmen ; befragte Person, Stellung im Unternehmen, Datum :

2. Welche ist/sind die Hauptaktivität(en) des Unternehmens ?

3. Wieviel betrug der Jahresumsatz 1997 ?

4. Wieviele Angestellte gibt es in jeder Abteilung ?

5. Wieviele Lehrlinge werden jedes Jahr im Unternehmen ausgebildet ?

6. Gibt es eine Einstellungsgarantie für die Lehrlinge, die hier ausgebildet werden ?

7. Erschwert der Sprachfaktor bei Lieferanten in einer anderen Sprachregion die geschäftlichen Kontakte ? Wenn ja, in welcher Hinsicht ?
(nur für Unternehmen, die häufigen Kontakt mit ihren Lieferanten haben)

8. Erschwert der Sprachfaktor bei Kunden in einer anderen Sprachregion die geschäftlichen Kontakte ? Wenn ja, in welcher Hinsicht ?

9. Haben Sie wegen Sprachproblemen Absatzmärkte aufgegeben oder nicht in Betracht gezogen ?

10. Gibt es eine Möglichkeit für die Lehrlinge, Sprachaufenthalte in der Schweiz oder im Ausland zu machen ?

LNAT

Englisch

Andere

11. Was halten Sie vom Kompetenzniveau der jungen Leute, die sich bei Ihnen für eine Lehrstelle bewerben ?

LNAT

Englisch

Andere

(4) gut

(3) befriedigend

(2) ungenügend

(1) sehr schlecht

12. Auf welchen Kompetenztyp und welches Niveau wird während der Lehre hingearbeitet (für welche Tätigkeiten), und was fehlt im Sprachunterricht ?

	LNAT	Englisch	Andere
Mündliches Verständnis			
Mündliche Ausdrucksfähigkeit			
Schreiben			
Lesen			

13. Wie beurteilen Sie das Kompetenzniveau der Lehrlinge, deren Lehrzeit beinahe zu Ende ist ?

	LNAT	Englisch	Andere
Mündliches Verständnis			
Mündliche Ausdrucksfähigkeit			
Schreiben			
Lesen			

14. Wie wichtig sind Sprachkriterien bei der Einstellung eines Fähigkeitszeugnis-Inhabers ?

- | | | | |
|-----------------------|------|----------|--------|
| | LNAT | Englisch | Andere |
| (5) ausschlaggebend | | | |
| (4) sehr wichtig | | | |
| (3) mässig wichtig | | | |
| (2) unbedeutend | | | |
| (1) gar nicht wichtig | | | |

15. Welche Bedeutung kommt bei der Einstellung eines Fähigkeitszeugnis-Inhabers den Zweitsprachenkompetenzen im Vergleich zu berufsspezifischen Kompetenzen zu ?

- | | | | |
|--------------------------------|------|----------|--------|
| | LNAT | Englisch | Andere |
| (5) ausschlaggebende Bedeutung | | | |
| (4) grosse Bedeutung | | | |
| (3) mässige Bedeutung | | | |
| (2) wenig Bedeutung | | | |
| (1) keinerlei Bedeutung | | | |

16. Stellen Sie im Laufe der Ausbildung einen Unterschied beim Sprachniveau der Lehrlinge fest,

- | | | | |
|-----------------------------------|------|----------|--------|
| | LNAT | Englisch | Andere |
| a) bei der Lehrstellenbewerbung ? | | | |
| b) während der Lehrzeit ? | | | |
| c) beim Abschluss ? | | | |

17. Können Zweitsprachenkompetenzen die Berufslaufbahn eines Lehrlings positiv beeinflussen ? (Aufgabenbereiche, Beförderung, Gehaltsbonus, etc.)

	LNAT	Englisch	Andere
Mündliches Verständnis			
Mündliche Ausdrucksfähigkeit			
Schreiben			
Lesen			

18. Glauben Sie, dass bessere Zweitsprachenkompetenzen bei Lehrlingen nützlich wären, wenn das Unternehmen :

- a) neue (nationale oder internationale) Märkte erreichen wollte ?
- b) seine Rentabilität steigern wollte ?

19. Ist das Kompetenzniveau der Lehrlinge wichtig für die interne Kommunikation im Unternehmen ?

- | | | | |
|--|------|----------|--------|
| | LNAT | Englisch | Andere |
|--|------|----------|--------|

20. Haben Sie noch etwas hinzuzufügen (über den Sprachunterricht z.B.) ?