# FROM CORE TO CONTENT: BRIDGING THE L2 PROFICIENCY GAP IN LATE IMMERSION

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**Abstract**  In this paper we argue that assumptions which underlie the successful implementation of early immersion education may not be valid for late immersion education. In particular, assumptions about the curriculum that hold for early immersion (e.g. that the same content can be covered) and the pedagogy (e.g. that there is no place for the use of the L1 by students or teachers) may need to be reconsidered in the context of late immersion. The reason for these differences lies in the nature and extent of the L2 proficiency gap experienced by late immersion students as they begin their immersion experience. The paper concludes with some suggestions for research focusing on curricular issues and pedagogy in late immersion education.

## Introduction

This paper argues that late immersion[1] is different from early immersion in important ways and that the issues faced in late immersion programmes, particulary in their initial stages, are not just greater than those of early immersion, they are of a different type and require different solutions. The proficiency gap referred to in the title is created when the medium of instruction is switched from the first language (L1) to the second (L2) and students move from learning a language as a subject to using it as a medium of content learning. The gap to be bridged is the difference between the level and type of L2 proficiency the students have and the target or 'threshold' level[2] they require in order to be able to engage effectively with the curriculum they are required to study. The more demanding the late immersion curriculum is, and the later in the educational process the switch occurs, the greater the L2 proficiency gap will be. The less complete the immersion (as in partial immersion programmes), the more difficult

it will be to bridge the gap. Immersion theory has developed primarily out of research and experience with early immersion programmes where, we will argue, the proficiency gap has less significance. Because the importance of the proficiency gap in late immersion has not been fully recognised, or its consequences dealt with, late immersion programmes may be failing to achieve their full potential and teachers who have to deal with this proficiency gap are receiving too little help or understanding.

The causes and nature of the L2 proficiency gap are outlined below in order to establish the key differences between early immersion and late immersion programmes *at the point where the late immersion programme begins*. We then look at the assumptions that are generally made about early immersion curriculum and pedagogy and the problems that result when these assumptions are applied without modification in the late immersion context. To illustrate these problems, we describe recent developments in the Hong Kong education system, where the failure to implement an English late immersion programme effectively has led to a new medium of instruction policy. In the very different Canadian context, the same issues, though far less extreme, are nonetheless real. Out of this discussion, we arrive at a number of recommendations for research which we believe would help to make late immersion programmes more effective, and would add to our understanding of the factors that affect outcomes in immersion programmes in general.

## Defining the Late Immersion Proficiency Gap

Figure 1 shows second language development and conceptual development as separate but intersecting continua. The four segments of Figure 1, A, B, C and D, are then used to illustrate the differences between early immersion and late immersion students *at the point in the curriculum where the late immersion students switch from an L1 medium of instruction to the L2.*

(A)  Conceptually new and linguistically new: Where the language and the concepts are new and have to be learned, the late immersion student is in the same situation as the early immersion student. Their teachers face the same task. However, the linguistic means used by them in performing this task are considerably different.

(B)  Conceptually new and linguistically familiar: Language in this category consists of familiar forms that are being used in a new and usually more technical sense; e.g. 'solution' in chemistry as opposed to a crossword puzzle, or 'subject' in sentence grammar as opposed to the school time-table. Far more words (and grammar) fall into this category for early immersion students simply because they know more words and grammar in the L2 than late immersion students initially do.[3]

(C)  Conceptually familiar and linguistically new: This category provides the major challenge for late immersion students and teachers. Late immersion students know the concepts, because they covered them in the L1 primary curriculum. They do not know the L2 linguistic terms and expressions for
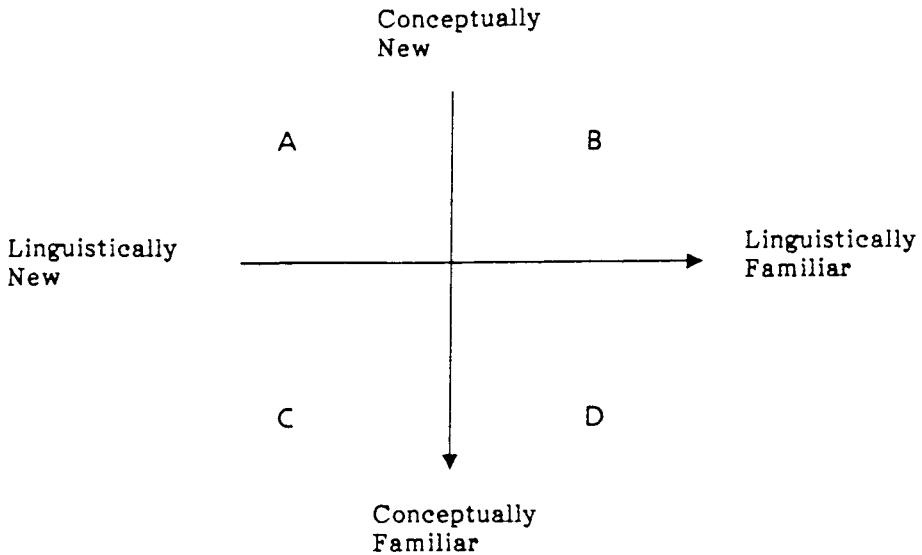
Conceptually
New

A                           B

Linguistically                                    Linguistically
New                                               Familiar

C                           D

Conceptually
Familiar

**Figure 1** Relationships between conceptual and linguistic development for immersion students.

these concepts. For late immersion students, this category includes virtually the whole of the content area curriculum studied through their L1. Early immersion students should have far fewer such problems since language and concepts were mastered together.

(D) Conceptually familiar and linguistically familiar: Category D provides a teacher with the building blocks that can be used in helping students to
• understand new concepts and construct new meanings. In a late immersion classroom, the quantity and quality of the available building blocks are greatly reduced. Much of the language that falls into Category D for early immersion students falls into Category C for late immersion students.

Late immersion students acquire some L2 proficiency through the core L2 programmes[4] offered in primary school. While this is useful, and arguably essential for late immersion, it has tended to disguise the proficiency gap rather than close it. As the syllabuses, teaching programmes and materials show, in core L2 programmes in Hong Kong and Canada, students usually follow a general language development programme often aimed at conversational proficiency. The texts they read tend to be narrative or descriptive rather than academic. When they write, the texts tend to be personal rather than expository. In content subjects, the proficiency required is academic rather than interpersonal, and content subject specific rather than general. Thus, not only is the students' L2 proficiency inadequate for the secondary curriculum, it is also somewhat inappropriate.

To sum up these points: there is a quantifiable, though not adequately quant-

ified, gap in the proficiency between where late immersion students are on entry to the programme and the L2 threshold level they need in order to engage effectively with the curriculum they are expected to follow; i.e. to be able to perform in relation to that curriculum in a manner broadly comparable to that of L1 students or early immersion students. This gap involves linguistic competence (vocabulary and grammar), the type of proficiency required (academic rather than conversational) and the range and level of receptive and productive communicative functions that the students can perform. After six years of early immersion, students are as well able to study the content curriculum at secondary level as their L1 counterparts. Late immersion students must bridge the L2 proficiency gap before they can begin to. use the L2 as the medium for acquiring curriculum content, and curriculum content as the means for acquiring the L2.

## Assumptions about Late Immersion

The L2 proficiency gap in late immersion has been ignored where the assumption has been made that there need be no fundamental differences between implementing early immersion and late immersion programmes: What has been shown to be the case for early immersion students regarding the curriculum to be followed and the pedagogical approach to be adopted, hold also for late immersion students. Indeed, since early immersion students have no L2 proficiency at all on entry to their programme, the task facing early immersion teachers might well appear greater than that facing late immersion teachers. These assumptions are examined in the sections that follow. Our point is not at all that the differences imply that one form of immersion is better, but that by recognising the differences, we are then in a better position to provide appropriate solutions.

### The curriculum

The assumption that the curriculum presents similar, or fewer, problems for the late immersion teacher than for the early immersion teacher is false for two reasons. First, the L2 proficiency gap is quantitatively and qualitatively greater in the initial stages of late immersion than in the initial stages of early immersion, the proficiency gained in the core L2 programme by late immersion students notwithstanding. Second, the resources available to the teacher for dealing with that mismatch are less adequate and less appropriate in late immersion.

At the start of their formal education, teachers can assume that students, L1 or L2 medium, have little academic knowledge or skills, and that the attitudes and behaviours appropriate to the classroom will have to be learned. The curriculum is designed to match this assumption. Despite the fact that at this stage early immersion students have little or no L2 proficiency, the academic curriculum they have to deal with can be similar to that of students working in their L1. Both groups are beginner readers and a great deal of support has to be provided for any written work that either group undertakes. The major difference lies in the general conversational proficiency that L1 students control and early immersion students lack. However the interpersonal language early immersion students need

to acquire is largely limited to the immediate classroom environment and is concrete rather than abstract. The meaning of the language they need to master is rather easily communicated through realia, or demonstrations of a kind well suited to that level of development.

Between the start of early immersion and the start of late immersion, the focus changes from socialisation into the classroom culture, a process amenable to concrete experience, to an academic orientation involving more abstract concepts and forms of discourse. The remedies for limited comprehension that early immersion primary teachers can adopt, such as puppets and pantomime, tend to be inappropriate to the level of maturity of late immersion students as well as inadequate for dealing with the more abstract and intellectually complex requirements of the secondary curriculum.

At the start of late immersion, students control in their L1 the language appropriate to classroom behaviour and attitudes, and they have acquired a considerable body of academic knowledge and skills across a wide range of content area subjects. They can read rapidly and with understanding any text appropriate to their level of cognitive/academic development; and they can write extended texts and engage in interactive discourse and argument which require an understanding of abstract ideas and some subtlety and sophistication in expression.

As a result, late immersion students find the first weeks and even months of their programme to be extremely demanding. They find it difficult to understand what the teacher says, and even with the aid of their dictionaries, understanding their textbooks is a formidable task. Their best efforts at speech are often only single words or phrases. Written tasks result in short texts, slowly constructed, limited in content and filled with errors.

It takes considerable effort, high motivation and self confidence for late immersion students to bridge the proficiency gap and come into line with the achievement of L1 students' performance in terms of content covered, tasks completed and outcomes achieved. Early immersion students are hardly aware that a proficiency gap exists. For them, early immersion is their first introduction to the classroom. It is different and it is fun. Late immersion students are acutely aware of the challenges they face and the differences between what they can achieve, and have been achieving, through the L1 and what they are initially achieving through the L2.

## The pedagogical approach

Given the difference in proficiency between the late immersion student and the early immersion student, and the nature of the proficiency gap which the late immersion student needs to bridge, it seems reasonable that different pedagogical approaches would be adopted for programme design and organisation, for lesson preparation and presentation and for the evaluation of achievement. In practice, however, late immersion teachers are expected to follow the regular curriculum at the normal speed; i.e. the same speed as early immersion and L1 medium students. Like early immersion teachers at the beginning of primary schooling, they will maintain the L2 as the medium of instruction, and after a reasonably

short period of time, certainly by the second year of the programme, so will the students. Any late immersion teacher who does not meet these expectations is thought to be a 'poor' teacher, one who has failed to understand the principles on which immersion is based or who lacks the skills required to implement those principles.

Under these circumstances, late immersion teachers are often reluctant to raise the problems that they face, or present for discussion strategies they use which deviate from these expectations. Nevertheless, studies in Hong Kong (e.g. Johnson et al., 1991; Shek et al., 1992; Hirvela & Law, 1992) have shown that teachers in Hong Kong consider immersion theory to be out of touch with the realities of late immersion classrooms. Late immersion teachers who are required to cover a heavily content-oriented syllabus in detail have argued that the use of the L1 by the teacher and the students is not just helpful, it is necessary well beyond the second year and even throughout the programme. Other teachers more concerned with the linguistic outcomes of the programme argue that if the L2 is to be maintained, curriculum content has to be reduced, and the approach to reading materials and textbooks, to teacher–student and student–student interaction, and to any kind of written task has to be different from the approach adopted in the L1 medium classroom. They argue that techniques adapted to the needs of early immersion students are inadequate and inappropriate in the late immersion context.

It is clear that the over-use of the L1, by teachers or students, must inhibit the development of the L2 and the aim in any immersion programme must be to maximise the use of the L2. However, there may well be occasions when the L1 can be used to save time and to prevent misunderstanding and frustration, and where the L1 can be used to support rather than subvert L2 development. Similarly it seems reasonable that in late immersion there must be some trade-off between content and language. What this trade-off might be, or even the parameters for discussing the issue, is less clear. One approach might be to analyse the 'standard' curriculum from the perspectives of quantity (e.g. coverage of content; amount of productive language use by students) and quality (e.g. depth of treatment of content; cognitive levels of communicative acts). Comparisons with different approaches to teaching and learning in late immersion programmes and their consequences relative to the standard L1 curriculum would be informative as to possible trade-offs.

There have been few studies of what experienced and effective content area teachers do in late immersion classrooms. Despite some discussions in the literature (e.g. Brinton, Snow & Wesche, 1989), the pedagogy appropriate for late immersion teaching has not been adequately defined or operationalised in teacher-training and professional development programmes. Some theorists have argued that immersion teachers should not ignore teaching the formal features of the target language (Allen et al., 1990; Stern, 1990); but others, arguing partly from the success experienced in early immersion, claim that formal language teaching is unnecessary, and counter-productive (Krashen, 1984) even in the language class. We believe that attention to the formal features of the language is important in all immersion programmes, but as in other aspects of the pedagogy, the needs

of the early immersion and late immersion students and the approach best suited to meeting these needs are likely to be different.

To summarise, many educators have assumed that late immersion education can be approached in much the same way as early immersion, and that any differences between those two contexts can be handled by teachers on a classroom by classroom basis. We have argued that under these circumstances optimal results in both L2 proficiency and academic achievement will not be achieved in late immersion programmes. A brief account of experiences of late immersion in the Hong Kong and Canadian education systems is presented below as support for this contention.

## Late Immersion in the Hong Kong Context

Between 1960 and 1980 the Hong Kong education system moved from providing early English immersion for a relatively small and privileged elite to provide late immersion starting at Grade 7 for approximately 90% of the school age population. A detailed account of the factors that brought this situation about would go well beyond the purposes of this paper, but in broad terms it resulted from a combination of policy at primary level and parental pressure at secondary level (see Johnson, 1994).

The policy, based on educational, psychological and cultural arguments, has been to provide Chinese medium education for the great majority of students. There was little opposition to this policy at primary level. At secondary level however, major international businesses have demanded a high standard of English from an increasingly higher proportion of school leavers. A large majority of parents have opted for the language that would secure the best opportunities for their children in tertiary education and their future careers, and were unwilling to enrol their children in Chinese medium schools.[5] Secondary school principals, who determine the language policy of their schools, claim to be English medium on the grounds that textbooks and examinations are in English even though in most cases much of the oral instruction is in Cantonese. In some classrooms as much as 90% or more of the oral medium is in Cantonese, with English terminology inserted, and constant switching between English and Cantonese as the teacher moves between text and explanation (Johnson, 1983; Johnson, Shek & Law, 1989).

The result of this failure to implement late immersion effectively has been increasing criticism from employers and tertiary institutions of the standard of L2 English being achieved, and in particular of students' L2 speaking and writing ability. These criticisms are aimed even at the most able students, whose general level of academic knowledge is reasonably high. The worst affected are the less able and less motivated students, whose low levels of achievement educationally and linguistically have become a matter of major concern (Johnson & Lee, 1987).

Vocabulary levels and reading ability are the aspects of the proficiency gap in the Hong Kong context that have been most extensively researched, and these will serve to illustrate the problems that students and teachers have been facing. In a study of textbooks used in the first year of late immersion (Grade 7), Cheung

(1985) showed that the textbooks contained a vocabulary of 2–3,000 headwords (5–6,000 words) and that these, and the sentence structures used, were well beyond most students' reading ability. Later studies (Education Department, 1988; Lai, 1991) showed that approximately 15% were unable to read the simplest of simplified English readers and few students were able to read at levels requiring a vocabulary of more than 500 words. Under these circumstances, and under pressure to cover a heavily fact-based curriculum, it was inevitable that content subject teachers would resort to the extensive use of the students' L1, Cantonese.

A further consequence has been the progressively greater simplification of the language of textbooks. While this could have been an effective way of narrowing the proficiency gap, the approach adopted was to rely on graphics and to limit the use of language. Science textbooks in the lower forms place a particularly heavy reliance on diagrams, charts and tables, with text limited to short simple statements. Explanations are provided in Cantonese by the teachers.

In 1989, a Hong Kong Education Department working party released a report on English language standards, and measures needed to improve them (Education Department 1989) and in 1991, the Hong Kong government approved a new policy on the medium of instruction (Education Commission, 1990). This policy is to be introduced progressively from 1994. It states that only those students capable of 'benefiting' from bilingual education should be admitted to the late immersion programme, and that schools which claim to use English as the medium of instruction must in fact do so. It is controversial whether the policy should have been introduced, and whether it can in any case be introduced effectively. The point we wish to make here, however, is that the new policy, and various measures being introduced in support of that new policy, aim to ensure that students who enter the English late immersion programme in future will be capable of bridging the L2 proficiency gap, and be helped to do so.

Measures being introduced to implement the new policy include the following:

## The curriculum

The assumption that students can move directly from L1 to L2 medium instruction in late immersion has been abandoned. Students making the move from Chinese medium to English medium classes will be expected to take a three-month 'Bridge Programme' before they begin work on the secondary curriculum. This programme is intended to enable students to 'recode' into English the knowledge they acquired through Chinese in the primary curriculum as well as raising the students' general English language proficiency. The 'Bridge Programme' covers the three major content subject areas of the primary curriculum: Social subjects, Science and Mathematics, and English, and occupies approximately 2/3 of the timetable. After the Bridge Programme these subjects will continue to be taught through English.[6]

Issues currently under discussion in Hong Kong include the rate of progress through the secondary curriculum that can be expected from English medium students and the evaluation of that progress relative to those students who continue their education through the L1. It is clear that the targets set for the students

at the end of their education, after five or seven years of secondary education, should be the same. It also seems clear that the rate and means of progressing towards that target will not be the same, particularly over the first two or three years.

## Pedagogy and the professional competence of late immersion teachers

Previously no distinction was made between teachers trained for Chinese medium and English medium education. A teacher was qualified to teach, and it was up to school principals to determine whether the teacher's English (or for that matter, Chinese) was adequate for the task. In future, in Education Department controlled Teacher-training Colleges, a distinction will be made, and work is in progress on proficiency tests and measures for the evaluation of performance in the classroom, which will determine whether teachers are capable of teaching through English. School principals will continue to exercise their judgement over who they employ, but the Education Department will require schools which claim to be English medium to show that they are so. Schools that cannot meet the criteria will not be allowed to run an English medium programme.

To help schools and teachers to meet these requirements, in-service programmes are being introduced which are designed equally to improve content subject teachers' English and to help them to develop the pedagogical skills they require if they are to teach effectively through English. As with the curriculum, the need to review and revise current teaching strategies is clear, if teachers are to help students bridge the L2 proficiency gap successfully. Over the past twenty years, teachers have relied increasingly upon the single strategy of switching to Cantonese to ensure comprehension. They will now need to develop a range of strategies for ensuring comprehension while maintaining English, such as demonstrations, the use of realia, comprehension checks and repair strategies, and for developing the students' productive language skills (Johnson, Shek & Law, 1993).

A crucial question for teachers and for policy is the extent to which some use of Cantonese may be retained. The policy states that English must be the 'predominant' medium of oral instruction, emphasising that the present overuse of Cantonese needs to be eliminated, but also reflecting the views of teachers that bilingualism is an asset and that it would be counter-productive to eliminate the use of Cantonese by teachers altogether. It will be important to identify ways in which the L1 can be used constructively to support L2 development rather than as a replacement for the L2; i.e. to promote rather than inhibit L2 development.

## Student selection

Whereas previously no restrictions were placed upon admission to English medium secondary education, criterion-referenced tests are now being developed in Chinese, English and mathematics. These will be used with norm-referenced tests in other subject areas to determine those students most likely to benefit from the late immersion programme. Test results will be used initially as guidelines for parents and school principals, but may later be used to restrict entry. The

assumption now being made is that students who are weak in L1 development, who have a low level of achievement academically, or who are poorly motivated towards learning through an L2 will not benefit from L2 medium education and that their presence in the programme is a major factor in reducing its effectiveness, in particular through the pressure their presence places upon teachers to use Cantonese.

To summarise, the assumptions underlying the new policy are first that only academically able and well-motivated students are likely to benefit from late immersion, and that all students switching from Chinese medium to English medium, however able, need an intensive bridging course that will move them towards the L2 threshold level. Second, the late immersion curriculum requires an approach to programme development and implementation that is different from that which is appropriate for L1 medium or early immersion programmes. Third, late immersion teachers need not only a high level of bilingual proficiency, but strategies for lesson preparation and a range of teaching skills for the conduct of lessons in the classroom that are specific to the late immersion situation. These may include strategies for using the L1 in support of, rather than as a substitute for, the L2.

## Late Immersion in the Canadian Context

The Canadian late immersion situation is in many ways different from that of Hong Kong. In Canada, the percentage of the school population involved is much smaller, with only approximately 2–3% of the population enrolled. Late immersion programmes are concentrated in Montreal and Ottawa, but one can find isolated programmes throughout the country. Enrolment is, in many instances, selective, even though no formal selection process exists.[8] By contrast with English and Cantonese in the Hong Kong context, the L2 and L1 (French and English) are cognate and the writing systems are similar. As a result, the problems that have forced themselves upon the attention of educators in Hong Kong do not appear so dramatically in the Canadian context. Nevertheless, from our bi-weekly observations of lessons and from discussions with students, teachers and school principals in the Toronto area during the autumn of 1992, it is clear that many of the same issues are important and need to be addressed.

### The curriculum

Generally speaking, teachers in the Canadian context are allowed greater opportunities than exist in Hong Kong schools for exercising individual initiative in developing their own curriculum. This greater flexibility allows teachers to modify their curriculum to suit the L2 proficiency and language needs of their students. As a result, the major cause of the use of the L1 in Hong Kong classrooms, the need to cover a large number of topics in detail, has sometimes been averted. However, where this happens it is a covert adjustment in which teachers receive little encouragement or assistance. It is assumed, officially, that the late immersion curriculum is parallel to and progressing at the same pace as the L1 curriculum.

School principals have told us that (as in Hong Kong) parents would not accept anything less than the assurance that this is the case, even though the principals we spoke to were aware that the two curricula are not parallel and could not be so if the late immersion programme is to be implemented effectively. (We should perhaps re-emphasise the point that we are referring here to the *initial* stage of late immersion programmes and not to late immersion programmes as a whole, where the long-term objective is parity with the L1 curriculum.)

Textbooks present a different problem in Canada from that in Hong Kong. In Canada, the number of students involved in any particular late immersion programme does not create a market that publishers consider justifies the publication of specially designed materials. Teachers must either design their own or make use of what exists as best they can. Despite the apparent advantage of cognate languages and similar writing systems, textbooks are a major problem for students. In a Grade 7 partial immersion class, we commented on the difficulty of a History textbook. It was in fact a book written for francophone students. The teacher agreed that the students could not read the textbook, but she used it for the illustrations and diagrams, and for a rough overview of the syllabus topics, an approach typical of the use many Hong Kong teachers make of textbooks in English.

For the initial stage of a late immersion programme, and for up to two or three years after that, it seems unlikely that the curriculum could be parallel to the L1 curriculum. It seems unlikely that the numbers involved in late immersion will be sufficient to permit the production of materials to suit each Board of Education and each variety (full and partial) of late immersion programme. The task of the teachers who must create the materials would be much easier, however, if the need to do so were officially recognised, and if the best means for catering for those needs were investigated and established. The information acquired needs to be disseminated through teachers' organisations, professional development programmes and the professional literature. Banks of materials could then be built up and shared by teachers working in similar contexts.

## The pedagogical approach

For L1 medium students in Canada, a student-centred approach including a wide range of tasks involving active and extended use of the language is widely encouraged. L1 medium content subject teachers feel they need pay little attention to formal aspects of students' language development. For late immersion students, a different pedagogical approach, at least initially, seems essential. In late immersion classes, considerable language support must be provided for any task, and feedback from the teacher is essential at various stages during any extended writing as well as at the end.

Late immersion students are not capable initially of extended active language use. For them to achieve the threshold level at which this is possible, intensive language development is required across every area of the curriculum. This requires teachers to develop and use strategies specific to the late immersion context. It requires careful linguistic planning for lessons and tasks, since little

is gained by setting, for example, pair or group work which is so far beyond the students' language proficiency that the work cannot be done, or the bulk of the work is carried out in the L1 rather than the target language.

In terms of the use of the L1, many late immersion teachers in Canada, as in Hong Kong, have insisted that the L1 has a role to play in explaining abstract terms and expressions and in clarifying confusion, for example over the nature of a task. In Hong Kong insistence on the need to use the L1 for some purposes, including interpersonal communication, was almost unanimous. In Canada, it seemed to us that there was a division in teaching styles between those who could tolerate a great deal of partial understanding, and those who found this vagueness unacceptable. Many teachers show great skill and flair in improvising the means for getting meaning across without using the L1, but research is needed before it can be concluded that total avoidance of the L1 is the only or the optimal approach in late immersion programmes. If the selective use of the L1 can be equally (or even more) effective, it is necessary to establish the parameters of effective L1 use and to make this information available. Not the least of our concern is that immersion theory should acknowledge that this is an issue and cease to assume that teachers who make use of the L1 in late immersion classrooms do so only because they are poorly motivated and/or lack the necessary teaching skills.

For a teacher in-service project conducted by the Modern Language Centre at the Ontario Institute for Studies in Education (Argue *et al.*, 1990), a number of late immersion lessons were videotaped. All lessons were conducted by teachers considered to be excellent in that the students' L2 development was exceptional. However, a frequent criticism from other immersion teachers who viewed the video was that the lessons were too teacher-centred. Teacher-centredness seems to us to some extent unavoidable in a situation where the teacher has the target language and the students do not, but it is also an indication of the need to close the proficiency gap as quickly as possible. If language-oriented late immersion strategies are not employed in the early stages, the pedagogical approach may tend to become more and more teacher-centred and transmission-oriented as teachers find their attempts to make learning more active frustrated by the limitations of the students' productive language skills.

## Evaluating Late Immersion Outcomes

Over the past ten years, in Hong Kong, there has been a considerable amount of research conducted by the Education Department (Education Department, 1989) and independent researchers which shows that the late immersion programme is not meeting the expectations of the community in relation to English proficiency (Johnson & Cheung, 1992) or achieving the standards which could be expected from a successful immersion programme. It is this research which has caused the government to move to the new policy on the medium of education in secondary schools already discussed.

Education systems in Canada do not usually conduct standardised assessments. The system itself therefore has limited means for monitoring achievement across

schools. Evidence about student achievement in late immersion comes from research contracted outside the system and has demonstrated no negative consequences for students' L1; L2 proficiency that is well in advance of students who have followed the core French as a second language curriculum (e.g. Barik & Swain, 1976) though it matches native speakers only in receptive language skills (e.g. Hart & Lapkin, 1989a, 1989b); and achievement in academic subjects equivalent to students studying through their L1 (e.g. Genesee 1976).[9] In general, it seems to have been assumed by educators involved in late immersion that what can be achieved is being achieved, and that the methods being used are (a) based on proven assumptions and are (b) optimal in their outcomes.

Complacency about outcomes, particularly L2 outcomes, may be inappropriate. The students tend to come from middle and upper middle class backgrounds. They control and use at home the standard variety of English, and their homes provide a literate and educationally supportive environment. Further, late immersion students have usually demonstrated good linguistic ability and above average academic motivation and achievement prior to their entry into the programme. Given this background, below average L2 performance compared with native speakers may be less than optimal. It seems at least possible that L2 proficiency, though different in the range of functions performed effectively, could match the average native speakers' productive skills in academic domains.[10]

## Summary

The major principle underlying immersion education is that the target language will be used as the medium of instruction and in this way students receive the quantity of comprehensible input and opportunities for comprehensible output that will ensure optimal language acquisition. Early immersion programmes demonstrate the success of this approach such that by the second year of their programmes most early immersion classes are well able to conduct their interaction through the L2. Neither the teacher nor the student seem to need to use the mother tongue.[11] This is not the case in late immersion classes. Even in Canada, the L1 is used amongst the students, and less frequently, but nevertheless in a consistent pattern of use, between many teachers and students. Commenting on this use of English, teachers observe that many explanations would be time-wasting if not impossible if restricted to the L2; that there are advantages in having a bilingual teacher and that those advantages should not be wasted. The Canadian late immersion classroom is still a long way from the L1 dominated Hong Kong classrooms, but the reasons given for switching to the L1, and the ways in which the L1 is used, are similar. In group work for example, both Hong Kong and Canadian teachers note how difficult it is to maintain the use of the L2 amongst the students. In both cases, the solution often suggested is to require an end product in the L2, while the discussion leading to that outcome is allowed to proceed in the L1. It could be argued that this approach to group work should be used only if language support measures prove inadequate. However, there are no guidelines as yet which could help teachers to determine how far language support measures can and should go, or to clarify the conse-

quences for the level of discussion amongst students if tasks are limited to what can be accomplished in the L2.

We do not wish to claim that the use of the L1 in late immersion is right or wrong. On the one hand, it is clear that the over-use of the L1 must inhibit the development of the L2, since it reduces students' exposure to and need for the L2. On the other hand, the key theoretical assumption that only the L2 can be used, has tended to make teachers either defensive about their use of the L1, or dismissive of the theory. The assumption that the L2 must be used has inhibited investigation to determine when the L1 might be used effectively and when its use would be counter-productive.

It has been assumed, tacitly or explicitly, that late immersion students should follow the same activity-based, student-centred curriculum in the L2 as students studying through the L1; that because the goal is the same, the way to get there must be the same. The reality of the classroom shows that this cannot be the case. Late immersion students cannot speak or interact or write as freely in the L2 as in their L1. The difference may be much reduced by the end of the immersion process but it is massive at the beginning. Acknowledging that this is the case would make it possible to address it effectively: for example, a 'Bridge Programme' might be introduced to accelerate movement towards that threshold level at which the immersion and L1 programmes really can be equivalent. If late immersion students are to be given the opportunities they need to develop their written and spoken language skills, not to mention the attention they need to pay to the development of grammatical control, the content of the programme they follow, the type and level of task set and the pedagogical approach adopted need to be different. Real progress towards determining how different and in what ways different can only be made once the existence of the problem has been recognised and accepted.

## Recommendations for Research

Research has answered the first question asked of immersion programmes: 'Is it possible for students to study through a second language without adversely affecting their L1 development and educational achievement?' That question has been answered affirmatively (Swain & Lapkin, 1982; Genesee, 1987; Rebuffot, 1993). There remain important questions to answer regarding the conditions under which optimal L2 and educational outcomes can be attained. These questions can no longer be addressed in terms of theory alone. It is necessary to examine more closely what effective teachers are doing in the classroom and to understand why. By doing so, it should be possible to improve achievement in late immersion programmes, in particular by closing the L2 proficiency gap at the beginning of such programmes more rapidly and more effectively. Such research will benefit immersion theory by creating a greater awareness of and more sensitivity to the constraints upon the different types of immersion programmes, with the further advantage that this development will help to close the gap between immersion theory and what experienced and effective teachers in late immersion programmes insist is good pedagogical practice.

It would be wrong to assume that solutions found in the Hong Kong context necessarily apply to Canada, or vice versa. In both contexts, however, the following are aspects of the late immersion programmes that need to be investigated.

## Revision of the late immersion curriculum

The nature of the L2 proficiency gap needs to be investigated in terms of:

(a)   The levels of L2 proficiency students have achieved in their core programmes.
(b)   The L2 threshold level required in particular programmes in order to engage effectively with the curriculum.
(c)   In order to close the L2 proficiency gap:
    (i)   core programme syllabuses could be revised to provide potential late immersion students with a more appropriate type of L2 proficiency.
    (ii)  bridge courses could be developed.
(d)   Late immersion curricula should be reviewed to determine:
    (i)   the path by which convergence with the L1 curriculum could be achieved most quickly and effectively.
    (ii)  in the case of partial immersion programmes, whether complete convergence is a realistic objective; and if not to determine alternative and more realistic goals.

## Pedagogical approach

The classroom practices and teaching strategies of experienced and effective late immersion teachers should be investigated to determine:

(a)   How the problem of a massive L2 vocabulary deficit is being overcome.
(b)   How time and opportunities are being created for students to develop speaking and writing skills, and by what means.
(c)   What strategies are being used in maintaining the L2 as the comprehensible medium of instruction.
(d)   What language support strategies assist students to maintain the L2 interaction with the teacher and with each other, and in extended writing.
(e)   What strategies work best in preparing or adapting materials to match the L2 proficiency of students at the beginning of a late immersion programme.
(f)   Whether there is a role for the L1 in late immersion classrooms, and if so, how the L1 is best used in support of the L2 and not as a substitute for it.

## Student learning

Students' study management and language learning strategies need to be investigated to determine:

(a)   The extent to which the amount of time and types of learning strategies required of late immersion students differ from what is required of early immersion and L1 medium students at the same stage in their educational development.

(b)  The learning strategies and study and reference skills used by the more successful late immersion students, and how these differ from those of less successful students.

(c)  The 'repair' and other strategies students use to maintain the L2 and avoid switching to the L1.

(d)  Contexts in which students find it necessary or helpful to switch to the L1, or for the teacher to do so.

## Selection of students

For each late immersion context, levels of student achievement should be assessed against student characteristics on entry to the programme. The aim is to determine whether there are criteria for identifying students who should be advised against entering a late immersion programme. The factors to be examined would include:

(a)  L1 development;
(b)  L2 proficiency;
(c)  academic achievement in L1;
(d)  commitment/motivation.

This list of possible research areas is intended to be suggestive rather than exhaustive. Our overall point is that immersion theory needs to be more fully informed by experience in the administration of late immersion programmes and the expertise of classroom teachers. Now that educational systems like those in Hong Kong and Canada have had experience with the conduct of late immersion programmes, it is time to examine the strategies and experiences of students and teachers alike, and on that basis to review, and if necessary, revise theory or practice or both in order to bring the two more closely into line. The research should identify constraints affecting late immersion outcomes as well as a range of strategies for enhancing the effectiveness of late immersion programmes. In particular it will be important to focus upon the effects of the L2 proficiency gap at the point where students enter late immersion programmes.

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to be carried out, we should not be understood as implying that no research has been or is being carried out in those areas, only that there is a need for such research.

## Notes

1. For the purposes of this paper 'immersion' is defined as any programme in which the medium of instruction in school is different from the language of the home and the out-of-school environment. Late immersion will generally be used to cover full and partial programmes. We believe, however, that the difficulty of bridging the L2 proficiency gap becomes greater as students have less exposure to the language and less opportunity to use it.
2. Cummins (1981) uses the notion of a threshold level primarily in relation to the L1, i.e. the L1 knowledge and in particular literacy skills a student brings to the L2 learning context. Here the term refers to the L2. The L2 threshold level is achieved when there is an approximate match between the L2 proficiency level of the student and the demands made on the student's proficiency by the curriculum. It will be clear from this definition that, as Cummins has noted in relation to the L1, the more demanding the curriculum, the higher the threshold level required to deal with it.
3. Late immersion students working in a cognate language face the problem of 'false friends', words whose forms they recognise and whose meanings they know or think they can guess, but where the familiarity of the term is in fact misleading. For non-cognate languages there are relatively few words of this kind, but students are denied the benefits of 'true friends' where the common origin of different terms is helpful, and the new meaning can be guessed.
4. Core L2 programmes refer to classes where the second language/foreign language is taught as a subject, often in short daily periods.
5. The return of Hong Kong to Chinese sovereignty in 1997 has never been used as an argument for strengthening Chinese medium education. Under the Joint Declaration agreed between the governments of China and Britain, Hong Kong will retain its own education system after 1997 along with the power of decision-making on policy matters such as the medium of instruction. Nevertheless, it clearly makes good political sense to strengthen Chinese medium education. An issue that remains to be resolved is whether 'Chinese' medium will continue to mean Cantonese, as at present, or whether
  • there will be moves to replace Cantonese with Putonghua, the national language and the oral medium elsewhere in China.
6. Chinese and Chinese History will be taught through Chinese and the medium of other subjects such as Art, Physical Education and Religious Studies, will be at the discretion of individual schools.
7. The Hong Kong government has in the past supported policies aimed at creating more of a balance between Chinese and English medium education. None of these initiatives was enforced. It is doubtful, therefore, whether the Education Department will in fact force schools to change from English to Chinese medium if, as seems likely, there is strong resistance from parents.
8. One school principal we interviewed argued strongly for selection. She interviews all parents and encourages students she feels will have problems to stay in L1 medium education. She also monitors students' progress closely and counsels those who are not performing well to leave the programme. She was convinced, like several other principals and teachers to whom we spoke, that the students who benefit most from late immersion programmes are those who enter the programme with a strong academic background and L2 ability, and who understand and accept the additional time, effort and frustration that late immersion involves. Parents are also selective in that many choose to put into immersion programmes children they feel are not adequately challenged by the normal L1 curriculum. In cities like Montreal and Ottawa however,

where a far higher percentage of students are enrolled in late immersion education, the school boards accept those who apply.

9. The results associated with the mastery of content appear to be related to the subject and to the amount of prior core L2 instruction that the immersion students have had (Swain, 1991). Years of prior core L2 instruction allows the L2 proficiency gap to be bridged more rapidly.

10. The question of ultimate goals arises here. Is the goal of late immersion in Canada to be able to produce students who can engage easily in 'normal' conversation with their peers in French, or do academic work in French? Although opinions of teachers, students and parents differ as to the primary goal, it is clear that the former will only be achieved through a much greater pedagogical emphasis on productive skills and time provided in the curriculum for collaborative learning.

11. Although there tends to be little use of the L1 by teachers or students in the primary grades, the use of the L1 in private conversations and some public speech *by students* reemerges. This appears to be a sociolinguistic phenomenon wherein students report that it seems unnatural to talk to their friends in the L2 when all their out-of-class interaction is in the L1. Furthermore, they report that the L2 they do control is 'not colloquial enough' to be used for communication between teenage friends (Tarone & Swain, in preparation).

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