The use of subject-related discourse functions in upper secondary CLIL history classes

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**Transcription conventions**

**Speakers:**

T  Teacher  
S  Student  
S(m)  male student  
S(f)  female student  
S1  identified student  
Ss  subgroup of students  

**Speech:**

{  simultaneous speech  
[ ]  commentary on non-language aspects  
(?)  uncertain transcription  
X  incomprehensible item (one word)  
XX  incomprehensible item (phrase)  
XXX  incomprehensible item (beyond phrase)  
?  rising intonation  
…  Pauses  

**Commentary:**

**Bold**  Used for emphasising particular aspects described in the analysis
I. Introduction

Babsi: geh jetzt (?) red auf Englisch wennst scho reden musst
Teacher: good, could you ...
Halil: w-wenn ich's nicht kann auf Englisch
Teacher: could you tr- translate this into historical terms?
(extract from classroom transcripts)

A language is a system that relates what is being talked about (content) and the means used to talk about it (expression). Linguistic content is inseparable from linguistic expression. But in research and in classroom practice, this relationship is frequently ignored. In subject matter learning we overlook the role of language as a medium of learning. In language learning we overlook the fact that content is being communicated. (Mohan 1986: 1)

Content and language integrated learning (CLIL) has been an innovative approach in European education for almost twenty years and has spread in a surprising manner (Maljers, Marsh & Wolff 2007: 7). In its basic definition it has been characterized as a “dual-focused educational approach which employs a foreign language in the acquisition of and instruction in non-language content” (Mehisto, Marsh & Frigols 2008: 9). Furthermore, another frequently made claim about CLIL is “that the non-language subject is not taught in a foreign language but with and through a foreign language” (Eurydice Report 2006: 7).

These initial claims already indicate the core principle of the CLIL approach, namely “integration”, i.e. the combining of language and content in order to make them work together effectively in the classroom. It is this integrated approach which sets CLIL apart from related approaches in bilingual education (Coyle 2007: 545). Therefore, from the political stakeholders’ point of view, CLIL has been considered advantageous as it seems to be an efficient approach to overcome deficiencies in conventional ways of
foreign language teaching and is apt to deal with socio-economic changes and to develop a plurilingual European population (Dalton-Puffer 2011: 184-185).

However, from a pedagogical point of view, CLIL is not only an efficient approach, but there is also another aspect to the “integration” of content and language, namely the nature of this language used in the classroom and the linguistic challenges faced in the process of constructing content knowledge. Even before CLIL gained momentum in European education, the importance of language for learning came into broader focus through the sociocultural theory of Soviet psychologist Lev Vygotsky. The notion was established that “every content teacher is at the same time a language teacher” (Steinmüller & Scharnhorst 1987: 9). This notion pointed at the importance of the particular nature of language used by the content teacher as content is always mediated through language. Bilingual education in Canada and the United States raised this question before the advent of CLIL in Europe. Cummins’ (1980, 1991, 2004, 2009) now widely accepted notion of cognitive academic language proficiency (CALP) as a skill that is inherently different from basic interpersonal communicative skills (BICS) paved the way for conceptual and empirical research on the language of the classroom. Mohan (1986, 2001), for example, tried to make visible “language as a medium of learning” (Mohan 2001: 109) by describing it within his “knowledge framework”. Similarly, Chamot and O’Malley (1987) tried to help students to develop academic language proficiency through their cognitive academic language learning approach (CALLA), and finally Schleppegrell (2004) attempted to define the “Language of Schooling” from a functional linguistic perspective.

With regard to CLIL, a continuously growing body of research on the language required for academic language proficiency under the particular circumstances of this approach has developed over the last decade. Two characteristics of CLIL, firstly, the fact that it employs a foreign language and not an L2 spoken in the wider community and secondly, the fact that the teachers of CLIL are not native speakers of the foreign language (Dalton-Puffer 2011: 183) might be of particular importance for this recent interest of CLIL research to investigate linguistic needs. Even though Maljers, Marsh & Wolff (2007: 7) have already proclaimed a new decade of research for the period between 2004 and 2014, which includes “evidence bases by which to validate
approaches and forms of good practise”, academic language in the CLIL classroom is still only partially understood.

Research on academic language in CLIL has mainly concentrated on two different approaches so far. On the one hand, there is a significant body of research which works within a genre theory approach. These studies are influenced strongly by the “Sydney School of Systemic functional linguistics” (Veel, Coffin 1996) and its “Write it Right” project, which tried to describe the genres students need to be able to read and the ones they need to be able to write in. In this respect, the notion of “genres” implied a “functional variety of text”, characterized by its “social purpose”, its “cultural context and its “recognisable stages” (Veel & Coffin 1996: 228). Even though proponents of this approach claim that a genre-based pedagogy is “not about written text only” (Morton 2010: 82), a great deal of their research examines schoolbook extracts or highly pre-structured sorts of communication such as presentations in CLIL classrooms (cf. Morton 2010, Morton 2009).

In contrast to the genre approach, a discourse function approach has been developed. These discourse functions go under different names (e.g. “cognitive skills” (Zwiers 2007: 99), “academic language functions” (Snow 2005: 703)). The construct of these discourse functions was influenced by a functional view of language which assumes that particular situations in communication lead to particular patterns in speech which can then be used as a routine in interaction. As educational contexts display certain recurring situations, they are assumed to develop these particular patterns of communication (Dalton-Puffer 2007b: 68-69).

Research on these discourse functions differs in terminology and assumed quantity of these discourse functions, and it frequently emphasizes that an accepted canon of discourse functions required in the classroom has not been yet agreed upon (Vollmer & Thürmann 2010: 115). However, there have been attempts to develop a framework for describing discourse functions on the conceptual level (cf. Vollmer & Thürmann 2010, Zydatiß 2010). Furthermore, the Council of Europe language policy division has made efforts to describe the conceptual basis of discourse functions across subjects (cf. Vollmer 2009a, Beacco et al. 2010) as well as with regard to specific subjects (cf. Beacco 2010).
On the empirical side, however, research on the process of discourse aspects of classroom talk is still a long way from giving a comprehensive view of the ways current CLIL practice constructs knowledge in the classroom. Dalton-Puffer’s (2007a) study of Austrian CLIL classrooms might so far have been the most insightful large-scale study of its kind. Apart from the discourse functions “defining”, “explaining” and “hypothesizing/predicting” studied there, smaller studies have investigated actual realizations of discourse functions such as “explaining” and “speculating” (Lose 2007), “defining”, “hypothesizing” (Dalton-Puffer 2007b) or “historical explanation” (Llinares & Morton 2010). Therefore, Vollmer (2009a: 8) expressed the need for “systematic observation and analysis” in classroom discourse in order to describe the language of oral production.

As far as the subject history which is pursued in this thesis is concerned, its CLIL realizations have been studied from either a language research perspective or from a history didactics research perspective for a long time (Heimes 2011: 26). This has prevented the development of any integrative view on language and content. A focus on discourse functions as pursued in this thesis, however, might be a step towards this integrated perspective on history taught in a foreign language.

The primary aim of this study is to shed some light on the characteristics of classroom discourse in CLIL lessons by analysing the existence and realization of four discourse functions in CLIL history lessons which are frequently mentioned in research. As this study is based on “naturalistic discourse data, analysing language use as an observable correlate of classroom learning” (Dalton-Puffer, Nikula & Smit 2010: 11), it can be located in the micro-level process quadrant of CLIL research as conceptualized by Dalton-Puffer & Smit (2007: 12-15). It tries to investigate how language in the CLIL history classroom is used to mean, i.e. to create meaning through the resources of language. These discourse functions under observation comprise “describing”, “classifying”, “explaining” and “defining”. The study aims to investigate how these constructs of subject-specific competence are realized in upper secondary CLIL history classes and how the use of these discourse functions is influenced by the “situated practice” of classroom interaction.
Thus, this study contributes to an understanding of discourse functions in the specific environment of history taught in a CLIL approach. Far too little attention has been paid to empirical findings in specific surroundings. The results of this study may therefore be of benefit to the further development of the constructs of discourse functions.

This study is divided into seven chapters. Following this introduction, chapter one considers the theoretical underpinnings of CLIL with regard to the view of language the approach is built on. Thus, it tries to answer the question concerning the role language plays in the concept of the CLIL approach. Afterwards, chapter two broadens the perspective and investigates research on the relationship of language and thought with regard to the use of language at school. The intersection between these approaches will be dealt with in chapter three which reviews literature on discourse functions motivating the main research question of this study. Chapter four examines the communicative demands of the history classroom which form the context for investigation of this study. Its research question and methodology will be considered in chapter five. Then, chapter six provides the conceptualizations of constructs for the four discourse functions under observation and employed in the task of analysis. This analysis is performed in chapter seven which is divided into four subchapters each investigating one discourse function individually under different aspects. Finally, the key findings from the analysis of the research data will be provided in a concluding chapter including a subchapter on the implications these findings will have on the teaching of content and language integrated history classes.
II. Discourse functions in CLIL history lessons

1. Defining CLIL: The relationship between content and language

This chapter is concerned with a review of the theoretical underpinnings of the CLIL approach. Firstly, the question is asked which role language is assumed to play in the CLIL classroom. Secondly, a review of the latest theoretical principles tries to answer the question how the relationship between language and other aspects of CLIL is conceptualized in these models.

1.1 CLIL - A “bain linguistique”? 

It goes without saying that in CLIL, the teaching of a content subject in another language, beneficent outcomes in terms of language learning have always remained a central aim in its implementation as can be seen in the role that was ascribed to CLIL in developing a plurilingual population by the European Union. However, an important and often neglected question has been the nature of this language learning as this aspect constitutes an integral part of any approach (Richards, Rodgers 2001: 33). An approach that tries to implement increased contact with a foreign language has to answer the question whether there is a role for formal language instruction in it or not.

In this regard, an influential and important underlying assumption of the CLIL approach with regard to language still seems to linger in the notion of “naturalness”. The CLIL Compendium (http://www.clilcompendium.com/brief.htm, 25 Sep. 2012), for example, emphasizes the naturalness of the approach as one of its principal advantages. It points out that “[i]t is this naturalness which appears to be one of the major platforms for CLIL’s importance and success in relation to both language and other subject learning.”. This emphasis on the “natural ways of picking up languages” in CLIL can be regarded as a variant of the “language bath” approach in language teaching, which Dalton-Puffer (2007a: 3) identified as an input-based psycholinguistic theory in the learning of an L2 prevalent in CLIL. Following Krashen’s (1985) monitor model, it is assumed that CLIL leads to acquisition of language without formal instruction by exposing students to comprehensible input leading to positive attitudes (Dalton-Puffer 2011: 194). In the present situation of CLIL in Austria, the “tacit assumption that there will be incidental
language gains” without formulating these gains has been described as a widespread belief (Dalton-Puffer 2007a: 295).

However, in theoretical attempts to describe the CLIL approach, this view of the nature of language learning has come under severe criticism. Thürmann (2010: 138), for example, calls for a critical view of immersion-based view of natural acquisition of language needed in CLIL. Similarly, Krechel (1999: 193) while promoting the focus of CLIL lessons on content and attributing language the role of a mediator of information, states that

\[\text{[t]his does not mean that bilingual education is simply a `bain linguistique´, unorganized immersion in the foreign language. Content-based language work needs careful planning and consideration, and success depends to a considerable extent on how the language work is organized.}\]

In other words, Krechel calls for a “content-based language work” which takes into account the characteristics of the non-language subject. His methods which CLIL language work should focus on include inferencing meaning, dictionary work, producing notes as well as work on subject-specific vocabulary and specific language function expressions (Krechel 1999: 198).

Criticism of a “bain linguistique”/ “language bath” approach in bilingual education in general was also levelled by Mohan (2001: 108) when he argued that “merely exposing” is not enough for students with limited English proficiency (LEP) to develop the language they needed to communicate in the content language classroom. Therefore, emphasis should be moved towards Language as a Medium of Learning describing “the discourse and the resources of the lexicogrammar of English” (Mohan 2001: 109).

As this kind of criticism puts pressure on reception-based notions of “naturalness” in CLIL language classrooms, conceptual constructs of CLIL have recently incorporated language work. Even though the argument of “naturalness” is still used and emphasized in recent introductions to CLIL as an argument to delimit the approach from and oppose it to assumed deficiencies of accepted language teaching (cf. Coyle, Hood & Marsh 2010: 12), a narrowly defined claim of naturalness has somewhat yielded the floor for a more watered-down version of the claim. Accordingly, it is acknowledged that “formal
language instruction remains integral to most CLIL models” (Coyle, Hood & Marsh 2010: 12). Therefore, the term “naturalness” in this example is used more in terms of meaningful interaction including formal instruction in an extra exposure context rather than in terms of mere exposure to the language without any elements of formal instruction.

1.2 Principles of integrating content and language in CLIL

Content and Language Integrated Learning (CLIL) is frequently characterized as a dual focused approach in which positive synergies between language and content are assumed, based on the assumption that “[…] students are likely to learn more if they are not simply learning language for language’s sake, but using language to accomplish concrete tasks and learn new content.” (Mehisto, Marsh & Frigols 2008: 11). Therefore, expectations raised in guide books on CLIL are high, amounting to foreign language learning while at the same time reaching a level of content proficiency which is equal to non CLIL learners (cf. Mehisto, Marsh & Frigols 2008: 12).

However, as Dalton-Puffer (2008: 139) pointed out, CLIL still shows deficits with regard to its theoretical underpinnings. This can be displayed by a look at the goals which are assumed by various different countries to be pursued in CLIL. The Eurydice Report (2006: 23), for example, suggests that there is a significant number of countries where official recommendations for CLIL practice do not assume subject-related knowledge in addition to language skills as an aim pursued in CLIL. These differences among European countries seem to indicate shortcomings of CLIL on the conceptual level, leading to different expectations on the policy level.

Nevertheless, as far as the development of the CLIL model in the first decade of the 21st century is concerned, a move towards a more integrated view of language and content can be stated. One of these first attempts to describe these principles of CLIL can be found in Coyle’s (1999) “Four Cs framework”. This framework tried to unite language learning and content learning within one coherent framework. As a consequence, Coyle (1999: 53) states the “Four Cs” as guiding principles of CLIL: Learning in CLIL is reached through “a progression in the knowledge, skills and understanding of content”, “engagement in associated cognitive processing”, “interaction in the communicative context” and “a deepening awareness and positioning of cultural self and otherness that
learning takes place”. By drawing on a range of research, this conceptualization of CLIL within a framework stressed the interrelatedness and equal importance of development in all of these four aspects of the CLIL approach.

As the role of language in CLIL contexts was frequently mentioned in terms of a “tool” (Krechel 1999: 193), a “vehicle” (Krechel 1999: 193) or a “medium” (Mohan 2001: 109), a definition of the language aspect became vital for a theoretical conceptualisation of CLIL. In a revision of her conceptual framework, Coyle (2007) explicitly brought language into focus again by trying to define the role of language in CLIL in an attempt to describe her CLIL framework further. In her revisiting of the concept “communication” (one of the “Four Cs”), she argued that a “reconceptualization of the role of language in CLIL” is needed (Coyle 2007: 552). The essence of this reconceptualization of language seems to be grounded in the determination of the language needed out of the content and the tasks of the classroom. Accordingly, language becomes a “vehicle for content learning” and is determined by language use rather than advancement of grammar (Coyle 2007: 552). It is conceptualized as a triptych consisting of three dimensions: language of learning, language for learning and language through learning.

*Figure 1 The Language Triptych*
This triptych tries to point out the different dimensions language can take in the CLIL classroom. The *language of learning* describes the language needed in the process of obtaining knowledge and of understanding skills and concepts of the content. This aspect of communication does not only include content-specific terminology but also ways to use it (e.g. language for describing, hypothesizing etc.). (Coyle, Hood & Marsh 2010: 61). Furthermore, *language for learning* focuses on operating in the foreign language learning classroom. It comprises aspects of language as diverse as “asking and answering questions using evidence”, “language to build arguments and disagreements” or “language for project work”. (Coyle, Hood & Marsh 2010: 62). Finally, *language through learning* highlights the language that might be needed in the process of learning as “using known language in new ways” or “accessing unknown language” (Coyle, Hood & Marsh 2010: 63).

A similar approach can be found in Zydatiß (2010) as he tried to redefine the role of language as a vehicle, tool and medium of learning. He took Coyle’s (2007) “Four Cs framework” of CLIL principles and changed the order as he moved “communication” into the centre of the model. However, this change did not signify a shift of the CLIL approach towards a merely content-based language instruction with a primary focus on language only laced with content. Zydatiß (2010: 134) still emphasized that CLIL is primarily about the acquisition of content knowledge. However, this approach regarded content knowledge as the mastering of subject-specific ways of constructing knowledge through language. In other words, this shift emphasized the discursive nature of content knowledge. In this regard, the specific ways of the content subject to create meaning through language determines the specific demands of language use in the CLIL classroom. In Thürmann’s (2010: 138) terms, this means that CLIL has to emphasize the epistemic and heuristic function of language while the objective of ordinary language teaching is the development of communicative competence for everyday situations.

This reconceptualization of language in the CLIL classroom only recently revealed the full potential of the CLIL approach. Morton and Llinares (2010: 47), for example, argued that “[…] CLIL is a context for the development of L2 academic literacies”. 
Furthermore, Coyle (2010: 68) stated that “for language to be used as a learning tool, what is needed is not so much a bain linguistique but more a bain d’apprentissage”.

These assertions of the importance of language open new perspectives for CLIL research as it becomes vital to conceptualize this kind of language as well as empirically base these claims on the actual practices of the CLIL classroom.

1.3 Conclusion

This chapter focused on the assumed role of language in the CLIL approach. It has become clear that CLIL theory is currently undergoing a change in the ways language is regarded in this context in both the nature of language learning as well as in the nature of language itself. In this regard, assumptions about natural ways of picking up the language seem to gradually clear the way for a more explicit focus on the language used in this specific setting. This seems to have renewed the interest in the relationship between language and content. However, as the Eurydice Report and the example from Austria have indicated, actual practice lags behind the conceptualisation.
2. The language used at school

The previous chapter has described how the latest theoretical conceptualisations of CLIL have moved language to the centre of the approach. This shift towards recognizing the role of language played in school and learning and its relation to content knowledge have been highly influenced by three strands of thinking which shall be described in this chapter. These comprise the notion of Cognitive Academic Language Proficiency developed by Cummins (1980, 1991, 2004, 2009), the interrelatedness of thought and language as expressed by the sociocultural learning theory of Vygotsky (1978, 1986) and the conceptualisation of types of thought explained by the thinking skills movement (Bloom 1972).

2.1 Academic language proficiency

The context encountered by students when they enter school is different from the context they experience in their everyday life in many regards. Some of its basic principles such as organisation of time and content as well as power relationships differ significantly from preschool experience. However, school does not only offer an alternative context in terms of its organizing principles but also in its language as teachers make use of language and students are expected to learn to use language in particular ways inherent to the context of school.

A widely acknowledged conceptualisation of this claim can be found in Cummins’ (1980, 1991, 2004, 2009) theoretical framework. Cummins built on research by Skuttnabb-Kangas & Toukomaa (1976) and their study of Finnish immigrant children in Sweden. Even though these children had no difficulties in speaking and understanding Swedish, they performed poorly in academic tasks. This paradox motivated Cummins to propose an explanatory theory hypothesising that there were two types of underlying language proficiency, one that constitutes conversational fluency performance (BICS; basic interpersonal communication skills) and one that underlies literacy skills performance (CALP; cognitive academic language proficiency) (Cummins 1980: 177; Cummins 2009: 3). A frequently mentioned exemplification of this difference can be seen in describing it in terms of the difference between a six-year-old and a twelve year old speaker of English. While there are hardly any discernible different features in terms
of phonology and basic fluency, they differ considerably in their ability to read and write as well as in their range of vocabulary (Cummins 2009: 3).

Even though Cummins (2009: 4) emphasized that CALP comprises both oral and written modality, cognitive academic language proficiency is mainly derived from written forms of language. For example, a significant amount of empirical findings cited as proofing the validity of the distinction was concerned with the difference between written and spoken text in linguistic features, e.g. Biber’s (1986) psychometrical study of English texts or Corson’s (1993) study of the English lexicon. Furthermore, Cummins (2009: 9, 19) frequently stresses the importance of written language skills such as reading and writing to gain access to academic language as the use of CALP in oral modality means to shift spoken language towards its written counterpart. This is especially important with regard to CALP in the CLIL context as it has been pointed out that students in CLIL classrooms primarily experience linguistic and intellectual activity through oral language rather than through written modes (Dalton-Puffer 2008: 148). Therefore, the ways in which the teacher employs CALP language will have significant influence on the development of this aspect of language proficiency in the CLIL student.

Furthermore, another implication for CLIL is the conceptualisation of CALP as an underlying proficiency. According to the “Interdependence Hypothesis” (Cummins 1980:179), L1 and L2 use of bilinguals in academic contexts such as school relates strongly to each other as they are both manifestations of a single common underlying proficiency. Therefore, he argued that CALP becomes visible in both languages assuming “adequate motivation and exposure to both languages either in school or in the wider environment” (Cummins 1980: 185). In this regard, the contrast between CLIL students and bilingual students growing up in a bilingual environment has to be pointed out as the exposure to the L2 is significantly different in CLIL contexts. Accordingly, the need of a more formal CALP instruction in CLIL contexts might arise.

The essential difference between BICS and CALP has strong implications for the language used in school. In an adaptation of a distinction similar to BICS and CALP, Thürmann (2010: 140) points out that teachers often speak two languages during the content lessons and cross the boundaries between these two modalities without being
aware of it. Thereby, they increase the difficulties for students to acquire the later ones and develop their competence of it.

In order to describe BICS and CALP further, Cummins’ (1991, 2008) later elaboration positioned them along two intersecting continua (see figure 2). One of these dimensions denoted the cognitive demand of language use and the other dimension was concerned with the amount of contextual support (Cummins 1991: 78; Cummins 2009: 4). Accordingly, the conversational abilities expressed by BICS were located in quadrant A (context embedded, cognitively undemanding) and academic language determined by CALP was placed in quadrant D (context reduced, cognitively demanding) (Cummins 2009: 4).

Criticism of Cummins’ framework has questioned the validity of the BICS-CALP distinction in general. However, little attention has been paid to the differentiating criteria mentioned above. As far as the cognitive demand is concerned, Cummins (2008: 4) defined it as the extent to which linguistic tools have become automatized. In other words, a situation which has become a routine is less cognitively demanding because the linguistic tools have become established. The key problem with this criterion has been identified as lying in the cognitively demanding side of many BICS uses. Aukerman (2007: 629), for example, mentions that a child not acquainted with public transport might find it extremely cognitively demanding to talk about this topic, and therefore this would be CALP. However, criticism along these lines overlooks that the difficulties in this case is caused by a lack of conceptual knowledge rather than a lack of cognitive ability in terms of thinking ability.

Furthermore, there is a second dimension which the distinction between conversational language proficiency and academic language proficiency is based on, namely “reduced context”. In Cummins’ (2009: 4) definition, context-embedded points to situations of language use where the realization of meaning is helped by the physical surrounding (e.g. facial expressions, gestures etc.). CALP, however, is “context-reduced” language, i.e. used in situations where meaning does not depend on these external signs but rather on an internal context. The point is that CALP establishes meaning “through language

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its*elf rather than by means of contextual or paralinguistic cues” (Cummins 2009: 4). Cummins did not describe CALP as “decontextualized” as some critiques such as Aukerman (2007: 630) have claimed, but as relying less on the external context in creating meaning than might be demanded by an ordinary conversation.

*Figure 2 BICS and CALP*

Nevertheless, the point of critique that any topic which someone has no knowledge about could potentially be interpreted as CALP remains as the conversation could take place in a context-reduced way. Accordingly, a theory that argues for school as a specific context for using language in particular ways different from ordinary communication, would benefit from an approach that tries to make the internal context of language demand explicit. This kind of approach would have to point out the particular cognitive abilities as well as the linguistic features of performance to realize them together with the context that shapes them. Furthermore, this approach would also have to be based on a theory of the relationship between language and thought. A perspective that takes this relationship between context, language and thought seriously and explains how they interact with each other can be found in sociocultural theory, which shall be dealt with in the following chapter. Afterwards, the cognitive demands of the language of schooling shall be pointed out.
2.2 Sociocultural theory

2.2.2 Language and Mind

Probably the most important strain of thought in sociocultural theory comes from Soviet Russian psychologist Lev Vygotsky, who worked on what he called “one of the most complex problems in psychology”, namely “the interrelation of thought and speech” (Vygotsky 1986: lix).

Basically, Vygotsky claimed that thought and speech should not be analysed in isolation from each other but rather be interpreted as being integrated. In order to reach this goal, he rejected the Cartesian dichotomy of thought and language and assumed a dialectic view of both elements instead, which is characterized by assuming a unity and at the same time looking at the characteristics of each of the two components. This led Vygotsky (1978: 24) to the conclusion that

> although practical intelligence and sign use can operate independently of each other in young children, the dialectical unity of these systems in the human adult is the very essence of complex human behaviour.

In this regard, the Vygotskian theory assumes a preverbal stage in which speech and practical intelligence are independent of each other. However, as soon as the use of signs and speech becomes part of an action, human intelligence develops (Vygotsky 1978: 24). It was claimed that a vitally important process in the creation of human intelligence was to be found in the development of inner speech. Experiments have demonstrated that children talked to themselves when they were confronted with a problem (Vygotsky 1978: 26). However, in the course of development, the child moves speech from the outside to the inside and thereby develops a new function of language as it becomes “an instrument of individual thought” (Vygotsky 1986: 236). Important in this regard is also the dynamic of this relationship, which prevents a viewing of thought and speech as the same process. Vygotsky (1986: 218) points out that “[t]he relation of thought to word is not a thing but a process, a continual movement back and forth from word to thought.”
Accordingly, Vygotsky (1978: 54) proposed the existence of an analogy between sign and tool as they both have a mediating function when it comes to the relationship with the world. The notion of “language as tool” implies that by learning to use the historically developed tool of language, humans establish a mediated relationship with the world (Lantolf 2000: 1). Therefore, as soon as the child begins using signs, the psychological operations in his/her mind evolve and the possibility of higher psychological behaviour arises (Vygotsky 1978: 55).

With regard to teaching, Vygotsky’s argument has important implications. Ivic (1994: 474) points out that this stresses that teaching language is important and does not merely trigger a function that would have developed anyway. Even more importantly with regard to the learning in content subjects pursued in this thesis, it claims that the development of language also means acquisition of the strong instrument of thought (Ivic 1994: 474). In other words, a particular use of language is the prerequisite for the emergence of particular higher functions of thought. This makes thought and language two sides of the same coin. The development of language leads to development of thought and thereby shapes thought. In Vygotsky’s cryptic words, thought is “born through words”- and it needs words to be realized (Vygotsky 1986: 255).

This theory of the relationship between language and thought was later developed by M.A.K. Halliday (1993) into a learning theory based on language. Halliday’s (1993) attempt of a language-based theory of learning is similar to Vygotsky in many respects and can be seen as an attempt to make the interrelated process of development of language and thought more explicit. At the core of his learning theory lies the hypothesis that “learning is learning to mean” (Halliday 1993: 113). In the introduction of his learning theory, Halliday (1993: 93) argues that

[w]hen children learn language, they are not simply engaging in one kind of learning among many; rather, they are learning the foundation of learning itself. The distinctive characteristic of human learning is that it is a process of making meaning- a semiotic process; and the prototypical form of human semiotic is language. Hence the ontogenesis of language is at the same time the ontogenesis of learning.
This view emphasizes the semiotic nature of knowledge. Human beings learn through language and therefore, language is not regarded as yet another domain of knowledge but “the essential condition of knowing, the process by which experience becomes knowledge” (Halliday 1993: 94). By drawing on speech samples of an infant, he could indicate how the children gradually develop their understanding of the world through developing their language. Language, in this regard, is the tool that transforms experience into knowledge. Lemke (1990: 192) called this view “social semiotics” and distinguished it from “mentalism” prevalent in recent cognitive psychology. In contrast to mentalism, social semiotics does not treat cognitive processes as “isolated phenomena that happen within a single mind isolated from others” (Lemke 1990: 193).

2.3 The semiotic nature of knowledge in school

As research in the tradition of Vygotsky has claimed, the impetus to develop new ways of thinking is initiated by the development of the semiotic system of language. As a consequence, a difference in the use of language at school as indicated by CALP would imply that our knowledge and our thinking would be significantly changed. This was pointed out by Vygotsky when he argued against the assumption that the relationship between “the form and the content of thinking [at school] are quite reminiscent of the relationship between a vessel and the liquid which it contains” (Van der Veer & Valsiner 1994: 191). In contrast to this belief, Vygotsky’s view perceives the acquisition of new content in school as implying new ways of knowing. An example of this would be the development of “scientific concepts” at school, which are not based on experience anymore, but on abstraction and can be seen for example in the classification of a whale as a mammal instead of a fish in school contexts (Lantolf & Poehner 2008: 5).

Therefore, a particular way of using language as described by CALP, which is significantly different from everyday language use, would also imply that the knowledge constructed through school subjects is of a different quality than everyday knowledge. This was pointed out by Schleppegrell (2004: 163) when she argued that

In school contexts, students come to new knowledge through language. The dense and abstract language characteristic of the texts of advanced literacy construes the specialized and abstract knowledge that students are expected to develop as they move into secondary
school and higher education. The linguistic challenges of schooling come from the specialized ways that language construes experience and social roles simultaneously in the densely structured texts of various subjects.

This view suggests firstly that “knowledge” in school is always construed through language. School subjects, for example, are taught through language and understanding is displayed through language. Others, in the tradition of Vygotsky, have made this claim about human knowledge in general, arguing that “the nature of human knowledge as we know it depends on our ability to use language” (Veel & Coffin 1996: 191) or that “language is the essential condition of knowing, the process by which experience becomes knowledge” (Halliday 1993: 94).

Secondly, Schleppegrell emphasizes that the process of schooling requires students to learn to use language in new ways. An example of this can be seen in “definitions” (Schleppegrell 2004: 37). At school, students have to give formal definitions which are different from ordinary ways of describing something, as these definitions imply a particular way of structuring knowledge rather than giving incoherent information about the object that is asked to be defined. Research has stressed that young children do have the knowledge of the vital parts of a definition, however, they lack the knowledge of form to express them and often acquire it when they enter school (Snow 1987: 8). In this regard, giving an effective definition in school contexts requires students to use linguistic resources in a new way (Schleppegrell 2004: 37).

As a great amount of language use in school takes place through spoken words in the classroom, Lemke (1985: 1) emphasized that the students learn this new way of using language through a process of initiation through the social activity of using language in “talk”.

**2.4 Thinking skills in school**

As we have seen in the previous chapter on CALP, one dimension of a characterisation of the language of schooling is based on the level of cognitive demand. In other words, the language of schooling is assumed to require cognitive skills that are different from the ones demanded by tasks accomplished in everyday communication.
Synthesizing the points made in the previous discussion namely that the cognitive demand is caused by a lack of routine with this language (Cummins) and that new uses of language lead to new processes of thought (Vygotsky), it remains vital for a conceptualisation of this language of schooling to make the particular cognitive functions explicit that the language of schooling requires and aims to develop. Therefore, approaches attempting to express the thinking skills involved in school might be helpful in characterizing this dimension of the language of schooling. This approach can be found in the so-called “thinking skills movement”.

An early attempt to classify these types of thought involved in the language of schooling can be found in Bloom’s taxonomy (1972). In order to find a tool for formulating teaching/learning aims and a basis for evaluation, Bloom et al. (1972) designed a taxonomy of types of thought by ascribing different skills to common underlying types of thought. For example, skills such as “classifying”, “describing” or “explaining” were subsumed under the thought type “comprehension”. These types of thought were then arranged according to their complexity in a hierarchical order comprising six types of thought: knowledge, comprehension, application, analysis, synthesis and evaluation.

Regardless of the naming of these types of thought, the importance of the taxonomy lies in its attempt to point out that teaching and learning in school involves more than the mere ability to memorize knowledge and reproduce it under certain conditions. Even though the relevance of knowledge is not denied, the original taxonomy conceptualizes it as the lowest of five other types of thought which students in school are asked to apply for solving problems. This aspect of the taxonomy is of particular relevance to content subjects which are often falsely assumed to be confined to reproduction of encyclopaedic knowledge. The prevalence of this assumption can be supported by research on teacher questioning practices across subjects, which confirmed that 60 per cent of the questions require students to merely recall factual knowledge (Gall 1970:713). Similarly, recent studies on these practices in CLIL revealed the same

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predominance of factual questions comprising 88 per cent of all questions asked by the teachers (Dalton-Puffer 2007a: 152; Dalton-Puffer 2008: 149).

Furthermore, it emphasizes the qualitative difference of thinking in school and thinking in everyday contexts. The lack of familiarity with these types of thinking can lead to answering a cognitively demanding question with a type of answer that uses thinking acquired in everyday context as displayed in an example of classroom interaction observed by McCreedy and Simich-Dudgeon (1990) (quoted in Schleppegrell 2004: 14):

Teacher: Do they have ears?
Student: No.
Teacher: How do you know? How do you know whether they have (any of those) or whether they do not, Karen?
Karen: Well, I know that they have eyes ’cause it was on the chart. And I knew that they didn’t have noses ’cause I looked it up, but I don’t know if they have ears or not.

Schleppegrell (2004: 15) points out that the teacher’s question “How do you know” does not lead to higher cognitive demand in this situation as the student evades any kind of reasoning and rather states the process of finding information. This seems to call for an explicit approach of teaching thinking skills.

Even though this taxonomy might be a powerful tool in order to make the range and increasing complexity of thinking visible, with regard to the language of schooling, a major drawback seems to be that it blurs the differences in actual verbal speech when it comes to using specific subcategories of the major types of thought. For example, “explaining, “comparing” or “classifying” might be located on a similar level of thinking in terms of complexity, but their actual realization in the form of verbal speech might involve patterns that are significantly different from each other. This seems to be an important point of critique if we take Vygotsky’s claim arguing that thought is born through language seriously. A revision of Bloom’s original taxonomy, published in 2001, seems to be moving into this direction as it is pointed out that “[…] in the
revision, the 19 specific cognitive processes within the six cognitive process categories receive the major emphasis” (Krathwohl 2002: 214).

Furthermore, more emphasis on the actual cognitive processes realized through speech also comes from the introduction of “metacognitive knowledge” in the revised taxonomy. As Pintrich (2002: 219) argues, recent psychological and educational theories emphasize the importance of helping students develop awareness of cognitive processes in order to become better learners. Again, this goal can only be reached by helping the students to access the language of schooling on the level of verbal realization of cognitive operations.

In conclusion, literature on thinking skills has indicated that the language of schooling can be characterised in terms of its cognitive demand by identifying particular cognitive operations. However, it suffers from the major drawback of not expressing the linguistic demands which are needed in realizing these cognitive operations.
3. Discourse functions: Integrating thinking, language and content

In the context of CLIL, this view of language as the medium of learning and schooling as an environment that demands new ways of developing this medium as described in the previous chapter opens a new perspective on the integration of language and content as it stresses that language demand in CLIL has to be defined out of the content-specific ways to construct knowledge in content subjects. Therefore, these theoretical assumptions do not only emphasize the need for specific language work in CLIL classrooms but also give a preliminary direction that language work in CLIL might take, namely the development of cognitive academic language proficiency in content subjects.

3.1 Theoretical concept of discourse functions

As Wildhage (2003: 93) pointed out, professional discussion on CLIL has frequently suffered from a misconception of emphasizing content work over language work which has led to the perception of language work in CLIL as an additional burden. On the other end of the extreme, however, there are misconceptions of CLIL which regard the approach as a merely content-based language class and disregard the role knowledge acquisition plays in CLIL classrooms (Zydatiß 2010: 134).

Early theoretical considerations, which have tried to overcome these misconceptions by developing a more integrated view of content and language in bilingual education, emphasized the role of language in the development of cognitive content-oriented skills by supporting “content oriented language learning” (Otten & Thürmann 1993: 76). This kind of language learning stressed four purpose oriented language skills (describing, explaining, concluding, evaluating) as the main goal of language learning in the bilingual classroom (Otten & Thürmann 1993: 77). These purpose oriented language skills stressed the role of language in the acquisition of content and gave direction for the language work that the CLIL context might be concerned with. However, they suffered from shortcomings on both the definition level as well as the level of description.

A deeper understanding of the language work required in CLIL classrooms was recently provided by the emergence of discourse functions in CLIL research. These resemble
academic language functions closely, which have been described in research that tried to help low English proficiency learners (LEP) in the United States to progress from ESL classes towards mainstream education (Chamot & O’Malley: 1987; Short 1994; Bailey & Butler 2003). These “academic language functions” were defined as functions that become established in the classroom as they are needed for learning and exhibiting understanding of academic content in contrast to “social language functions”, which are characterized by functions such as “inviting” or “complementing” and used in everyday life (Snow 2005: 703). These constructs imply a functional approach to language. In contrast to a narrow view of language as consisting of rules and structures analysed on a sentence level, functional linguistics claimed the existence of “certain definable patterns” in the language, called functions, that are used to realize particular purposes (Halliday 1977: 26). This view emphasized the relationship between larger units of text and its respective context for creating meaning. Accordingly, language teaching is not limited to the acquisition of correct forms on a sentence level but goes beyond this narrow view and focuses on the acquisition of these broader patterns of language.

In the CLIL context, a deeper understanding and theoretical grounding of these functions was recently provided by Zydatiß (2005) (see figure 3). In his model, learning in the CLIL classroom is viewed as taking place at the intersection of content, language and cognition. This intersection of these three aspects of content and language integrated learning provides a unit called “discourse function” (Zydatiß 2005: 163). Thus, the inherent interrelationship between thought and language described in the previous chapter is employed in this model as it is central to the nature of discourse functions to see higher cognitive abilities developing out of language used in the context of the subject and also to see the development of language as impossible without developing cognitive ability in the context of the subject.

As the model indicates, concepts/categories, knowledge structures and content specific modes of enquiry/study skills have discourse functions at their core. Therefore, discourse functions are vital to the learning of these aspects. In applying these functions to dealing with material or texts through classroom interaction or in written modes, Zydatiß (2005: 165) expects students to develop awareness for the interrelatedness of subject-specific content, thought processes and the expressions of language which is
expressed in discourse functions. Therefore, classroom focus on discourse functions is perceived as the central aim of CLIL lessons by providing a way to raise awareness.

Accordingly, discourse functions will in the following be understood as defined by Vollmer (2009b: 179, quoted in Vollmer, Thürmann 2010: 116) as

Integrative Einheit von Inhalt, Denken und Sprechen, die mit Makrostrukturen des Wissens sowie mit basalen Denkoperationen und deren Versprachlichung in elementaren Texttypen in Beziehung gesetzt werden können und in denen sich dieses Wissen und Denken sozial wie sprachlich vermittelt ausdrückt.

This conceptualisation of a unit of cognition, content and language implies a shift towards a broader and more competence-oriented view of learning (Zydatiß 2010: 135-136). According to the definition of competences as “Einheit von Kenntnissen, Fähigkeiten und Einstellungen” (Zydatiß 2005: 134), learning in CLIL subjects is not confined to knowledge of the appropriate concepts and categories of the respective content subject alone. This would imply a concept of CLIL as what has been described as “training”, namely the acquisition of skills which are restricted to specific situations (Widdowson 1983: 18). In contrast, discourse functions can be seen as “abilities” acquired in “education”, because they could be described as what Widdowson (1983: 18) gave as a characteristic of abilities: “cognitive constructs which allow for the individual’s adjustment to changing circumstances”. In other words, discourse functions can be assumed to be applied across different content areas.

*Figure 3 Discourse Functions*

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Subject-specific notions (concepts & categories)

Knowledge structures & cognitive operations

Discourse Functions
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Zydatiß (2005: 164);
Zydatiß (2010:142)
3.2 Description of discourse functions

Discourse functions are not only cognitive ways of thinking but at the same time also linguistic in nature. In other words, a cognitive pattern of thinking is assumed to come into being and manifest itself in language. Therefore, a learner will encounter discourse functions first and foremost through actualizations in language.

From a functional linguistics perspective of language, discourse functions can be seen as linguistic patterns with a purpose, which have developed through the particular needs and aims in the subjects and which have become established as routines through continuous use (Dalton-Puffer 2007a: 128; Dalton-Puffer 2007b: 68). The classroom is assumed to be an environment where they are repetitively used in order to reach the goal of knowledge acquisition. In this functional perspective, they are similar to everyday communicative functions such as “inviting”, “making appointments” or “apologizing” which have been included in the functional approach to language teaching (Dalton-Puffer 2007a: 128). In contrast to language functions, however, they are categories reflecting particular types of linguistically realized patterns of cognition and linguistically realized structure of knowledge (Vollmer & Thürmann 2010: 116).

As the previous chapter has stressed, the body of literature on thinking skills has been concerned with the cognitive side of thinking and therefore did not ascribe any linguistic patterns to the respective thinking skills. The conceptualization of discourse function, however, tries to overcome a merely cognitive based view of thinking by trying to give a linguistic description. At the moment, assignment of specific language patterns to their corresponding discourse function is still far from giving a comprehensive description and opens a promising field of research.3

In order to study their realization in actual language, it was suggested that analytical research of discourse functions has to acknowledge that there are different levels of discourse functions: while some of them are narrow in purpose and length (“microfunctions”), others cover longer stretches of discourse (“macrofunctions”) (Kidd 1996: 290; Dalton-Puffer 2007a: 130, 2007b: 69) Accordingly, microfunctions can be described more specifically in terms of lexis and syntax whereas the linguistic patterns

3 The number of analytical studies on discourse functions is rather low: Dalton-Puffer 2007a, 2007b; Lose 2007
of macrofunctions tend to be less clear in this regard (Dalton-Puffer 2007b: 69). Any attempt of analytical description of discourse functions therefore has to take into account grammatical, cognitive and rhetorical dimensions in order to specify them (Dalton-Puffer 2007a: 130).

Table 1 Distinction Micro-/ Macrofunctions according to Kidd (1996)

<table>
<thead>
<tr>
<th>Microfunctions</th>
<th>Macrofunctions</th>
</tr>
</thead>
<tbody>
<tr>
<td>“small scale”</td>
<td>“large scale”</td>
</tr>
<tr>
<td>“specific language tasks with narrow purpose”</td>
<td>“general language tasks with broader purpose”</td>
</tr>
<tr>
<td>“limited stretches of discourse”</td>
<td>“larger stretches of discourse”</td>
</tr>
<tr>
<td>“small number of distinctive sentence patterns”</td>
<td>“not associated with particular sentence patterns or discourse signals”</td>
</tr>
<tr>
<td>“distinctive discourse markers”</td>
<td>“description on the rhetorical level”</td>
</tr>
</tbody>
</table>

Examples: defining, classifying, comparing, contrasting, expressing cause and effect, generalizing, exemplifying, expressing time relations

Examples: explaining, describing, reporting, narrating

As far as the lexis of micro-level discourse functions is concerned, a field which might contribute to our understanding of the lexis employed by them is English for Specific Purposes (ESP). In this field of study, Widdowson (1983: 92) claimed that a group of lexical items could be identified which operated across subject-specific boundaries. This “procedural vocabulary” is characterized by its high indexical potential, which allows it to be symbolically unspecific, i.e. it can be interpreted in different ways as exemplified by the verb “do”, which could function as a substitute for any particular type of action.⁴ A reason for their appearance across different contexts might be that these

[W]ords of wide indexical range are especially useful for negotiating the conveyance of more specific concepts, for defining terms which relate to particular frames of reference. (Widdowson 1983:93)

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⁴ A similar distinction has been made by Dutro & Moran (2002: 14-15) by their distinction between „brick vocabulary“ and „mortar vocabulary“.
McCarthy (1991: 78) described this procedural vocabulary as “words that enable us to do things with the content bearing words or schematical vocabulary”. Therefore, discourse functions which are conceptualized as operating on content can be assumed to consist to a high degree of procedural vocabulary as they can be used across different contexts.

Macrofunctions, in contrast, are more evasive with regard to their linguistic devices. Kidd (1996: 298) emphasizes that macrofunctions can be described with regard to their formal structure in syntactic and discoursal terms. However, these aspects cannot be described as narrowly as they can in microfunctions. In describing macrofunctions, analytical description has to focus on formal aspects such as tense, articles, pronouns and demonstratives and discoursal aspects such as “rhetorical features” (Kidd 1996: 298-299).

3.3 Unresolved questions

Despite the advances discourse functions have made with regard to their theoretical conceptualisation as exemplified by Zydatiß’s (2005) model, it has been pointed out that discourse functions in CLIL are still in the early stages of their development (Dalton-Puffer 2007b: 69) and that there is great demand for conceptual and empirical work (Dalton-Puffer 2011: 193). As the “language of schooling” has come into focus of the European Council’s language policy division, attempts to develop frameworks for implementation of discourse functions have been proposed (cf. Thürmann, Vollmer & Pieper 2010). Nevertheless, there is a wide range of unresolved questions on discourse functions concerning their exact number and linguistic materialization, their internal relations and their transversality.

With regard to their number, research on discourse functions varies greatly, and it has frequently been pointed out that a canon of widely accepted discourse functions does not exist (Vollmer & Thürmann 2010: 115). Table 2 gives an overview of discourse functions mentioned in literature on academic functions/discourse functions. In total, it identifies almost forty distinct functions with some only mentioned once (i.e. “taking other perspectives”, “matching”). Nevertheless, the table also shows that consensus can be found in these functions which were already mentioned in Otten and Thürmann’s (1993: 77) “purpose oriented language skills” as describing, evaluating & assessing,
explaining and drawing conclusions are among the most frequently mentioned discourse functions in literature. However, the great number of functions mentioned only once points to the need of further empirical research to establish the inventory of discourse functions applied in the classroom.

Empirical attempts to develop the inventory have so far mostly tried to deduce discourse functions through analysis of written modes and curricula (Vollmer & Thürmann 2010: 116). However, Vollmer (2009: 7) has pointed out that far too little is known concerning the actual use of discourse functions in oral classroom discourse. Attempts to suggest how discourse functions are employed in these spoken contexts to construct knowledge can be found in Dalton-Puffer’s (2007a) large scale study of Austrian CLIL lessons as well as in smaller studies (Llinares & Morton 2010; Lose 2007).

As far as the relationship between discourse functions is concerned, lack of research can be stated. Dalton-Puffer (2007a: 130) suggested structuring them on two levels as macro- and micro-functions according to their coverage in terms of length, purpose and their recognisability in terms of particular patterns. Thürmann, Vollmer and Pieper (2010: 26) took this distinction a step further claiming a conceptual relationship between these two levels and arguing that “[m]ost of the microfunctions relate to or are components of macrofunctions” (Thürmann, Vollmer, Pieper 2010: 25). However, this claim has only been made conceptually, and empirical proof is still missing.

Finally, another question opening up a large field of research concerns the use of discourse functions across subjects which has been termed “transversality” of discourse functions (Beacco 2010: 22). As these functions are assumed to constitute the language of schooling, it is implied that they are common to all subjects. Vollmer and Thürmann (2010: 112) propose that discourse functions are universal to all subjects and that the difference in communication between subjects is located in lexicon, genres, methods etc. Vollmer (2009a: 10), however, also points out that the transfer of knowledge about these discourse functions from subject to subject has not been investigated. Furthermore, another gap in research concerns the emphasis different subjects might put on different discourse functions.
Table 2: Academic/Discourse Functions

<table>
<thead>
<tr>
<th>Discourse function</th>
<th>Mentioned in</th>
</tr>
</thead>
<tbody>
<tr>
<td>analysing</td>
<td>Dalton-Puffer (2007a)</td>
</tr>
<tr>
<td>appreciating</td>
<td>Thürmann/Vollmer/Pieper (2010)</td>
</tr>
<tr>
<td>commenting</td>
<td>Bailey/Butler (2003)</td>
</tr>
<tr>
<td>contrasting</td>
<td>Thürmann/Vollmer/Pieper (2010)</td>
</tr>
<tr>
<td>deducing</td>
<td>Beacco (2010)</td>
</tr>
<tr>
<td>explaining</td>
<td>Thürmann/Vollmer/Pieper (2010)</td>
</tr>
<tr>
<td>exemplifying</td>
<td>Kidd (1996)</td>
</tr>
<tr>
<td>expressing opinion</td>
<td>Lose (2007)</td>
</tr>
<tr>
<td>expressing time relations</td>
<td>Kidd (1996)</td>
</tr>
<tr>
<td>generalizing</td>
<td>Kidd (1996)</td>
</tr>
<tr>
<td>hypothesizing, speculating</td>
<td>Dalton-Puffer (2007a), Lose (2007)</td>
</tr>
<tr>
<td>informing</td>
<td>Chamot/O’Malley (1987), Dalton-Puffer (2007a)</td>
</tr>
<tr>
<td>interpreting</td>
<td>Beacco (2010)</td>
</tr>
<tr>
<td>judging</td>
<td>Thürmann/Vollmer/Pieper (2010)</td>
</tr>
<tr>
<td>justifying</td>
<td>Beacco (2010)</td>
</tr>
<tr>
<td>labelling</td>
<td>Thürmann/Vollmer/Pieper (2010)</td>
</tr>
</tbody>
</table>
3.4 Arguments for explicit description and teaching

With regard to the acquisition of knowledge in CLIL classrooms, research has indicated that no differences in the content knowledge acquired in CLIL classes could be found in comparison to knowledge acquired in mainstream content classrooms (Dalton-Puffer 2008: 142). As no differences in structure between L1 and L2 lessons could be stated either, hypotheses have attributed CLIL’s efficiency to the construction of knowledge through learning and developing the language (Stohler 2006: 45). In other words, CLIL’s efficiency is attributed to a deeper level of semantic processing of the content through language. Given the premises that knowledge is structured and cognitive operations are developed by the use of discourse functions, the description of discourse functions might explain CLIL’s content paradox.

Therefore, a thorough description of them has become a means to overcome the language bath approach of natural language acquisition often assumed in CLIL as described in chapter one. Discourse functions emphasize that the assumption of “school language as a more or less colloquial register laced with technical terms of a specific
field of knowledge has to be abandoned” (Thürmann, Vollmer & Pieper 2010: 19). Kidd (1996: 295) stated that microfunctions might develop through mere participation in the content subject, however, explicit teaching might enhance the speed of learning. This is even more applicable to macrofunctions whose acquisition without guidance by the teacher has to be doubted (Kidd 1996: 299). The process of acquiring these “formal uses of language” (which discourse function could be seen as being a part of) have been claimed to usually take place intentionally (Snow 1987: 15).

Thus, in order to develop school language, explicit teaching and continuous work on discourse functions is needed. However, it has also been pointed out that “most CLIL teachers at secondary level are subject specialists with a good command of English but with little or no linguistic training “(Llinares & Whittacker 2010: 126). For many of these teachers, the misconception prevails that the language of a subject consists solely of subject-specific terms and language focus might be restricted to the use of glossaries. Therefore, an explicit description of discourse functions can be assumed to help these teachers include explicit language work in their classrooms on aspects of the use of content language which they might use but which they are not aware of.

Furthermore, a systematic description of discourse functions also has to go hand in hand with a systematic teaching because the language of schooling has been found to have severe social implications. Zwiers (2007: 94), in reference to Bourdieu (1977/1986), uses the term “academic capital” to refer to an imbalance between students from lower-class backgrounds to students of middle/upper class backgrounds in their relationship to academic language. According to Zwiers (2007: 94) lower class students and non-native speakers suffer from severe disadvantages with regard to the distinct communication patterns of academic language because these patterns are not part of their social background. This has also been referred to as “marginalising” of students who are unable to develop these abilities (Veel & Coffin 1996: 196). This hypothesis is in line with research by Cummins, which claimed that in bilingual education a significant latency period of five to seven years could be found among non-native students to develop age-appropriate levels of expression in CALP (Cummins 1991: 78).

Moreover, the explicit teaching of discourse functions is vital to keep a level of cognitive demand that is not severely below non-CLIL classrooms. Wildhage (2003:
89) identified discrepancy between cognitive and language abilities as one of the major problems of CLIL. In contrast to their cognitive ability to express complex aspects in their mother tongue, CLIL students’ language ability in the foreign language lags behind (Wildhage 2003: 89). As regards discourse functions this means that CLIL students might have already acquired some aspects of academic language proficiency, which is embodied in discourse functions in their mother tongue. However, in order to apply these in the foreign language and to develop them further, discourse functions and their linguistic features have to be made explicit to the students in the CLIL classroom.

Finally, discourse functions have been pointed out to be of great scaffolding value (Zydatiß 2010: 145-147). In Vygotsky’s (1978: 86) learning theory, it is assumed that children learn what lies within their Zone of Proximal Development which is defined as

\[ \text{T}he \ distance \ between \ the \ actual \ developmental \ level \ as \ determined \ by \ independent \ problem \ solving \ and \ the \ level \ of \ potential \ development \ as \ determined \ through \ problem \ solving \ under \ adult \ guidance \ or \ in \ collaboration \ with \ more \ capable \ peers \]

In this regard, discourse functions can become a tool for scaffolding purposes, i.e. to help students reach a higher level of development. This is a technique of providing help by giving a temporary structure to solve a particular problem and later removing this structure as soon as the student is able to solve the problem without it. Zydatiß (2010: 146), for example, gives visual representations to explain the structure of a range of discourse functions which might initially help students to increase their understanding of texts. Wildhage (2003: 98) argues that visual representations do not only increase receptive but also productive skills by combining logical structure of texts with content-specific concepts. As these visual and concrete scaffolding tools are gradually replaced by the use of linguistic expression only, students move from a more context-embedded use of language towards the context-reduced use which is characteristic for academic language (Zydatiß 2010: 147).
3.5 Finding discourse functions in actual classroom talk

As I have already pointed out, discourse functions have been mainly deduced from curriculum analysis or textbook analysis, which means that they are to a great extent based on written text and a thorough observation and analysis of discourse functions occurring in classroom discourse is still missing.

However, any attempt of finding discourse functions in classroom discourse has to take into account the particular nature of the classroom context. It has been pointed out that a significant aspect of the classroom context is that it is not simple “transmission of knowledge” that takes place there, but rather a dialogic negotiation of meaning (Lemke 1985: 8). The classroom has to be assumed to have its own conventions as it consists of so-called “activity structures” which denote shared “common sense of the structure of the activity” (Lemke 1990: 4; Lemke 1985: 10). It has been claimed that classroom interaction display typical interaction pattern with the IR(E/F) pattern (initiation, response, evaluation/follow up) or Triadic Dialogue as probably the most prevalent (Walsh 2006: 5; Lemke 1990: 100). In a significant quantity of current teaching practices, these patterns have been described as typical as they can often be found in classroom discourse in the teachers asking for an answer, nominating students, students answering and the teacher evaluating and/or elaboration following up.

It is within those patterns that content will be made sense of by teachers and students. Accordingly it might be within those patterns that discourse functions will be realized. Lemke (1985: 20) called the pattern underlying the actual activity structures “thematic structures”. His analysis suggested that establishing content means developing semantic relationships between terms through language (Lemke 1990: 21). In other words, “thematic structures” come into existence through the establishment of connections between terms. Therefore, Lemke (1985: 20) hypothesized that most of content knowledge is learned implicitly, by hearing, speaking, being corrected, but mostly by shaping our speech to conform to what we hear around us, inferring patterns of meaning relations between terms and longer expressions from their usage in context.
As regards the realization of discourse functions in the CLIL classroom, Lemke’s (1990: 22) remark on modern (science) classrooms arguing that most of the thematic development takes place mostly implicitly and the students are assumed to understand these patterns without formal teaching of them has strong implications as this implicitness might limit the actual number of findings of discourse functions in CLIL classes. Nevertheless, it does not diminish the importance of teaching and learning discourse functions as Lemke (1990: 95) also emphasizes that mastering content means having language available to express these semantic relationships.
4. Linguistic demands of the history classroom

Even though history is among the most frequently taught CLIL subjects and therefore one of the cornerstones of the approach and regarded as advantageous by many practitioners for its language outcomes, Theis (2010: 45) pointed at the scepticism expressed by many members of departments of didactics of history at university level. This chapter tries to answer the question in how far language in history is specified through the history curriculum as well as point at new ways the content subject history can be conceptualized in terms of its language.

4.1 Language in the current Austrian history curriculum

As CLIL history lessons do not have separate curricula of their own, a curriculum analysis of communicative demands of the subject has to be based on the mainstream history curriculum. However, the question regarding the awareness of the curriculum towards any of the demands as regards language in history can be briefly stated as nonexistent. Neither the curriculum for Austrian upper secondary vocational schools (BHS) nor the curriculum for upper secondary grammar schools (AHS) gives any description of these demands. Both of them are highly content-based and only the grammar school curriculum even mentions the category language though in vague terms (“application of language in various communicative situations”, “encouragement of critical reflection through involvement in and interpretation of sources” and “development of democratic communication culture”). Furthermore, the grammar school curriculum incorporates aspects of a “Kompetenzmodell” by describing the development “Sachkompetenz”, “Methodenkompetenz” and “Sozialkompetenz” as essential objectives of history learning and teaching. These skills suffer from the shortcomings which Heimes (2011: 43) pointed out for many “Kompetenzmodelle” in general, namely the focus on the cognitive components disregarding the practical side of these skills.

In contrast to these curricula, the guidelines for the new standardized “Matura” aim at facilitating communication between teachers and students. In those guidelines,

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5 E.g. 31.6 % of all CLIL subjects in Upper-Austria are history subjects (Gierlinger, Hametner & Spann 2007: 71).
6 http://www.bmukk.gv.at/medienpool/1003/htlallg.doc (7th September 2012)
7 http://www.bmukk.gv.at/medienpool/11857/lp_neu_ahs_05.pdf (7th September 2012)
Kühberger (2011: 15-17) gives a list of three levels with five to six operators each (e.g. level II comprising the operators “analysing”, “explaining”, “comparing”, “evaluating” and “classifying”). Even though these operators are an attempt to overcome a merely content-based curriculum, they are only an adaptation of Bloom’s taxonomy described in chapter 3, and therefore suffer from the same shortcomings as they focus only on the cognitive operational side and disregard language.

4.2 Discourse functions in the history classroom

In contrast to the negligence of language in the Austrian history curriculum which has been pointed out above, research on the integration of content and language is on its way to develop a theory-based account of communicative demands in history. Heimes (2011: 13-14), for example, states that literature on CLIL history is still small in quantity and has been dominated by foreign language researchers while history didactics researchers have a distant or even hostile relationship to the subject. However, recently a more integrated and interdisciplinary view of CLIL history has begun to develop (Heimes 2011: 14). Generally, two approaches to integrating foreign language learning processes and content learning can be identified and shall be briefly described in the following.

To begin with, a great body of research, which has attempted to integrate language learning and content learning by analysing how language is employed in the history classroom to construct subject matter knowledge has been significantly influenced by a genre approach. In the view of this approach, the development of the language of history implies the development of an expanding range of genres through the experience in the history classroom (Veel & Coffin 1996: 191). These genres were defined as “functional varieties of text with a recognisable social purpose within a cultural context and with recognisable stages within the text” (Veel & Coffin 1996: 228). By applying analytical tools from Systemic Functional Linguistics, these genres were claimed to move from “recording”, “sequencing” and “listing” in the early years of history in school towards “determining cause and effects” and “developing logical arguments” in the later years (Veel & Coffin 1996: 192).
A growing body of research has applied this notion to CLIL history classrooms (Morton 2009; Morton 2010; Linares & Whittacker 2010). One major drawback of this approach, however, is that it seems to overlook the culture-specific ways of the classroom. The genre approach was developed by the “Write it Right” Project in Australia where the reading and writing of long textual passages in the history classroom was of crucial importance for its aim to develop literacy. In contrast, CLIL classrooms in general have been described as displaying a largely oral character (Dalton-Puffer 2008: 148). Furthermore, even “lecturing” which would exhibit longer stretches of coherent discourse could not be found in CLIL lessons (Dalton-Puffer 2008: 149). Therefore, a description of the language of knowledge acquisition in terms of discourse functions (at the moment) might be more appropriate to explain the practices of knowledge acquisition in the CLIL history classroom as well as to the language needs of students in these classrooms.

On the other hand, there are approaches that try to integrate history and language teaching by developing models which incorporate aspects of language teaching and the didactics of history. (Staschen)- Dielmann (2007, 2010), for example, defined “narrative competence” as the essential “bridging competence” integrating historical learning and foreign language learning in order to overcome a separation of content and language competence. “Narrative competence”, which is a concept developed by the didactics of history, has thereby become vital for a shared consideration of language by both didactics of history as well as foreign language teaching. This competence developed out of notions about the constructedness of history and has been considered as one of the key areas of history (cf. Bodo v.Borries 2008: 44). It expresses the notion that students have to become aware of history as essentially constructed through the present and as essentially multiperspectival in its nature (Wildhage 2003: 79). As these aspects are achieved through language, linguistic demands of the history classroom require closer attention. Accordingly, Dielmann (2010: 232) emphasized discourse functions as the key concept of “narrative competence” and maintained the double focus on both cognitive as well as linguistic aspects in the history classroom.

Another approach which aimed at overcoming a split perspective of CLIL history by integrating content and language learning can be seen in Heimes’ model of “history
skills”. Similarly to Dielmann (2007, 2010), Heimes (2011: 15) aims at finding an intersection concept between the didactics of history and foreign language teaching and defines this intersection as “history skills”. These “history skills”, which take on board language learning strategies as well as study skills in history, integrate content learning and foreign language learning as the development of content concepts as well as the development of language terms is seen as taking place in parallel.

Regardless of the differences which Dielmann’s (2007, 2010) and Heimes´ (2011) model might exhibit by referring to different “Kompetenzmodelle”, for the aims of this thesis it is important that they both compare with each other as they both consider discourse functions (academic language functions) as playing a central role in the development of a unit integrating language and content either called “narrative competence” or “history skills” (Dielmann 2010: 230-231; Dielmann 2007: 88; Heimes 2011: 69-71).

Given the priority of spoken discourse in CLIL classrooms, the essential linguistic character of history and the importance which is given to discourse functions in the theoretical models described above, it is surprising that research on discourse functions focussing explicitly on CLIL history classrooms is almost non-existent. However, a description is needed as subject related discourse functions in history have been claimed to be a key to increasing historical competence.

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8 An exception is Llinares & Morton’s (2010) study of “historical explanation” in a contrasting analysis of language in CLIL history classrooms and mainstream history classes in Spain.
5. Research question, data and methodology

5.1 Research question

As already pointed out in the previous chapter, very little empirical research concerning specific discourse functions in the setting of CLIL classrooms appears to have been carried out. So far, great weight has been laid on the occurrence of discourse functions in written forms of language while the actual occurring language in the classroom has been widely neglected and therefore opens up a wide field of research.

This study is an attempt to fill this gap by investigating the construction of content knowledge through language in CLIL history lessons. It tries to answer the question in how far the knowledge building process in the CLIL history classroom employs discourse functions to reach its aims. Therefore, it tries to demonstrate how the semantic relationships between concepts are realized in these CLIL history lessons under observation.

In order to answer this question, the following set of sub-questions shall be considered within this thesis:

1. How frequently do discourse functions occur in the data?
2. What do these discourse functions reveal about the linguistic repertoire that teachers and students employ?
3. Can evidence for explicit language work on these discourse functions be found? (e.g. metatalk)
4. What classroom activity structures do these discourse functions correlate with?

5.2 Data and method of analysis

The database which forms the foundation of the following study was formed by transcripts of natural classroom interaction. It comprises 18 CLIL history lessons conducted by three different teachers, all of whom were trained EFL teachers. All of these lessons took place in upper secondary classes at three different vocational schools (BHS). Together these lesson transcripts formed a corpus which consists of about 129,000 words comprising more than 660 minutes of recording. Therefore, the
recording of the average lesson was about 45 minutes except for three double lessons which consisted of twice this amount.

In order to investigate the inventory of discourse functions in these lessons, a descriptive-empirical study was conducted. As a thorough analysis of all the discourse functions dealt with in literature would go beyond the constraints of this thesis by far, I laid the focus on four frequently mentioned discourse functions, namely defining, explaining, describing and classifying. This set of functions was chosen as these functions can be assumed to play an important role in the history classroom and therefore can be observed in a wider sample of classroom transcripts. Furthermore, as far as describing and classifying are concerned, CLIL research is inexistent both on a conceptual as well as on an empirical level.

The process of analysis comprised the following steps: Firstly, an initial impressionistic analysis and tagging of the corpus on the basis of assumed communicative intent of teacher and student utterances was carried out. In a second step, an explicit and detailed framework for analysis, which operationalizes the discourse functions in terms of the lexico-grammatical resources they are supposed to exhibit, was constructed (see chapter 6), mainly based on ESP literature (Trimble 1985, Widdowson 1979a, Widdowson 1979b). This framework was employed to estimate the use of lexico-grammatical features typically occurring within the patterns of defining, explaining, describing and classifying by comparing the supposed discourse functions tagged in the first step with those features claimed in ESP literature and described in the second step. Finally, the activity pattern of these discourse functions was analysed so that any influence of the interactional patterns on the realization of discourse functions could be described.
6. **The patterns of defining, describing, classifying and explaining**

In order to observe the realization of discourse functions in actual classroom language and the interaction patterns they are realized through, it is vital to give a definition of the discourse functions under observation. Therefore, this chapter will be concerned with describing the patterns and characteristics of four discourse functions that this thesis focuses on: *defining, describing, classifying* and *explaining*.

6.1 **Defining**

*Defining* has been called the “perhaps most obvious of all microfunctions” (Kidd 1996: 294). In contrast to other discourse functions, *defining* has been the focus of attempts of conceptualisation. Its syntactic pattern has been regarded as rather amenable to description as it consists of a clear structure (Dalton-Puffer 2007b: 69; Kidd 1996: 294) described this structure as “standard definitions” consisting of the pattern “an X is a Y having characteristic Z”.

Another attempt to conceptualize definitions was developed by Trimble (1985), who distinguished three kinds of simple definitions: “formal definitions”, “semi-formal definitions” and “non-formal definitions”. A “formal definition” in Trimble’s (1985: 75-76 terms is similar to Kidd’s standard definition and consists of the equation “Species= Genus + Differentia”, in other words, a formal definition gives the name of the term, states its class and its distinguishing feature (e.g. “A strigil was a metal tool used to scrape sweat and dirt from the body.”). In contrast, a “semi-formal definition” contains only two of the three basic defining elements: the term being defined and the statement of difference (Trimble 1985: 77) (e.g. “A strigil was used to scrape dirt from the body”). Finally, non-formal definitions only give the name of the term to be defined and a word that can be used synonymously (Trimble 1985: 78) (e.g. “A strigil was a tool”). As pointed out by Dalton-Puffer (2007b: 70), the realization of the pattern depends on the pragmatic situation and therefore definitions deviating from the standard/ formal definition can still be appropriate.
In contrast to *defining*, the discourse function *explaining* seems to be less straightforward to characterize. The entry “explain” in the OED makes this broad coverage of explaining visible. According to the OED, it covers “the sense of spoken words, motives of actions” as well as “the cause, origin or reason of” something. This variation of “what” an explanation actually explains is reflected in literature on explaining. Martin & Rose (2003: 107, quoted in Mohan & Slater 2005: 156), for example, emphasized that

> [t]he meanings of technical terms in professional occupations, such as economics, linguistics or biology (e.g. inflation, malfunction, gene), refer not to concrete objects, but to abstract concepts, and can only be learned through a long series of explanations in secondary and tertiary education. Although technical entities like genes, atoms or galaxies can potentially be pointed to and named through instruments, the only way to fully understand them is by getting fully involved in scientific explanations, typically in writing.

In this regard, *explaining* means to explain the sense of words as pointed out by the OED. This suggests a relation of explaining to defining; however, in contrast to *defining*, *explaining* is characterized by “a long series of explanations”. It can be seen as a more thorough form of defining as learning and understanding of a significant number of subject specific terms in the humanities, social sciences and science disciplines involves more than defining the term (Martin 1992: 543; quoted in Mohan & Slater 2005: 156).

However, the second part of the OED’s entry (“make clear the cause, origin or reason of”) is particularly important with regard to the history classroom and the subject
history in general. It has been pointed out that historical causation is “one of the most fundamental topics of historical understanding, and therefore also one of the most important aspects of history instruction” (Voss 1994: 403, quoted in Coffin 2004:265), as well as one of the important thinking skills of the history classroom (Zwiers 2006:321) and one of the “strong motifs in history discourse” (Schleppegrell & Oliveira 2006: 256). Accordingly, some attempts to characterize explaining have limited it to causality and consequence. In this view, explaining involves the linking of an explanandum to an explanans through semantic relations expressing cause or consequence. In her analysis of CLIL Biology lessons, Lose (2007: 99) described the linguistic resources expressing causality and consequence explanations as mainly comprising conjunctions (e.g. because, since used for causality; therefore, for this reason, as a result used for consequence).

Table 3 Causality and Consequence

<table>
<thead>
<tr>
<th>Causality</th>
<th>The Roman Empire collapsed BECAUSE Germanic tribes invaded the Roman Empire</th>
<th>BECAUSE it was invaded by Germanic tribes. it collapsed.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consequence</td>
<td>Germanic tribes invaded the Roman Empire</td>
<td>HENCE CONSEQUENTLY it collapsed. AS A RESULT</td>
</tr>
</tbody>
</table>

Adapted from Widdowson et al. 1979:118.

With regard to history, however, a description of explanations has revealed that they are more complex as history usually involves multifactorial (abstract) explanations and therefore more lexico-grammatical resources than just conjunctions are needed. Besides conjunctions, causal relations have been demonstrated to be realized by verbs (e.g. “The Barbarian Invasion caused the fall of Rome”), by circumstantial elements (e.g. “Because of the Barbarian Invasion, Rome fell”) or by causal abstract nouns (e.g. “The reason for the fall of Rome was the Barbarian Invasion”) (Llinares & Morton 2010: 49-50). Coffin
(2004:263) pointed out that history requires students to develop from explanations which focus on human agency towards explanations which focus on impersonal, abstract structures. She found a strong correlation between the latter and the use of causal abstract nouns (e.g. reasons, factors, outcomes, consequences) (Coffin 2004:274).

As limiting explaining to either explanations of terms or explanations of causes and consequences seems counterintuitive to its meaning as it limits the actual complexity of explanations, a description of explaining covering both is needed. This is in line with Mohan and Slater’s (2005: 153) view, which regarded (scientific) explanations to cover both taxonomies of concepts as well as logical sequences of reasoning. Dalton-Puffer (2007a: 145) and Smit (2008: 288) suggested applying Lemke´s (1990: Appendix C) toolbox for analysing semantic relations between terms. Even though Dalton-Puffer (2007a: 145) pointed out the shortcomings of Lemke´s semantic relations as they are not all operating on the same level, it also seems to be these shortcomings that make them useful for describing explaining as the toolbox covers the taxonomic aspect as well as the logical aspect of explanations. The description of causal explanations given above can be seen as a linguistic description of the Cause/Consequence connection covered by “Logical relation”.

Table 4 Lemke´s toolbox

<table>
<thead>
<tr>
<th>Type of relation</th>
<th>Subtype</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal</td>
<td>Attributive</td>
<td>The apple is red.</td>
</tr>
<tr>
<td></td>
<td>Classifier</td>
<td>A winesap apple</td>
</tr>
<tr>
<td></td>
<td>Quantifier</td>
<td>The tree apples</td>
</tr>
<tr>
<td>Taxonomic</td>
<td>Token</td>
<td>John is a student.</td>
</tr>
<tr>
<td></td>
<td>Hyponym</td>
<td>Any dog is a mammal.</td>
</tr>
<tr>
<td></td>
<td>Meronym</td>
<td>The drawer of a desk.</td>
</tr>
<tr>
<td></td>
<td>Synonym</td>
<td>Please go. Please leave.</td>
</tr>
<tr>
<td></td>
<td>Antonym</td>
<td>Please leave. Please stay</td>
</tr>
<tr>
<td>Transitivity</td>
<td>Agent</td>
<td>The man built the house.</td>
</tr>
<tr>
<td></td>
<td>Target</td>
<td>The man built the house.</td>
</tr>
<tr>
<td></td>
<td>Medium</td>
<td>The jar broke.</td>
</tr>
<tr>
<td></td>
<td>Beneficiary</td>
<td>He gave my aunt the jar.</td>
</tr>
<tr>
<td></td>
<td>Range</td>
<td>He walked a mile.</td>
</tr>
<tr>
<td></td>
<td>Identification</td>
<td>The white part is the 2s orbital.</td>
</tr>
<tr>
<td></td>
<td>Possession</td>
<td>My aunt has the jar.</td>
</tr>
<tr>
<td>Circumstantial</td>
<td>Logical</td>
<td></td>
</tr>
<tr>
<td>----------------</td>
<td>---------</td>
<td></td>
</tr>
<tr>
<td>Location</td>
<td>Elaboration</td>
<td></td>
</tr>
<tr>
<td>Circumstantial</td>
<td>A, i.e. B (Exposition), A, e.g. B (Exemplification), A, viz B (Clarification)</td>
<td></td>
</tr>
<tr>
<td>Time</td>
<td>Addition</td>
<td></td>
</tr>
<tr>
<td>Material</td>
<td>A, and B (Conjunctive), Not A, nor B (negative conjunctive), A, but B (adversative)</td>
<td></td>
</tr>
<tr>
<td>Manner</td>
<td>Variation</td>
<td></td>
</tr>
<tr>
<td>Reason</td>
<td>Not A, but B (Replacive), A, but not B (Exceptive), A or B (Alternative)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Connection</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cause/Consequence, Evidence/Conclusion, Problem/Solution, Action/Motivation etc.</td>
<td></td>
</tr>
</tbody>
</table>

A further implication which Dalton-Puffer (2007a: 140) deduced from the OED entry of explaining is the “strong orientation towards an interactant in the talk”. Therefore, explaining has been seen in de Gaulmyn’s (1986: 125) perspective as “telling you what you don’t know” (quoted in Dalton-Puffer 2007a:140, Smit 2008:280). Accordingly, Smit (2008: 280) argued that “participants”, “explanandum”, “explanantia” and “interaction” are the basic ingredients of explaining. In order to determine stretches of explaining in the classroom discourse, this means that explanation sequences can be identified by the “interactively formulated explananda and the ensuing interactionally constructed explanations” (Smit 2008: 291).

### 6.3 Classifying

*Classifying* is another discourse function which is usually seen as a microfunction. According to the OED, classifying means “[t]o arrange or distribute in classes according to a method or a system” (OED 1989). Therefore, basic components of any classification are an object to be classified, a hypernym denoting class and some underlying principle. In Trimble’s (1985: 86) terms, a *complete classification* consists of “the item (or items) being classified”, “the class to which the items (members) belong
to” and “the basis (or bases) for classification”. Therefore, an example like “We can classify particles into three types in respect to size: 1. Those easily visible to the naked eye; 2. Those which cannot be distinguished even under powerful optical microscopes; and 3. Those molecules of a substance like water or sugar.” (Trimble 1985: 86), can be seen as a realization of the discourse function “classifying” containing the three elements of a complete classification. In this case “in respect to size” represents the basis for classification, which could also be entailed implicitly. In Lemke´s (1990: 202) terms, classifications have a particular thematic pattern consisting of “what is to be classified” (the item), “in what category the classification is to be made” and the fact “that there is more than one type (the Classifiers) to choose from” (the class(es)), all of which are expressing semantic relationships.

In order to give a canonical representation of the patterns involved in classifying, the structure pointed out by Widdowson et al. (1979b:77-78) in their coursebook “Reading and Thinking in English” could be used. Widdowson et al. (1979: 77-78) identified two types of classification. Type 1 can be described as a “bottom-up” approach by which specific class members are classified in relationship to their higher order and more general term. Type 2, in contrast, expresses a top-down approach whereby a general group is sub-divided into smaller groups.

*Figure 4 Classifying Type I*
As regards *defining*, the question arises where to draw the line to *classifying*. Especially type 1 as described by figure 5 seems to have similarities to Trimble’s “non-formal definition” as it expresses a hierarchical relationship between a specific term and a general class. In other words, every definition seems to entail some element of classifying which blurs the boundary between *defining* and *classifying*. The difficulty arises out of the hyponymy (*x is a kind of y*) that both discourse functions seem to entail. (Both seem to be a part of the “taxonomic relation type” of Lemke’s (1990: Appendix C) chart). Trimble (1985: 86) was aware of the close relatedness of definitions to classifications and regarded the feature of “statement of difference” in definitions and “basis for classification” in classifications as the dividing line. While the first tries to distinguish the item from all the other class members, the latter tries to give a defining feature that all members of the class have in common (Trimble 1985: 86).

### 6.4 Describing

Even though the macrofunction “describing” is among the most frequently mentioned discourse functions in literature, it has so far not been focused on in research. If we compare the OED’s entry “explaining” with “describing” (see table 4), we can see that describing is distinguished from explaining in a similar way as Dalton-Puffer (2007a: 140) distinguished *defining* from *explaining*: they differ in their “communicative intent”. Notwithstanding their similarities as regards the formulations “give details of”
in explaining and “give a detailed or graphic account of” in describing, their difference seems to be that describing does not imply a comprehension difficulty on part of one of the interactant(s). Therefore, describing can be rather seen as an instance of what de Gaulmyn (1986: 125, quoted in Dalton-Puffer 2007: 140) called “informing”, namely “telling you what I know”, which does not require additional information through the interaction. In the context of the history classroom and its wide range of sources and materials (cf. pictures, photographs, cartoons, maps, diagrams, charts, graphs, etc (cf Wildhage 2003: 91)), it can be assumed that this will mean that describing is not only realized in “telling you what I know”, but also in the rather more contextualized “telling you what I see”.

Table 5 Explaining & Describing (OED)

<table>
<thead>
<tr>
<th>OED: Explaining</th>
<th>OED: Describing</th>
</tr>
</thead>
<tbody>
<tr>
<td>“A mutual declaration of the sense of spoken words, motives of actions etc. with a view to adjust misunderstandings”</td>
<td>“To set forth in words, written or spoken, by reference to qualities, recognizable features, or characteristic marks”</td>
</tr>
<tr>
<td>“Make plainly visible, give details of; to make clear the cause, origin or reason of…”</td>
<td>“To give a detailed or graphic account of”</td>
</tr>
<tr>
<td>“A statement that makes things intelligible”</td>
<td></td>
</tr>
</tbody>
</table>

Despite the fact that “describing” also has an everyday communication realization, the discourse function describing used in school contexts is significantly different and requires a particular way of using language. Its difference to face-to-face interaction in everyday use was described for primary school contexts. Michaels (1981), for example, observed that primary school children were supposed to conform to particular discourse conventions by the teacher in so-called “sharing time” (also known as “show and tell”) situations where children are asked to stand up in front of the class and describe an object or an event. This study by Michaels (1981: 427-428) revealed that children in these situations were required to give a context-reduced description conforming to a particular schema of the teacher in which

1. objects were to be named and described, even when they were in plain sight;
2. talk was to be explicitly grounded temporally and spatially;

Table 5 Explaining & Describing (OED)

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<thead>
<tr>
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<tr>
<td>“A statement that makes things intelligible”</td>
<td></td>
</tr>
</tbody>
</table>
3. minimal shared background or contextual knowledge was to be assumed on the part of the audience;
4. thematic ties needed to be lexicalized if topic shifts were to be seen as motivated and relevant.

These principles can be seen as the early stages in the development of the discourse function *describing*. For many of these children in the study, it might have been the first encounter with this more written-like way of describing. At later stages, in the context of lower and upper secondary classes, the targets of *describing* change as the subjects set boundaries as to the “what” to describe. These targets range from concrete objects to rather abstract ideas. In the subject matter of history, for example, *describing* might cover

- Concrete objects: e.g. a Roman coin, a WW II photograph, etc.
- Places: e.g. a medieval castle, a Roman military fort, a city in the Early Modern Period, etc.
- Processes: e.g. the Industrial Revolution, mummification in Ancient Egypt, the “Weighing of the Heart”, the Barbarian Invasion
- Abstract structural representations: e.g. the Feudal system, the Roman constitution, etc.

Furthermore, each discipline is characterized by its specific look on these targets. A Roman coin, for example, could be the object of study for a chemist as well as for a historian. However, a chemists’ description will be entirely different from the historians as the chemical description might focus on the substances which the coin consists of whereas the historian will describe aspects such as its value, its symbols etc.

Nevertheless, both subject-specific views mentioned in this example have the focus on structure in common and by employing the discourse function *describing*, they can be assumed to require similar language patterns. Therefore, *structural description* can be seen as one sub-category of describing. Structural descriptions can be regarded as giving account of the parts of an object (Widdowson 1979: 39). Therefore, they always express a part-whole relationship. A description of the structure of a Roman coin, for
example, could describe its symbolic components (parts) as making up the surface of the coin (whole). Similarly, a description of a medieval castle covers components such as the drawbridge, the moat, the curtain wall, the bailey etc.

A canonical representation of “structural description” can therefore be assumed to be formed by a whole and a part linked together by verbs such as “consists of, “contains” etc. The reversed construction is equally possible stating the parts first and then linking them to the whole by the means of verbs such as “make up”, “form” etc. Therefore, structural description can be said to express a relationship of meronymy (x is a part of y) in contrast to classifying and defining, which have been conceptualized as expressing the relation of hyponymy (x is a kind of y).

Figure 6 Structural Description Type I

<table>
<thead>
<tr>
<th>Whole</th>
<th>consists of</th>
<th>Parts</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>is divided into</td>
<td></td>
</tr>
<tr>
<td></td>
<td>is made up of</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Includes</td>
<td></td>
</tr>
</tbody>
</table>

Figure 7 Structural Description Type II

<table>
<thead>
<tr>
<th>Parts</th>
<th>make up</th>
<th>Whole</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Form</td>
<td></td>
</tr>
</tbody>
</table>

Adapted from Widdowson et al. (1979) and Gillet et al. (2009)

Closely related to structural description, the discourse function can also be concerned with what Trimble (1985: 71) called physical description, namely the act of describing the physical appearance in terms of “dimension, shape, weight, material volume, colour, and texture.” Trimble (1985: 71) points out the importance of space order in physical descriptions which require the use of more or less general locative terms as “above”, “below”, “in the centre”, “to the right” etc.
Moreover, “description” can also imply a focus on the functional aspect of something. History, for example, often analyses artefacts whose purpose is no longer obvious as they belong to a different culture or a different way of living. Thus, functional description involves the linking of the whole (or of one of its parts) to a function or a purpose. In contrast to structural descriptions, a functional description in the case of history will involve the use of the past tense. A canonical functional description can be constructed by a range of verbs to link the whole/part to its respective function. A test in the MICASE Corpus revealed that all of these could be found in actual spoken academic English (with the exception of the long phrase “performs the function of”). Furthermore, the function of a device or of one of its parts can also be expressed by verbs denoting causality, and therefore functional description is closely linked to causality (Trimble 1985: 72).

*Figure 8 Functional Description Type I*

<table>
<thead>
<tr>
<th>Whole/part</th>
<th>served to</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>was responsible for</td>
<td></td>
</tr>
<tr>
<td></td>
<td>performed the function of</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Enabled</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Controlled</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Regulated</td>
<td></td>
</tr>
</tbody>
</table>

*Figure 9 Functional Description Type II*

<table>
<thead>
<tr>
<th>The A One</th>
<th>Function of the</th>
<th>Whole/part is to</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purpose</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aim</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Objective</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Role</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Adapted from Widdowson et al. (1979) & Gillet et al (2009)*

These two canonical descriptions of structural descriptions and functional descriptions cover most of the targets described above. Concrete objects, places and abstract
representations can be described by either a functional or a structural or by both discourse functions and offer a rather static description.

However, a great part of historical description is concerned with a dynamic view. Therefore, *process descriptions* cover a third aspect of *describing*, defined as “a series of steps or stages that are interrelated in that each step (but the first) is dependent on the preceding step and that all steps lead toward a definite goal” (Trimble 1985: 72). In general, descriptions of processes can be seen as stretching along a continuum from rather simple, “step-by-step” processes to more complex processes of certain stages. A description of the process of mummification, for example, might be located on the lower, more simple end whereas a description of the process of the Industrial Revolution would involve a more complex description.

For a canonical representation of “process description” a vital rhetorical element might be discourse markers expressing sequence (first, then etc.). Furthermore, it can be assumed that the pattern of “process descriptions” will also be characterized by heavy use of passive voice as this grammatical feature allows foregrounding the process itself and not the actor.

*Figure 10 Process Description*

![Diagram of process description steps]

Adapted from Gillet et al. (2009)
7. Empirical analysis of defining, classifying, explaining and describing

The previous chapter attempted to give a framework for the four discourse functions under observation in this thesis. After this illustration of typical features which might be expected to occur in those discourse functions, this chapter tries to analyse the occurrence of discourse functions within 18 CLIL history lessons. Generally speaking, discourse functions were found in all of these lessons except for two lessons which stood out in their pattern of interaction as one of them was highly unstructured (the teacher employed an individualized learning method) and the other was extremely rigid in the teacher's control of the interaction. Table 6 gives a quantitative overview of the sequences tagged in the lessons as containing discourse functions as well as the way they were realized. An in-depth analysis of these discourse functions shall be provided in the following subchapters.

Table 6 Quantitative overview of discourse functions tagged in the corpus

<table>
<thead>
<tr>
<th>Discourse Function</th>
<th>Quantity</th>
<th>Performed by Teacher</th>
<th>Performed by Student</th>
<th>Co-constructed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Explaining</td>
<td>39</td>
<td>6</td>
<td>2</td>
<td>31</td>
</tr>
<tr>
<td>Describing</td>
<td>38</td>
<td>9</td>
<td>4</td>
<td>25</td>
</tr>
<tr>
<td>Defining (disregarding translations)</td>
<td>19</td>
<td>17</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Classifying</td>
<td>12</td>
<td>6</td>
<td>-</td>
<td>6</td>
</tr>
</tbody>
</table>

7.1 Defining in CLIL history lessons

Defining has been described as consisting of a relatively stable linguistic and schematic pattern, which establishes the basic semantic relationship between terms. Teaching history in a foreign language could be considered a subject that demands a particularly high degree of these defining sequences during classroom interaction as the students can be assumed to encounter a high proportion of subject-specific terminology that they will not be familiar with. This concerns either the concept behind the term itself or, if they
are familiar with the concept, definitions that could be expected to be needed in order to link the term to an already existing concept. However, the data of the corpus analysed proves this assumption to be wrong. Generally speaking, definitions as described in chapter 5.1 by the types “formal definition”, “semi-formal definition” and “non-formal definition” turned out to be rare among the 18 CLIL history lessons of the corpus. As displayed in table 5, definitions which could be classified as either “formal”, “semiformal” or “informal definitions” amounted to about nineteen instances, which means that on average definitions occurred only once per lesson.

Moreover, giving definitions was found to be an activity almost entirely performed by teachers as only one instance of a student definition could be found. As it was uttered under the special conditions of discussing a history test, it will be discussed in “Metadiscourse” (see below). The majority of these definitions uttered by the teachers can be classified as “formal definitions” as they proved to contain the pivotal elements of “class” and “distinguishing feature”. Instances of these formal definitions given by teachers are presented in extracts 7.1 a. to 7.1 f. The first definition below, for example, first specifies the class (“place”) that monastery belongs to and then gives a distinguishing feature (“where the monks live”).

*Extracts 7.1 a.-f.*

a. T: places where the monks live, yes… […] (“monasteries”)

b. T: right. a wreath is .. the round thing that they put on their heads (“wreath”)

c. T: this is the money that goes to the…husband. …and the husband administers it, yeah? .. he can do with it what he likes, but … (“dowry”)

d. T: a governor in the provinces […] (“proconsul”)

e. T: what are labourers? ..ah.. labourers are people who are paid by the day, .. taglöhner (“labourers”)

f. T: ah whatah .. whatah .. do you call a type of oh/of (?) family father that decides everything and is very strict and .. the opposite of democratic (?) (“patriarch”)

Therefore, the teachers’ definitions indicate that they implicitly know the pattern which constitutes the discourse function defining. Although they used the “semi-formal” and

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9 Mentioned in Dalton-Puffer (2007: 136)
“informal” type of definitions as well, the latter ones only constitute a small number in contrast to the relatively high number of formal definitions uttered by teachers. This indicates that formal definitions were the preferred way of teachers to form the discourse function defining.

The most prominent strategy to avoid defining among students as well as among teachers, however, was found to be translating. The corpus revealed 18 instances of translating terms when the need of expressing the meaning of a concept arose. The teachers showed this reaction to defining almost twice as often as students. The prevalence of translations used to express the meaning of a term might be explained by the IR(E)/F pattern which characterizes most of the CLIL interactive discourse. As these patterns have the tendency to minimise students’ answers to one word or short phrase answers, they are more likely to lead to translations instead of definitions.

*Extract 7.2 “Commemorare”*

01 Sf: was heißt commemorate?
02 T: commemorate ah in erinnerung rufen

*Extract 7.3 ”Peace Treaty”*\(^{10}\)

01 T: what is a peace treaty?
02 Wolfgang: ein (?) friednesvertrag
03 S: Friedensvertrag
04 T: friedensvertrag.

Furthermore, as IR(E)/F patterns favour the teacher’s control of interaction, another consequence concerning defining seems to be that it is the teacher who asks for the majority of the definitions. Teachers do not only give almost all of the definitions, but they are also the ones who ask for the great majority of them. This strong element of control over classroom interaction materializes in twice as many requests for definitions by a teacher. However, students did not comply with the teachers’ requests for definitions. Moreover, there is a significant number of defining sequences where the teacher did not request the definition but simply assumed that the word would be

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\(^{10}\) Mentioned in Dalton-Puffer (2007: 137)
unknown by the students and therefore gave the definition within the same turn they used the term (see extract 7.4 below).

*Extract 7.4 “Ford”*

01 T: and a ford. Where the river could be crossed. What’s a ford?... a ford in a river. .. a place where a river can be crossed. What must that be?

The patterns used to instigate definitions turned out to be fairly similar across the data. Definitions in CLIL history classrooms appeared to be usually given after questions which were either some form of “*what does X mean*” or of “*what is X*”? Interestingly, the former phrase did not lead to any formal definitions and seems to be treated as a question demanding a translation. However, with a small sample size, caution as regards this generalization must be applied.

The phrase “define X”, which could be regarded as the most explicit way of asking for the discourse function *defining*, was found to be extremely rare and could be observed only twice in the data. The first instance was related to the only formal student definition (which will be dealt with under “Metadiscourse”) and the second could be found in the teacher’s call “yeah, that's right, now let's let's first of all define: when is the flood?” The latter does not ask for a definition in the sense defined above but rather the naming of a fact and is therefore unrelated to the discourse function under observation.

As regards the actual definiendum, Wildhaage (2003: 102) divided subject-specific terminology into “Subject specific terms in a narrow sense” (e.g. “Stab in the Back Myth”) and “Transferable vocabulary and word fields used in historical and political discourse” (e.g. “to pass an act”). Only four definienda fall into the former group (“Pilgrims”, “Mayflower Compact”, “proconsul”, “Cold War”), while all the other terms can be regarded as vocabulary highly transferable to other contexts. Interestingly, all four definienda denoting “Subject specific terms in a narrow sense” were defined through a formal definition. This indicates a tendency of definitions being used for “Transferable vocabulary and word fields used in historical and political discourse” whereas “Subject specific terms in a narrow sense” can be rather assumed to be typically covered by *explaining* sequences.
Table 7 Occurrence of defining in the corpus (including definitions within explanation sequences)

<table>
<thead>
<tr>
<th>Term</th>
<th>Description of interaction and language pattern</th>
<th>Asked by</th>
<th>Phrase used for asking</th>
</tr>
</thead>
<tbody>
<tr>
<td>commemorate</td>
<td>Translation by teacher</td>
<td>St</td>
<td>“was heißt X”</td>
</tr>
<tr>
<td>Harvest</td>
<td>Non-formal definition &amp; translation by teacher</td>
<td>St</td>
<td>[intonation]</td>
</tr>
<tr>
<td>Pilgrims</td>
<td>Formal definition co-constructed</td>
<td>T</td>
<td>“who were the X”</td>
</tr>
<tr>
<td>commemorate</td>
<td>Translation &amp; non-formal definition by teacher</td>
<td>St</td>
<td>“was heißt X”</td>
</tr>
<tr>
<td>Mayflower Compact</td>
<td>formal definition by teacher</td>
<td>T</td>
<td>“the mayflower was what”</td>
</tr>
<tr>
<td>Revive</td>
<td>Translation by teacher</td>
<td>T</td>
<td>“what does X mean”</td>
</tr>
<tr>
<td>tribe</td>
<td>Translation by student</td>
<td>T</td>
<td>“do you know what X is”</td>
</tr>
<tr>
<td>Ford</td>
<td>Formal definition by the teacher</td>
<td>T</td>
<td>“what is X”</td>
</tr>
<tr>
<td>Expel</td>
<td>Translation by student, synonym by teacher</td>
<td>T</td>
<td>“what does X mean”</td>
</tr>
<tr>
<td>Proconsul</td>
<td>Formal definition by teacher &amp; German translation asked and given by teacher</td>
<td>T</td>
<td>“what is X”</td>
</tr>
<tr>
<td>Wreath</td>
<td>Formal definition by the teacher</td>
<td>Not asked</td>
<td>-</td>
</tr>
<tr>
<td>Persecuted</td>
<td>Translation by teacher</td>
<td>T</td>
<td>“what does X mean”</td>
</tr>
<tr>
<td>peace treaty</td>
<td>Translation by students</td>
<td>T</td>
<td>“what is X”</td>
</tr>
<tr>
<td>civil war</td>
<td>Translation by students</td>
<td>T</td>
<td>“do you understand the term X”</td>
</tr>
<tr>
<td>Autocrat</td>
<td>Semi- formal definition by teacher</td>
<td>T</td>
<td>“do you know what X means”</td>
</tr>
<tr>
<td>Tribe</td>
<td>Translation by teacher</td>
<td>St</td>
<td>“what is X”</td>
</tr>
<tr>
<td>Abandon</td>
<td>Translation by teacher</td>
<td>Not asked</td>
<td>-</td>
</tr>
<tr>
<td>Virtuous</td>
<td>Translation by teacher</td>
<td>St</td>
<td>“what is X”</td>
</tr>
<tr>
<td>Witnesses</td>
<td>Formal definition by teacher</td>
<td>St</td>
<td>“what is X”</td>
</tr>
<tr>
<td>act on her behalf</td>
<td>Translation by teacher</td>
<td>T</td>
<td>“what does X mean”</td>
</tr>
<tr>
<td>Midwife</td>
<td>Semi-formal definition by teacher</td>
<td>T</td>
<td>“you know what X is”</td>
</tr>
<tr>
<td>Physician</td>
<td>Translation by teacher</td>
<td>Not asked</td>
<td>-</td>
</tr>
<tr>
<td>Cold War</td>
<td>Formal definition by student</td>
<td>T</td>
<td>“define X”</td>
</tr>
<tr>
<td>Word</td>
<td>Type of Definition</td>
<td>Teacher's Role</td>
<td>Student's Role</td>
</tr>
<tr>
<td>--------------</td>
<td>---------------------------------------------</td>
<td>----------------</td>
<td>----------------</td>
</tr>
<tr>
<td>sniper</td>
<td>Translation by students</td>
<td>T</td>
<td></td>
</tr>
<tr>
<td>trap</td>
<td>Translation by students</td>
<td>T</td>
<td></td>
</tr>
<tr>
<td>monastery</td>
<td>Formal definition by teacher</td>
<td>T</td>
<td></td>
</tr>
<tr>
<td>assembly</td>
<td>Translation by student</td>
<td>T</td>
<td></td>
</tr>
<tr>
<td>archaic period</td>
<td>(almost) formal definition by teacher</td>
<td>Not asked</td>
<td></td>
</tr>
<tr>
<td>deity</td>
<td>Non-formal definition by teacher</td>
<td>St</td>
<td></td>
</tr>
<tr>
<td>patron</td>
<td>Translation by teacher</td>
<td>St</td>
<td>Mix [Intonation] +is</td>
</tr>
<tr>
<td>fortified</td>
<td>Translation by teacher</td>
<td>Not asked</td>
<td></td>
</tr>
<tr>
<td>patriarch</td>
<td>Formal definition (reversed) by teacher</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>dowry</td>
<td>Formal definition by teacher</td>
<td>T</td>
<td></td>
</tr>
<tr>
<td>labourers</td>
<td>Formal definition by teacher, translation by teacher</td>
<td>T</td>
<td>“What is X”</td>
</tr>
<tr>
<td>peasants</td>
<td>Non-formal definition by teacher</td>
<td>Not asked</td>
<td></td>
</tr>
<tr>
<td>bridegroom</td>
<td>Formal definition by teacher</td>
<td>T</td>
<td></td>
</tr>
</tbody>
</table>

### 7.1.2 Metadiscourse on defining

Remarkably, teachers do not discuss the formal structures of definitions in the CLIL history classroom even though they ask for them all the time and even though the analysis has described them as consisting of a simple pattern that is within every student’s grasp on both on the structural as well as on the schematic level. Lemke (1990: 118) called the process of “talking about talk” or explaining what we are doing when we talk “metadiscourse”. This activity of raising awareness of language can be demonstrated to be almost inexistent in CLIL history lessons.

There were only two sequences in the data where the teacher’s behaviour displayed attempts to take the discussion of defining to a meta-level (see examples below).

**Extract 7.5 “Pilgrims”**

01 T: so .. er .. the who were the pilgrims you could also use that victoria who were the pilgrims
02 Ss: (xx)
03 T: you either know it or you find it here
04 Sm: the early settlers
Victoria: the early settlers

T: Yeah okay

Sm: woa bist du gut

T: so anything else that you could add which make sense as far as the

Sm =the pilgrims=

T: =settlers are concerned (hali)=

Sm: =were persecuted because of their religion

T: good

Ss: (xx)

T: persecuted because of their religion yes

This sequence is one of the rare examples where the students and the teacher co-
construct a definition in the course of the interaction. Even though it is not stated in full,
it exhibits the elements of a formal definition: class (“the early settlers”) and
distinguishing feature (“who were persecuted because of their religion”). The teachers
question “so anything else that you could add which make sense as far as the settlers
are concerned” can be regarded as a rudimentary attempt to talk about defining as she
indicates the lack of the distinguishing feature in the student’s attempt to form a formal
definition of the term “pilgrims”. However, even though this is metatalk, there is no
explicitness as regards the constituents of a formal definition, and it thus remains the
task of the student to grasp the importance of these elements.

The second example of metatalk was found at the beginning of a lesson where the
teacher and the students discussed correct answers to the questions of a history test
which was handed back at the start of the lesson.

Extract 7.6 “Cold War”

T: so, aah “deffine the Cold War”, both groupssäh .. got thissah ..

question

Ss: (XXX)

T: ah it’s .. i mean i accepted most of the answers, butah what were the

basic(s?) things? who got a point here please (?)?

Ss: (XXX)

T: and tell me what you wrote, .. Carina.

Carina: ... i would (?) ... (XX) in German

T: ja, say it in German? this is no problem
S: (laughing)
S: (XXX)
S: hm?
Ss: (XXX)
S: red lauter, dass dich das mikrophon versteht
S13: kämpften für einen GGottesstaat?
S: (XXX)
S13??: lauter (??)
S: was?
S14: hä?
T: as a/ also (??) Cold War
S: (singing?: XXX) bm bm bm bm
S14: Cold War?
S13: ahm the war between US...A and the Soviet Union(?)
T: yeah, but i think i put a line under the word war. it was not really a
war, it was ... 
S: a conflict (??)
S: a (XXX)
S: a wettrüsten
S15: Battle
T: a confflict
S15: Hahaha
T: it was a wettrüsten, what is wettrüsten?
S: a (XXX)
S: (laughing)
T: it was an arms...
S: ff-
S: (XXX)
S: Arms
S: arms (XXX)
T: some people wrote it i think. what is wettrüsten?
S: Race
T: an- it's an arms race
S: (laughing) jetzt hada am schummler gschaut
Ss: (laughing)
T: yes, that's right. it was an arms race, .. correct. ...
The teacher’s question for the “basic things” could be regarded as an attempt to ask for the components of a formal definition. However, the teacher in this situation does not take advantage of the problem in order to discuss the way to construct the discourse function *defining*. Therefore, this attempt is similarly to the previous example only a rudimentary attempt of metadicourse as the components of *defining* are not discussed explicitly. The interaction develops into a discussion about the correct “class” which the term “Cold War” belongs to (“yeah, but I think I put a line under the word war. It was not really a war, it was…”). The student’s answer “ahm the war between US...A and the Soviet Union” is the only student-generated definition that could be found in the data.

In this regard, it is also fairly interesting that the word “define” (meaning *defining* in the sense it was described in in 5.1) only occurs in the test situation but is not used during classroom interaction. The CLIL teachers in these samples seem to assume that the discourse function *defining* and the language involved in its realization are self-evident and therefore, they do not have to be discussed in the classroom. Nevertheless, it can be asked for in tests. The fact that this meta-level discussion of answers to a *defining* question occurred while discussing the answers in a history test also indicates that teachers regard defining as an important skill when it comes to displaying historical knowledge. Otherwise “defining” would not be emphasized in a test by explicitly asking for it. In other words, students are expected to give formal definitions in history tests despite the fact that its formal structure is never taught explicitly during the lessons.

### 7.2 Explaining in CLIL history lessons

Generally speaking, it was found that, in contrast to other discourse functions, *explaining* was a more frequent phenomenon within the corpus of the eighteen CLIL history lessons analyse. In total, 39 instances of explaining sequences were tagged in the corpus. Accordingly, *explaining* could be said to occur on average at least twice in every lesson containing discourse functions. This frequency is not surprising as explaining used as a means of constructing new knowledge or going into detail about a topic is regarded as a central aspect of teaching by both teachers and students (Smit 2008: 275).

However, an initial analysis of the sequences tagged as instances of *explaining*, in which Lemke’s toolbox for semantic relations (see chapter 5.2) was applied, suggests
that there are basically two types of explaining sequences in the corpus as has been pointed out in the description of this discourse function. The first sequence type, which comprises slightly more than half of all explaining sequences, can be characterized as mainly employing one of the semantic relations of Elaboration (i.e. EXPOSITION, EXEMPLIFICATION, CLARIFICATION). In Extract 7.7, for example, the student expresses problems with the term “Commecon” in line 01 and thereby initiates the explaining sequence and gives it the status of an explanandum. Afterwards, the teacher offers an explanantium by explaining the term using the semantic relation of EXPOSITION. Even though extract 7.7 displays an “Addition” relation as well (REPLACIVE), the most frequently exhibited relation in this type of explaining was “Elaboration”. In contrast, the second type exclusively employs a “Connection” relation of CAUSE/CONSEQUENCE. This type is exemplified in extract 7.8 “Oppressing helots”. The sequence starts with the explanandum expressed through the why-question establishing a CONSEQUENCE and then gives the explanantium through stating CAUSES. Given these semantic differences on the level of logical relations, the two types will be treated separately.

Extract 7.7 “Commecon”

<table>
<thead>
<tr>
<th>Exm</th>
<th>01</th>
<th>S16:</th>
<th>ah ... (XXX) come? con?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>02</td>
<td>T:</td>
<td>comecon well you just say comecon. yeah it’s an abbreviation! … i don’t know what it really stands for. i think it’s russian, yeah?</td>
</tr>
<tr>
<td></td>
<td>03</td>
<td>S16:</td>
<td>yes ...(XXX)</td>
</tr>
<tr>
<td></td>
<td>04</td>
<td>T:</td>
<td>ja ja comecon was some kind of ah ah an economic cooperation between the soviet union and the other ah so-called eastblock countries …so while the the western countries ah formed the the european union or the forerunners of the european union which was the so-called ah ah european community ah the eastblock countries together with the sowsjet union formed the so-called comecon.</td>
</tr>
<tr>
<td></td>
<td>05</td>
<td>S16:</td>
<td>okay (groaning)</td>
</tr>
</tbody>
</table>

EXPOSITION REPLACIVE
Extract 7.8 “Oppressing helots”

Exm 01 T: slaves can be sold, helots can’t. ah .. yeah, why did the Spartans keep them oppressed?

02 S28: They-

03 S1: they needed something to eat

04 S28 they were afraid of rebellions

05 T: they were afraid of rebellions, yes. ah they even declared war on them once .. every year

7.2.1 Explaining terms

As pointed out above, the first type of explaining comprises explanations of terms. More than 80 per cent of all these sequences were found to be initiated by the teacher. In other words, in the majority of all these sequences, the explanandum comes into existence through the teacher’s assumption about the knowledge of the students and not through a problem expressed by the students themselves. This means that the core function of “telling you what you don’t know” in these explaining instances is modified and becomes a “telling you what I assume you don’t know”.

In contrast to defining, the description of explaining (chapter 5.2) has construed explaining as covering longer and more complex stretches of discourse. The analysis revealed that the majority of explaining sequences of terms initiated by the teacher was found to cover “subject-specific terms in a narrow sense” (e.g. “hetaerae”, “Jesuits”, “Ludendorff Offensive”). This seems to suggest that these are considered to be more complex and therefore have to be covered by longer stretches of explaining while for “transferable vocabulary” typically the micro function defining is considered to be sufficient.

The most common strategy of teachers to establish an explanandum was found to be asking the students for the explanantium instead of giving it themselves. This seems paradoxical as the main reason for asking in the first place was an assumed knowledge deficit of the students. As this strategy is quite common across the data, it can be assumed that the teacher assumes a knowledge deficit only in some areas of the semantic relations of the term while she assumes others to have been understood. Usually the explanantium is then developed by a question-answer-evaluation/follow-up
type of the IR(E/F) tripartite interaction pattern in which the teacher as the primary knower has the opportunity to control the way the explanation develops. Therefore, explanations have a strong display aspect besides the central aspect of constructing new knowledge. In extract 7.9 (“hetaere”), for example, the teacher asks for an explanation of the subject specific term “hetaere” by initiating the explanation with a question (line 01, line 03). The student gives an explanantium in form of an exposition (line 06), the teacher evaluates it positively (line 07) and carries on the control of the interaction by asking a kind of follow-up question by signalling the student to carry on with the explanation (line 11). After a repetition of this pattern, in which the student has again displayed understanding of the term by using the semantic relation of exposition (line 14-19), the cycle of the tripartite pattern starts again. However, this time the response is evaluated negatively by the teacher (line 30) and she proceeds to fulfil the “telling you what you don’t know” function of explaining. The following IR(E)/F pattern ends again in a positive evaluation by the teacher.

Extract 7.9 “Hetaere”

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>T.</td>
<td>there's a special type of companion or friend, hetären,</td>
<td></td>
</tr>
<tr>
<td>02</td>
<td>S:</td>
<td>(drawing in breath:) hah!</td>
<td></td>
</tr>
<tr>
<td>03</td>
<td>T:</td>
<td>what are they?</td>
<td>(I)</td>
</tr>
<tr>
<td>04</td>
<td>S:</td>
<td>(XXX)</td>
<td></td>
</tr>
<tr>
<td>05</td>
<td>T:</td>
<td>what are hetären? ... no? Bianca?</td>
<td>(I)</td>
</tr>
<tr>
<td>06</td>
<td>Bianca:</td>
<td>these are women who are ... ahm most of them are very intelligent and</td>
<td>(R)</td>
</tr>
<tr>
<td>07</td>
<td>T:</td>
<td>intelligent, yeah</td>
<td>(E)</td>
</tr>
<tr>
<td>08</td>
<td>Ss</td>
<td>(lachen)</td>
<td></td>
</tr>
<tr>
<td>09</td>
<td>S:</td>
<td>intelligent!</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>S:</td>
<td>intelligent!</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>T:</td>
<td>yeah?</td>
<td>(F)</td>
</tr>
<tr>
<td>12</td>
<td>S:</td>
<td>aufschreiben.</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>S:</td>
<td>Ingelligent</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Bianca:</td>
<td>and they had ...</td>
<td>(R)</td>
</tr>
<tr>
<td>15</td>
<td>S:</td>
<td>Ingelligent</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Bianca:</td>
<td>they had special skills</td>
<td>(R)</td>
</tr>
<tr>
<td>17</td>
<td>T:</td>
<td>yes ...</td>
<td>(E)</td>
</tr>
</tbody>
</table>
This predominance of the IR(E/F) pattern makes explaining monologues extremely rare. Besides the monologue in extract 7.7 (“Comecon”), only two other examples of an explanation purely given in the form of a monologue could be found in the data. These comprised one explanation given by a teacher (extract 7.10 “Measles”) and an explanation given by a student (extract 7.11 “Ludendorff Offensive”).
Extract 7.10 “Measles”

| E x m | 01 | T: | ja it does not (x) as much as er as= | EXCEPTIVE |
|       | 02 | Sm: | =not as much as= |
|       | 03 | T: | =yeah as the chicken pox thats right er but this is all the information you have about measles but measles in third world countries in very poor countries is a killer number one or one of the main killers of small children so its still the case that many young children die er of this disease if they are undernourished if they are weak if their immunsystem is very weak so i mean im not a biologist i have no idea but er why the er the indians could not er cope with that but it must have to do something with their immunsystem annett very nice good er anyone else who would like to go on |

EXPOSITION

CAUSE/CONSEQUENCE

The explanation monologue on measles displays semantic relations typical of explaining, i.e. exceptive and exposition. In contrast, the only explanation monologue of a student given in extract 7.11 (“Ludendorff Offensive”) does not employ these semantic relations. In this extract, the teacher establishes the explanandum by asking a student to “say what the Ludendorff offensive is”. Even though the student is given sufficient interactional space for expressing the explanation, the explanantium of the term he gives can hardly be regarded as a successful explanation.

Extract 7.11 “Ludendorff Offensive”

| E x m | 01 | T: | [...]could you also say what is the ludendorff offensive ? who would like to talk about that ? Michael ? |
|       | 02 | S: | yeeeea. Also zuerst, then....ha,ha, ha...I'll tell you what the ludendorffoffensive is, o.k.? |
|       | 03 | S: | o.k. the germans (xxx) in the war and destroyed, äh, and destroyed the (xxx) for the American troops (xxx) |
|       | 04 | T: | Mario, would you listen please. |
|       | 05 | S: | so the german commander ludendorff launched the operation Michael oder (xxx) ehm, which was successful and so the allies learned from the german success so they appoint a similar commander the French marshal foch. |

As can be seen from this monologue explanation given by a student, the lack of model monologue explanations uttered by teachers as found in the data has a significant impact on the students’ ability to give a coherent explanation of a term in a monologue by
using the logical relations of Elaboration. The students hardly ever have the chance to observe a cohesive explanation. Instead, an understanding of term and the development of the linguistic abilities required to explain the term itself has to rely on inference from the bits and pieces scattered across the classroom discourse.

### 7.2.2 Explaining causes and consequences

As already pointed out above, type II of the discourse function *explaining* was found to occur slightly less often than type I (explaining of terms). This means that, on average, this type occurred only once in every lesson analysed. Considering the central role causal explanations are assumed to play in the construction of historical knowledge by “giving meaning to the discipline” (Coffin 2004: 262), this finding is surprising.

Typically, these sequences are initiated by a “why” question, which is only rarely uttered by a student. Even though a wide variety of lexico-grammatical resources would be possible to realize the causal explanation discourse function, an analysis of these functions revealed that students employ only an extremely small amount of them. Basically, this limited set of resources for expressing causal explanations consists of subclauses with the conjunction “because” and elliptical forms of this construction. Extract 7.12 (“American Intervention”) displays one of these explanation sequences. The teacher initiates the typical consequence-cause relation of this type of explanation. The first answer gives the explanantium in form of a “because” subclause. However, the other causes given by the students (and also the teacher) do not exhibit any marker of causality at all. Other realizations of the explanantium, such as causal verbs, circumstantial elements or causal abstract nouns could not be found in the students’ explanantia.

**Extract 7.12 “American Intervention”**

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Sf(?):</td>
<td>the Americans startet do (xxx) the war on gernany.</td>
</tr>
<tr>
<td>Exm</td>
<td>T:</td>
<td>and why did this help the allies in (xxx) ? CONSEQUENCE</td>
</tr>
<tr>
<td>Exp</td>
<td>Sf(?):</td>
<td>because of the material they delivered. CAUSE</td>
</tr>
<tr>
<td>04</td>
<td>T:</td>
<td>yes, the material and also the…something else.</td>
</tr>
<tr>
<td>05</td>
<td>Sf(?):</td>
<td>the troops.</td>
</tr>
<tr>
<td>06</td>
<td>T:</td>
<td>the troops which were well fed, well rested in contrast to the others. O.k. the orange group  CAUSE</td>
</tr>
</tbody>
</table>
Please, could you say why you picked it? Who have... ah... Isabella?

07 Isabella: they got the last power.

08 T: yes, who got the last power? I mean, what do you mean with last power?

09 Sf: (xxx)

10 T: aha, this is what you mean. Also, they were not tired of the war. They were well fed, well rested, ok.

Furthermore, the teachers´ lexico-grammatical resources for expressing causal explanations were mainly determined by the conjunction “because”. In contrast to the students, however, the teachers´ lexico-grammatical repertoire revealed a wide range of features as they also used causal abstract nouns in their explanations. In extract 7.13 (“Illness”), for instance, a teacher changes an explanation involving the conjunction “because” (“before Hippocrates, people thought .. they were ill because the gods .. “) into a construction using a causal abstract noun (“the cause of the illness came from God”) and in extract 7.14 (“Reason”) a teacher upgrades a student´s formulation into one using the causal abstract noun “reason”.

Extract 7.13 “Illness”

01 T: because .. i’d like to .. make this list, and this list should .. include .. the causes of illnesses .. and .. the remedies .. what they did to heal the illness. .... now, before Hippocrates, people thought .. they were ill because the gods .. punished them. the cause of the illness .. came from God, and the healing, the cure, also came from God

Extract 7.14 “Reason”

01 S14: can you think of something why it was like this (?)?
02 T: .. a reason why it was like that?
03 S14: Yes

The restricted use of lexico-grammatical resources does not only illustrate the limited linguistic repertoire but also has a significant impact on the way students perceive and construct history. As the “why” questions were used to ask for explanations of the actions of human agents, the conjunction “because” was found to collocate with a human agent in all of the cases. Explanations involving the use of abstract causal nouns
as exemplified above were found to be extremely rare in the data. However, Coffin´s (2004: 278) study has discovered that an increased use of abstract causal nouns is vital for explaining history in terms of non-human causal forces (Coffin 2004: 278). This means that CLIL history students learn through language to explain history mainly as the actions of human agents rather than as an analysis of certain structures.

Furthermore, another impact of limited resources of language on thinking can be demonstrated by the lack of explanations involving consequence as described by Widdowson et al. (1979: 118) and typically characterized by the conjunctions “hence”, “consequently” or “as a result”. The only causal explanation which came close to this kind of explaining found in the data was a statement by a teacher after a long sequence of giving causes. In this statement the teacher used the construction “and this is why... husbands always wanted to have sons. ... girls couldn’t inherit ... the property.” The phrase “this is why” is a rather conversational form of the ones given in chapter 6.2; nevertheless, it expresses consequence. Even though cause and consequence are two sides of the same coin, thinking (and talking) about them involves different resources. In the CLIL history lessons analysed, the students can be said to acquire only the cause side.

7.2.3 Metadisocurse on explaining

Explicit requests for explanations instigated by using the word “explain” itself were found to occur only in a very small number. Even though the verb was used for requests to give explanations of type I (e.g. “Could you explain the term reparations”) as well as type II (e.g. “Can I please ask people from these three groups to explain your reasons why you put it on first place?”), the vast majority of explaining sequences did not use the word “explain” to initiate the explanation sequences. These requests rather relied on more conversational ways to initiate explanations as “what does X mean” for type I and “why” questions for type II. Furthermore, students did not use the word “explain” at all. These findings already indicate a lack of explicitness of the discourse function explaining in the CLIL history classroom.

This lack of explicitness can also be seen in the lack of metadiscourse on explaining. Talk about explaining was found to be almost inexistent in the data. The only example
where a teacher commented on an explanation on a meta-level can be seen in extract 7.15 (“Circumnavigate”). There, the teacher initiates the explanandum using the phrase “what does X mean” and tries to control the explanantium by asking about the parts of the word. As this leads students to the German phrase “im Kreis fahren” (“to go in a circle”), the teacher uses the meta-comment “Maybe this is not a good explanation”. Further attempts to explain the term also fail and the teacher uses another meta-comment by telling students that this could be reformulated into a “positive explanation”. However, the teacher does not topicalize the elements involved in a “good” or “positive” explanation.

*Extract 7.15 “Circumnavigate”*

| Exm | 01 | T: | [...] what does the headline mean “circumnavigates the globe”? ........ circumnavigate. [...] do you know what a circle is? |
| Exp | 02 | Sm1: | [Naviga ... tion. |
| 03 | Sm2: | ja, Kreis. |
| 04 | T: | ein Kreis. and to navigate, navigieren, what could this mean? ... im Kreis is a g’fohn. okay, ah, (lacht) ... maybe this is not a good explanation. What did ... I mean he reached California for instance, ah, he reached Peru, he reached Chile, what did he do? he circumnavigated the ... |
| 05 | Sf: | na, im Kreis fahrn. |
| 06 | T: | im Kreis fahrn. |
| 07 | Sf: | na ja, ... |
| 08 | T: | aber das ka[ma positiv auch ausdrücken. there could be a positive explanation for that which means Welt |
| 09 | Sm2: | [the world |
| 10 | Sm2: | ... umfahrung. |
| 11 | Sm3: | Welt umfah .... umsegeln. |
| 12 | T: | eine Weltumseglung, yes. this was, ah, Sir Francis Drake, so, ah, a big achievement that he did this. okay, ah, okay. could you tell us why I wanted you to put this under financial difficulties of Queen Elizabeth? what did Francis Drake do when he made this big journeys? do you know that? was this in your text? |

7.3 Describing in CLIL history lessons

A quantitavie analysis of the macro-function *describing* revealed a similar number of occurrences as in the case *explaining*, namely 38 instances, amounting to an average number of about two describing sequences per lesson. As the discourse functions *explaining* and *describing* contrasted significantly with the number and length of other
discourse functions, it can be assumed that *describing* and *explaining* are the central functions of the history classroom.

However, in contrast to explaining, describing was found to be a highly contextualized practice in the data in the sense that in a significant number of describing sequences, the target of the description was present. This can be seen in the initiations of describing sequences by teachers as exemplified in extracts 7.16 a.- o. where the teachers frequently use verbs of sensing (e.g. “look”, “see”, “faced with”). Initiations of describing such as the ones in these extracts comprise half of all the explaining sequences. Therefore, giving a verbalised account of semiotic systems other than language (e.g. maps, pictures) which are physically present in the development of the discourse was found to be a frequent context for the realization of the discourse function *describing*.

*Extract 7.16 a.-o.*

a. T: the question is how to **describe** a map…
b. T: ah in the **picture** ahh did you find the sacred olive tree in the **picture**?
c. T: **look** at that. It’s a different picture, a reconstruction of Olympia
d. T: what do you **see** in the **picture**? Could you **describe** it?
e. T: you are **faced with** aah two… **pictures**
f. T: To give you an idea of the .. ah geography could you take the **map**, could you **have a look** at the **map** at page sixteen please
g. T: and can you please **have a look** at this one **picture**…the black-and-white one.
h. T: ahh let´s **look** at the **map** first together. Where is it,.. Sparta, on which … aah …
i. T: **look** at this house, typical Greek house
j. T: and … this is a **map** of Egypt … what does it tell you?
k. T: on this **map** you can also see ah number of towns.. you can **see** Memphis, you can **see** Thebes..
l. T: who can **describe** the **pictures**?
m. T: Yeah, let´s **have a look** at such a party. .. a party for men only
n. T: What can you **see**? What are the men doing?
o. T: Could you **have a look** at this picture and give me a first impression that you have.
7.3.1 Physical descriptions

A vital element of an academic description is its explicitness, which means that even though the targets of description are physically present, they need to be identified precisely. This was emphasized by Michaels (1981: 427-428) principle of naming and describing “even when [...] in plain sight”. Especially when giving physical academic descriptions as often demanded in the description of pictures and maps in school, students are required to be explicit in their description. This stands in contrast to the everyday realization of the describing function, where explicitness is not necessary.

However, the instances found in the data suggest that physical description in the CLIL history classroom often lack the explicitness which the academic discourse function describing would require. In extract 7.17 (“Gusen”), for instance, a student gives a description of a map which he has drawn on the blackboard during his presentation. The way he describes the location of places and the spatial distances between them is characterized by features which are highly conversational. Instead of using locative terms, his description draws on resources from interpersonal communication, namely demonstrative pronouns (here, there, this area). This example is the only physical description monologue that could be found in the data.

The predominant way to describe location on maps and pictures, however, is co-construction. Within these co-construction sequences, teachers are not consistent when using the academic discourse function describing only. The data indicated that they rather use a mix of both conversational as well as academic ways of describing. Teachers were frequently found to employ demonstrative pronouns which were probably accompanied by pointing gestures used within these co-constructed sequences (e.g. “it must be this one here”, “there’s a hotel there”, “what’s happening here?”, “Athens is here”, “Piraeus is here”, “you can see here”, “and this isaah .. gynaikon”, “what could have happened here?”). This use of language in combination with gestures has been argued to be a typical feature of basic interpersonal communication skills (BICS). However, their language for describing is also characterized by the use of locative terms which would make it possible to identify position without the physical context of the map given. Therefore, this use of language could be characterized as a feature of cognitive academic language proficiency (CALP). The range of these terms,
however, is not particularly great as can be seen by the basic prepositions used by the teacher in extract 7.18 (“Sacred olive tree”): *in the middle, outside, next to, in front of*.

*Extract 7.17 “Gusen”*

01 Mr Benda: okay? and somewhere **here** a very little river the gusen is coming out of the mühlviertel. so and i think **here** is then gusen one concentration camp ... and very later (?) on **here** is “donaualtarm”.

02 Mr Gerber: ja ja ... gusen is about ... three or four kilometres from mauthausen away and yeah one five kilometres from the concentration camp in mauthausen and sankt georgen about seven or eight kilometres. it’s not really far away.

03 Mr Benda: yes and very later on is gusen two and now i try to ham the draw the ... the underground factory like it was shown in one such a photo ah drawing so

04 T: mister doppelhammer (?) may i introduce (?) once again, could you give me some idea where the village of sankt georgen an der gusen ... is?

05 Mr Benda: the village is ah i would say ... **this** area

06 T: Mhm

07 Mr Benda: and so ... and then **there** is langenstein

08 T: mhm

09 Mr Gerber: und daun mauthausen jo.

10 Mr Benda: and gusen is ah ah a part between langenstein and sankt georgen.

11 T: Mhm

12 Mr Benda: and **here** is (XXX)berg

13 T: Mhm

14 Mr Benda: and mauthausen ... actually gusen two was on on the area of sankt georgen and luftenberg (?)

15 T: Mhm

16 Mr Benda: and are not too clear from here because i don’t exactly know where the borders are.

*Extract 7.18 “Sacred olive tree”*

01 T: ah in the picture ah did you find the sacred olive tree in the picture?

02 Sascha: the sacred olive tree?

03 T: Mhm

04 S29: Yes

05 Sascha: of course

06 Daniel: what’s (?) an olive tree (?)

07 S29: (XXX)
Students, by comparison, hardly ever used these locative terms at all as it is the teacher who does the describing in most of these sequences. If the students perform physical descriptions, they are often unable to do so as extract 7.19 (“Painting”) exemplifies. There, the students are asked by the teacher to describe a painting. However, as they do so, they do not display any use of locative terms that would describe the location of
elements of the picture to a third person who does not see the painting. Instead, their language is characterized by the use of adjectives for describing it (e.g. “dark”, “pessimistic”, “destroyed”, “damaged”) and sentences expressing an interpretation (“it doesn’t matter if they live or die”, “ah million died without... any reason”). The teacher accepts these descriptions at first; however, after this sequence has finished, she also makes clear that these descriptions do not meet her expectations of describing as she expresses the inadequacy of this way of describing (extract 7.20, extract 7.21). Her remarks emphasis the use of locative terms for giving physical descriptions as the use of “in the foreground” exemplifies. As these comments are also rare instances of talk about talk, they will be dealt with under “Metadiscourse” in chapter 7.3.5.

*Extract 7.19 “Painting”*

01 T: ah on the next page you see ah ..
02 S: (coughing)
03 T: scene of this war .. in a picture ... andah which is not more comforting ..
04 Thomas: da Otto Dix
05 T: than the description
06 Michael?: (lacht) sein knie verschimmelt
07 T: ah could you ah could you have a look at this picture and give me a first impression that you have.
08 S44: i think the/they (?) soldiers are very despera(ere)/te andeh so they ...
09 S: (XXX)
10 S44: it doesn't matter if they live or die
11 S: (XXX)
12 T: ... yeah. ah Carinna and Marion,
13 S45: some of them are already/dead (?)
14 T: did you understand it or do you mean- ah do you need me as an amplifier
15 S: no, i understand/-stood (?) it
16 S: (XXX)
17 T: you understood it? Great
18 Thomas: yes, (XXX)
19 T: Monika (?)?
20 S45: some of them were (?) already (?) (XX dark (?)
21 Thomas: it shows them (?) best (?)?, did/do (?) they? Yes
Monika: the whole picture is very dark and looks very pessimistic

Thomas: Okay

Monika: like the hell

S: Thomas, you (XXX)

T: like hell. Isabella

Isabella: ah million died without .. any reason

T: ... yes

Isabella: ... yeah

S: thank you. ... (XXX)

T: Monika

Monika: everything you can see is destroyed. ... so nothing's really okay. all the trees are damaged and so ...

T: yes. ... ah .. is it realistic?

S46: No

S: No

S46: what?

Ss: (lachen)

S: the picture

T: the picture at page twenty-one

S: yes, why not

S46: No

T: is it realistic

S: Yes

S: Yes

S47: Yes

T: is it like the f-

S47: if they are all died

T: Yhong (?), i did not hear you. what did you say?

S47: if they are all died, it's realistic

S: (XXX)

S: Dead

T: ..... ääh i see what you mean, you mean the interpretation .. many people died ..

S48: hm/was (?)? .. hm?

T: there, so they portrayed that.

S48: der schaut eh (?) aus (?) (XXX)
Extract 7.20 “How to describe a picture”

01 T: what we did now - i ask(ed?) you what your impression of this picture is .. and you told me and you interpreted it, but if you try to imagine the situation at the Matura, if you do the same thing, this might be quite ah quite stressful and quite difficult for you to do that.

02 S: can i go to the toilet?

03 T: yes, of course. so the simpler version would be if you follow ah the guidelines below: simply starting out with .. describing the picture, using these .. phrases, and once you have described the picture and you t- you have talked about the obvious, .. then you could start interpreting it.

04 S: huddled together?

05 T: ah okay, so could i ah s- ah Monika, i am not so sure, are you going to do this oral examination? okay, so, Monika, in the foreground, could you follow these rules here at the bottom.

06 Monika: (XX)

07 S: in the foreground

08 Monika: in the foreground we can see some dead people lying

Extract 7.21 “All subjects”

01 T: apart from the fact that it is very depressing. and do you know how you should go about this? so if you don't know an interpretation, if you have no idea, at least describe it. but it's- this does not only hold true for .. history, this holds true for all the subjects. .. talking about the obvious. ah ten minui- ten minutes are over in ..
7.3.2 Structural descriptions

Structural descriptions are characterized by meronymy relationships between whole and its parts. In the corpus, sequences which expressed some relationship between a whole and its parts in the CLIL history classroom were concerned with a wide range of topics ranging from politics (“components of the Roman government”, “components of the Duma”) over geography (“components of the geography of the UdSSR”, “components of the geography of Egypt”) to architecture (“components of an Ancient Greek house”, “components of the city of Rome”, “components of Olympia”).

However, there are instances where the components of a whole are talked about but not verbalised through a structural description. This behaviour was found in descriptions of reconstructions (e.g. “the City of Rome”, “Olympia”) but also in descriptions of maps (e.g. “geography of Egypt”). As these components (e.g. important buildings in Rome, temples in Olympia, cities in Egypt) are visually present through the visual aids which are used, the teacher seems to assume that a structural description which would give the components in a single utterance is not necessary and rather talks about one or two components at a time. Therefore, the teacher just names the components (“the Colosseum, yes”, “ah, and this? Circus Maximus?”, “on this map you can also see ah a number of towns .. you can see Memphis, you can see Thebes”) in these cases instead of using a structural description such as “This is a reconstruction of the City of Rome, and it consists of the Circus Maximus, the Collosseum, the Forum Romanum, …”.

If teachers, however, do give structural descriptions of the components of a whole, a common tendency among teachers across different lessons was found to be the use of colloquial phrases such as “we have” or “you have”. In extract 7.22 (“Government of Rome”), for example, the teacher gives a description of the government of Rome. In contrast to the features of a structural description as exemplified in chapter 5.3, the teacher employs the phrase “we have”, which rather ought to be classified as a feature of everyday social interaction rather than of academic use. Similarly, in extract 7.23 (“Typical Greek house”), the teacher uses this phrase to describe the components of the first and the second floor in an Ancient Greek house. The same feature could also be found in a structural description of the Egyptian social structure.
Extract 7.22 “Government of Rome”
01 T: there's some work for you. .. the government of the republic.
02 Ss: (XXX)
03 T: we have a senate, .. we have an assembly, .. and .. we have .. officials. .. ahm ... the senators. the senators are .. people who ah belong to the group of patricians. two main social groups. the rich people, the nobility, the nobles, are the patricians. it says so on the right-hand side. can you find that? ... patrizier?

Extract 7.23 ”Typical Greek house”
01 T: rich women had a special room, ah i'll show you this .. typical Greek house
02 S: Mhm
03 S: (singt:) mhmhm
04 T: it's .. a rich man's house
05 Daniel? (lacht kurz)
06 T: on the ground floor you have the men's room, .. a hall, a living room with a .. an altar (es klopf), and a bathroom
07 [...]lesson is interrupted by someone coming in]
08 T: good ah the bathroom .. on the first floor, Christoph, ... we have .. the women's room, .. ah a slaves' room, a bedroom, .. and .. that's that. and the women's room was on the first floor. Jasmin, ah why did you mention it? .. oh yes, men are not allowed into that room, who is in this room then?

In contrast to these contextualized sequences, which could be found across different lessons, the occurrence of context-reduced structural descriptions exhibiting the canonical features described in chapter 5.3 was found to be extremely rare. One instance of a structural description characterized by these features was realized by a student in a presentation. In her presentation on the Russian revolution, she described the (political) components of the Duma (extract 7.24 “Duma”), and later the same student described the (geographical) components of the Soviet Union (Extract 7.25 “UdSSR”), using the phrase “consist(ed) of”. The other instance was found in a teacher monologue giving a description of Greece (extract 7.26 “Greece I”, extract 7.27 “Greece II”). In contrast to the student, however, the teacher is not consistent in the use of either contextualized or context reduced ways of describing structure. The description starts with the use of the phrase “consists of” for describing the main parts of Greece. Nevertheless, after this context reduced way of using language, the teacher’s language changes into a form of
language exhibiting the features described above: “you have” becomes the predominant phrase as in “inside Greece you had lots of independent states. […] there was the city state of Sparta, and of Corinth […]”

Extract 7.24 “Duma”

01 Isabella: yeah, and a new Duma were found- ah were founded, and in this Duma révolutionary and bourgeoisie parties a-ah they/the (?) - also this Duma consist of révoluna- (laughing) . révolutionary and bourgeoisie parti- bourgeois, das sind die bürgerlichen gewesen, also die schon etwas reicher en leute ...

Extract 7.25 “UdSSR”

01 Isabella: ... and the UdSSR consisted.. of .. Ukraine, White Russ,White Russia, Georgia, Armenia and Azerbaijan, and so this was the ... this was the .. first communist superpower in the world. ... thank you for listening.

Extract 7.26 “Greece I”

01 T: yes ah so Greece consists of the mainland and many islands and this map just shows you just for your information all the Greek dialects, Dorian Greek, Ionic Greek, spoken on the coast of Asia Minor, .. Aeolic Greek, Arcadian Greek. all those are dialects ah, they are related, .. and it's the same language. ... and then the Greeks ah founded colonies ...

02 S: mhm

03 T: ahh .. all around the Mediterranean, particularly on the northern (?) coast, not so much .. on the southern coast .. because on the southern coast we had the Phoenician colonies .. andaah .. those Greek colonies .. weren't really colonies, they were not colonies in the .. sense that we have them in the nineteenth century, they were independent, independent states

Extract 7.27 “Greece II”

01 T: ahh .. and even inside Greece .. there was not one .. ah .. country or one .. state with one ruler. .. inside Greece you had lots of independent states, .. you had .. city-states, small states .. and there was the city-state of Athens and the city-state of Sparta and of Corínth and so on. and each city-state consisted of a number of things, can you see that? no, not really, but you'll get a photocopy in a minute.

02 S2?: a number of thing(s?) (XXX)

03 S: (XXX) kopierten (?) (XX)

04 S: (lacht)

05 T: ah ... there is the .. acro--polis

06 Ss: Polis
07 S: Mhm
08 T: the word means 'high city', acro means 'high'
09 S2: Polis
10 T: and polis means 'city'
11 S: Polis
12 S: City
13 S2: Stadtstaat
14 S: Ah
15 T: so you have acropolis with the temple on top
16 S: Mhm
17 T: .. and a wall around it, .. and then you have the polis, .. the city
18 S: City
19 S: Mhm
20 T: .. and then you have the surrounding countryside ... with villages. who would live in the villages?

In conclusions, the subcategory *structural describing* of the discourse function *describing* cannot be seen as sufficiently realized in an academic way in the CLIL history classroom. Even though the data suggests that the history classroom offers a significant number of situations for realizing this subcategory of describing, it also indicates that in only a tiny fraction of the total number of instances a context reduced description could be found.

### 7.3.3 Functional descriptions

Functional descriptions are among the least occurring subcategories of the discourse function *describing* in the data. Only a small number of five instances of functional descriptions could be identified in the eighteen lesson transcripts. All of these instances were found to be realized in co-construction with the teacher asking for a specific object and a student giving a description of the function of the object in question. As exemplified by the extracts 7.28 - 7.33, these co-constructions follow the IR(E/F) pattern neatly. It is always the teacher who initiates the functional description and finally evaluates it. As these functional descriptions only occur in co-construction patterns, their elements (viz. a whole, a function) are not uttered in one monologue utterance but scattered across the discourse.
Furthermore, almost all of these functional descriptions which have been taken from different lessons by different teachers, employ the same phrase for initiating the functional description, namely a form of the rather colloquial phrase “what was that good for”. Similar to the phrase “we/you have” in structural descriptions, the phrase “what was that good for” seems to be a substitute for a more formal way of expressing the discourse function functional description. Thus, the patterns described by type I and type II of functional descriptions were highly infrequent in the corpus. This tendency was only broken in two examples, namely in extract 7.30 (“Council”) and 7.31 (“Shabti”), where the teacher uses the more formal phrase “what’s the function of” to ask for a functional description of the council and a functional description of Egyptian shabtis through the phrases “what’s the function of” and “what’s their purpose, function” respectively.

As far as the second element of this subcategory, the expression of function, is concerned, the teachers accepted various ways of expressing it. In extract 7.28 (“Colosseum”), the student merely uses a noun (“festivals”) to describe the function of the Colosseum. In the other extracts, the students use mostly full sentences; however, none of these constructions can be said to be a variant of the canonical form of describing function as described in chapter 5.3. The reason might be that the phrase “what was that good for” can be interpreted in various ways, which has an impact on the answer given by the students. In extract 7.33 (“Pyramids”), for example, the answer of the student rather takes the form of a definition of “pyramid” instead of a functional description of the term.

Extract 7.28 “Colosseum”

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
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<th></th>
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<tbody>
<tr>
<td>01</td>
<td>T:</td>
<td>the Colosseum, yes, <strong>what was that good for?</strong></td>
</tr>
<tr>
<td>02</td>
<td>Clemens:</td>
<td>.. ahm .. festivals</td>
</tr>
<tr>
<td>03</td>
<td>S:</td>
<td>gladiatoren (dt.?)</td>
</tr>
<tr>
<td>04</td>
<td>S:</td>
<td>Fights</td>
</tr>
<tr>
<td>05</td>
<td>T:</td>
<td>festivals, gladiators, yeah. ..</td>
</tr>
</tbody>
</table>
**Extract 7.29 “Sacrifices”**

01 T: they made sacrifices and well there is the picture of the leg at the end ...

02 Sascha: (reading slowly) a model of the part of the body that had been cured.

03 T: what was that good for? can you explain it? in a complete sentence, Sascha.

04 Sascha: the people who were cured left offerings ..

05 T: Mhm

06 Sascha: and mostly th-aat (?) were models of the part of the body that had been cured.

07 T: right. good.

**Extract 7.30 “Council”**

01 T: […] what’s the function of the council?

02 Mimi: they ..

03 Daniel: they (??)

04 T: Aahm

05 Mimi: they drew up new laws and

06 T: Mimi

07 Mimi: they drew up new laws and policies

08 T: Policies

09 Mimi: Policies

10 T: right. yes, Mimi, and the council ah .. has to g give them to the assembly to decide.

**Extract 7.31 “Shabti”**

01 T: […] J-a- .. what are the shabti? .. what's their .. purpose, function, etcetera, etcetera? .. Jane

02 Jane: there's a (??)/these are (??) special servants, and they

03 T: Right

04 Jane: do āhh .. the the work afterrr the ...

05 S?: na in life after death (XX for example (??))

06 T: yes, they work … a- ahm .. for the dead person .. in life after death, in the afterlife .. yes? they are workers, they are servants. they are special .. wworkers, they don't do .. any odd work. .. what sort of work do they do? Tina

**Extract 7.32 “Ostracism I”**

01 T: a vote of Ostracism, also at the assembly but only once a year. .. ah
what was that good for?

S3: ahh .. too to banish people if they had done anything wrong

T: Mhmm

Extract 7.33 “Pyramids”

T: [...]... those triangular things, what are they?

S3: Pyramids

T: yeah .. ah ... **what are they good for?**

Eva?: oh the- ... the/there/ they (?) were the ... sha- (?) the ... the tombes for the pharaohs

T: that's right ..yes .. the tombes for the pharaohs .. in the Old Kingdom ..

7.3.4 Process descriptions

Similarly to functional descriptions, only a handful of process descriptions could be found in the data. These processes covered the description of “getting divorced in Ancient Greek”, “embalming a mummy”, “seeing a doctor”, “the Day of Judgment in Ancient Egypt” and “Ostracism”.

As has been stated in chapter 5.4, a vital rhetorical element of process description is the series of steps which it consists of and their interconnection between each other. The process descriptions found in the data comprised descriptions of processes involving between two and four steps. In order to express the interrelation between those steps and display the sequence in which they occur, the data suggests various strategies. The most frequent expression was found to be the sequence discourse marker “then”, often in combination with “and” (e.g. “[...] he asks you a few questions [...] and **then** he writes a prescription”, “and **then** he is eaten by the beast”) and the conjunction “and”, which might be an elliptic form of the one just mentioned (e.g. “she had to go to an official called an Acho-Achon? [...] ...and persuade him to act on her behalf”). Other sequence markers, such as those using number, were only found three times and occurred only in the form “first” (e.g. “They wash(ed?) the body **first**”). Another infrequent way to express the interrelation between steps was the use of a conditional if-sentence (e.g. “and the person was banished, for ten years [...] if there are six thousand votes”) and the time-span expression “when” (e.g. “he could own his property **when** he returns”). This predominant way of describing the sequence in the process description by using
“then” might be easy to grasp if the steps in the discourse are mentioned in the same way as they are actually occurring. However, as extract 7.36 (“Seeing a doctor”), where step III occurs before step II, indicates, this does not always have to be the case. In these situations, the actual sequence is harder to understand as “then” does not express the number the step takes in the sequence.

Extract 7.34 “Getting a divorce in Ancient Greece”

01 T: .. from that paragraph. tell me, Mimi, how could a woman get a divorce? (I)
02 Mimi: aaahm ...sh-she had to go to an official called an Acho-Achon? (R)
03 T: Achon, yeah (E)
04 Ss: (XXX) (E)
05 Mimi: Achon, .. and persuade him to act on her behalf. .. but/ah (?) (R)
06 T: yes. (E)

Extract 7.35 “Embalming a mummy”

01 T: and they do a number of things to ... ah preserve their bodies ah .. we discussed embalming in great length ah .. who can describe the pictures? ... maybe Bettina? (I)
02 Bettina: mhm .. ahm (I)
03 T: what is happening? .. what are they doing in general? (I)
04 Bettina: ahm .. they wash(ed?) the body first (R)
05 T: yeah, they are preparing a mummy (E)
06 S: Yeah (E)
07 T: they wash the body first, yeah yeah (R)
08 Bettina: and .. they took out ah .. the brain and the insides (R)
09 T: Hm (R)
10 Bettina: but they left the heart .. in the body (R)
11 T: Mhm (E)
12 Bettina: Ahm (E)
13 T: .. and then? (F)
14 Bettina: ahm they stopped .. ahm (XX) (R)
15 T: (XXX) (R)
16 S (sneezing) (R)
Similarly to other discourse functions, process descriptions were not realized in monologues but co-constructed through IR(E/F) patterns. As process descriptions consist of distinct steps, which follow one another, they fit well into the IR(E/F) pattern as each step can be realized through one IR(E/F) sequence. The typical realization of this pattern with regard to process descriptions is an initiation of the process in general and the first step in particular by the teacher through a request for describing a process (I) followed by a description of the first step by a student (R), an evaluation by the teacher (E) followed by a request of the teacher to describe the next step (F). This realization of the next step was found to be often initiated by an elliptic sentence uttered by the teacher and giving only the first half of the sentence and waiting for a student to complete it (“.. and you prescribe some ... whatever. ..”); “what happens first? the dead person .. goes .. to ..”; “and the dead person .. must ...; “and if he hadn't been telling the truth then ..”).

However, the data also revealed that a follow-up question (F) does not always have to occur in order to make the student utter the next step. For example, step II in extract 7.34 (“Getting a divorce”), step II in extract 7.35 (“Embalming a mummy”), step 3 in extract 7.37 (“Day of Judgement”), are described by a student without a preceding request through a follow up question of the teacher. This seems to suggest that the initiation (I) of the teacher for the describing sequence is enough for the students to know that they are supposed to give one step after another. Therefore, the students can be assumed to be familiar with the schematic pattern of process descriptions.

Extract 7.36 “Seeing a doctor”

01 T: and doctors ever since had this approach. what does a doctor do? when you go and see him? .. he asks you a few questions

Step I (I)

02 S: cure (?)

03 S: yeah (?)
Furthermore, there is another function in the use of a follow up question indicated in the data. It is not only used to initiate a new step, but also to develop a step further. In the transcript, this feature has been tagged as “extension” and appears as a frequent phenomenon in the data. As the answers given (and required) for the response (R) in the IR(E/F) pattern are significantly short, they might not always be regarded as sufficient for a description by the teacher. Therefore, the follow-up question (F) allows the teacher to overcome this disadvantage and go into more detail about the properties of a particular step of the process. However, it does not overcome the disadvantage of short utterances of the students as the responses to “extensions” are also similarly short.

As far as the use of tense in these sequences is concerned, the canonical process description given in chapter 5.4 assumed the use of past tense. In fact, the majority of the process descriptions employ past tense as the processes described concern events that took place in the past. The only exceptions are extracts 7.36 (“Seeing a doctor”) and 7.37 (“Day of Judgment”) which are concerned with more general applicable processes and therefore use the present tense. An interesting deviation of this general past tense use, however, can be found in extract 7.35 (“Embalm a mummy”) where the teacher asks for a description of the process shown by the pictures and therefore uses present tense (“What is happening?”) whereas the student seems to interpret the questions as
describing the historical process of embalming a mummy and therefore uses past tense (“They washed the body first”). As line four (student uses past tense) and line five (teacher reformulates into present tense continuous) indicate, the teacher tries to change the discourse into a highly contextualized practice of describing a process expressed by pictures before she finally gives in (line 17) and uses past tense herself.

Moreover, another assumed feature of process descriptions was the use of passive voice. Surprisingly, the data indicated only a very small number of passive constructions in these process descriptions. Extract 7.35 (“Embalming a mummy”), for example, could be assumed to exhibit significant use of passive voice as it is the process of mummification which is important and not the agent of the process. However, a general tendency in these patterns is the use of (an often undefined) “they” as subject of an active sentence instead of passive voice. Reformulations of these constructions into passive ones could not be found. Similar to causal explanations, this might be another example of the foregrounding of human agency instead of more impersonal forms of expression in these history classrooms.

Extract 7.37 “Day of Judgment”

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</thead>
<tbody>
<tr>
<td>01</td>
<td>T:</td>
<td>yes .. the Day of Judgment .. what happens on the Day of Judgment? ...</td>
<td>(I)</td>
<td></td>
</tr>
<tr>
<td>02</td>
<td>S:</td>
<td>was heißt (?) (XX)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>03</td>
<td>T:</td>
<td>Clemens</td>
<td></td>
<td></td>
</tr>
<tr>
<td>04</td>
<td>S:</td>
<td>was heißt (XX)?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>05</td>
<td>Clemens:</td>
<td>äh am ... Osiris weighs the heart against the Feather of Truth</td>
<td>Step Z (R)</td>
<td></td>
</tr>
<tr>
<td>06</td>
<td>T:</td>
<td>okay, we are in the last act of all that .. yes ... the weighing of the heart against the Feather of Truth, and?</td>
<td>(E), (F)</td>
<td></td>
</tr>
<tr>
<td>07</td>
<td>Clemens:</td>
<td>... and there is .. ah there are forty-two judges</td>
<td>(R)</td>
<td></td>
</tr>
<tr>
<td>08</td>
<td>T:</td>
<td>yes? can we see them here?</td>
<td>(E), (F)</td>
<td></td>
</tr>
<tr>
<td>09</td>
<td>Clemens:</td>
<td>No</td>
<td>(R)</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>T:</td>
<td>no ... ahm ... where do the forty-two judges come in?</td>
<td>(E), (F)</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>S:</td>
<td>was heißt (?) (XX)</td>
<td>(R)</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>T:</td>
<td>they come in earlier. what happens first? the dead person .. goes .. to ..</td>
<td>(E), (F)</td>
<td></td>
</tr>
</tbody>
</table>
Clemens: (XXX)  
Step I  
(R)

T: judgment .. and the dead person .. must ...  
Step II  
(E),  
(F)

S: (XX)  
(R)

T: yes, do something, say thsomething in front of forty-two judges .. what? .. what must they do or say? ... Soran  
Step II  
(E),  
(F)

Soran: he has to- ahm t- ah .. he has to tell them about his life  
(R)

T: Aha  
(E)

Soran: and .. then they judge if he .. was a good man or a bad one  
Step III  
(R)

T: (ya?) that's right  
(E)

Soran: and .. if the .. if the .. heart is- was heißt d'n schwerer?- heavier  
(R)

S: Heavier  

Soran: Heavier  

T: Mhm  
(E)

Soran: then .. he he wasn't ahm he was a bad man  

T: Mhm  

Soran: and then he ... he ..  
Step IV  
(R)

S: was (?) (XXX)  

Soran: ja (?)  

T: and then he is eaten  

S: he is eaten  

Soran: Genau  

T: he is eaten by this beast  

S: Beast  

Soran: he is eaten by a crocodile  

T: he is eaten by this beast, yes .. ah but this ah .. these scales do not decide whether he was a good man or a bad man but whether he was lying .. in front of the judges .... because here he said ah .. ahm ... what he .. hadn't done in his life, he('d?) listed all the sins that he hadn't done .. and if he hadn't been telling the truth then ...  
Step III  
(E),  
(F)

S: then he is eaten (?)  
(R)

T: then he is eaten by the beast  
(E)
Extract 7.38 “Ostracism”

01 T: a vote of Ostracism, also at the assembly but only once a year. .. ah what was that good for? (I)
02 S3: ahm .. too to ba/(e)mish people if they had done anything wrong (R)
03 T: Mhm (E)
04 S3: aannd ahmm .. they took .. Step I (R)
05 T: Yees (E)
06 S3: sch-scherben (?)? (R)
07 T: scherben (?), ya (E)
08 Ss (laughing)
09 S3: and they wrote ahmm .. something on it, .. and Step II (R)
10 T: mhm, what did they write on it? Step II extension (E), (F)
11 S3?: M (R)
12 S: the names (X) (R)
13 S3: if they had him to-
14 T: the- (E)
15 S3: if they had to banish .. the people or not (F)
16 Daniel: (XX or no (?)) (E)
17 T: yeah- no no no, not yes or no, they didn’t write yes or no on it, Verena, wrote did they write on it? Step II extension (E), (F)
18 S: they they wrote the name of this person (R)
19 S3: the name (F)
20 S: the names (F)
21 Daniel: (XXX) six thousand (X) (E)
22 S: asso (?) (R)
23 T: they wrote the name of the person they wanted to see banished, yes (E)
24 S: Asso (E)
25 S: is ja wurscht (?) (E)
26 T: .. on that .. and what’s the thing called? Step II extension (F)
27 S: Ostrácon (?)? (R)
28 T: it’s not a ballot paper, it’s a ...
29 S: Ostracism
30 Ss: Ostra(XX) (XXX)
31 T: (XX) it's Ostracon, yes (E)
32 S: Aha (F)
33 Daniel: a piece of broken pottery
7.3.5 Metadiscourse on describing

Metadiscourse on discourse functions has so far not been found to be a frequent phenomenon in the data. This general observation also holds true for the discourse function describing and its subcategories. Physical descriptions were the only subcategory that appeared to be discussed through metadiscourse in these CLIL history lessons in three sequences.

One of the rare examples of these metadiscourse sequences is given in extract 7.39 (“How to describe a map”). In this sequence, the teacher tries to make the language used in a structural description explicit. After using the demonstrative pronouns “here and there” in a way which has already been claimed to be characteristic of these descriptions, she points out the phrase “as far as” to the students. However, this is the only instance of explicit language teaching and has to be rather seen as a correction of the “till” used earlier by a student than a planned attempt to teach language for describing a map.
Extract 7.39 “How to describe a map”

but they started as a very small town, and ... (clears his throat) ... it got bigger very fast. ahm ... the question is how to describe a map, you know? ahm ... they .. ah conquered all the countries between here and there, or they got .. to Egypt .. or they got as far as Egypt. you can't say they got till- till Egypt, you said this just earlier.

Soran: Mhm

T: till is .. you know 'till five o'clock' ..

Soran: Mhm

S: Bis

T: yeah? as far as is in a geographical sense. right ahm .. City of Rome, is there anything ... you recognize? this is a reconstruction of the City of Rome ....

A more targeted attempt, however, could be seen in extract 7.40 (“How to describe a picture”) and 7.41 (“All subjects”), where a teacher tries to take the discussion of structural descriptions to a meta-level. As can be seen from this extract, the teacher is aware of the linguistic difficulties of giving a context reduced description and has therefore handed out a list with phrases. These “guidelines” were the most explicit kind of language work that could be found in the corpus. Interestingly, the metatalk takes place in connection with “the situation at the Matura”, the highly important exit exam taken at the end of Austrian grammar schools or vocational schools. Similarly to the metatalk described in the chapter on defining, this seems again to indicate that teachers are aware of the importance of the ability to express discourse functions in testing situations. However, explicit language work on a meta-level as exemplified by this extract was found to be extremely rare in the CLIL history classroom.

This awareness of the importance of discourse functions for academic discourse in general can also be seen in the third instance of topicalizing describing on a meta-level (extract 7.41 “All subjects”). There, the teacher emphasises the importance of giving structural descriptions “holds true for all the subjects”. With regard to this clear statement of importance, surprisingly little metadiscourse takes place besides these very rudimentary sequences.
Extract 7.40 “How to describe a picture”

01 T: what we did now - i ask(ed?) you what your impression of this picture is .. and you told me and you interpreted it, but if you try to imagine the situation at the Matura, if you do the same thing, this might be quite ah quite stressful and quite difficult for you to do that.

02 S: can i go to the toilet?

03 T: yes, of course. so the simpler version would be if you follow ah the guidelines below: simply starting out with .. describing the picture, using these .. phrases, and once you have described the picture and you t- you have talked about the obvious, .. then you could start interpreting it.

04 S: huddled together?

05 T: ah okay, so could i ah s- ah Monika, i am not so sure, are you going to do this oral examination? okay, so, Monika, in the foreground, could you follow these rules here at the bottom.

06 Monika: (XX)

07 S: in the foreground

08 Monika: in the foreground we can see some dead people lying

Extract 7.41 “All subjects”

01 T: apart from the fact that it is very depressing. and do you know how you should go about this? so if you don't know an interpretation, if you have no idea, at least describe it. but it's- this does not only hold true for .. history, this holds true for all the subjects. .. talking about the obvious. ah ten minui- ten minutes are over in ..

7.4 Classifying in CLIL history lessons

Even though classifying might be considered to be more common to science than to humanities, it is a basic principle of academic thinking and therefore could be expected to frequently occur in the (CLIL) history classroom as well. Yet, the micro function classifying was found to be the quantitatively least occurring discourse function among those studied in this thesis as the data only contained one dozen instances of classifying. This amounts to less than one instance per lesson on average.

Furthermore, an analysis of these instances also revealed that in general, classifying is a highly implicit activity in the CLIL history classroom. This can be seen from the fact that complete classification, which can be regarded as the most explicit type of classifying was completely absent in the data. This type, which is characterized by a lexico-grammatical pattern consisting of the three elements item(s), class(es) and
bas(e)s of classification (for example “A can be classified into X, Y, Z according to G.”), would increase comprehension as it makes the semantic relationships obvious. However, examples of classifying were rather found not to exhibit these lexico-grammatical patterns and therefore require a specific amount of inferring on the part of the students as exemplified in example 7.42 (“Social structure of Greece I”). There, the teacher starts with three items (“citizens”, “metics”, “slaves”) without mentioning the class they all belong to. The bases for classification (“right to vote, “requirement to pay taxes”, “citizenship”) is present but not stated as such. Moreover, only when “women” are introduced as establishing “an entirely different category than men”, a second class to choose from is presented and at the same time gives the students the opportunity to infer that the previous class was “men” and therefore items are classified according to “men” and “women”. Then, the items in the class “women” (“slaves´ wives”, “metics´ wives”, “citizens´ wives”), are again distinguished implicitly on the basis of “social status”. This brief analysis of ways of expressing the discourse function classifying reveals that a significant aspect of this discourse function in the CLIL history classroom lies in its implicit formulations, which require the students to infer a great amount of information.

Extract 7.42 “Social structure of Greece I”

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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>T:</td>
<td>you had citizens, .. you hadah .. metics and you had slaves. you've already got that sheet</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Items of classification (a)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>02</td>
<td>S:</td>
<td>No</td>
<td></td>
<td></td>
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<tr>
<td>03</td>
<td>S5:</td>
<td>Yes</td>
<td></td>
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<tr>
<td>04</td>
<td>S:</td>
<td>No</td>
<td></td>
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<td>05</td>
<td>S:</td>
<td>No</td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>06</td>
<td>S:</td>
<td>no!</td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>07</td>
<td>S:</td>
<td>No</td>
<td></td>
<td></td>
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<tr>
<td>08</td>
<td>T:</td>
<td>yes, most of you have, those that were absent haven’t</td>
<td></td>
<td></td>
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<tr>
<td>09</td>
<td>S5:</td>
<td>ahm .. (XXX) haven't</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>S</td>
<td>(laughing)</td>
<td></td>
<td></td>
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<td></td>
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<td></td>
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</tr>
<tr>
<td>11</td>
<td>S5:</td>
<td>(XXX)</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>12</td>
<td>T:</td>
<td>citizens .. citizens have ffull citizenship and the right to vote, .. ah metics don't have the right to vote but they .. must pay taxes, and slaves have no right</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Bases for classification (a)</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
7.4.1 Classification monologues and dialogues

As far as the activity pattern of classifications is concerned, this discourse function occurred in both monologues as well as in dialogues. In the following, these two types shall be treated separately.

In the dialogue types of realizing the thematic pattern of classifying, students were found to contribute to this discourse function mostly by giving the items of classification belonging to a class after a question by the teacher for these members of the class. In other words, the students were merely asked for the items of classification. In example 7.43 (“Roman Republic”), for instance, the teacher asks for a particular “kind of government” and the student’s answer solely consists of the item “republic”.
“Roman Republic”

thrown out, driven away, yes, driven out, thrown out. ... and the people of Rome decided they want... a different kind of government. what sort of ... government did they want and get? ... a republic.

Similarly, in example 7.44 (“Religions in the 16th century”), the teacher demands an answer to the question concerning “various types of religions evolving in the 16th century”, and the students give those items belonging to this class by expressing utterances consisting of a noun and a determiner only (“the Protestants”, “the Calvinists”). The same pattern can be seen in example 7.45 (“Social structure of Greece II”), where the teacher asks for the items belonging to the class “non-citizens” and again receives the short answer “the slaves”, “foreigners” and “metacs”. As already pointed out in the chapters on the other discourse functions investigated in this study, the reason for these rather short answers seems to lie in the predominance of the IR(E)/F interaction pattern. Therefore, asking for the items of a class can again be regarded as a way which lends itself well to being realized by this kind of interaction pattern. These examples of classifying indicate that the teachers’ strategy of asking for items of the class to realize the thematic structure of classifying does not only decrease the explicitness of the discourse function but also has significant impact on the students’ length of output.

“Religions in the 16th century”

and happy and can tell me .. from the last lesson .. ahm .. what we said about the various types which emerged in the sixteenth century

ich weiß nicht wie der (?) Heisel (?) heißt (?)

ja. okay. .. which religions .. emerged?

wa (?)? .. Streit? .. der war nie so schlank.
the Protestant

Lines 14-42 not relevant

so, ah .. the Protestant ..

the Protestant sects

(XX gib ma (?) meine handschuhe (her (??))

ich mag auch so eine(XXX)

(XXX)

hättest da'n (XXX)

(XXX) yes.

(XXX) yes.

(XXX) yes.

(XXX) yes.

(XXX) yes.

(XXX) yes.

(XXX) yes.

(XXX) yes.

they were very extreme.

they were very extreme.

they were very strict.

they were very strict.

they were moderate

they were moderate

okay (?)

they were moderate
Extract 7.45 “Social structure of Greece II”

01 T: aahm women, children .. ah women and children are not citizens

02 S1: Sometimes

03 T: sometimes they are

04 S1: no, women not, children .. sometimes, if they are ah boys ...

05 T: right .. yes, when they have grown up .. they become citizens.

06 S1: Yes

07 T: okay? who else is not a citizen?

08 S: Wonderful

09 T: other people .. ah that live in a polis that are not citizens. Dany.

10 Dany: the slaves.

11 T: the slaves are not citizens, and there is another group ..

12 S: Foreigners

13 T: ah of foreigners. what are they called?

14 S: wie heißen die (?)?

15 S1: ja, metta (??)

16 T: special word starting with m

17 S1: ja, metta (??)

18 T: Dany

19 Dany: metacs or

20 T: Metics

21 S4: Metics

22 Dany: Metics

23 T: yeah? metöken in German. they are not citizens of .. say Athens, they .. aah come from another .. city-state .. what are their duties?

The other kind of realization of classifying in the CLIL history classroom was rather monologic in nature. This type of classifying was found to be realized by teachers only and thereby increased the output of teachers even more. In other words, not a single example of a classifying monologue by a student could be found in the data. Extract 7.47 (“Menshevikks & Bolsheviks”) represents a teacher’s classifying monologue. There, the teacher starts with the class (“Social Democrats”) and uses the verb “split
into” to introduce the two items of this class (“Mensheviks”, “Bolsheviks”). As in all the other examples, the basis for classification is present but not stated as such. It has to be inferred from the translations (“minority”, “majority”) and the comment that “in this one vote they were a majority, but in the long run .. aah .. they were a minority in the country.”

Extract 7.46 “Mensheviks & Bolsheviks”

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<tbody>
<tr>
<td>01 T:</td>
<td>okay, so these ah Social DDemocrats, i don't want to go into detail because this is quite a tricky thing. they split into two parts, Mensheviks and Bolsheviks. .. ah and this is translated as 'Minority' .. and 'Majority'.</td>
<td>Class of classification</td>
<td></td>
</tr>
<tr>
<td>02 S:</td>
<td>(XXX)</td>
<td>Items of classification</td>
<td></td>
</tr>
<tr>
<td>03 T:</td>
<td>ah .. which term was familiar to you .. before the lesson? before Isabella's talk?</td>
<td>Basis for classification</td>
<td></td>
</tr>
<tr>
<td>04 S:</td>
<td>keins von beiden</td>
<td></td>
<td></td>
</tr>
<tr>
<td>05 T:</td>
<td>did you h- n- did you know of both terms or did you only know one of them?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>06 Karin?:</td>
<td>na Bolsheviks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>07 S:</td>
<td>Mhm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>08 T:</td>
<td>only the Bolsheviks?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>09 S:</td>
<td>anyone else? .. have- ah Diana, have you heard about Mensheviks before?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 Diana:</td>
<td>No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11 T:</td>
<td>ah ... why is this so? ... who won thiss conflict in the end?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12 S:</td>
<td>the Bolsheviks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13 S:</td>
<td>the Bolsheviks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14 S:</td>
<td>the Bolsheviks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15 T:</td>
<td>the Bolsheviks, of course; ... in this one vote they were a majority, but in the long run .. aah .. they were a minority in the country. this is why the terms are so very misleading. yeah? .. so this is very misleading, it says here 'majority', this was just one vote where they were the majority, in general they were ... the minority. and Isabella .. ah will explain why they were the minority. the Bolsheviks were ah based their belief ah their revolution on whom? ... on .. one man</td>
<td></td>
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</table>
To sum up, the discourse function *classifying* can be said to be strongly uncared for in the CLIL history classroom. Firstly, *classifying* proved to be a discourse function dominated by the teachers as uses of classifying monologues by students could not be observed in the data at all and their involvement in realizing the discourse function was claimed to be extremely limited to answers consisting of nouns only. Secondly, in contrast to the other discourse functions analysed previously, no attempts of any rudimentary forms of metadiscourse on the language involved in classifying could be found in the data. This lack of explicit knowledge about the lexicogrammar of *classifying* might be an important factor in the lack of students´ classifying monologues mentioned before. Thirdly, the small number of realizations of this discourse function exhibited strong elements of implicit formulations lacking the lexico-grammatical patterns pointed out in chapter 5, thus making the process of learning and understanding their thematic pattern more difficult for the students.
III. Conclusion

1.1 Summary of key findings

The primary objective of this study was to investigate the use of discourse functions in CLIL history classrooms. It specifically tried to answer this question by an examination of the quantitative occurrence of, the linguistic realization of, the explicit language work on and the activity structures involved in two micro functions (defining, classifying) and two macro functions (explaining, describing).

The study was carried out on the basis of 18 classroom transcripts of CLIL history lessons in three different vocational schools. A descriptive empirical study was conducted to investigate the quantitative and qualitative properties of the four discourse functions under investigation. Even though the study was limited by the number of teachers and the number of lessons analysed, its outcomes indicate tendencies which might also be expected in other upper secondary CLIL history classes.

A preliminary finding of this study was that instances of the discourse functions defining, describing, explaining and classifying cannot be considered a frequent phenomenon of the CLIL history classroom. The macrofunctions explaining and describing comprised the upper end of the scale with 39 and 38 tags respectively. On the lower end, however, the micro functions defining (disregarding mere translations) and classifying were found with 19 and 12 tags respectively. Despite these individual differences between these four discourse functions examined in this study, none of them was found to occur more often than twice in a lesson on average.

As regards the lexico-grammatical patterns of defining, explaining, describing and classifying, the analysis revealed that students hardly ever express these discourse functions on their own. Moreover, the small amount of discourse functions realized by students also made clear that students are often highly unaware of the canonical lexico grammatical features involved in the realization of discourse functions. In contrast, teachers performed these discourse functions more often and in the case of defining and explaining with a significantly stronger accordance to the lexico grammatical features pointed out in chapter 6. This seems to suggest that teachers posses the procedural knowledge to perform these functions. The macro function describing and the micro
function *classifying*, however, do not conform to this hypothesis as *describing* revealed to lack the important feature of context reduced language even in the sequences of teachers, and *classifying* demonstrated to be largely realized implicitly without the use of its lexico-grammatical features.

With regard to the influence of activity structures on discourse functions, the results of this study have confirmed that the tripartite pattern of IR(E)/F is predominant in these CLIL history classrooms and has a significant impact on the realization of discourse functions. Firstly, the question-answer pattern typical of IR(E)/F might be the main reason for the small amount of monologues through which the students would be able to observe the use of lexico grammatical features to realize discourse functions. Secondly, the IR(E)/F pattern leads to scattering elements of discourse functions across discourse, which makes it more difficult to understand the semantic relations holding between terms. Thirdly, IR(E)/F was suggested to be a reason for one word or elliptical short-phrase answers of students. Thereby, it significantly diminishes the language output of students.

Finally, this thesis also offered some interesting observations as regards explicit language work in the CLIL history lessons observed. In general, these attempts to take discourse functions on a meta-level were found to be small in number and rudimentary in quality. However, two examples, namely extract 7.6 (*defining*) and extract 7.40 (*describing*), were particularly interesting in this regard as they both occurred in relation to a testing situation (history test and Matura respectively). Even though any generalization has to be made cautiously with regard to their small number, these two examples seem to indicate a certain kind of awareness of (some) teachers for the importance of these discourse functions.

However, besides these rare examples, explicit language work on discourse functions was almost inexistent. A conclusion which can be drawn from this is that in the light of the close relationship between content and language, explicit language work is significantly important in the CLIL history classroom and attempts have to be made in order to overcome the views of natural acquisition of the discourse functions. As this thesis has exemplified, the implicit ways in which participants often realize thematic patterns is a serious obstacle to content learning.
1.2 Pedagogical implications

The results of the present study have emphasized that CLIL in upper secondary history classes is still a long way from its full potential, so “that the non-language subject is not taught *in* a foreign language but *with* and *through* a foreign language” as claimed by the Eurydice Report (2006: 7). Discourse functions revealed to be limited both quantitatively in their number of occurrences as well as qualitatively in the lexico-grammatical patterns they were realized in.

Therefore, one important implication is to provide explicit language work in the CLIL history classroom. The teacher could help to ensure development of discourse functions by explicitly teaching them. On a theoretical level, this thesis has provided a conceptual basis for *describing*, *explaining*, *defining* and *classifying*. Especially the conceptualisations of *explaining* of causes and consequences, *describing* of physical properties, functions, processes and structures and *classifying* are important and useful for the teacher in this regard as they have not been described in literature on discourse functions before. Furthermore, these descriptions provide a basis for knowledge about discourse functions which have been claimed to be only realized insufficiently even by teachers (describing, classifying).

On a practical level, this thesis has provided a basis for developing scaffolding tools for teaching these discourse functions as it has attempted to highlight the language patterns of *explaining*, *describing*, *defining* and *classifying*. What has become clear in this study is the significant lack of metadiscourse on the various discourse functions. Therefore, the patterns pointed out in chapter 6 might be of value for indulging in metadiscourse on discourse functions in the CLIL history classroom. Thürmann (2010: 148) has pointed at the pedagogic potential of a specification of the patterns of these discourse functions if they are further defined by teachers working together across subjects. This might lead to “the development of an integrated curriculum that is accepted by teachers of all subjects and provides the basis for developing a whole-school language policy” (Thürmann, Vollmer & Pieper 2010: 26).

Finally, it is also suggested that another aim of the CLIL classroom should be to reflect on the activity structure and decrease the IR(E)/F patterns. These patterns have been suggested to have a significant impact as they play a vital role in diminishing students’
output and at the same time in distorting discourse functions. This does not mean that a return to a lecturing style of teaching is recommended, but it means that teachers have to look for ways of teaching and learning which provide more space for individual utterances and therefore for a realization of discourse functions.
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Abstract (English)

In connection with repeated calls for a “reconceptualization of the role of language in CLIL” (Coyle 2007:552) researchers have started to focus on the heuristic and epistemic role language plays as a “learning tool” in constructing subject knowledge (Zydatiß 2010:135). While these claims point towards a conceptual integration of content and language learning, little empirical research has investigated the actual realization of this “learning tool” in the CLIL classroom (Kidd 1996, Lose 2007, Dalton-Puffer 2007).

This study examined the subject-specific language use in terms of discourse functions occurring in naturalistic language data of 18 upper secondary CLIL history lessons taught by three different teachers in Austria. The conceptual framework developed for the data-analysis drew chiefly on discourse-rhetorical work developed in the field of English for Specific Purposes in the 1970s and 1980s (Trimble 1985, Widdowson 1979, 1983), an area of scholarship which has not yet been fully exploited by CLIL researchers so far. Two micro-functions (defining, classifying) and two macro-functions (explaining, describing) which can be assumed to play a central role in the construction of knowledge in history lessons were chosen for the analysis. The data-corpus of 129,000 words was analysed with regard to the frequency, linguistic realization, the activity structure and explicit language work involved in the realization of these four functions.

Findings from the study revealed that these discourse functions cannot be considered to be a frequent phenomenon of the CLIL history classroom. Even more importantly, the study showed that students hardly ever realize discourse functions on their own and if they do so, these often lack the canonical lexico-grammatical features. In the case of describing and classifying, this lack of canonical lexico-grammatical features could also be observed in discourse functions realized by teachers. This might be caused by the predominance of the IR(E)/F interaction pattern which was found to diminish the occurrence of monologues which could serve as models for discourse functions, to scatter elements of discourse functions across several participants and lead students to short and elliptic answers. Furthermore, the analysis uncovered a significant lack of explicit language work on a meta-level. These results contribute to an understanding of the current practices in CLIL history classrooms and offer directions for more focused work on these discourse functions in order to develop CLIL’s full potential.
Abstract (Deutsch)

**Deutsche Zusammenfassung**

Die vorliegende Diplomarbeit untersucht den Zusammenhang von Inhalt und Denken anhand der Realisierung sogenannter discourse functions (Diskursfunktionen) im Content and Integrated Learning (CLIL) Ansatz in Geschichtsstunden der BHS Oberstufe.


Daher strebt diese Arbeit eine empirisch-deskriptive Analyse von 18 CLIL Geschichtsstunden an um zu klären in wie weit discourse functions für den Wissenserwerb eine Rolle spielen. Der Fokus liegt dabei auf den vier discourse functions „explaining“(erklären), „describing“(beschreiben), „defining“ (definieren) und „classifying“(klassifizieren) welche als wichtige Bestandteile des Faches angenommen werden.

Der erste Schritt der Untersuchung umfasste dabei eine impressionistische Analyse die die kommunikative Absicht von Sprechhandlungen von Schülerinnen/ Schülern und Lehrerinnen/ Lehrern bestimmte. In Schritt II wurde ein Analysegerüst konstruiert (Kapitel 6), das, basierend auf ESP Literatur bestimmte lexiko-grammatikalische Muster der vier oben genannten discourse functions als Analysegrundlage zu den angenommenen Sprechhandlungen herangezogen wurde. In einem letzten Schritt wurden schließlich die Interaktionsmuster zwischen den Teilnehmerinnen/ Teilnehmern der Interaktion bestimmt. Diese Gesamtaanalyse der vier discourse functions folgt in Kapitel 7.

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Sprachkenntnisse

Deutsch (Muttersprache).
Weitere Sprachen: Englisch, Französisch, Latein, Tschechisch (Grundkenntnisse).