# Language Across the Curriculum

Helmut Johannes VOLLMER

*PRELIMINARY STUDY*
*Languages of Education*

# Language Across the Curriculum

Helmut Johannes VOLLMER, *Universität Osnabrück*

Intergovernmental Conference
*Languages of Schooling: towards a Framework for Europe*

Strasbourg 16-18 October 2006

## Contents

### Abstract

Language Across the Curriculum (LAC) as a concept acknowledges the fact that language education does *not only* take place in specific subjects explicitly defined and reserved for it, such as *mother tongue education*, *foreign language education*, *second language education* etc.). Language learning and education also take place *in each and every subject* in school, in each and every academic/mental activity, across the whole curriculum – whether we are conscious of it or not. This reflects the latest research findings on *Reading Comprehension* (which is required extensively in each non-linguistic subject-matter in learning and teaching) and with insights that LS/L1 as a subject in school cannot be solely responsible for language education; the development of language skills and competences has to be integrated also into subject-specific teaching.

Consequently, we need to develop a comprehensive understanding of language education and language learning in school that takes place *across all subjects* – in addition to the central role of language as a subject itself and all that it involves (e.g. shaping the intellectual and social personality). This linguistic dimension in each and every learning activity is sometimes hidden and partly implicit and therefore often underestimated in its importance. However, LAC as a policy has to be understood as a necessary and systematic extension of the standard variety of the language of school education (LE) into subject specific ways of thinking and communicating or, to phrase differently, into disciplinary modes of language use. These follow in part different thematic patterns and rhetorical structures to the ordinary language of school (and certainly to everyday language use). Acquiring conceptual literacy and discourse competence for subject-specific use and thus acquiring new varieties of language use within one and the same language is not to be seen as a luxury, but rather as a *preliminary and fundamental form of plurilingualism*.

A *second form of plurilingualism* develops when a learner acquires other languages, extends his/her repertoire with new languages *through foreign language education* adding to the new varieties of the language of school education and home language if different. Both types of plurilingualism (the first discourse-based or *internal* one as well as the second *external* one, based on adding new language repertoires) are indispensable for learners to become intra-culturally and inter-culturally sensitive, knowledgeable and skilled and thus to develop towards democratic citizenship and participation within Europe. A special case in point concerns the integration of content and second language learning within the framework of CLIL (or multilingual education) leading ideally to support for both types of plurilingualism.

## 1. Goals in connection with Language Across the Curriculum

In order to understand the importance of language in school education, for all subjects and across the whole curriculum, we have to identify and summarise the basic tenets on which LAC rests. These are (cf. Corson 1990, 74):

    i. Language *develops* mainly through its purposeful use (domains to be broadened)

    ii. Learning (often) *involves* talking, writing, shaping and moving (normally in reaction
        to perceptions)

    iii. Learning often *occurs* through speaking or writing as much as through shaping and moving

    iv. Language use *contributes* to /is a pre-requisite for cognitive development

    v. Language is the *medium* for reflecting on learning, for improving it, for becoming (more or less) autonomous as learners.

Therefore the goals of LAC are – in simple terms - to support language development in each and every child, in all domains of language use, in each learning activity in school, and to give children feedback about their progress (through appropriate assessment and evaluation). LAC is no longer narrowly seen as the exclusive domain of L1/LS education nor is it confined solely to the conventional four modes of language: Reading, Writing, Listening and Speaking; all non-verbal means of representation and expression are rightly seen as part of the overall semiotic systems that we have at hand and that we use when communicating. The whole scope of semiotics comes into focus including images or graphs, movements and, generally speaking, all visual forms of representation and expression (cf. Corson 1990: 72). Thus, we can distinguish eight modes of human activities involving language, namely:

- Listening: comprehending oral input/intake
- Speaking: constructing meaningful utterances
- Reading: understanding written texts
- Writing: producing written texts/coherent discourse
- Viewing: attending to visual signs/information
- Shaping: using visual means of expression
- Watching: attending to physical movements
- Moving: using the whole body, the whole person for self-expression.

The concept of LAC also claims that language and learning as well as language and thinking are deeply linked. Therefore, wishing to acknowledge and further develop childrens' existing mental and linguistic capacities, LAC focuses on active, constructive, potentially autonomous learning (more than on teaching):

> "Language plays a central role in learning. No matter what the subject area, students assimilate new concepts largely through language, that is when they listen to and talk, read and write about what they are learning and relate this to what they already know. Through speaking and writing, language is linked to the thinking process and is a manifestation of the thinking that is taking place. Thus, by explaining and expressing personal interpretations of new learnings in the various subject fields, students clarify and increase both their knowledge of the concepts in those fields and their understanding of the ways in which language is used in each." (Ontario Ministry of Education, 1984; quoted in Corson 1990, 75)

Consequently, all teachers are encouraged to participate in developing language skills and competences within their fields of responsibility and thus contribute to a school *learning* policy as a whole. In summary one can state the following beliefs:

- Language is more than communication skills

- Language is also linked to the thinking process

- Language is a tool for conceptualising, for thinking, for networking

- Language supports mental activity and cognitive precision

- Language for academic purposes helps to express thoughts more clearly (this is especially true for writing)

- Language helps to structure discourse and practise discourse functions

- The overall goal, therefore, is not just the development of *Cognitive/Academic Language Proficiency (CALP, Cummins 1979),* but of „Conceptual Literacy" and of "Discourse Competence".

In the last decades, these insights have become firmly established in cognitive linguistics and in constructivist pedagogy (e.g. Bereiter/Scardamalia 1987, 1993). The concept suggests (even demands) that the basic functions of language are acquired in LS/L1 education and should then be *extended* and *widened* through continued and conscious language use as well as language reflection in each and every subject, as much as they should be explicitly linked to competence goals defined in foreign and second language learning. The specific role of bilingual education as a bridge between subject-specific learning and elaborated language learning approaches in L2/L3 is a case in point here.

To summarise the main aims underlying LAC, it is not only a question of the extension of language competences as such (in its different dimensions and contexts), but rather the development of "conceptual literacy" and "discourse competence". The first of these terms can be defined as the ability to think clearly with the help of language, whereas the second means to apply linguistic abilities acquired for the purpose of communicating clearly about relevant topics and thematic structures. In other words, language is as much a tool for conceptualizing content and knowledge as it is for expressing oneself accordingly in a rational, "academic" style, based on subject-specific conventions and registers (Coetzee-Lachman 2006). The integration of the two related concepts can be labelled *academic literacy.* This is by no means to be contrasted with "vocational literacy", as is sometimes suggested. In this writer's view, there is no difference in the basic language competences involved, only a difference in topic, context, level of acquisition and level of application of the same

competence. To give an example: If a student (or trainee) is asked to write a daily or weekly report about his or her vocational training at the workbench and what he learned (e.g. filing), the planning and structuring of such a report as much as its linguistic realisation in detail is similar to the creation of other types of texts on other more academic topics. The basic preparation for such a task and the language education involved in performing it, however, require subject-specific ways of perception, observation, conceptualisation and communication (here: writing), all of which are based on the same language competences that form and add up to different types of functional literacy. In documenting and talking or writing about vocational learning experiences and insights, the language chosen has to be appropriate and communicatively efficient. Therefore, this is *not different in principle* from the language use appropriate for reporting about academic topics and for engaging in academic discourse.

In conclusion, LAC in the broadest sense aims at enabling students to manage the diverse discourse functions involved in academic and/or vocational work and thus at developing academic/vocational language proficiency for satisfactory participation in the relevant discourses. These discourse functions can largely be divided into a number of mental-linguistic macrostructures, namely: describing/reporting, naming/defining, explaining, exemplifying, arguing/supporting, assessing, evaluating. They reflect fundamental forms of language use in a "pre-scientific" or scientific manner (cf. Zydatiß, 2005 and the critical review by Coetzee, 2006).

**2.** Beneficial relationship between LS/L1 and LAC

Subject teachers often expect certain competences to be already acquired through LS/L1 teaching and therefore readily available in subject-specific learning contexts, without additional training or reflection about their meaning and use in these new contexts. In a way, these expectations are justified, but they have to be spelled out explicitly, by way of "contract" between teachers of language as a subject and teachers of non-linguistic subjects. In addition, the subject teachers themselves have to list clearly what they want to reach with their students in terms of minimal language goals in connection with their subject-specific goals. This requires a cross-curricular matrix of educational goals in general and of linguistic competences in particular to which different subjects and learning experiences might add and contribute in different ways. It also has to be agreed upon institutionally, (or even in the larger framework of society as a whole), when these competences should be reached and at what level. For example, some of the competences to be developed through LS/L1 and to be delivered by a certain point in time for further use and extension in new (subject-specific) contexts include the following: basic knowledge in the formation of simple, but also of complex sentences – with different types of super- and subordination of ideas (clauses, sentences or parts thereof) and with different possibilities of organising and linking those ideas /or propositions cognitively and linguistically in appropriate ways. These competencies also comprise correct spelling and orthography in general as much as mastering the rules of phonology and pronunciation. In more abstract terms, the expected competencies can be grouped into the classical, yet extended dimensions /or domains of language education, namely reading comprehension, listening comprehension, speaking competence and writing competence plus their non-verbal counterparts (see above under 1). With regard to reading competence, which has been the focus of investigation and international debate ever since the first PISA study, the type of information to be understood or at least in part to be inferred from different source materials should comprise a large variety of "continuous" as well as "discontinuous" texts (the latter ones comprising graphs, tables, diagrams, pictures,

cartoons and such like) and their interaction with one another (e.g. text-picture comprehension, cf. Kress 2003, Schnotz 2005).

In recent years, the definition of basic competences has evolved accordingly, to include *Media Competence* or, more precisely, *Mediation Competence.* This dimension comprises, for example, not only the ability to transform information from one source into another (e.g. from a statistical table into a written text), but also the "translation" of content or "meaning constructed" between members of different groups (age groups, discourse communities, representatives of different language conventions and styles or groups with differing levels of expertise) – even including between speakers of different languages. Mediation competence, therefore, is at the heart of communicative competence, since it involves the ability to adapt one's message according to audience, purpose, language mode, text type (genre) and other circumstantial variables.

The actual outcomes of language education in a specific class, school or setting need to be studied empirically. In general, these outcomes are also partly dependent on the content with which they are learned and stored. One criticism is that this content is often too general and thus too remote from subject-specific topics and questions. In that sense, the transferability of the acquired language skills and competences seems to be more difficult for the learners, if it happens at all in a more or less conscious way. On the other hand, general language education – before it becomes more specific within the different subjects – has to serve all of the domains and disciplines represented in school and outside. Unfortunately, formal language education very often stops at the end of primary education or at the lower secondary level. It is considered to have been completed to a certain extent by that time, so that normally there is no substantial follow-up during the advanced stages of education (cf. Rosebrock 2006). This is a major problem, indeed a mistake, at least from an LAC point of view. Conceptual literacy and subject-specific discourse competence do not develop on their own, as my own research (Vollmer 2006a,c) clearly shows. They need continuous attention, systematic treatment and goal-oriented practice, without which the language, and also the content level of competence, remains simple, underdeveloped or even deteriorates over time.

**3.** Components of conceptual and discourse competence in subject-specific contexts

If we understand the extension of language abilities into subject-specific thinking and communication as something that each and every learner must encounter and master as an indispensable part of his education ("Bildung")[1], then we can identify more closely what these cognitive and communicative abilities are made up of in different school subjects and across the whole curriculum. They consist of at least three compentence areas that can be distinguished from one another and that the learner needs to develop:

    i.    The competences required for comprehending, identifying, selecting and integrating information in connection with certain texts, tasks and materials.

---

[1] *Bildung* (in German) means to develop and bring out the full potential of a human being, based on his/her nature, but stimulated and structured by education (nurture). This dynamic concept encompasses the product or relative state reached by a human being as well as the process of becoming educated/becoming one's own self. During this process the mental, cultural and practical capacities as much as the personal and social competencies are being developed and continuously widened in a holistic way.

ii.  The competences for naming these perceptions and new elements of information, for expressing what was or was not understood as well as for responding to them in appropriate ways, connecting them with already existing (stored and re-activated) knowledge.

iii.  The competences needed for negotiating perceptions and insights as much as positions and arguments in interaction with others, inside and outside the classroom. This area of competence implies specific ways of tailoring one's language and communication towards certain addressees and certain purposes or goals to be reached.

It may seem very demanding, if not idealistic, that each and every young European should be able to use language in such an explicit and differentiated way. There are many obstacles to be overcome and challenges to be addressed (some of which have been mentioned elsewhere, see Vollmer 2006b). Nevertheless, in designing a new framework of reference for language education in Europe, we have to identify the *minimal goals and components* which can and should be reached by everyone and which *lead to plurilingualism*: a repertoire of languages and language varieties with competences of different kinds and levels. In this perspective, any new Council of Europe framework needs to address the concept of Language Across the Curriculum. The close mental and structural relationship between LS/L1 education, foreign or second language education and LAC from a learning point of view (and hopefully also from a teaching point of view) will become more obvious as we try to spell them out and make explicit use of them, since they are so intimately linked to one another, e.g. via comprehensive competence models and careful goal or standard definition (cf. Vollmer/Beacco 2006).

We need not only to define our realistic competence demands and expectations, but also to evaluate the actual achievements within the different areas of language competence. Ultimately, we need to attempt to describe an integrated language learning curriculum, at the centre of which there are specific competences, tasks and expected outcomes allotted to specific subjects, to specific levels of teaching or to the school performance as a whole. All of these will have to be supportive and understandable for the learners, as well as evaluative in their function and valid. Several European countries have already started moving into this direction. This is a long process, however, which requires consideration of many factors, dealing with many influential variables and obstacles (e.g. lack of expertise, attitudes of subject teachers, no central agent or responsibility for cross-curricular language education in school, deficiencies in teacher education etc.).

**4.**  Perspectives: LAC as initiation and participation

LAC as part of such a comprehensive language policy for schools can be considered as a form of initiation into new discourse behaviours and discourse communities by developing and using new language varieties, by extending one's own competences, identities and personality. This view is not idealistic, but at the basis of developing plurilingualism in one of its forms. In the final analysis, introducing LAC requires a radical change in the attitudes and mentality of the teachers involved, those already in service as much as those in teacher education. Every teacher has to be confronted with the issues of academic language use, both oral and written, and trained so as to be prepared for teaching it within the subject matter courses later at school. Every student teacher needs to learn how to define minimal goals or what to do with the goals he/she encounters within the school, the province or the national curriculum: Which of those does he/she want to include, which of them can he/she afford not to

include within the subject-matter teaching? Which of them are needed by the learners for future development and participation in society? All of these decisions require a high level of information and of professional competence in theory, in curricular matters and in teaching methodology. However, nobody seems to have responsibility at the moment, neither at school nor in university, for this type of qualification in subject-specific language competence, for conceptualising language learning in this holistic way and for coordinating and supervising the development of a whole school language education policy. These are some of the issues which have to be considered and solved urgently on a local, national and European level.

References

Bereiter, Carl & Scardamalia, Marlene (1987). *The psychology of written composition*. Hillsdale, NJ: Erlbaum.

Bereiter, Carl & Scardamalia, Marlene (1993). *Surpassing ourselves: An inquiry into the nature and implications of expertise*. Chicago: Open Court Press.

Coetzee-Lachmann, Debbie (2006): "Eine Definition fachspezifischer Diskurskompetenz". In: Johannes-Peter Timm (ed.), *Fremdsprachenlernen und Fremdsprachenforschung: Kompetenzen, Standards, Lernformen, Evaluation. Festschrift für Helmut Johannes Vollmer*. Tübingen: Narr, 249-265.

Coetzee, Debbie (2006). "Methodological considerations in assessing task-based subject-specific writing: The case of bilingually trained geography learners of grade 10 in Germany". In: Vollmer, Helmut Johannes (Hrsg.). *Empirische Zugänge in der Fremdsprachenforschung. Herausforderungen und Perspektiven*. Frankfurt am Main: Lang, 65-88 (to appear).

Corson, David (1990). "Language across the curriculum (LAC)". In: Corson, David (ed.), *Language Policy Across the Curriculum*. Clevedon: Multilingual Matters, 72-140.

Cummins, James (1979). "Linguistic interdependence and the educational development of bilingual children." *Review of Educational Research*, 49, 222-251.

Kress, Gunther R. (2003). *Literacy in the new media age*. London: Routledge.

Rosebrock, Cornelia (2006). "Socio-economic Background and Reading. Reading attitudes, fluency and literary education in the German Hauptschule". Preliminary study, Council of Europe, Language Policy Division. Strasbourg. www.coe.int/lang

Schnotz, Wolfgang (2005). "An Integrated Model of Text and Picture Comprehension". In: Mayer, Richard E. (ed.), *The Cambridge Handbook of Multimedia Learning*. Cambridge: Cambridge University Press, 49-70.

Vollmer, Helmut J. (2006a). „Fachlernen und Sprachlichkeit: Aufgabenbasierte Kognition, Kooperation und Kommunikation bei bilingualen und monolingualen Lernern". In: Hahn, Angela & Klippel, Friederike (Hrsg.), *Sprachen schaffen Chancen.* München: Oldenbourg, 121-135 (in print).

Vollmer, Helmut Johannes (2006b). "Language Across the Curriculum – Ways Towards Plurilingualism". In: Martinyuk, Waldemar (ed.), *Towards a Common European Framework of Reference for Language(s) of School Education*. (Paper, presented at a conference in Kraków, 27-29 April 2006. Kraków: Jagellionian University. (to appear).

Vollmer, Helmut J. (2006c). Subject-Specific competence and language use of CLIL learners: Grade 10 geography in Germany. In: Nikula, Tarja/Dalton Christiane (eds.), *English as the medium of instruction in European schools: analyzing classroom discourse*. Vienna: University of Vienna (Special Issue of *Vienna English Working Papers* (VIEWZ). (Paper, presented at the ESSE 8 Conference, London, August 29 – September 2, 2006).

Vollmer, Helmut Johannes/Beacco, Jean-Claude (2006). "Towards a Common Instrument for Language(s) of (School) Education". Preliminary study: Council of Europe, Language Policy Division. Strasbourg. www.coe.int/lang

Zydatiß, Wolfgang (2005). Diskursfunktionen in einem analytischen curricularen Zugriff auf Textvarietäten und Aufgaben des bilingualen Sachfachunterrichts. In: *Fremdsprachen Lehren und Lernen 34*, 156-173.