CLIL across contexts:
A scaffolding framework for CLIL teacher education

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Semiotic Translation, Literacy Learning and Teacher Development

Semiotic Translation and Literacy as a Pedagogical Goal of CLIL

Over the past decade, the notion of 'literacy' has internationally become one of the core goals of school education and *Bildung* in general as well as a central pedagogical goal in content learning and knowledge acquisition. It is based on the assumption that acquiring subject-specific knowledge is largely connected with the ability to express it in discursive form. On the one-hand, such a subject-specific literacy (mathematical, scientific, musical etc.) encompasses the ability to partake of the discourses in a particular discipline, i.e. to be able to use the language and terminology that a discipline has developed to describe and conceptualize the phenomena that it investigates and seeks to explain or describe. On the other hand, the notion of 'literacy' contains the idea of being able to use and, in particular, communicate subject-specific knowledge in everyday cultural contexts and social situations. Learners must be able use their content knowledge to participate in cultural and public discourses, engage and interact in problem-solving processes and negotiate controversial issues like, e.g., genetic engineering (biological literacy), nuclear energy (physical literacy) or gangster rap (musical literacy). Therefore, the idea of literacy as the capacity to translate discipline-specific languages including various types of symbolization and a range of symbolic languages (cf. fig. 1) into everyday contexts of communication is crucial to literacy learning in terms of *Bildung*. In fig. 1, the phenomenological level of everyday experience and the everyday language that is used to conceptualize is the basic level of understanding and symbolization. The other end of a continuum of translating phenomena into other semiotic forms and languages is represented by the top level at which the most abstract language of formulas or other discipline-specific formalized codes is used (Leisen 2005).

Semiotic Translation and the Framework for Teacher Development in CLIL

In the following, I will try to elucidate how semiotic translation as literacy learning can be regarded as a didactic tool that should be central in teacher training programmes because it is suited to focus the education of teachers on literacy learning as the pedagogical core of teaching content. Teachers of content subjects tend to regard the languages of their discipline as the 'natural' language of the subject they teach. By contrast, to the learners these disciplinary languages – the language of chemistry, the language of music, of art etc. – are often utterly strange and foreign; learners have to familiarize themselves with them and acquire them – very much in the manner of a foreign language. Implementing the notion of semiotic translation in teacher training therefore also introduces a reflexive dimension into teacher development, creating an awareness of the languages one uses and the disciplinary cultures from which they originate. I will use the paradigms of the CLIL "Framework for teacher Development" to illustrate in what way semiotic translation is relevant in teacher development and my makes references to the categories and paradigms used in the respective descriptors of the framework.

Knowledge

The use of semiotic translation in the content classroom requires a deep knowledge of the discipline-specific symbolizations and modes of representing subject matter in the foreign lan-

guage of the CLIL classroom. The teacher must also be familiar with different types of material manifestations and medial forms of representing content, ranging from verbal description and forms of graphic visualization to diagrams, charts and formal language (central part of fig. 1). In terms of the framework, the teacher needs to know how culture and the world or slices thereof are approached through different symbolic representations and languages. This implies that semiotic translation is part of the teacher's role of the mediator and his knowledge of different ways of symbolizing (slices of) the world or, in a semiotic-constructivist approach (*sensu* Cassirer, Peirce, Goodman, Bruner), of world-making, or, in terms of the framework, of creating culture and the world through language (cf. Hallet 2006: 129ff. and 144f.) This also requires a teacher's deep knowledge of the whole conceptual system that is connected with and communicated in disciplinary discourse and different languages.

These are only just a few aspects of how a CLIL teacher's knowledge and competences as described in the framework are directly related with semiotic translation. Moreover, it is of utmost importance that teachers develop an awareness of the different languages and discursive cultures that different disciplines (and the related school subjects) have developed as ways of looking at and constructing the world ('aspect'). In teacher training as much as in school education, such awareness is the basis of an individual's way of understanding and reflecting upon the world. The reflexivity that results from this awareness can be regarded as one of the cores of a pluralingual *Bildung* (Breidbach 2007, Bonnet et al. 2009) and CLIL education in particular.

Values

The co-existence of different symbolizations (languages) in a domain and the plurality of languages that are available to conceptualize the world are a paradigm of the experience of (inter-)cultural difference. This applies to different types of symbolization in a particular content subjects as well as to the specific languages that disciplines have developed. For instance, the way 'colour' is conceptualized and used in art is quite different from the ways physics or literary studies employ the concept. The language of a subject therefore represents the specific ways it conceptualizes (a particular part of) the world and its objects ('aspect'). This insight contributes to an ethics of understanding of the relativity of world views, of the plurality and diversity of world making and the need to tolerate different (disciplinary) cultures and the functionality of discipline-specific languages. The plurality of languages in a discipline and across disciplines also points to the need for interdisciplinary approaches because no discipline (content-subject) can claim to represent or describe the world comprehensively.

Skills

The teacher must himself be able to translate very specific disciplinary ways of saying and expressing things into the learners' language which are initially often incomprehensible and 'foreign' to the learner. The teacher must therefore be proficient in various 'languages' that are all employed in the process of approaching and addressing a phenomenon at different levels of abstraction. A teacher must also be skilled to train the learners to integrate scientific concepts into their everyday language (Hallet 2002) and develop methodological tools and design classroom activities that initiate semiotic translation processes and the negotiations between the learners that go hand in hand with them. In that respect, every content teacher is always also a language teacher. In terms of the framework, teachers have to design negotiations and conceptualizations that "allow the learners to activate their own patterns, to develop their own discourses" and "to enable the learner to cross the zone of proximal development."

Teacher Development Activities

The pedagogical skills required to initiate conceptual learning through semiotic translation and to design the corresponding classroom interaction have to be acquired and trained carefully. Since most teachers of content subject are not aware of the significance of language and

discourse in their discipline and of the discursive character of all conceptual learning, this discursive dimension of teaching has to be carefully developed, beginning with 'language awareness' (in terms of various symbolizations that are available and translatable into each other) and leading to a full-fledged methodological competence in the field of semiotic translation. In particular, teachers must develop the ability to design complex tasks and scenarios which structure the learners' negotiations and reflections and lead to presentable outcome.
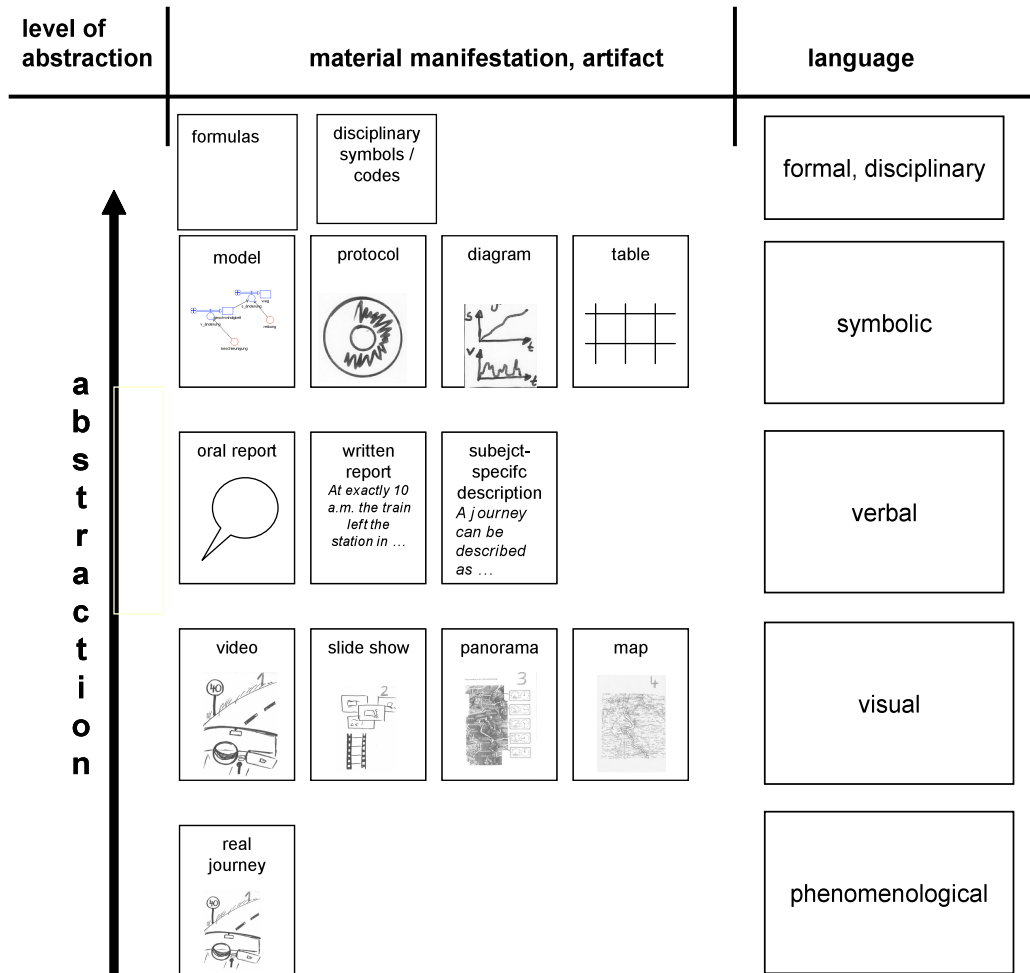
Activity / Learning Outcome

Special attention has to be paid to those dimensions of teacher training and development that concern the integration of the symbolic and discursive form into content learning and teaching. Classroom experiments with designs for semiotic translation should be documented and subject-specific translation designs should be tested for various phenomena or objects of learning and teaching. A systematic analysis of classroom discourse and of learner products (essays, presentations, posters) with a focus on discourse and symbolic forms should become a routine in teacher development.

References

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level of abstraction	material manifestation, artifact			language
	formulas	disciplinary symbols / codes		formal, disciplinary
	model	protocol	diagram	table	symbolic
	oral report	written report *At exactly 10 a.m. the train left the station in …*	subejct-specifc description *A journey can be described as …*		verbal
	video	slide show	panorama	map	visual
	real journey				phenomenological

After: Leisen, Josef (2005). Wechsel der Darstellungsformen. Ein Unterrichtsprinzip für alle Fächer. *Der fremdsprachliche Unterricht Englisch 39* (78). 9-11.

Fig. 1: The translation of symbolic languages.