Discussion of multilingual education looks at three European models, each designed for a different population, and compares them with the Canadian immersion model. The models are: (1) trilingual education applied to the entire school population of Luxembourg; (2) multilingual education in the nine-institution, five-city European School network, intended for children of European civil servants; and (3) the Foyer Project in Brussels (Belgium) to enable immigrant populations to benefit from mainstream education in a bilingual city. In each European model, at least three languages are involved. It is concluded that all four models show how different program designs can produce high levels of language proficiency, that such proficiency is tempered by contextual more than program variables, and that the former play a considerable role in determining achievement. Common variables seen as contributing to success include: focus on relevant language input and output; teachers highly proficient in the target language; strong encouragement of parental involvement in and understanding of the specificity of bilingual education; and early emphasis on first-language literacy. A major difference between the Canadian and European models is that in the latter, the target language is taught as a subject prior to its introduction as a medium of instruction, then in parallel. (MSE)
European Models of Bilingual Education: Practice, Theory and Development

Hugo BAETENS BEARDSMORE
Professor of English and Bilingualism at the Vrije Universiteit Brussel and the Université Libre de Bruxelles, Belgium

Introduction

The rapidly growing momentum of European integration has led to an increase in investment in the promotion of linguistic skills via education, spearheaded by initiatives emanating from the Commission of the European Communities. These initiatives are likely to influence both linguistic and more general education throughout Western Europe.

The Commission of the European Communities intervenes on a supra-national level among the 12 member states of the EEC by means of a series of directives and programmes affecting language and education under the acronyms ERASMUS and LINGUA. The ERASMUS programme is designed to bring about collaboration amongst universities situated in different countries. The goal of ERASMUS is to encourage European integration by enabling students to spend a part of their studies in a university of a different member state; by the end of the century it is hoped that no students, whatever their discipline, will be able to obtain a degree without having spent a part of their study period abroad. The budget investment for 1990-1995 is 200 million ecu or approximately 220 million US dollars.

The nature of ERASMUS programmes varies enormously, based on negotiations between different universities according to their specific needs. One of the most ambitious programmes is between the universities of London and Paris where, in the law departments, second year students from both institutions exchange places so that the second year French students spend a year in London while their British counterparts spend a year in Paris.

ERASMUS programmes have implications for language acquisition, since, as the London-Paris law department exchanges imply, not only do the students involved get training in the opposite country’s legal systems but they also get taught through the medium of a different language, considerably enhancing their linguistic capacities and international job prospects. In cases where minor languages are involved extra subsidies are available from the EEC for students to
spend a preparatory linguistic training period in the country they move to on the exchange programme.

The general educational implications are self-evident. Students get confronted with a new culture and language in their host institutions, develop a greater awareness of European diversity and European commonalities, there is cross-fertilisation of teaching ideas and methodologies, a restructuring and rethinking of programmes and an impetus to innovation and adaptation, both on the institutional and individual levels.

The LINGUA programme is aimed at developing linguistic competence at secondary school level. The EEC is encouraging the learning of three languages for all pupils in secondary education, irrespective of academic orientation. Choice of languages is left open among the nine official languages of the member states so as not to impose a major language on the diversified populations that make up Europe.

Its flexibility allows, for example, the autonomous region of Catalonia in Spain to promote Catalan as the first language, Castilian as the language of inter-Spanish communication, and French or English as a language of wider communication. The LINGUA programme intervenes financially to promote language learning in professional and technical education, language learning in businesses and enterprises and inter-university collaboration on language teacher-training; the budget available for 1990-1995 is 200 million ecu or approximately 220 million dollars. The EEC also intends to set up a European Academy of foreign language teaching.

The inspiration for both ERASMUS and LINGUA has evolved from an awareness of the need to respect the linguistic and cultural heterogeneity of the Europe of tomorrow and to enhance communication across linguistic borders, without imposing a unique lingua franca which would be unacceptable to certain member states, or privileging certain linguistic communities either traditionally predisposed towards multilingualism (like the smaller nations) or reticent towards it (like Britain and France). Inspiration has also been taken from some of the multilingual education programmes of the type I intend to describe below.

I shall describe three successful European models of multilingual education, destined for very different populations, and compare them with the Canadian immersion model, for the simple reason that the latter is the best documented and therefore more widely known. In so
I will try to extract significant features that account for success, according to the circumstances. The models are:

1) The trilingual education system applied to the entire school population of the Grand Duchy of Luxembourg;

2) Multilingual education as developed in the network of European Schools situated in different European cities;

3) The Foyer Project, developed in Brussels to enable immigrant populations to benefit from mainstream education in a bilingual city.

In all three cases a minimum of three languages are involved, which makes them more complex than standard Canadian immersion. My aim is to show how even complex language learning environments can cope with bilingualism in education while at the same time to warn against the adoption of any single model, no matter how well-tried, without the necessary modifications to specific local circumstances. This is because far too often well documented success stories, like Canadian immersion, have been taken over as a blue-print in circumstances where they do not satisfy local needs, merely because the research background has proved their effectiveness in the context for which they were developed.

1) Trilingual Education in the Grand Duchy of Luxembourg

The Grand Duchy of Luxembourg represents a unique example of a western nation where the entire school population undergoes developed education transiting through three different languages as medium of instruction (for details, cf. Baetens Beardsmore & Lebrun, 1991).

The Luxemburger is monolingual by birth and becomes trilingual through education. This achievement is a complex, long-term process. In nursery schools and the first year of primary education Luxemburger is the sole medium of instruction but is progressively replaced by German. German is taught as a subject during the first year of primary school and by the end of grade 6 the transition to the exclusive use of German as a medium must be completed. In grade 2 of primary school French is introduced as a subject in preparation for its use as a medium in secondary education. In the first 3 grades of secondary education most classes are taught through the medium of German, except for the French language and mathematics, which are now taught through the medium of French. The further the pupil progresses in secondary education the more subjects are taught through the medium of French, with German gradually disappearing as a medium, except for language classes. This
complex system operates on the principle of introducing the child to schooling by means of the home L1, rapid transition to a genetically related L2, German, and a gradual transition to a genetically unrelated L3, French.

Throughout the programme German and French are the focus of attention as a subject matter in parallel to their being used as a medium of instruction, which may well have implications for the quality of the outcome in terms of productive accuracy. Figure 1 indicates the number of contact hours per language for the entire curriculum in Luxembourg for children following the standard programme from age 6-18.

![Figure 1: Hours of language exposure during school career in Luxembourg schools](image)

For illustrative purposes Table 2 indicates the amount of time in the secondary standard curriculum devoted to each language, expressed in percentages. As such it reflects the step-wise nature of the transition from one major language of instruction to another and is merely a continuation of a similar transition in primary education, but where the shift occurs from Luxemburger to German. Variations in percentages in Table 2 depend on course options selected by pupils but whatever the options at least one fifth of the time in school is devoted to the study of languages as a subject, a very different picture from standard Canadian immersion programmes where apparently very little time is devoted to the study of the language per se.
Table 1
Amount of time in the standard secondary curriculum devoted to each language, expressed in percentages

<table>
<thead>
<tr>
<th>LANGUAGE</th>
<th>GRADES</th>
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<td>1</td>
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<tr>
<td>Lux. subject</td>
<td>3%</td>
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<tr>
<td>Lux. medium</td>
<td>-</td>
</tr>
<tr>
<td>German subject</td>
<td>13%</td>
</tr>
<tr>
<td>German medium</td>
<td>50%</td>
</tr>
<tr>
<td>French subject</td>
<td>20%</td>
</tr>
<tr>
<td>French medium</td>
<td>13%</td>
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<tr>
<td>Other languages</td>
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</table>

Of all pupils who completed the standard secondary school programme in the 1985-1986 school year 70% succeeded in final examinations leading to higher education, indicating that trilingual education can have a high success rate, irrespective of social class, selection, or other variables so often considered as conducive to success (Fishman, 1977). This model is unique in that it proves that trilingual education can work for an entire school population. Moreover, since all university studies have to be followed in a country other than the Grand Duchy itself, there being no full university in Luxembourg, linguistic standards must be sufficiently high for students to be able to pursue their studies in a foreign country.

2) Multilingual Education in European Schools

The trilingual education system used in the Grand Duchy of Luxembourg was adapted by a far more complex system upon the foundation of the European School network in 1958. These schools have been described in detail elsewhere (Baetens Beardsmore & Swain, 1985; Baetens Beardsmore & Kohls, 1988), so that here I shall merely outline their characteristics.

European Schools form a network of 9 establishments situated in 5 different countries and intended primarily for the education of the children of European civil servants. The largest school is in Brussels, with about 3000 pupils ranging from kindergarten to secondary level. Each school consists of different linguistic sub-sections covering the 9
official languages of the member states, where everyone follows the same programme, irrespective of the language of instruction.

A European School is not an elite school, though it tends to have this reputation. Priority is given to European civil service children, but each school has an obligation to take in others if space is available, with particular emphasis on those from less favoured groups, including the handicapped (Schola Europaea, 1988). The programme is controlled by intra-governmental instances, education is free, though non civil service children may pay a small subsidy, there is no selection on entry, no streaming, nor is there any specialization until the fourth year of secondary education.

The principles behind European Schools can be summarized as follows:

1° The child's distinct national, cultural, religious and linguistic identity should be maintained, underlining the significance of instruction in the L1.

2° Throughout schooling, all children must acquire a thorough knowledge of an L2 (to be selected from English, French or German) through which they will be able to learn content matter and be prepared to take examinations through the medium of both L1 and L2.

3° The higher the child progresses in the school the more lessons are taught via the medium of a second or third language.

4° The programme is designed to promote linguistic and cultural pluralism rather than assimilation so that all children are obliged to take on a second and third language, with no linguistic discrimination in favour of speakers of a major language like English or French.

5° From primary school onwards, communal lessons are taught to members of different sub-sections brought together for integration purposes. In the primary section these communal lessons are known as European Hours. The further the children progress in the programme the more lessons are taught to mixed groups from different sub-sections.

6° Study of an L3 becomes compulsory from the third grade of secondary education.
7° All teachers are qualified native speakers of the language they use as a medium of instruction.

A pupil who progresses through the entire programme will receive L2 as a subject over the whole 12-year syllabus, giving a total of 1,100 hours of formal language instruction, in addition to lessons taught via the medium of an L2. The L3 programme consists of a minimum of 360 hours of core language instruction in addition to optional courses in which the L3 is the medium of instruction. Since the founding of the schools success rates on university entrance examinations have been approximately 90%, indicating that the strong language commitment has no detrimental effects on academic achievement.

Moreover, the Commission of the European Communities and the Council for Cultural Cooperation of the Council of Europe, in May 1990, organized a conference aimed to examine to what extent experience gained in European School type education could be extended to the general population by examining the use of an L2 as a working language for non-language subjects and the creation of special bilingual or international language sections, indicating the faith and confidence in the model.

3) The Foyer Project in Brussels

This project is a unique Belgian initiative aimed at producing bicultural children with trilingual competence (for details, cf. Byram & Leman, 1990). The Belgian capital of Brussels has an official bilingual status where schools are divided into Dutch or French-medium establishments but where children are required to receive the second national language from the age of 7 onwards for a minimum of 3 and a maximum of 5 lessons per week. Given that 24% of the population of Brussels is of immigrant origin, that 50% of new-born children are of foreign origin and that in certain areas these immigrants make up 80-90% of the kindergarten and primary school population, there is a serious education problem for those who do not have Dutch or French as their primary language.

To help these children fit into the mainstream educational system five schools have been involved in the Foyer Project, each working with a specific minority population in a different Dutch-medium school. The outside environment of the city is predominantly French so that the primary language of socialization of the children involved may be, but is not necessarily, French. The home language may be a dialect variant of a standard language, e.g. Sicilian for the Italian group, Moroccan Arabic...
for the Moroccans. The school language is Dutch, while French becomes compulsory under legislation for Brussels from the age of 7 onwards.

The Foyer Project begins with a 3 year kindergarten period in which the minority group spends 50% of the time as a separate group and 50% of the time with the mainstream children. In the first year of primary school the minority group is separate for 60% of the time for lessons in the ethnic language and culture and mathematics, spends 30% of the time as a separate group learning Dutch and 10% of the time integrated with the mainstream children. In the second year of primary school 50% of the time is spent as a separate ethno-cultural group for language and culture, 20% as a separate group for Dutch lessons and 30% for integrated lessons with the mainstream group, including mathematics lessons. From the third year onwards 90% of the time is spent with the mainstream group using Dutch while the minority language is taught for 3 to 4 hours per week separately. French lessons are taught with the mainstream group according to the legal requirement.

Certain characteristics identify the Foyer Project. The immigrant population is fixed at slightly lower than the Dutch-language population so as to avoid the displacement of Dutch as the medium in which the school operates. This is necessary because Dutch is a minority language in Brussels and could easily be displaced by French, or even the immigrant language, if numbers were not controlled. Immigrant languages are taught by native-speaker teachers and literacy skills are taught in the ethnic language first. The schools require strong parental involvement and make efforts to integrate scholastic and extra-curricular activities with an aim to providing intercultural exchanges between the groups involved.

Results from the project are encouraging, though given the experimental nature of the enterprise it is too early yet to predict the final outcome. There are no data available on the effects of this trilingual development on success in secondary school to date as the cohorts have not yet moved up sufficiently.

Comparisons Between Different Models

Although one must be extremely prudent in making comparative assessments of the outcome of different bilingual education systems, given the multiplicity of diverging variables that need to be taken into consideration, it can be useful to examine results in support of claims about success.
Table 2 provides a comparative overview of results on French as an L2 as attained on a series of standardized tests by 13 year old pupils in the Luxembourg trilingual system, the European School multilingual system and a Canadian immersion programme. When the tests were taken the Luxembourg pupils had received approximately 1400 contact hours with French both as a subject and a medium of instruction, European School pupils had received approximately 1300 hours of French as a subject and a medium, while Canadian immersion children had received about 4500 contact hours, primarily of French as a medium. The similarity of scores obtained across the three models of education reveals how diverging programmes can attain comparable results. What is significant in the interpretation of such results is an analysis of the factors that have contributed to them, in spite of such variations in programmes.

For the manifest success of Luxembourg, European School and Canadian immersion models (and as far as can be judged, of the Foyer Project) requires careful analysis lest they be misappropriated for application in totally different contexts serving totally different populations, as has been the warning about immersion programmes imported from Canada into the United States (Hernández-Chávas, 1984).

Such an analysis can hopefully bring to light a set of minimal criteria which are potentially conducive to the effective promotion of bilingual education in most contexts, to which must be added the
specific criteria peculiar to any given population in a particular environment. Indeed, this is what the theoretical discussions of bilingualism in education have attempted to unravel, as reflected in the macrological analyses produced by Spolsky, Green and Read, 1974; Fishman, 1976; Fishman, 1977; Cummins, 1984; Skutnabb-Kangas and Cummins, 1988; Baetens Beardsmore, 1990).

An analysis of the level of language competence achieved by the end of the European School programme among 17+ year olds (Housen and Baetens Beardsmore, 1987) led us to consider what the theoretical explanations were for the ultimate attainment. This study forms part of a series on the model in question, including an examination of the nature of European Hours given in primary school (unpublished), an investigation comparing Canadian immersion results with European School results achieved by 13+ year olds (Baetens Beardsmore and Swain, 1985) a study comparing achievement on French as an L2 and French as an L3 among 13+ and 14+ year olds (unpublished) and a comparative study of results on English and French as an L2 among 13+ year olds in a European School, where these were not part of the wider, out-of-school environment (unpublished). In all cases, it became apparent that the success of the schools could be accounted for by a combination of curricular and extra-curricular factors.

In any adaptation of a particular model of bilingual education it is important to bear these two types of factor in mind. Success in bilingual education depends in part on the extent to which the languages involved are dependent on school instruction alone, as is the case with Canadian immersion programmes, and one must bear in mind Fishman's (1977, 102) comment that "School use of language is just not enough". In cases where a particular language in a bilingual programme is primarily school dependent expectancy levels for ultimate attainment must be realistically adjusted. A comparison between some of the factors that distinguish the models developed in Europe from Canadian immersion programmes clearly reveals why similar levels of achievement were attained by 13+ year olds who had received highly disproportionate classroom contact hours with the target language.

In educational contexts there are some factors which the school can control and others which it cannot. For example, the research indicates that the most significant differences between the populations tested related to the pupils' self-motivated use of the L2; pupils in a European School initiate peer-group interaction in the L2 whereas immersion pupils do not. However, the structure of the European School programme makes it necessary for linguistically mixed groups to use a common L2 as a medium of communication. Since immersion children come from homogeneous English backgrounds it is only natural for them
to communicate amongst themselves in English and not the L2. In the European School investigated the L2, French, serves as a lingua franca for cross-linguistic communication. In Canada there is no need for a lingua franca because of the homogeneous background of the pupils. In both cases this is a factor outside the schools' control. In the European School investigated there are considerable native-speakers of the L2 with whom communication can take place at peer-group level, whereas in Canada there are no native-speakers of French available for peer-group interaction. The European School can control this factor via the curriculum whereas an immersion programme cannot. A factor outside the control of both types of school is the nature of the out-of-school environment. For pupils from the Brussels European School French tends to be used at least sometimes and often more with friends outside school and between classes, and is used most or all of the time with Francophones in the community. In immersion cases there are no native-speakers available for the use of French outside the classroom.

Although French as an L2 is not essential as a lingua franca in the Luxembourg case, the fact that this language is widely used in the out-of-school environment and prevalent in media and official instances, means that similar factors beyond the control of the school also intervene in influencing the linguistic climate in and around the schools which help to determine proficiency. The same is true for the Foyer Project, where the out-of-school French environment provides ample stimulus for the use of the language to compensate for the limited classroom contact hours, while the proportion of time devoted to Dutch and the first language varies as proficiency develops.

Theoretical Considerations

To explain success in bilingual education Cummins (1979, 1981, 984) posited three conceptual arguments. The first is the Threshold Level Hypothesis, which assumes that if bilingual children attain only a low level of proficiency in either of their languages, their interaction with the environment is likely to be impoverished, thereby hindering intellectual growth. If children attain a high threshold level of proficiency in one or two languages, this will positively influence the potential for intellectual growth and lead to beneficial aspects of becoming bilingual.

Cummins' second hypothesis suggests that there is a close relationship between proficiency in L1 and L2 for the development of literacy-related aspects of language usage; this is known as the Common Underlying Proficiency, which assumes that adequate and sufficient instruction in one language will enable the transfer of sub-
skills to another language, provided there is enough exposure to this L2 in the school and the environment and sufficient motivation to learn it.

The third hypothesis distinguishes between **Context-Embedded, Cognitively Undemanding** linguistic activity, and **Context-Reduced, Cognitively Demanding** linguistic activity. The former reflects the lower threshold level and is typical of conversational interaction, whereas the latter requires a much higher level of proficiency necessary for handling content matter through the medium of a different language.

In Luxembourg, the European Schools, and as far as can be judged from early results from the Foyer Project, these factors are reflected in the nature of the programmes. Although the L2 is introduced in a core language programme from early stages in education, it is not until the L1 has been solidly established that the L2 becomes a partial medium of instruction. In Luxembourg the switch is rapid, whereas in European Schools and the Foyer Project it is more progressive. The common underlying proficiency between L1 and L2 allows for the transfer of literacy-related sub-skills requisite for academic progress in two, and later three languages in all the systems, including Canadian immersion. There is also a gradual but steady transition from context-embedded, cognitively undemanding activities in L2 to cognitively-demanding, context reduced activities of the type necessary for examinations through other languages than the L1.

In his controversial hypotheses on language acquisition and language learning, Krashen (1981, 1982) developed the **Comprehensible Input** model to reflect what he felt to be the most significant factor in determining progress. This hypothesis suggests that acquisition progresses through a series of distinct stages where the pupil moves from one step to the next by processing the input provided. According to Krashen, for efficient progress the input must contain lexis and structures already acquired, labelled i, together with some language not yet acquired and a little beyond the current level of proficiency, giving i+1. According to Krashen, the non-acquired +1 element can be inferred from contextual, paralinguistic and general knowledge cues embedded in the message. This input must be intrinsically interesting and relevant by appealing to the acquirer's tastes and imagination and must be provided in sufficient quantity.

Swain (1985) argued that comprehensible input, or i+1 alone, is insufficient for the acquisition of high levels of L2 proficiency, based on results obtained on Canadian grade 6 immersion pupils. The children
concerned had received French comprehensible input for almost seven years, and although they had reached good levels in certain aspects of French, they were appreciably different from native-speakers, particularly in activities requiring high levels of grammatical knowledge. The subjects performed satisfactorily on subject-matter tests and therefore must have understood what was taught through the L2. This suggests that it is not input alone that is important in L2 acquisition. With immersion pupils, input is derived mainly from listening to teacher talk, so the less than native-like grammatical competence can only be accounted for by the inadequacy of the input hypothesis. On the other hand, Swain claims that output fulfills a vital role in the process of L2 acquisition in that it enables the acquirer to apply the available linguistic resources in a meaningful way. This pushes the acquirer toward the delivery of a message that is conveyed as precisely, coherently and appropriately as possible, enabling experimentation with target language structures by trial and error.

In Luxembourg, in European Schools and in the Foyer Project in Brussels, the nature of the environment, in school and outside school, pushes the speaker in the active use of the L2. In the three systems, unlike the Canadian experience, exposure to the L2 is not restricted to the classroom and output is fostered by two-way interactional exchanges in which meaning is actively negotiated.

Although the above theoretical constructs go a long way to explaining the nature of the outcome of the four models discussed they fail to give sufficient emphasis to the social and psychological aspects of language acquisition contexts. These are felt to be of particular significance in a bilingual education system, since they may well be decisive in determining to what extent a learner makes use of the potential for Cummins' hypotheses to operate in cases where the programme takes his parameters into account. Similarly, there may well be sufficient opportunities for both input and output to have effect yet these opportunities may not be taken up, or else may be modified by other factors.

This possibility was taken into account in the study of the European School by Housen and Baetens Beardsmore (1987) when it was noticed that there was differentiated ability in L1, L2, L3 and L4 amongst the pupils investigated which could not be explained in terms of the highly satisfactory test-score results. One case was that of an English pupil with French as an L2 who revealed signs of backsliding in the second language, another that of a Dutch girl who had higher proficiency in her L4, Italian, than her L3, English, in spite of the fact that she had greater classroom contact hours with English, significant opportunities for input and output, and a genetic similarity between her
L1, Dutch, and her L3, English, all of which should have led to different predictions.

Schumann's (1978; 1986) **Acculturation Model** provided the framework of interpretation to account for levels of achievement in the different languages. According to Schumann, acquisition depends on the degree to which the learner acculturates to the target language group. This he bases on the broad concepts of social and psychological distance. Social distance depends on the following seven factors which determine whether the target language acquisition context is good or bad for affecting social distance.

1° **Social dominance pattern.** The learner's group can be dominant, non-dominant, or subordinate in relation to the target language group. If it is dominant or subordinate, social distance will prevail, inter-group contact will be limited, and target language acquisition inhibited; if it is non-dominant, social distance will be minimal and target language acquisition fostered.

2° **Integration strategies.** These can lead to (a) assimilation to the target language group's life style and values, (b) adaptation, which partly preserves original culture patterns and partly adopts those of the target language group, or (c) preservation, which rejects the target language group's values. Social distance is fostered by preservation and minimized by assimilation.

3° **Degree of enclosure.** This factor refers to the structural aspects of integration and involves such things as endogamy, institutional separation, and associational clustering. Sharing of social, religious and cultural institutions decreases the degree of enclosure thereby fostering intergroup contacts and the acquisition of the target language.

4° **Cohesiveness and size of the learner's group.** The larger and more cohesive the learner's group is, the more likely intragroup contacts will outweigh intergroup contacts, thus increasing social distance and hindering target language acquisition.

5° **Congruence.** The more similar the two group's cultures are, the more likely integration will be facilitated and consequently social distance reduced.
6° **Intended length of residence.** The longer the learner intends to reside in the target language area, the more inclined he or she will be to seek contacts with the target language group and the smaller the social distance will be.

7° **Attitudes.** Favourable attitudes improve both the quality and the quantity of contacts between the learner and the target language group and facilitate the acquisition process. Unfavourable attitudes may have the opposite effect.

Together with the above sociological factors the following three psychological factors also come into play, according to Schumann.

1° **Language shock, culture shock, culture stress.** These refer to the degree of anxiety engendered by expressing oneself in a weaker language, and the ease or difficulty with which one assimilates the cultural attributes borne by the other language. The greater these are felt, the greater the psychological distance from the acquisition of the target language.

2° **Ego-permeability.** This refers to the permeability of an individual's ego boundaries and comes about by lowering the inhibitions felt in speaking the weaker language.

3° **Motivation.** This can be integrative or instrumental. Schumann feels that integrative motivation minimizes psychological distance and increases opportunities to interact in the target language.

When the above criteria of social and psychological distance were applied to an analysis of the pupils in the European School, where the curriculum clearly took into account Cummins' hypotheses, Krashen's i+1 input hypothesis, Swain's output hypothesis, and where there were ample opportunities for peer-group interaction both inside and outside the school, an explanation was found as to why the Dutch girl's L4 was higher than her L3 and why the English boy's L2 showed signs of backsliding. In both cases the pupil's individual profile reflected degrees of social distance from the target languages which coincided with levels of proficiency. The English boy's reactions towards the French language community showed signs of increasing rejection with age, accounting for his backsliding, in spite of good test scores. The Dutch girl was indifferent to all things English but strongly attracted to the Italian environment in her school, explaining her activation of
opportunities to promote her competence in Italian. Standardized test score results were good for all the languages involved with both subjects, yet it was Schumann's acculturation model which brought out the more subtle differences and explanations which accounted for the real nature of their proficiency.

A final hypothesis which encompasses all of the earlier mentioned parameters is related to the perception the pupil has of the language learning effort. Acquiring a second language to a substantial level of competence is a long-term process where the rewards of satisfactory ability and ease of interaction are often postponed. Core language lessons often attempt to overcome such postponement by the use of artificial techniques, whereby minimal interaction can be achieved within the limits of each lesson (particularly in the functional notional syllabus as promoted by the Council of Europe (cf Yalden, 1983). Bilingual education is far more successful on this count, however, by the fact that the languages involved are perceived as immediately pertinent by the recipients, in circumstances which are as near natural as is possible. Although it is not natural, in Canadian immersion programmes, for homogeneous English-speaking pupils to interact informally in the L2, the fact that the whole of the classroom experience is conducted in French and that subject-matter is also taught through this language means that French is immediately pertinent, at least within the limits of the classroom. In a European School, and to a slightly lesser extent in Luxembourg and in the Foyer setting, the L2 is needed for both curricular and extra-curricular activities, inside school and outside. In such cases it is believed that immediate pertinence is perceived in a way which works backwards to generate spontaneous output, by which further input is received, producing circular reinforcement.
Conclusions

If one attempts to summarize the major features which represent minimal conditions for a successful bilingual education programme, then the following elements require consideration.

No single model of bilingual education is universally applicable and no single existing model should be transplanted to a totally different context (Mackey, 1972). As Spolsky, Green and Read (1974) have pointed out, a bilingual programme depends on three types of factors, situational, operational and outcomes. On the situational level it is necessary to analyze the context in which bilingual education operates (i.e. the population, its status, size, resources, aspirations, etc.). On the operational level it is necessary to analyze the factors involved in the interaction of the school with the surrounding community. On the outcomes level it is necessary to appraise realistically what the goals of a given programme can achieve and be cautious about the myth of the "perfect bilingual".

Comparisons between different models reveal how different paths can lead to high levels of proficiency, that such proficiency is tempered by contextual variables more so than by programme variables, and that the former play a considerable role in determining ultimate achievement. These contextual variables are only partially within the control of the school or the programme designer but are decisive in determining the nature and outcomes of any programme.

All models share features in common. They all illustrate the significance of Cummins' hypotheses, the role of input and output and the notion of immediate pertinence. Research into the European School model has also revealed to what extent social and psychological distance play a decisive role in activating output.

Apart from the contextual variables relating to the out-of-school environment and the population make-up within each programme, which the school cannot manipulate, what significant variables appear to affect success?

Canadian research reveals how unrealistic it is to expect homogeneous English-speaking peers to interact in the L2 in self-initiated peer negotiation outside the formal classroom. This feature appears significant in determining the productive proficiency in oral communication in the target language, if the output hypothesis plays the important role which research leads us to believe. Indeed, the speed with which English has displaced the other languages in Singapore as the common lingua franca would lend substance to the argument that
the school alone cannot produce high levels of proficiency, since in Singapore cross-ethnic interaction, being conducted in English, lends immediate pertinence to the task of acquiring English and stimulates self-initiated peer negotiation, as attested by Gupta (cf. this conference) in her observation of kindergarten classes. Hence Canadian immersion results reflect high levels of receptive competence in the L2 and realistically adjust expectancy levels on productive proficiency to take into account those features of linguistic ability that cannot reasonably be produced by an education system alone. The message to the educational planner, then, is not to expect bilingual education to produce native-like competence in two languages if the contextual variables do not allow for this to develop. Examination criteria must be adjusted and clearly specify levels of dual-language proficiency on the outcome level accordingly, as has been done in the Canadian context.

Other points which the models share are the following.

All four models are characterized by highly proficient teachers in the target language. European Schools only use native-speakers as teachers, Luxembourg's teachers all receive their qualifications in the countries of the language which they use, where they acquire native-like competence. Foyer project teachers are native-speakers of the immigrant language or of Dutch, near-native speakers of French. Canadian immersion teachers are native-speakers or highly competent bilinguals. All the models consider this teacher proficiency a significant feature when high levels of bilinguals are the goal. Unfortunately, in many cases where bilingual education is provided level of teacher proficiency is not always commensurate with the goals of the programme.

Parental involvement in and understanding of the specificity of bilingual education is strongly encouraged in the models outlined. This is because bilingual education may require parents to receive reassurance about progress in cases where part of the curriculum is being taught through a language the parents do not know. Canadian immersion requires strong parental support, since it is voluntary, and parents are briefed on the nature of bilingual development so as to allay fears they may have about their children's linguistic and scholastic progress. Luxembourg parents are familiar with the system, having gone through it themselves. The Foyer project encourages parental participation and contacts to create racial harmony, as does the European School system.

Although literacy need not be taught through the first language, as is the case in Canadian immersion, the European models all begin
literacy in the first language, since this appears an easier solution for the transfer of skills to the second language.

A major difference between Canada and the European programmes, however, is that the target language is taught as a subject, prior to its introduction as a medium. Moreover, the second language as a subject is continued in parallel to its use as a medium throughout the education process. It is felt that this parallelism helps to account for the higher rates of accuracy in written and spoken productive competence in Europe, as revealed by interviews with pupils from the Canadian, European School and Luxembourg models.

This point is of even greater significance in cases where homogeneous school populations and a lack of stimulus in the target language from the outside environment imply that peer interaction cannot take place with native speakers. The difference between programmes where an L2 is taught merely as a subject in core-language lessons and truly bilingual education where the L2 is used as a medium is that in the latter the core language lessons have more immediate pertinence. Each language as a subject lesson can be perceived as of potential use for the language as a medium lesson, so that they are of greater relevance in the linguistic market place of the school. The short-term pay-off is apparent to the pupil, whereas in core language lessons the pay-off is often so long-term that the pupil loses sight of the goal in the years of effort required to attain sufficient competence to be able to do anything realistically with the language. Hence, the motivational variable, so often called upon as the answer to acquiring language proficiency, is automatically built in to properly developed, long-term bilingual education. Socio-cultural factors are stronger than linguistic factors in bilingual development, and in cases where bilingualism forms part of educational development it is these socio-cultural factors that require manipulation within the constraints of the situational context of the school.
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