This article presents theoretical considerations behind the Jyvaskyla teacher in-service development program in teaching content through a foreign language and surveys some international experiences of bilingual education. The term "bilingual program" refers to all variations of bilingual education and teaching of non-language subjects through the second/foreign language, from total immersion to short, content-based courses. The ultimate aim of second language learning is some level of bilingualism, a complex concept to define. Definitions of bilingualism use the criterion of competence level, age or origin, the learning process, the individual's identification with the two languages, or the functions that the two languages have in his environment. Finns regard the ability to speak the language articulately as the main indicator of language proficiency. Language learning presupposes cognitive processing of input and real-life testing of the hypotheses formed. Various factors are involved in communicative competence; in Finland, teaching non-language subjects through a foreign language is referred to as immersion, foreign language content instruction, content-based language instruction, extended language instruction or language-enhanced content instruction. European models of bilingual education and considerations on the development of bilingual education are discussed. (Contains 43 references.) (CK)
LANG 3E LEARNING AND BILINGUAL EDUCATION: THEORETICAL CONSIDERATIONS & PRACTICAL EXPERIENCES

1. Introduction

Finland has a long tradition in second/foreign language learning and teaching. Throughout this history, issues concerning the quality, efficiency and ease of communication and its teaching - be it in the mother tongue, Finnish, or in some other language - have continued to reign both in the public discussion and as educational concerns. Today, due to the extremely rapid increase of international contacts, the communication skills required in the Finnish society are at a level which presupposes high-level, active proficiency, which, in turn, naturally places ever-increasing demands on language teaching. Since the development of good productive skills in a second or foreign language requires a considerable amount of time, effort and experience, and the number of hours available for formal language teaching is quite modest, it has become necessary to search for new solutions, which could provide new opportunities for language learning. One such solution, already implemented to some extent, is bilingual education. From the many approaches which fall within its scope, we need to find the ones which would be most suitable for our particular learning and teaching context. Simultaneously, we need to gear teacher development programmes to cater for the new skills and knowledge needed in the implementation of bilingual programmes.

This article presents some of the theoretical considerations behind the Jyväskylä teacher in-service development programme in teaching content through a foreign language, as well as surveys some well-known, international experiences of bilingual education. The term bilingual programme is used here to refer to all variations of bilingual education and teaching of non-language subjects through the second/foreign language, from total immersion to short content-based courses (cf. Council of Europe Work-
shop 12 A conclusions below). Many questions and issues remain beyond the scope of this account, for instance, questions concerning teacher roles, teacher qualifications and forms of assessment. This is mainly because they are still questions on which relatively little research evidence exists for our context for the moment. (More information will, however, become available in the next few years from eg. the Council of Europe projects). Also, the extent of, and readiness for, change required from teachers and educational institutions in general at this moment in Finland, is such that developing any rigid systems and criteria for the implementation of bilingual programmes seems both unwise and premature. Instead, it is necessary to gain more experience and to consider what is already known - or not known - about second/foreign language learning, in order to clarify what kinds of factors come to play a role when we implement bilingual programmes in the Finnish context, and in what way the learners’ opportunities for language development could be enhanced.

2. Language Learning and Bilingualism

The ultimate aim of second/foreign language learning and teaching is always some level of bilingualism, regardless of whether they occur under natural conditions (eg. a child learning two languages simultaneously) or more formal learning situations (eg. within a bilingual programme at school). Bilingualism, however, is a complex concept to define, and the inconsistency of the definitions available is clearly reflected in the research and theory of the field. Thus, some researchers restrict the use of the term to those individuals who have complete mastery of two languages, while others would talk about bilingualism even in cases where the individual has a minimal command of the second/foreign language. In addition to the criterion of proficiency or competence level, there are definitions that use the criterion of age or origin, those that concentrate on the process of learning, on the individual’s identification with the two languages, or the functions which the two languages have in the individual’s context and environment of language use (Cummins & Swain 1986; Skuttnabb-Kangas 1984). Furthermore, bilingualism is also a concept that is, to a large extent, culturally determined, ie. it is defined on the basis of the status of the second/foreign language in the community and society. Therefore, Finland is usually called a bilingual country, because Swedish has an official status here, although the question of whether Finns are bilingual in this respect remains controversial and is subject to interpretation. And when bilingualism is considered with respect to majority and minority languages without an official status, the concept becomes even more

If we accept a broader view of the term bilingualism, for instance, "the production and/or comprehension of two languages by the same individual" (Cummins 1981), we can relatively safely claim that the aim of second/foreign language teaching in this context is to work towards bilingualism, regardless of what the language in question is. But in Finland, for instance, the knowledge of languages is measured by school-specific or national school-leaving examinations, administered at various levels of the school career, which means that the crucial criterion in language learning and teaching in our context is the issue of proficiency level. For this reason, we must carefully consider the question of what it means to "know" a language.

"Knowing" a language means different things to different people. The criteria for this are established by both the individuals themselves and the cultural environment within which they operate. In Finland, we have rather high, even unrealistic, criteria for when an individual would say that s/he "knows" the language in question.

Many research studies (eg. Sallinen-Kuparinen 1986, Lehtonen & Sajavaara 1985) show that Finns tend to regard the ability to speak the language fluently and articulately as the main indicator of language proficiency in both the mother tongue and in the foreign language. Thus, a Finn who has studied English or some other language for eight years might still give a negative answer to a foreigner's question "do you speak English/German etc.", because s/he might not feel comfortable with, or in total command of, the situation of language use. In some other cultures, elementary level knowledge of the foreign language would produce a positive answer. This is our overall language learning context, and, as teachers we might not even be aware of the internalized language learning theories that affect our actions of teaching and learning. There are naturally many individual differences, but it is important to bear in mind that all the participants of the learning/teaching context come to this context with certain, preconceived ideas of how learning and teaching occur, and that these ideas bear upon the perceived efficiency and success of the learning and teaching process. Depending on our own or perceived experiences of the learning process, we see certain pedagogical solutions as "good" and discard others, because they have not worked. Reflection on these issues is therefore of great importance, because the experiences of the learner and the teacher might not always coincide, which can cause delays, frustration, and even blockages, in the learning process.
These individual "learning theories" do not, of course, only concern language learning. There are studies that indicate the existence of such theories in many other disciplines and subjects, as if the conceptual frameworks of these various disciplines were somewhat predestined to generate the use of certain types of learning theories (for a review, cf. e.g. Leino & Leino 1990, Kolb 1984). This implies that teachers of different subjects come to the teaching situations with somewhat different ideas of how that particular subject is most successfully learned and taught, which is reflected in their pedagogical approaches. Recent research on (language) learning strategies (cf. O’Malley & Chamot 1990, Oxford 1990) also seems to indicate that different disciplines require the use and development of different types of cognitive and metacognitive strategies, as well as different language learning strategies, particularly in contexts where the subject matter or content is being learned through the second/foreign language. Thus, the teaching of non-language subjects in this way means that the teachers in question should become aware and knowledgeable of the underlying factors of such a teaching and learning situation. They must know something about what constitutes the process of language learning in the situation where they are teaching their own subjects through a foreign language.

3. Process of Language Learning

Language learning has been extremely widely studied, particularly over the past 30 years or so (for a review, cf. Ellis 1985, 1992, Larsen-Freeman & Long 1991). The theoretical frameworks, within which these studies have been carried out, reflect the development and focus areas of the general learning theory, the moves from the behavioural to the cognitive view of learning, from product to process, from description to explanation. After the research findings on the first language acquisition process (cf. e.g. Dulay & Burt 1974) of the 1970’s, and Krashen’s (1982, 1985) influential acquisition/learning hypotheses, research into second/foreign language learning has concentrated more clearly on theory-formation in the field. Earlier studies mainly aimed at enquiry for the sake of application, for example, for the development of language teaching. Today there are hundreds of thousands of pages of research regarding language learning, addressing the crucial questions of "who is learning what under which conditions and why". The studies range from learner-centred (eg. cognitive, affective, biological factors, etc.) and learning-centred (ie. relating to the actual process of learning) aspects of language learning, to language-centred (eg. interlanguage, language universals, communicative competence, etc.) and culture-centred (eg. majority vs. minority language learning, bilingual-
ism, language maintenance, inter-cultural or cross-cultural communi-
cation, language planning and policy, etc.). And naturally there are also
studies which have application as their starting point, such as those
concerned with learning (and acquisition) in the classroom, role of self-
directiveness and self-assessment, learning how to learn, and development
of new pedagogical approaches and alternative assessment forms (Räsänen
1993).

Although the actual process of language learning can only be studied
rather indirectly, there is quite a lot of reliable information already
available on language learning. We know for certain that this process is
an extremely complex one - a process in which many factors play an
important role, as is evident from the abundance and variety of research
in the areas involved (for a review, cf. Larsen-Freeman & Long 1991). In
addition to cognitive factors, then, at least biological, affective and socio-
cultural factors, as well as the learners' previous experiences contribute to
the success of the language learning process. Depending on the theoretical
starting-point, learning is seen as an outcome of the interplay of two or
more factors, or, as is the case with the wholistic approach, of all these
factors. For instance, the research focussed on individual learning styles
and strategies is mainly based on concepts derive.d from cognitive psy-
chology, whereas the studies made on the "good" language learner show
evidence of a more integrated, or experiential, theory.

Language learning is a cognitive and a social phenomenon, ie. it presup-
poses cognitive processing of input and real-life testing of the hypotheses
formed. Whether this processing occurs automatically or consciously
depends on several factors, such as what kinds of experiences the learner
has of various learning tasks, how complicated s/he perceives the task at
hand, what kind of a personal learner image s/he has, what kinds of
personal aims he/she has, and what his/her cognitive capacity is. On the
basis of these kinds of factors the learner approaches the learning task,
and adopts the strategy s/he thinks will work in the context. According
to research findings (eg. Naiman et al.1978, Wenden & Rubin 1987 &
1991, Oxford 1990, Ellis 1992), a "good" language learner has a reservoir
of strategies available, from among which s/he will select the most
appropriate one. The existence of this reservoir, as well as flexibility in its
use, then, depends on his/her previous learning experiences (Skehan
1989, however, refers to this as language learning aptitude), and that is
where the teacher is in a key position to help. When learning is seen as
learner growth in this way, language learning would mean learner
development in three different, but interconnected areas of knowledge,
skills and awareness, namely, development of own learner image (per-
sonal awareness), of the learning process (metacognitive awareness), and
of the learning task (task awareness, ie. language and communication), (Kohonen 1992; 1994, this volume).

A crucial issue in language learning is the concept of proficiency, because the definition given to it determines, to a considerable extent, how language learning is viewed, how success is measured and how teaching is arranged. From the point of view of the learning process, language proficiency includes analysis of linguistic knowledge and monitoring of linguistic processing. These are components of the cognitive mechanism underlying learning, organization of information and problem-solving, and this mechanism is responsible for both mother tongue learning and the learning of other, subsequent, languages. Second/foreign language learning is, in fact, often seen as a continuation of first language learning in the sense that these different languages have the same cognitive basis ("interdependence hypothesis", cf. Cummins 1979, Cummins & Swain 1986; Bialystok 1991). In other words, it seems that certain cognitive skills are transferrable from one language to another (eg. if you know how to read in one language, you can read - but not necessarily understand - in another language, provided that the alphabet is recognizable; or, if you know how to ride a red bike, you can also ride a blue bike). Thus, for instance, many studies on bilingualism show that an older and more experienced learner is more effective in his/her later language studies (ie. within the same time and similar exposure, s/he will reach a higher level of overall proficiency in the second language), because certain cognitive prerequisites have already been fulfilled in connection with first language learning (Cummins & Swain 1986). This view is often presented as the basis for arguments concerning solid mother tongue knowledge and skills, particularly in connection with minority language education. The new language input, thus, represents a collection of new surface forms, which the experienced learner attempts to organize into a coherent framework and collection of "rules" to be tested and verified. These rules refer to both formal language knowledge and conventions of language use, ie. to what is often called the communicative language competence, which is another way of looking at language proficiency.

4. Components of Language (Communicative) Competence

There are many views and theories about communicative competence and about what kinds of factors and components are involved in it. There are also so many different names used for these components that it would be impossible here to give an account of even half of them. Suffice it to say
that from the point of view of teaching through a foreign language, what seems to be crucial for the development of communicative competence in a second/foreign language is that provisions should ideally be made in the teaching process to facilitate the development of both formal knowledge of the language system and pragmatic knowledge of how this system can be used in real-life situations. This means in practice that formal language teaching should systematically accompany the teaching of content through a second/foreign language, a point which has been clearly shown by the immersion experiments in Canada (cf. eg. Swain 1991, Baetens Beardsmore 1993).

Perhaps the most influential representation of communicative competence was made by Canale and Swain in 1980 (elaborated in Canale 1983; for a review cf. Huhta 1993). We return here to the question of what it means to "know" a language, ie. what language competence involves. Bachman (1990), in fact, uses this latter term in his considerations about language testing. On the basis of these views, it is possible to illustrate the components of communicative language competence in the following way:

![Diagram of Communicative Competence](adapted from Canale & Swain 1980, Canale 1983, Bachman 1990)

More recently, it has become common to also talk about cultural competence or cultural literacy as a separate category to the above. This view refers to the significance and manifestation of cross- and intercultural
communication differences and similarities between nationalities and representatives of nationalities. It is true that internationalization and rapid increase of international contacts have contributed to the fact that advanced knowledge and skills required by situations of intercultural interaction have become a necessary aim for language teaching at all levels. Awareness of, and sensitivity to, the similarities and differences manifested by these situations will facilitate the growth of international understanding and cultural tolerance, as well as contribute to the self-confidence and national and cultural identification of the second/foreign language users.

5. Bilingual Education and Bilingual Programmes

In this article, the broad view, presented at a recent Council of Europe workshop on teaching non-language subjects through a foreign language (C of E workshop, Soest 1993), of which programmes could be called bilingual programmes, has been used. Thus, any programme which involves teaching content matter through a second or foreign language is a bilingual programme, i.e., regardless of its form, pedagogical approach, proportion of teaching done in the mother tongue, etc. This is naturally based on the assumption presented above, namely that the ultimate aim of second and foreign language teaching and learning is to reach at least some level of bilingualism. Again, due to the complexity of the concept of bilingualism, it is worth bearing in mind that bilingualism here is interpreted in its broad, although not the broadest (i.e. minimal knowledge of L2), sense.

There is a very wide range of bilingual programmes offered around the world. In fact, teaching subject matter or content, as it is also often called, through a second or foreign language is by no means some recent development, but dates back far to the history of education. The attempts to establish a "lingua franca", or to help immigrants and minority groups to adapt themselves to new societies and cultures, or to enhance the second or foreign language competence of minority and majority language speakers, are all examples of bilingual education. Over the past 30 years or so, however, as distances between countries and continents have shrunk due to advanced technology, and contacts between people from around the world become more frequent, the role of language and communication in these new contexts has increased in its importance within the frameworks of educational policies. New models have been developed to suit the purposes and needs of communities and societies.
Because of the fact that a new "model" is needed for any specific situation in order for it to serve the community in an appropriate way, the programmes established around the world use many different names and also differ in their approaches and theoretical foundations. Thus, for instance in Finland, teaching non-language subjects through a foreign language is in public and educational discussion referred to at least as (some terms are direct translations from Finnish) immersion (kielikylpy), foreign language content instruction (vieraskielinen aineenopetus), content-based language instruction (sisältöpainotteinen kielenopetus), extended language instruction or language-enhanced content instruction (kielipainotteinen aineenopetus). Because of this variety in terminology, it is perhaps useful to consider the issue of teaching non-language subjects through a foreign language in Finland within the conceptualizations of well-established bilingual education models around the world. We will start by looking briefly at some "prototype" models from North America (for a review, cf. eg. Padilla et al. 1990), namely the immersion model and the content-based language teaching model, and proceed to discussing models developed for the European context.

The Immersion Model

The first French immersion programme aimed at English-speaking children in Quebec, Canada, was started in 1965 on the initiative of parents. Within two decades immersion became a mass educational movement all across Canada, where over quarter of a million Canadian children in all provinces were receiving a large part or all of their school instruction through a second language. This instruction follows different immersion formats, and involves both French (or English) and several heritage languages. Since the 1971 introduction of the Spanish immersion programme in California, immersion-type approaches to second and foreign language instruction have also spread throughout the United States as alternatives to traditional formal foreign language teaching programmes (Brinton et al. 1989).

In general, the immersion programmes can be divided into the following three types:

* Early total immersion programmes, in which the pupils are taught entirely through the second language (L2), starting from kindergarten, and the mother tongue (L1) is introduced in grade 2, 3 or 4 (North-American educational system). The amount of instruction in the mother tongue is, then, gradually increased until by grade 6, 7 or 8, approximately half of the instruction is given in L1 and half in L2.
* Early partial immersion programme is an approach in which the pupils receive 50% of their instruction through the L2, starting in kindergarten and continuing up to grade 8.

* In late immersion at least 50% of the instruction is given in L2, beginning anywhere in grade 6 to 8. These pupils should have at least one year of formal studies in the second language before starting. (Lapkin et al. 1983).

The immersion model has been carefully researched, and the results with language majority children are very good, which makes it a viable alternative also for foreign language teaching. The language itself is largely learned incidentally through the use of the second language as a medium of instruction. By the end of the elementary school, early immersion students have usually developed a functional bilinguality in L2, at least as regards receptive skills. In many subjects they perform even better than students who have received monolingual instruction, indicating greater awareness and development of academic skills. After the introduction of the mother tongue into the curriculum, their literacy-related skills in this language quickly surpass those achieved by comparison groups in monolingual programmes. Their L1 development is, thus, not endangered by the fact that instruction is given in L2. A considerable amount of transfer from L2 to L1 seems to take place quite naturally in these programmes. (Cummins & Swain 1986; Lambert 1990).

As regards late immersion programmes, the results are quite similar, indicating, however, that older learners seem to be more effective than younger ones in some aspects of L2 learning (usually excluding phonology). This is particularly clear in the development of literacy-related skills and academic skills, and gives further evidence of the transfer of skills from one language to another. The results of the immersion programmes also suggest that young learners benefit more from literacy skills being developed in one language only at a time, because the different surface structures of the languages may unnecessarily delay the development of the basic cognitive skill. Although slight delays at the beginning of the programmes are quite common particularly in late immersion (due mostly to the complexity and level of abstraction required in the subject matter and lack of appropriate vocabulary knowledge in L2), the immersion research shows that the benefits in terms of L2 development are substantial and that no long term effect on content command has been found. In fact, most immersion students can be tested in either language, and with similar results. (Cummins & Swain 1986, Harley et al. 1990).
Finally, a few comments on the not so successful outcomes of the immersion programmes (for a critical view, cf. Hammerly 1985, Baetens Beardsmore 1993). First, language minority children do not seem to benefit from these programmes in the sense that they would develop functional bilinguality in their two languages. This is due to many reasons, the most important ones concerning the status of the minority language and of the ethnic group in the L2 community, which often turn the immersion programme into a subtraction programme with no support to the maintenance of the mother tongue and original culture. This may have detrimental psychosocial effects on the child’s development as a whole. Such effects have not been found with language majority students participating in immersion programmes.

Secondly, although immersion students often reach native-like receptive skills in the L2, their productive skills continue to remain non-native like (albeit better than in monolingual programmes) particularly in terms of accuracy. (It is important to bear in mind, however, that there are immersion programmes which distinctly aim mainly at the development of L2 receptive skills). Therefore, more recently, the amount of formal language teaching within the immersion programmes has been considerably increased, or attention has been explicitly focused on language rules and forms. This is particularly important in programmes which do not have the support of a real, authentic L2 community around them, i.e. in situations where the second language is in reality a foreign language whose native speakers are not easily available for authentic input.

As stated above, immersion education is one of the most carefully studied educational approaches to second/foreign language development. Immersion-type solutions to language teaching are also found in many European countries (for immersion programmes in Finland, cf. Laurén 1990).

Content-Based Language Teaching

The arguments for introducing content-based language teaching in North America are based on five different rationales. According to Brinton et. al. (1989) the rationales implicit in the integration of language and content instruction in this way are as follows:

1) ESP (English for specific purposes) experiences and research shows that for successful language learning to occur, the language syllabus must take into account the uses the learner will make of the target language, which means systematic focussing on those language forms and functions which will best serve the learner in his/her future language use.
2) The use of informational content which is perceived as relevant by the learner enhances motivation in language learning and thus promotes learning effectiveness.

3) Content-based approaches are built upon the previous experience of the learner, as they take into account the learner's existing knowledge of the subject matter, and use pedagogical methods which aim at overall development of cognitive and academic skills, as well as linguistic skills.

4) Content-based approaches provide a larger framework and context for language development, in which focus is not only on fragmented examples of "correct" language forms, but also on interaction and discourse patterns.

5) SLA (second language acquisition) research suggests that a necessary condition for successful language learning is sufficient, comprehensible input which requires focussing on the meaning rather than the form. The development of good receptive communicative skills is the foundation on which productive skills are based.

In addition, the roots of content-based language teaching also lie in the experiences and research findings of immersion education and the language across the curriculum approaches. It is important to bear in mind that content-based language teaching can refer to both L1 and L2 instruction. Furthermore, content-based approaches are used on all educational levels, from the primary to the tertiary level.

As suggested by the name, content-based language (CB) teaching has a double focus: content mastery and language development (in educational discussion in Finland two terms exemplify this double focus very well "kielipainotteinen aineenopetus - language-enhanced content instruction" vs. "sisältöpainotteinen kielenopetus - content-based language instruction"). But there is also a third aim for CB instruction, and that is the focus on the development of the learner's thinking skills (or academic skills). This focus is necessary at least in the case of language minority students in general education, often referred to in the U.S. as LEP (limited English proficiency) students. It means systematic development of eg. learning strategies and other cognitive and metacognitive skills necessary for academic achievement on all levels of education. Interactive activities are used to promote the development of communicative skills, often within the framework of co-operative and experiential learning (Short 1990).
Three basic prototype models (described in Brinton et al. 1989, Wesche 1993), can be distinguished within the content-based language teaching approach: theme-based, sheltered, and adjunct models. Contrary to immersion programmes, the amount of content to be presented in L2 is not as strictly determined, although research seems to indicate that a minimum of 25% is a prerequisite for successful language learning (Council of Europe workshop results 1993). Many CB programmes in the U.S. are, however, comparable to immersion programmes in this respect, covering most of the curriculum in L2.

The three prototype models share the following features:

1. Content is used as the curriculum organizing principle.

2. There is a double objective in the models: content mastery and second language development.

3. Authentic (i.e., not produced for language teaching purposes) language materials and tasks (i.e., reflecting types of academic demands placed upon the students) are used, with supplementation and adaptation by the teacher.

4. Accommodation is made to the materials (and pedagogical approaches used) according to learner needs and proficiency levels.

The basic differences can be found in the primary learning and assessment foci, as well as teacher roles. In a theme-based model, the focus is second language learning and the content is usually presented by the language teacher. An integrated language teaching curriculum, with higher levels of language processing, can be developed around a specific theme which is relevant for the learners, and all language skills can be practiced in a systematic and meaningful way. The theme-based model is the most wide-spread of the three models, because it can be easily implemented, although it does require a considerable amount of coordination in terms of materials adaptation and development.

In sheltered courses, mastery of content is the primary focus, which is why a content area specialist is usually responsible for the instruction. Second language learners are separated or "sheltered" from native speaker students, which is believed to provide a positive and more comfortable learning environment where the students can benefit from the linguistic adjustments made by the teacher. Sheltered instruction requires an institutional setting in which content area specialists with sufficient proficiency in the target language are available. The course is designed in
co-operation with the language teacher, who often also takes responsibility for teaching the students appropriate communicative skills and study skills (e.g., note-taking, learning strategies) to facilitate content learning. Sheltered courses are becoming quite popular in tertiary-level education.

The adjunct model refers to content-based instruction in which students are simultaneously taking a content course and a (separate) language course - the idea being that the two courses complement each other in terms of mutually coordinated activities. In North America, second language learners are integrated with native speakers in the content class but segregated from them in the language class. A large amount of co-operation and coordination is necessary to ensure development of both content mastery and language.

As regards teacher qualifications in implementing these content-based language teaching models, Brinton et al. (1989) suggest the following: For theme-based teaching the language teachers need training in content and language curriculum design and materials development, and for sheltered instruction the content specialists need awareness and knowledge of second language development. Successful implementation of the adjunct model, then, requires that both the language and content teachers be trained in curriculum and syllabus design, as well as materials development. Furthermore, training should also focus on curriculum coordination and team-teaching methodology.

European Models of Bilingual Education

The diversity and success of the bilingual and multilingual programmes used in Europe is often neglected, because they are not as well documented as the North-American models. Yet, most European countries have long traditions in multilingual education either for the whole population or for selected groups based on some contextually relevant criteria. Among the "prototype" models on which more systematic research is available are the European School model, operating in nine different countries, the Foyer model in Brussels, and the Luxembourg model. All models are additive in nature, and all except the Foyer model are in principle examples of mainstream education. The Foyer model is offered to immigrants, and aims at maintenance of the home language. The account given below is mainly based on Baetens Beardsmore's (1993) report and comparison of the European bilingual and trilingual programmes.
A. The Luxembourg trilingual model

This model is unique in the sense that it is offered to the entire school population of the Grand Duchy of Luxembourg. Due to the fact that there is no full university in Luxembourg, the school population goes through a transition from monolingual (Luxembourg) to trilingual (German and French) in order to be able to pursue university studies abroad. For this reason only, as well as due to proximity and contact with the neighbouring countries, the proficiency level of the Luxembourg students must be sufficiently high in all three languages in order to manage future endeavours.

The Luxembourg system is based on the principle of introducing the home language, Luxembourg, in pre-school and primary education, proceed to instruction given in German, which is similar to L1, and followed by French as a subject in grade 2 already. Later, towards reaching the level of secondary education, the dominant role of German as a medium of instruction is diminished, with French substituting it as the medium of instruction. Throughout this process of transition, both German and French are also actual subjects of the curriculum. An important point to keep in mind is the fact that all three languages are also used in the immediate environment of the learners.

The teachers are all trilingual, and there is a strong community support for the system itself. The aim of the Luxembourg programme is full trilingualism, and the results have been very good, with 70% (in 1985-86) of the students involved in the standard programme having succeeded in the final examinations leading to higher education. Thus, trilingual education can have a very high success rate, irrespective of social class, student selection, and other factors often seen as prerequisites for success in such programmes.

B. European School Model

The European School model refers to a network of nine schools operating in five different countries. The network was founded in 1958, and the school population for which it is aimed includes children of European civil servants, although other students are also accepted. Perhaps because of this student selection criterion, European Schools are often seen as elite schools, although education is, in most cases, totally free. The same programme is followed in each School, irrespective of the language of instruction (home language + other languages). This, too, is a trilingual programme, aiming at full bilingualism and biliteracy in two languages.
and at partial trilingualism in the third language. All languages are taught both as a subject and as a medium, with L1 dominance in primary education, L2 (English, French or German) gradually substituting it as a medium of instruction. Study of an L3 becomes compulsory from the third grade of secondary education. The total number of formal language teaching hours, over the 12-year syllabus, are 1,100 in L2 (in addition to L2-medium instruction), and 360 for L3 (in addition to optional courses which use L3 as the medium). The students must take the European Baccalaureate examination through the medium of two languages. The success rates in university entrance examinations have been approximately 90% for the students graduating from the European Schools.

C. The Foyer Model in Brussels

This bicultural and trilingual education programme is offered to immigrants in 10 Dutch-medium schools in Brussels, with an aim to integrate language minority students into the French-dominant bilingual city and into the mainstream educational system. During the first year of primary education, following a three-year kindergarten period with half of the time spent in individual ethnic and language groups and half with the mainstream children, 60% of lesson time is spent in a separate group, 30% as a separate group learning Dutch and the rest in the integrated class. In grade two, 30% of the instructional time is already spent with the mainstream group, while from the third year onwards 90% of the time is spent in this way. French is introduced as a compulsory subject at the age of seven, and taught with the mainstream group according to the legal requirements of Belgium. Strong parental involvement is necessary, and efforts are taken to promote intercultural exchanges between the groups involved also in extra-curricular activities.

Since this model is still at an experimental stage, final outcomes are not available. The first results, however, are encouraging.

D. Other European experiences

Yet another model, comparable to the above although slightly different in its orientation is the Catalan/Basque bilingual programmes in Spain. This model resembles the Canadian immersion model in its administration, as well as results. In both Catalonia and the Basque country there are programmes which have the national language Spanish as a subject and as a medium of instruction. The bilingual programmes aim at full bilingualism and biliteracy, and are additive in nature. Both languages are
used in the immediate environment. As with North-American immersion programmes, the best results have been gained in situations where majority speakers are receiving their instruction in the second language (the Basque model), or both languages are used as a medium of instruction (50% + 50%). (For details, cf. Artigal 1993).

In his comparisons between the various models Baetens Beardsmore (1993) states that what is noticable in the implementation of the various successful models of bilingualism in Europe, is the fact that they have been developed on the basis of local criteria, for local purposes. No single model is applicable directly, but the situational and operational factors, as well as the outcomes expected, must be used in the decisions taken. As regards the common factors in all models presented above, the following are among the most important:

a) the languages involved are immediately pertinent and seen as such; eg. there is access to their use in the surrounding environment (language as a subject often neglects the importance of this factor)

b) the teachers are highly proficient in the target language(s), which makes high levels of student competence in L2 a realistic goal (in situations where the contextual factors do not allow for this development, it is not realistic to expect native-like productive competence)

c) parental involvement is encouraged;

d) different paths can lead to high levels of proficiency;

e) bilingualism is overtly promoted by whole-school policies and public attitudes (cannot be totally controlled by the school, these are also contextual constraints to be taken into account).

Furthermore, emphasis on the target language as a subject, characteristic of the European models, seems to be an important factor in explaining the level of accuracy in the target language, ie. high level of productive skills, attained in these models. As was mentioned above in connection with the Canadian immersion model, this is one area to which considerably more attention is now given, when compared with the early years of immersion education.

Because of lack of internationally accessible documentation on the many other bilingual programmes already in operation in many European countries, and the speed in which bilingual experiments are increasing, it is not possible to give a comprehensive account of them. Bilingual sec-
tions are often part of secondary education in Germany and other countries, "elite" schools aiming at high L2 proficiency exist in many countries, and the number of bilingual education programmes and experiments is rapidly growing all over Europe, indicating perhaps an aim at some form of "European citizenship".

In the last part of this article an account will be given on a recent (September 1993) Council of Europe workshop addressing both theoretical and practical issues involved in bilingual programmes. The sub-projects started in this Workshop 12 A will continue for two years, and the findings will be reported at the end of 1995 in trilingual Luxembourg.

6. European Considerations on the Development of Bilingual Education

Teaching non-language subjects or "content" through a second/foreign language is not of increasing interest in Finland only, but also seems to be one of the trends in a large Council of Europe project called "Language learning for European citizenship". One of the workshops included in this project was held in Soest, Germany, at the end of September 1993. The name of this Workshop 12 A was Bilingual education in secondary schools: learning and teaching non-language subjects through a foreign language, and the participants (some 70 in total) represented 28 European countries. The idea was to share experiences of bilingual education and to discuss some mutually important issues, as well as make plans for future research, development and co-operation.

During a very intensive week, seven working groups discussed the following themes and problematic issues involved in this type of bilingual education:

1. What can be gained by teaching/learning non-language subjects through a foreign language?

2. How should bilingual teaching/learning be organized in order for the model to be suitable for each context, for the specific needs and circumstances of each country?

3. To whom should bilingual forms of learning be offered? Are there any specific requirements or prerequisites to be met?
4. Are specific *methodological approaches* necessary? How can language learning be coordinated across curricular and subject boundaries?

5. Who qualifies for teaching bilingually organizes subject areas?

6. How can schools offering bilingual programmes develop an *international profile*?

Although the forms of bilingual/multilingual education offered by the various European countries may differ considerably, it seems that the questions and concerns are quite similar. At the end of the workgroup discussion, the following conclusions and recommendations were presented as a summary:

* **Bilingualism and bilingual education in Europe** is not an exception, but a living reality - it should not be seen as something for the elite only, it is for all citizens.

* Programmes in which the *whole school policy truly supports bilingualism* (ie. the atmosphere at institutions, attitudes of pupils, teachers and principals, as well as the outward appearance of the school activities which overtly shows that this school/institution thinks highly of bilingualism/ multilingualism) have been the most successful ones. There are still too many examples of a "hidden curriculum" in which covert attitudes and everyday actions act against the "official" pro-bilingual policies. But in order to achieve a successful whole school policy, close cooperation and open discussion are needed to cross the traditional subject boundaries towards a re-evaluation of the curriculum and pedagogical approaches.

* Special attention should be paid to integrating *language and intercultural communication into the whole curriculum*, in order to strengthen one's own national identity and culture and to enhance internationalization and international understanding on a practical level.

* Bilingual learning results should not be measured by tests designed for monolingual programmes. **Special tests and assessment forms are needed**, and school-specific tests should be developed.

* There is no research evidence to show the unsuitability of some subject for bilingual education (except the mother tongue). However, at lower levels, it might be easier to choose subjects which have a rather low linguistic content and which allow for a variety of illustrative materials or physical action to be employed (eg. arts, crafts, PE, mathematics, geography). In
this way, sufficient time is allowed for the development of pupil’s vocabulary and concepts.

* A minimum amount of 25% is required to produce real gains and good results.

* Setting of aims must be realistic, taking into account learner needs, skills and experiences, as well as other constraints. In the Finnish context of English/German as a foreign language, for instance, this means matching together the aims, the teacher’s proficiency level and pedagogical approach, as well as the pupils’ level of English/German.

* Bilingual programmes must be supported by formal language teaching, which should accompany content teaching in a systematic and coordinated way.

* Content teaching should use learner-centred pedagogical approaches in order to provide opportunities for authentic language practice.

* Institutional support is essential and should be concerned with teacher development, systematic co-operation and school development, development of instructional and assessment materials, as well as with re-evaluation of traditional subject boundaries.

The international R&D projects set up for 18 months at Soest will address the development of bilingual curricula, materials, methodology and assessment, development of teacher development programmes and description of teacher qualifications, establishment of exchange programmes, and development of whole-school policies. The accomplishments of the projects will be presented at a follow-up meeting of the Workshop 12 A, to be held at the end of 1995 in Luxembourg. This event will no doubt be crucial in terms of more systematic documentation on the European approaches to bilingual education, as well as establishment of European networks in this field.
REFERENCES


