New prospects or imminent danger? –
The impact of English medium
instruction on education in Germany

FRIEDERIKE KLIPPEL – Ludwigs-Maximilians-University Munich, Germany

ABSTRACT
Within the last two decades integrated content and language instruction in English has mushroomed in German schools. While some welcome this development as a path to increased bilingual competence in many technical and scientific fields, others warn of the dangers to the survival of German as a medium of discourse across the whole disciplinary range and of the possible pitfalls for the whole educational system.

In this article I will first outline the rationale of integrated content and language learning, then present a brief overview of current approaches and their results, before trying to tackle some of the practical problems and far-reaching consequences.

Introduction
What is the content of language classes? How much language and what kind of language can be acquired in content subject classes? These two questions summarise the complex relationship between content and a foreign or second language as a medium of instruction and learning. Not only do we have a wide variation in approaches to content and language teaching today, but also over the long history of foreign and second language learning, a number of interesting solutions to the language and content question have emerged. It is not surprising, though, that interest in content-driven approaches to language teaching has followed in the wake of the communicative approach. After all, if communicative language teaching (CLT) has, as its main objective, the equipping of learners with a new language tool, that is, communicative skills in a further language, then one needs to think what this tool may be applied to. Just as apprentice carpenters cannot learn to use a plane or drill without some wood to work on, language learners need something to talk about.

Looking back at the long history of language learning in Europe we can see two distinct roots of the present situation – the ‘monastery tradition’ and the ‘marketplace tradition’ (McArthur 1991). In each tradition, content,
methods, materials and teaching-learning situations were quite different. In the ‘monastery tradition’ the Latin language itself and the great works written in that language formed the core of teaching. In Latin classes the learners acquired the tools to unlock the store of the written tradition and to gain access to their intellectual and spiritual heritage. In the ‘marketplace tradition’ emphasis was placed on learning by doing. Traders’ sons were sent on ‘workplace experience abroad’, as we might call it today, and they were expected to pick up content, that is, the trading conventions, and knowledge about goods and procedures at the same time as becoming conversant in the foreign language. This was a far more functional approach to foreign language acquisition than the type of instruction meted out at the monastery and grammar schools and represented an early type of integrated content and language learning. Both language-teaching traditions have been with us for many centuries. Sometimes one, sometimes the other, was the more prominent and dominant. So, where are we now?

In the second half of the twentieth century the idea of combining content teaching and language learning blossomed in a number of countries. First of all there were countries like the USA and Australia, to which many non-English-speaking people emigrated who had to be taught English as a second language in order to be integrated into the new society more quickly. Another situation has existed in Canada since the mid-sixties when early immersion began in order to help English-speaking children attain a higher proficiency in French than seemed possible merely through language teaching. In Germany French bilingual classes were introduced in some schools in the 1970s under the auspices of the French–German Treaty of Friendship to help foster good French–German relations and prepare pupils for successful intercultural encounters. Although the motivation to extend the language learning possibilities sprang from different aims in each of the three contexts mentioned, the resulting realisations of integrated content and language teaching share a number of features, namely that the main or exclusive focus is on the content rather than on the forms of the foreign or second language and that language learning therefore is largely implicit.

Table 1 shows a few of the common approaches in this area in primary and secondary schools moving from traditional foreign language teaching at the top to (total) immersion at the bottom of the table. As one can see by scanning the vertical columns, some of these approaches tend to be used in second language contexts, others in combination with foreign language learning; in some, language teachers are involved in the teaching, in others subject and language teachers work together. In immersion classes the teacher tends to be a native speaker of the second language used. Although
Table 1: From foreign language instruction to immersion – ways of combining content and language teaching

<table>
<thead>
<tr>
<th>Focus and language</th>
<th>Model/Approach</th>
<th>Type of language learning</th>
<th>Teacher</th>
<th>Time frame and levels</th>
<th>Materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>language and culture mostly FL</td>
<td>foreign language instruction, eg EFL in Germany, French in UK</td>
<td>explicit language learning</td>
<td>language teacher</td>
<td>long-term from primary level upwards</td>
<td>authentic materials, language textbook</td>
</tr>
<tr>
<td>contextualised language L2</td>
<td>topic approach in ESL</td>
<td>explicit language learning and implicit content learning</td>
<td>language teacher (subject as informant)</td>
<td>short-term or long-term primary and/or secondary</td>
<td>ESL topic books written for particular language level, eg teaching English through science topics</td>
</tr>
<tr>
<td>language and content mostly L2/FL</td>
<td>combined projects in EFL/ESL and other subjects</td>
<td>content focus, but adaptation to language level; explicit and implicit language learning, explicit content learning</td>
<td>content and language teachers in collaboration</td>
<td>short-term primary and/or secondary</td>
<td>topic-related materials chosen from a variety of contexts and sources, perhaps with language glossary</td>
</tr>
<tr>
<td>content and language FL and L1</td>
<td>CLIL eg Germany: Bilingualer Sachfachunterricht; Austria: Englisch als Arbeitssprache</td>
<td>content taught according to subject syllabus, mostly implicit language learning (in combination with language instruction)</td>
<td>content teacher with good FL/L2 competence, but maybe without language teaching qualification</td>
<td>long-term mostly secondary</td>
<td>specially written or adapted materials to fit content syllabus; maybe textbooks from target language country</td>
</tr>
<tr>
<td>content and language L2</td>
<td>immersion</td>
<td>incidental language learning (mostly L2)</td>
<td>content teacher as native speaker of language of instruction</td>
<td>long-term from primary upwards</td>
<td>subject textbooks in second/foreign language</td>
</tr>
</tbody>
</table>

FL = foreign language, L2 = second language, ESL = English as a second language
(information drawn from: H Kaestner 1993; C Davison and A Williams 2001; M B Wesche 2002)
in most cases content and language integrated learning (CLIL) is a long-term effort, the use of topic-based projects in the foreign or second language within subject teaching can be one way of reaping some short-term benefits. Both primary and secondary pupils may enjoy CLIL, though in foreign language contexts we are more likely to find this approach at secondary schools, simply because there are not enough primary teachers with the necessary qualifications in a foreign language. The same diversity which we can see in the approaches and organisational features is also obvious in the range of materials used. Again, the degree of explicitness with regard to language learning defines what kinds of materials are considered appropriate. It determines whether these are organised along linguistic or subject lines, and whether and how much their language has been adapted to a certain level of linguistic proficiency.

It is now time to look more closely at the specific situation in Germany. Should German schools welcome integrated content and language teaching as a necessary and propitious innovation for English language education? Quite a number of academics, teachers and even school administrators think so (cf most recently Bach and Niemeier 2000; Wolff 2002). Therefore, I shall first present the promising features of English medium instruction.

**New prospects for success**

It is an old dream of teachers and learners alike to take all toil and effort out of learning. There are a number of realisations of this dream. In Germany, we have the metaphor of the Nuremberg Funnel (the Nuernberger Trichter), which teachers use to pour knowledge directly into their learners’ heads. In the long history of education the metaphor of learners being empty vessels waiting to be filled with learning by teachers recurs at intervals. But the idea of effortless learning is not restricted to a view of pupils as seemingly passive recipients. Another recurring concept of learning hinges on the implicit and pleasurable acquisition of knowledge and skills in play and games. While being actively involved in such an activity, the participants are seen as picking up and practising important skills and bits of knowledge without becoming aware of their learning. Some people see CLIL in this vein, as the ideal way of acquiring competence in a second or foreign language without actually attending language classes. They also see it as being even more successful for language acquisition than foreign language classes (for example, Timm 2002). CLIL has secured something of a reputation for being a panacea to a lot of the problems encountered in ‘normal’ second and foreign language teaching.

It is therefore necessary to look at these claims, and I propose to deal with them in relation to the learning situation itself, the yield of CLIL classes, the learner, and the larger educational framework.
THE LEARNING SITUATION

With the communicative approach, practical foreign language competence emerged as the overall goal of second and foreign language instruction worldwide about 30 years ago. In spite of enormous efforts to develop a varied and highly differentiated communicative methodology, a lot of language classes still fall short of that aim. It is not surprising therefore that language educators are casting around for a better way of fostering communicative goals. The artificiality of simulated interactions in the foreign language class has often been lamented. There is a distinct gap between language use in the classroom for purposes of acquiring that language and the need to prepare learners to manage situations outside a school setting in the foreign language at a later stage. When one makes the foreign language the normal language of instruction in social studies or natural sciences, any need to invent information gap activities evaporates, because they crop up quite naturally in the course of teaching the subject matter and have to be resolved in the second language.

The content classroom possesses a second advantage over the foreign or second language class: it is rich in contextualised input. Those who believe that pupils acquire language most effectively by receiving a huge amount of varied and stimulating input see CLIL as the obvious setting for successful language acquisition. Input in the content classroom is not only embedded in a clear situational and topical context, it is also authentic insofar as it is not specially constructed for language learning purposes.

The content class presents learners with language in use in several interactional and academic situations, which are the normal run of things in a particular subject. Talking about topics in different fields, such as the social sciences or geography, and dealing with a diverse set of tasks and projects, also extends the range of interaction and communication as well as the contact time with the foreign language. In short, learners receive input that is more extensive, more varied, more authentic and broader as the basis for acquiring the foreign language through equally increased opportunities for comprehension and communication. Since the teacher focuses on the subject matter, that is, the content of the learners’ output rather than its linguistic form, there is far less anxiety and hesitation on the part of the learners.

YIELD

Empirical studies show that CLIL provides us with a rich yield in language. In Northern Germany, Henning Wode and his research team at Kiel University compared pupils from CLIL classes with those receiving only the usual English language instruction as to their skill in dealing with a communicative problem-solving situation, the activity ‘Desperate decision’ (Klippel
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1984: 104). His results indicate that those pupils who had not participated in CLIL classes possessed a narrower lexicon, knew fewer synonyms and used less complex sentence structures and cohesion (cf. Burmeister 1998). The CLIL pupils were clearly better prepared to use the foreign language effectively in communicative interaction. So far, these empirical studies have only looked at a relatively small sample of all the pupils attending English medium classes in a range of subjects, however, and it may be premature to generalise.

It also seems clear that CLIL helps learners practise a different and wider range of study skills and learning strategies. Depending on the subject taught in the second or foreign language, reading strategies in history (Lamsfuss-Schenk 2000) or social sciences, note-taking skills in the experimental natural sciences, descriptive skills in science (Maxis-Gehrke and Bonnet 2001) or visual arts (Rymarczyk 2003), are practised to a far greater extent than in the ordinary foreign language classroom. Thus CLIL extends the range of ‘soft skills’ in the foreign language.

Looking at the yield of content and language integrated classes a further aspect ought to be mentioned. Whereas the foreign language class deals with ideas and concepts firmly rooted in our familiar everyday world, the other subjects need a different kind of conceptualisation, namely one based on the underlying scientific disciplines. For example, when we talk about ‘rain’ in the English language class, we describe and comment according to our own experience and feelings. We may say that we like or dislike rain, that we need to take an umbrella, and that we think it rains a lot in a particular place. For German learners, therefore, talking about ‘rain’ in English in the English language classroom is not really substantially different from chatting about Regen in their first language outside school. However, when pupils talk about ‘rain’ as a type of precipitation in the context of the topic ‘weather’ in their geography class, they may start from their experience and common understanding of the term, but they need to reach a different kind of conceptualisation in the end (Hallet 2002). A subject like geography aims at concept-building on a solid scientific foundation. ‘Rain’ is not just moisture dripping from above, it is part of the hydrological cycle, which has to be understood. Learning about ‘rain’ in geography therefore is a cognitively more demanding task leading to a deeper processing of the central terms than learning the meaning of new words in the foreign language class. Therefore, acquiring subject-specific terminology is not just replacing colloquial vocabulary by scientific terms. It is much more than that. Learners construct the concepts which are taught in certain scientific domains on the basis of their mental representations. The resulting concepts have to be internally and externally valid. If concept building takes place in a second or foreign...
language, then the learners reach some kind of deeper understanding of the world via another language, which has to be tied back both to their mother-tongue terms as well as to the larger scientific framework. Although the fact that concept-building and deep processing are central to CLIL may be interpreted as a very positive side effect, the concrete ramifications nevertheless still need to be looked into far more thoroughly.

To conclude, CLIL yields an increased awareness of language and culture. However, the extent to which either awareness will be fostered in the content classroom depends largely on the subject taught, the materials used, and the teacher’s skill in focusing on these issues.

**THE LEARNER**

Small-scale empirical studies as well as anecdotal evidence suggest that learners’ motivation receives a substantial boost in subjects taught in a second or foreign language. As far as the situation in Germany is concerned, both the parents’ and the pupils’ support of CLIL seems to be largely based on instrumental motivation, at least in the case of English as the language of instruction. English undoubtedly is the dominant world language of our time and everyone clearly sees the need to be proficient in English. Therefore, the demand for content teaching in English is high. Bilingual streams in secondary schools cannot cater for all the pupils who want to enter.

A second positive aspect of CLIL seems to be that some learners actually achieve better results in certain subjects when these are taught in a foreign language. Some CLIL teachers report that some girls do better in science taught in English than in science taught in German. Rather than being a panacea, subject teaching in a different language may simply favour those who have an affinity for language and who enjoy learning in a less error-focused environment.

**THE EDUCATIONAL FRAMEWORK**

So far, CLIL has not yet reached the status of a universally adopted approach. Wolff states that some 1800 schools in Europe, including approximately 500 in Germany, offer CLIL (Wolff 2002). That means that educational authorities may sit on the fence as far as official curricula, teaching materials and teacher training are concerned. Still, there are a number of voices pointing to those general qualities of CLIL, which render the approach attractive. First, there is the possibility of getting two for the price of one. In the context of budget cuts and saving programs in state education, any idea which allows two goals to be reached without extra cost, is indeed a very tempting one simply for its efficiency.
Second, the goal of European education, namely that everyone learns two European languages at school to a high level of proficiency, cannot be reached by language classes alone. If we want to foster multilingual competence, we need to give languages more space in the curriculum. But school timetables cannot simply be extended. If we want more language instruction, other subjects would have to be scaled down. In this context, CLIL indeed acquires the aura of an elegant solution.

**Imminent dangers?**

So far, I have discussed some of the arguments that are used to propagate CLIL as an ideal way to achieve a Europe of multilingual citizens through motivating subject classes without the need for big investments into curriculum reform. I would now like to flip the coin over and look at the reverse side. Like many movements in our field, CLIL attracts enthusiastic support on the one side and substantial criticism on the other. The critics have been less vociferous so far, but a number of points have been raised. I shall deal with these under the same headings as before.

**THE LEARNING SITUATION**

CLIL postulates that learning happens both in the area of language and in the subject matter itself. Since most of the research into this approach has been undertaken by language specialists, we do not yet know well enough how subject learning and language learning interact in detail in the various content disciplines, although some of the results of Canadian immersion seem to indicate that there is no loss of subject matter learning gains (Cummins 2001). As far as language learning is concerned, it is obvious that the foreign or second language is encountered in a different way from that prevalent in the language class. The focus lies on the subject matter, and learners deal with that in whatever language it is presented. Therefore, the foreign language input in terms of structures and vocabulary is not arranged systematically from a linguistic point of view, nor does it follow any linguistic progression. Nor are there explicit language-focused modules to explain or practise language. This is welcomed by some as a realistic and authentic language-learning situation, whereas others feel doubtful about the outcome of such a haphazard way of encountering language. Foreign language teachers who believe in the need for a systematic and progressive approach tend to be critical of CLIL.

It is nearly impossible to discuss the learning situation within CLIL in general, since the subjects are grounded in different foundation disciplines and adhere to different cultures of teaching, both within one country and
certainly across the language divide. History in Germany, for instance, relies heavily on reading and analysing extracts from authentic historical sources. This may make its teaching a lot easier if the topic is, for example, ‘The British Empire’ or ‘The French Revolution’ – when English or French texts can be integrated quite naturally as historical sources to be studied. Talking about these sources is not very different from discussing texts in an intermediate or advanced foreign language class. Learners need to be able to scan texts for information, to sum up the main points and scrutinise sources for bias. And yet, history books in each country provide learners with a particular view of history. History is seen as the most important school subject for the formation of national identity. Therefore, it is not trivial to discuss which language and which perspective is to be used in a class dealing with national, European, or indeed world history.

In chemistry, just to take another example, both practical experiments and references to the underlying concepts and natural processes are part of the lessons. More than in a foreign language class the learners in a chemistry class need to put their observations into words, take notes and write them up. The natural science subjects do not provide much scope to practise emotive language or argumentative skills. Learners therefore will not acquire certain types of communication.

In teaching different subjects in another language we also have to deal with the question of terminology. Not only the natural sciences but also social science subjects, even sports and visual arts, contain a great number of technical terms which need to be understood and used, preferably both in the learners’ first and in the second or foreign language. Of course, it takes more time to teach terminology in two languages. But this is just an organisational matter. While the natural sciences and mathematics rely on an internationally recognised set of terms and formulae, even though the methods of teaching these subjects vary from country to country, some social science terms are difficult, if not impossible to translate. Further, the learning situation may become absurd if a German social studies class talks about the German parliamentary system or a history class discusses the Bismarck government in French or English. As soon as we leave the abstract level of discussing the pros and cons of CLIL and consider particular subjects and topics, we are faced by substantial practical and fundamental issues.

Very obvious problems lie in the necessary fit of topic and language, in the provision of suitable teaching materials and the subject teacher’s language competence. If the teacher is not fluent enough, he or she may rely more on textbooks and printed materials as well as dominate the lesson more than in a class conducted in the pupils’ native language. Thus CLIL may result in
less group and project work and fewer chances for the learners to have their say, meaning less negotiation of meaning, which we know is an important way of learning how to interact and contribute.

**YIELD**

When we look at the yield of CLIL we have to investigate if there is an added gain at the end of a teaching period compared to that same period of instruction in the learners’ first language. So far many of the methodologists in the content disciplines are very sceptical, at least in Germany (Richter 2002; Wildhage 2002). In the grammar schools in particular, a lot of subject teachers are convinced that their subject would lose in depth and breadth if it was taught in another language, unless it was given more room in the timetable. In some of the German states the subject taught in a foreign language receives an extra period per week and quite often is prepared for with two years of more extensive and intensive language teaching. In these schools the teachers actually practising CLIL are mostly those who have studied both the subject and the foreign language and are therefore qualified to teach both.

However, one needs to be realistic about the yield of CLIL: for a start the school setting determines the types of interaction and the kinds of communication possible in content classrooms with its parameters of instructional discourse, its communicative and social roles for teachers and learners. The teaching situation and classroom discourse are quite distinct from everyday communicative settings (Wesche 2002: 361). It would therefore be naive to expect that the acquisition of the full range of communicative skills will simply happen in a foreign language content classroom just because the main focus is not on the language itself (cf Swain 2001). The Canadian and Finnish experiments (Vollmer 1992; Rymarczyk 2003: 29ff) show that immersion teaching leads to oral fluency, but does not support the development of writing skills and accuracy in the second or foreign language to the same extent, in short what Cummins (2000) calls CALP (cognitive academic language proficiency).

**THE LEARNER**

Not every learner is highly motivated by being taught a range of subjects in another language. The Canadian drop-out rate is high, and in German schools pupils are not always happy about having to contend with a difficult subject like physics or a text-intensive subject like history in a language they are still not very confident in. For some, the foreign language is an extra burden they are unwilling to carry, especially if they lose out in terms of
achievement and in their end-of-year marks. Just as education administrators interpret CLIL as two for the price of one, some learners see it exactly the other way round – working hard in two areas, that is, subject and language, for just one mark.

The question of motivation is a fickle one. As long as CLIL is the exception rather than the rule, its sheer difference tends to boost learner motivation and to attract the more confident and capable learners. Should CLIL become a generally accepted approach and no longer be cast in the glow of being something special, then motivation will be likely to drop.

THE EDUCATIONAL FRAMEWORK

The consequences of introducing CLIL on a grander scale could be quite dramatic. Let’s just suppose that all German secondary schools were to offer at least two subjects in English from the beginning of secondary schooling to the end. This would need massive teacher training, materials development for all levels, and a new look at assessment for a start. With enough funds and time, this should not be a problem.

But what would become of German as a means of communication in the subject areas now taught in English? Would young Germans only be able to talk about issues taken from these subjects in English? Could this be the beginning of a partial language death? In Germany we are aware of the fact that English is the world’s dominant language in many fields. If one wants to take part in the global discussion of scientific, technical, or medical issues for example, one has to be able to do so in English. There no longer exists a journal in physics or biology published in German. So in order to prepare learners for real language use at a later stage, for example in the workplace, in training or at university, one needs to teach content from the natural sciences in English. Therefore there would not be many schools willing to teach science subjects in a language considered less useful internationally, like Italian or Polish.

As far as certain subjects are concerned, the much lauded aim of European plurilingualism is simply not achievable by CLIL, mainly because the needs of pupils and the interests of most parents would not be met by taking any other European language but English to teach a content subject (Rymarczyk 2003: 276f). In fact, CLIL would be an excellent way to give native speakers of English a taste of other languages.

The dominance of English is just one drawback; the other is the threat to traditional foreign language classes. In many European countries (except the United Kingdom) instruction in foreign languages forms part of the core curriculum for many years. If one were to establish CLIL widely, the
role, purpose and importance of foreign language teaching would need to change. Foreign language instruction could become merely the insignificant foundation course, before ‘real’ language acquisition begins in the content disciplines, or it could be relegated to the sidelines as a kind of repair service for all those tedious and unglamorous jobs which content teaching does not have time for. CLIL could pose a serious threat to the autonomy of foreign language teaching, a threat we as language teachers and teacher trainers should not take lightly.

**Perspectives**

Where does this leave us? On the one hand we see the fervent supporters of CLIL who argue that their approach would be a panacea for the shortcomings of the communicative language teaching concept. Learners would acquire fluency in a foreign language more effectively and more deeply, even if not more accurately than in foreign language classes, and be able to function in that language. CLIL could provide an enormous boost to the learning of more languages, and Europe would be truly multilingual when everyone knows at least two other languages in addition to their own. On the other hand there are those who are sceptical about the language learning part of content teaching, who see and maybe exaggerate the practical problems and educational consequences of this approach, and who are concerned about the aim of plurilingualism being swept away in a tide of ‘English only’.

It is trivial to say that we need to learn more about CLIL before we can decide whether to adopt the approach or not, because we shall never know enough about teaching and learning to reach permanent and perfect solutions. Yet, it is true that so much of learning in school is embedded in language, and that different subjects use language in different ways and expect learners to be able to do different things with language. But classroom and teacher language has not been high on the research agenda in recent years (Kasper 2000). We might do well to go back to the seminal research undertaken by Jill Richards in the 1970s (Richards 1978), who tried to find out by asking teachers and observing lessons in different subjects what the subject-specific language demands are. Breaking classroom discourse and language-based tasks down into levels and components might help us understand which subjects are more suitable to be taught in a foreign language than others. A recent study undertaken in an English medium visual arts classroom in Germany clearly shows which pragmatic functions are dominant in talking about art work (Rymarczyk 2003). Research in this direction will also help in teacher training, when crucial learning situations and critical incidents can be pinpointed for content learning and language learning alike.
Second language acquisition research in recent years has shown how important it is for learners to notice foreign language elements in order to take them in and integrate them into their knowledge base (Schmidt 1990; van Lier 1996). It seems counterproductive in this respect to rely on incidental language learning in content classrooms, where neither teachers nor learners are aware of what is happening language-wise. Only teachers who understand language acquisition processes know when to provide the right kind of scaffolding which will help the learner across a comprehension or production gap. Most content teachers will probably not be familiar with the fundamentals of language learning and teaching; consequently, there is a great need for training and in-service preparation for CLIL, not just for laying the foundations in understanding language acquisition but also for getting to know effective methods and procedures which foster both content and language learning (Swain 2001).

Language is perhaps the most important element in school education. We as language teachers, researchers and teacher trainers have to cooperate with the content specialists as well as with each other in order to create concepts and integrated modules of content and language learning. The European aim of individual multilingualism is a vital one. CLIL not only gives us a chance for interdisciplinary cooperation across the arts and science divide, it also provides us with a unique field for language acquisition research and the study of classroom learning. In addition, discussing CLIL might make language issues in general more salient in public discourse. It is an exciting field – and we ought to till it wisely.

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