Educating the Educators
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CLIL Teacher Competences and Their Promotion in German Teacher Education: A Case Study

DISSERTATION

zur Erlangung des

akademischen Grades eines

Doktors der Philosophie

am Fachbereich 2: Philologie/Kulturwissenschaften der

Universität Koblenz-Landau

vorgelegt im Promotionsfach Anglistik/Amerikanistik
Schwerpunkt: Angewandte Linguistik/Fachdidaktik
am: 17. Dezember 2020
von Felicitas Fein
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Acknowledgements

At this point, I would like to seize the opportunity and thank all those people who supported and accompanied me on this journey – a journey in which I not only learned a lot about this academic field but also about myself. Without you, completing this thesis would not have been possible.

First of all, I want to thank Prof. Dr. Constanze Juchem-Grundmann, Professor of Applied Linguistics and English Didactics at the University of Koblenz-Landau, Campus Koblenz. After my studies, you encouraged me to take on this journey – a choice which I have never regretted ever since. Thank you so much for your wholehearted support, your enthusiasm for my work, your valuable feedback and your belief in my abilities. I am so grateful for the opportunity you provided me with. I have always enjoyed working for and with you and hope to keep on doing so in the future.

Secondly, I want to thank Prof. Dr. Michael Meyer, Professor of Literary Studies and English Didactics at the University of Koblenz-Landau, Campus Koblenz. Thank you for your interest in my work and for always offering your support. Also, I want to thank Prof. em. Dr. Dieter Wolff for his valuable feedback to my research. I highly appreciate being given the opportunity to discuss my thesis with you.

Next, I want to express my gratitude to the *Bundesministerium für Bildung und Forschung* (Federal Ministry of Education and Research) and their initiative *Qualitätsoffensive Lehrerbildung*. Thanks to this initiative, the MoSAiK project (***Mo**dulare **S**chulpraxisanbildung als **A**usgangspunkt zur **i**ndividuellen **K**ompetenzentwicklung*, English: modular integration of school practice as a starting point for individual competence development)[1] could be established at the University of Koblenz-Landau. In the realm of this large-scale project, our CLIL certificate could be established and the project provided me with the necessary resources for my research.

SPONSORED BY THE
Federal Ministry of Education and Research

I also want to thank my student assistants Ann-Katrin Biehl and Marco Nisius, whose assistance in transcribing and coding the data as well as researching CLIL teacher education programmes in Germany helped me a lot.

Also, I want to thank my colleagues for our fruitful discussions, your support and your interest in my work. I especially want to thank my fellow PhD students of the MoSAiK project

[1] This project is part of the "Qualitätsoffensive Lehrerbildung", a joint initiative of the Federal Government and the Länder which aims to improve the quality of teacher training. The programme is funded by the Federal Ministry of Education and Research. The authors are responsible for the content of this publication.

– our discussions over uncounted cups of coffee have been an essential contribution to this thesis. Also, I especially want to thank Sarah Wunderlich and Dr. Jochen Ecke for offering your support and investing your time in proofreading parts of this thesis. Your suggestions and feedback have been invaluable.

And finally, embarking on this PhD journey was only possible because I knew that my friends and family always got my back. Thanks to my friends: for your support, for your open ears, for sometimes taking my mind of this thesis when necessary and for your – at times – crazy ideas which often encouraged me to test and especially stretch my limits. Through that, you have broadened my horizon so much.

I also want to especially thank my parents. You have always supported and encouraged me in every phase of my life and I know that I can always count on you. I cannot put into words how thankful I am. I owe you so much! And last but definitely not least, I want to thank you, Philip: Knowing you at my side means so much to me!

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List of Abbreviations

B.Ed.	Bachelor of Education
BICS	Basic Interpersonal Communication Skills
CALP	Cognitive Academic Language Proficiency
CEFR	Common European Framework of References for Languages
CK	Content Knowledge
CLIL	Content and Language Integrated Learning
CP	Credit points
GFD	Gesellschaft für Fachdidaktik (*Association for Fachdidaktik*)
ICC	Intercultural Communicative Competence
ICT	Information and Communications Technology
IDM	Integrated Dynamic Model
KMK	Kultusministerkonferenz (*Standing Conference of the Ministers of Education and Cultural Affairs*)
L1	mother tongue or school language (see also footnote 5, p. 9)
L2	second or foreign language (see also footnote 5, p. 9)
M.Ed.	Master of Education
MINT	Mathematik – Informatik – Naturwissenschaften – Technik (*Mathematics – Computer Sciences – Natural Sciences – Engineering*)
PCK	Pedagogical Content Knowledge
PK	Pedagogical Knowledge
PPK	Pedagogic/Psychological Knowledge
QCA	Qualitative Content Analysis
RQ	Research Question
SEN	Special Educational Needs

SLA	Second Language Acquisition

Abbreviations for universities with CLIL programmes

PHK	Pädagogische Hochschule Karlsruhe
PHL	Pädagogische Hochschule Ludwigsburg
UniBr	Universität Bremen
GUF	Goethe-Universität Frankfurt
TUBr	Technische Universität Braunschweig
GAU	Georg-August Universität, Göttingen
SUH	Stiftung Universität Hildesheim
TUDo	Technische Universität Dortmund
BUW	Bergische Universität Wuppertal
JGU	Johannes-Gutenberg Universität, Mainz
MLU	Martin-Luther Universität, Halle-Wittenberg
CAU	Christian-Albrechts Universität, Kiel

Note: Some of these abbreviations are officially used by the respective universities, in some cases, however, no official abbreviations exist and hence, abbreviations were chosen for this dissertation exclusively.

Glossary

Abitur	highest educational degree at German schools; entrance qualification for university programmes (comparable to the British A-levels)
Berufsbildende Schule (BBS)	collective term for schools which offer the theoretical part of apprenticeships (e.g. for jobs in the field of craftsmanship); mostly, the German *Abitur* can also be obtained (similar to vocational schools)
Bildungssprache	formal register of language, including, for example, everyday language, technical language and symbolic language (cf. Gogolin 2010)
Bildungsstandards	German educational standards, which define the competence levels, students are expected to show in a certain grade or in order to obtain a certain degree
Bildungswissenschaften	collective term for academic disciplines connected to the broad field of education, e.g. pedagogy, psychology or sociology; also: obligatory component of all teacher education programmes in Germany
Gesamtschule	a school which combines several school types and degree forms (similar to comprehensive schools)
Gymnasium	a school which provides a deepened, general education and prepares their students for university; the German *Abitur* is obtained at *Gymnasien* (similar to higher secondary school)
Hauptschule	a school which provides their students with basic, general education and prepares them for an apprenticeship; usually lasts for nine school years
Pädagogische Hochschule	similar to universities; only offers study programmes in the field of education (similar to teacher education college or universities of education)
Realschule	a school which provides their students with basic, general education and prepares them for an

	apprenticeship, usually lasts for ten school years (similar to lower secondary school)
Sekundarstufe I/II	two educational levels in German education, following primary education and prior to university education; *Sekundarstufe I* mostly lasts until grade 10 and *Sekundarstufe II* usually covers grade 11-13
Studienseminar	educational institution responsible for the second phase of teacher education
Vorbereitungsdienst/Referendariat	second phase of teacher education in Germany, following university training, conducted at schools in close cooperation with *Studienseminar*; usually lasts between 18 and 24 months

1. Introduction

"[I]increasing the number of relevant and appropriate teacher education programmes [for CLIL] is a priority."
(Coyle, Hood & Marsh 2010: 163)

Content and Language Integrated Learning (CLIL) has experienced growing importance in the last decades and an increasing number of schools have already implemented CLIL programmes or are planning to do so. Especially aiming at improving the students' foreign language competences, CLIL programmes are also expected to promote the students' cognitive skills, their intercultural competences and their content subject competences as well as raising their motivation for learning a foreign language. Due to these potential benefits of CLIL, the implementation of CLIL programmes is encouraged by the *Kultusministerkonferenz* (KMK) through explicitly asking for an extension of CLIL programmes (KMK 2013) and also implicitly through the European Union, which asks their citizens to be proficient in at least three languages: their mother tongue as well as two other European languages (Commission of the European Communities 1995). Though the potentials of CLIL programmes are widely praised, first research results also raise doubts if CLIL students can live up to these high expectations. Both Fehling (2005) as well as Rumlich (2013; 2016), for example, found that CLIL programmes not inevitably show the expected results but that the CLIL students' success might also be at least partially explained by other influences, such as the selection process of future CLIL students. Hence, CLIL students apparently fall short of the high expectations that are usually connected to the respective CLIL programmes and as this is mainly based on the unsatisfactory quality of these programmes, Rumlich concludes that "it is now high time to focus on the quality of CLIL provision" (Rumlich 2016: 452). He continues to explain that "the promises of CLIL do not materialise automatically owing to the fact that another language is used for learning in a non-language subject" (Rumlich 2016: 452). As, in general, the success of teaching is highly connected to the role of the teacher (cf. Alejo & Piquer Píriz, 2010; Bongartz & Dziak-Mahler, 2007; Dafouz Milne et al., 2010; Gnutzmann, 2007, 2015; Halbach, 2010; Kupetz, 2010; Pérez Cañado, 2016; Vilkancienė & Rozgienė, 2017; Wolff, 2002)(cf. Hattie 2003), the success of CLIL teaching must also highly depend on the quality of the CLIL teachers. Fehling as well as Rumlich also attribute great importance to the role of the CLIL teacher and therefore, focusing on the improvement and development of CLIL teacher education programmes is one step in securing and increasing the positive effects of CLIL programmes.

In contrast to the continuously growing number of CLIL schools, however, the number of

specifically trained CLIL teachers is comparably small. In Germany, CLIL teachers are not (yet) required to attend any special training in order to teach in a CLIL programme. The KMK considers a fully trained subject teacher with sufficient foreign language competences as appropriately qualified (KMK 2013: 16–17). As this seems especially surprising in the light of the aforementioned importance of CLIL teachers for the success of CLIL programmes, experts in the field of CLIL have long been arguing that CLIL programmes can only reach the high expectations if teachers are specifically prepared for teaching in these programmes (cf. Cenoz & Genesee 1998; Lamsfuß-Schenk & Wolff 1999; Wolff 2002; Königs 2007a; Coyle 2010; Coyle, Hood & Marsh 2010; Hillyard 2011; D'Angelo & Garcia Pascual 2012; Mentz 2015; Gnutzmann 2015). Thus, the quote which opens the introduction to this thesis and which considers the development of CLIL teacher education programmes as a priority can be understood as the central idea of this research. What Coyle, Hood and Marsh connect to this demand for CLIL teacher education programmes is the need of "relevant and appropriate" (Coyle, Hood & Marsh 2010: 163) programmes, which are hence adapted to the specific educational context as well as the (future) CLIL teachers' educational background. As an example, teachers in Germany are usually already qualified in two subjects while most teachers in other European countries are only qualified in one subject. German CLIL teachers are hence often already trained to teach the foreign language as well as the content subject and thus bring different prerequisites than other European teachers who are either qualified to teach the foreign language or the content. Notwithstanding, is it sufficient for a CLIL teacher only to be trained in the content subject and the foreign language? Or does CLIL teaching require more than the sum of these two components? Do CLIL teachers need additional teaching competences to the ones of a content and a language teacher? In the light of the recent findings of CLIL programmes falling short of the high expectations, the answer to these questions must clearly be "Yes". Hence, in order to appropriately train (future) CLIL teachers, special training programmes need to be developed which consider the teachers' individual educational backgrounds, i.e. their qualifications as language and/or as content teachers and build up on these competences through adding the CLIL-specific teaching competences.

Although theoretical guidelines for CLIL teacher education have already been developed on a European scale (cf. Bertaux et al. 2010; Marsh et al. 2011), these are mostly on a meta-level and hence do not consider the respective educational backgrounds or national prerequisites. Therefore, this thesis aims at developing a German Framework for CLIL Teacher Education, which considers both the already published, theory-based standards of CLIL teacher education as well as the practical perspective of experienced CLIL teachers in Germany. This

German Framework for CLIL Teacher Education classifies the different teaching competences, which are derived from integrating the theoretical and the practical perspective on CLIL teacher education, with regard to the three different competence areas, i.e. the general teaching competence, the language teaching competence and the subject teaching competence and is hence adaptable to different CLIL settings and educational backgrounds. In addition to developing this German Framework for CLIL Teacher Education, which provides the content of future CLIL teacher education programmes, this thesis discusses different forms of structurally implementing CLIL teacher education programmes in the existing structures of teacher education in Germany. This is achieved through analysing the current state of the art of CLIL teacher education at German universities and systematising the different forms of implementing these training programmes in the prevailing educational structures. Building on these first two steps, in the third and final step, this thesis develops a CLIL teacher education programme at a German university that is based on the results and elements of the German Framework for CLIL Teacher Education as well as the state of the art of CLIL teacher education in Germany. Thus, this thesis is allocated at the intersection between foreign language teaching as well as teacher education and is structured in eleven chapters.

After this first introduction, the theoretical basis of *CLIL* is discussed in chapter 2. Beginning with the definition of the term *CLIL* as well as a juxtaposition with related terms and concepts used in the literature, the chapter continues with the development and the current forms of CLIL programmes in Europe and particularly in Germany. The chapter concludes with an overview of the aims of CLIL which are discussed in the light of current research findings and with regard to the implications these have on the importance of CLIL teacher education.

This is followed by chapter 3, which focuses on teacher education in general and first establishes the concepts of *competence* and *knowledge*, which function as a basis for discussing established models of general teacher competences and principles of good teaching in the following step. Afterwards, the general German teacher education programme is discussed and the aforementioned models and principles applied.

Chapter 4 merges these two chapters on CLIL and on teacher education as it discusses research in the area of CLIL teacher competences as well as CLIL teacher education programmes. Afterwards, it concludes with current issues of CLIL teacher education.

After the preceding theoretical chapters, chapter 5 discusses the research questions. Moreover, it elaborates on the research design, which addresses the previously identified research questions.

Next, chapter 6 postulates the first component of developing the German Framework for CLIL Teacher Education through analysing the CLIL teacher competences which are officially needed. In order to do so, the "European Framework for CLIL Teacher Education" (Marsh et al. 2011) as well as the "CLIL Teachers' Competences Grid" (Bertaux et al. 2010) are strongly relied on. Through the use of Qualitative Content Analysis (Kuckartz 2016), these competences are analysed as well as systematised.

Afterwards, the practical perspective of experiences CLIL teachers is added in chapter 7. First, expert interviews are conducted with German CLIL teachers, which are again analysed via Qualitative Content Analysis (Kuckartz 2016) and added to the development of the German Framework for CLIL Teacher Education.

Finally, the theoretical and the practical perspective of CLIL teacher competences, which are discussed in the previous two chapters, are the basis for developing and discussing the German Framework for CLIL Teacher Education in chapter 8. This Framework especially incorporates the models of general teacher competences as well as the prerequisites of teacher education in Germany, which are discussed in chapter 3. Based on these prerequisites, the CLIL teaching competences are classified with regard to the competence area they target, such as the general teaching competence, the language teaching competence or content teaching competence. Through this classification, the Framework is adjustable to different CLIL contexts. Hence, future CLIL teacher education programmes which are developed on the basis of the Framework can consider the regional characteristics of CLIL programmes as well as the teachers' educational backgrounds.

Afterwards, the current state of the art of CLIL teacher education programmes in Germany is discussed in chapter 9. In a comprehensive survey, all CLIL teacher education programmes at German universities are analysed with regard to their structural implementation in existing teacher education programmes. Based on this analysis, the different programmes are systematised with the help of a set of previously defined criteria, such as their target group, the target languages or the content subjects which are offered in the programme.

Finally, the previous research on developing the German Framework for CLIL Teacher Education as well as the state of the art of CLIL teacher training in Germany serve as the basis for developing a certificate programme at a German university which is presented and discussed in chapter 10. After examining the elements of the certificate programme on the basis of the previous findings, the first cohort of students which ran through the programme is presented.

Lastly, the final chapter 11 summarises and discusses the results as well as the limitations of the findings. Also, possible implications for future research in the field of CLIL teacher education are sketched out and a concluding summary terminates this thesis.

As this thesis presents and discusses groundwork for designing CLIL teacher education programmes, the conducted analyses need to be well-founded and described in detail. Only through these extensive analyses, this newly developed concept for CLIL teacher education in Germany can contribute to securing the success of future CLIL programmes.

2. CLIL – Content and Language Integrated Learning

*"Bilingual education is **the only way** to educate children in the twenty-first century."*
(García 2009: 5, original emphasis)

Though the idea to teach a subject with and through another language is not a new one, it has gained momentum and interest within the past years. Over the course of time, different understandings and approaches as to integrating content and language have emerged and hence, the following chapter starts with the different terms that are often used in this context and continues with the development as well as the current forms of the CLIL teaching approach in Germany. The chapter concludes with an overview of the aims that are pursued with implementing CLIL teaching programmes and research results either supporting or questioning these. Especially the definition of the sometimes synonymously used terms *CLIL, Bilingualer (Sachfach-)Unterricht* and *immersion*, which are defined differently, though, is a crucial prerequisite for analysing and developing CLIL teacher education programmes as their theoretical orientation needs to be considered.

2.1. Definition of Terms

CLIL, Bilingualer (Sachfach-)Unterricht, immersion – all three terms are used when referring to teaching approaches that feature the combination of subject and language learning. As they refer to different theoretical underpinnings with different connotations, though, it is unfortunate that they are often used interchangeably in discourse. Therefore, it is crucial to first of all shed light on these differences and thus clearly define the scope of the present research.

CLIL

The term *CLIL*, an acronym for *Content and Language Integrated Learning*, was coined in the 1990s and functions as an umbrella term for various teaching approaches. Though no universal description has been agreed on yet, the following definition by Coyle, Hood and Marsh (2010) is widely cited and accepted:

> Content and Language Integrated Learning (CLIL) is a dual-focused educational approach in which an additional language is used for the learning and teaching of both content *and* language. (Coyle, Hood & Marsh 2010: 1, original emphasis)[2]

[2] The term "additional language" is defined as "a learner's 'foreign language', but it may also be a second language or some form of heritage or community language" (Coyle, Hood & Marsh 2010: 1).

This emphasis on the dual-focus of CLIL clearly highlights the focus of CLIL on both content and language learning, which is supported through adding that "CLIL is not a new form of language education. It is not a new form of subject education. It is an innovative fusion of both" (Coyle, Hood & Marsh 2010: 1). The Eurydice[3] report also refers to this dual-focus through explaining that the CLIL approach includes that "the non-language subject is not taught *in* a foreign language but *with* and *through* a foreign language" (Eurydice 2006: 7, original emphasis), again supporting the prior argument that CLIL teaching not only uses the foreign language as a medium of instruction but explicitly focuses on language learning as well. Next to this dual-focus on language or *communication* as well as *content*, Coyle, Hood and Marsh add two more dimensions, i.e. *cognition* and *culture*, in their development of a 4Cs Framework of CLIL (see Figure 2.1), which demonstrates the four key components of CLIL teaching. The aspect of *content* refers to the specific subject matter while *communication* is concerned with learning and using the (foreign) language. *Cognition*, furthermore, highlights the importance of learning and thinking processes in CLIL lessons and *culture* refers to developing intercultural awareness and the feeling of a global citizenship (Coyle, Hood & Marsh 2010: 41). As is shown in Figure 2.1, *culture* is visualised through a circle around the triangle of *content*, *communication* and *cognition*, suggesting that *culture* frames the other three aspects. Apart from the circle for *culture*, another square – the *context* – frames the 4Cs Framework as all CLIL programmes need to take the local or national contexts into consideration.

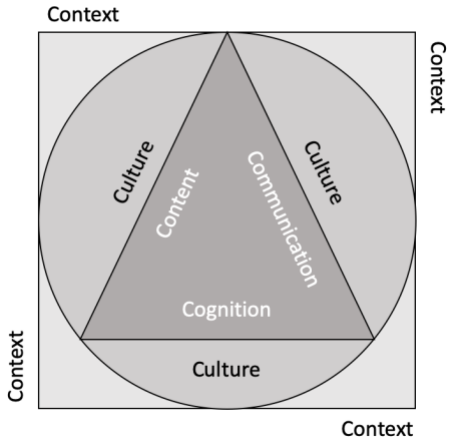


Figure 2.1 4Cs Framework (Coyle, Hood & Marsh 2010: 41)

Despite this integration of the 4Cs, though, the focus of CLIL may vary within either a single lesson or an entire lesson unit as not all four components can be of equal relevance at all times.

[3] The Eurydice network was founded in order "to provide those responsible for education systems and policies in Europe with European-level analyses and information which will assist them in their decision making" and which also published a report on the state of the art of CLIL provision in Europe (Eurydice 2006) (https://eacea.ec.europa.eu/national-policies/eurydice/about_de, last access: 1 October 2020).

Apart from that, the CLIL approach is also meant to be "content-driven" (Coyle, Hood & Marsh 2010: 1) and thus prioritising the content subject over language learning.

Though the elements of the 4Cs Framework form the cornerstones of a definition of CLIL, CLIL is still understood as "flexible and can be adapted to different [educational or national] contexts" (Coyle, Hood & Marsh 2010: 1). Therefore, the term *CLIL* is often used as an umbrella term, which is explicitly underlined by Baetens Beardsmore, who states that "there is no single blue-print of content and language integration that can be applied in the same way in different countries" (Baetens Beardsmore 1993: 3).

Bilingualer (Sachfach-)Unterricht

In the German context, the term *Bilingualer (Sachfach-)Unterricht* is used more frequently than the internationally used term *CLIL*. The *Kultusministerkonferenz* (Standing Conference of the Ministers of Education and Cultural Affairs, short: KMK), which published a report on the current realisation of bilingual education in Germany and which also formulated guidelines for the future development of bilingual education, defines *Bilingualen Unterricht* as follows:

> Unter bilingualem Unterricht wird in den deutschen Ländern grundsätzlich ein Fachunterricht in den nicht-sprachlichen Fächern verstanden, in dem überwiegend eine Fremdsprache für den fachlichen Diskurs verwendet wird. (KMK 2013: 3)[4]

This definition entails several important aspects. First of all, this definition focuses on the teaching of the content subject (*"in den nicht-sprachlichen Fächer"*) while the foreign language is (only) used for content-related discourse (*"für den fachlichen Diskurs"*), which puts a strong emphasis on the importance of content learning and leaves language learning seemingly as a by-product or secondary effect. In addition, the content subjects which are taught bilingually receive an additional school lesson per week, which is then taught in the school language in order to ensure that all students understand the content and also learn the subject-specific terms in the school language (KMK 2013: 3). Apparently, the KMK seeks to ensure that CLIL students can compete with monolingually taught students as CLIL students might face difficulties understanding the content if the additional language is added to regular content teaching. The strong focus on content learning in German bilingual settings is also visible in the assessment regulations, which require bilingual teachers to use the same assessment principles as in monolingual settings, i.e. focusing on the students' content achievements and

[4] Translation by the author: In the German federal states, bilingual education is understood as subject teaching in the non-language subjects, in which a foreign language is predominantly used for (subject-related) discourse.

only including the language perspective if a weak language performance renders the students' answers incomprehensible (KMK 2013: 15).

Apart from that, the KMK's definition of *Bilingualer Unterricht* also requires that the foreign language is used predominantly (*"überwiegend"*), which implies not exclusively. This matches the term of **bi**lingual education, hence a form of education which is conducted in two languages. Accordingly, Diehr speaks of a triple-focus of bilingual education: content – school language (L1) – foreign language (L2)[5] (Diehr 2016: 65). The importance of using both the L1 and the L2 especially with regard to the subject-specific language is underlined by Diehr, who states that not all (subject-specific) concepts have direct equivalents in the L1 and the L2. With the help of the Integrated Dynamic Model (IDM), Diehr therefore argues that due to the lack of concept equivalences, both the L1 and the L2 need to be actively used and the differences between the concepts need to be directly addressed in bilingual education (Diehr 2016).

Though the KMK generally suggests to use the L2 for two thirds of the teaching time while using the L1 for the remaining third of the teaching time (KMK 2013), Diehr developed three different types of integrating the L1 and the L2 in bilingual teaching settings. Accordingly, Type A tries to exclusively use the L2 and only uses the L1 in order to ensure that the students also learn subject-specific terms in the L1 as well. Hence, Type A strongly prioritises the L2 over the L1. Type B, in contrast, regards the L2 as the guiding language, which is still of greater importance than the L1 but Type B also systematically integrates the L1 in order to support the students' understanding of the content. Finally, Type C considers both the L1 and the L2 as complementary, equally important components of bilingual teaching (Diehr 2012; Diehr 2016; Diehr & Frisch 2018). In order to achieve the goal of developing the students' subject literacy in both languages, Diehr argues that Type C is most suitable but also explains that the choice which type to use in a bilingual setting also depends on the general aims and organisational form of implementing the approach (Diehr 2012; Diehr & Frisch 2018). Though Diehr and Frisch consider Type C to be the favoured form of implementing the L1 and the L2 (Diehr & Frisch 2018), a survey of 58 teachers, which was conducted by Wolff and Sudhoff, shows that the vast majority of teachers (75.4%) hardly includes the L1 but still regards the L2 as the dominant language that is, they follow Type B. While only 7% of the teachers approve of the equal use of the L1 and the L2 (Type C), 17.5% also try to use the L2 exclusively (Type A) (Wolff & Sudhoff 2015: 21). Interestingly, though, the survey also revealed that the teachers'

[5] Following Diehr (2016), *L1* is used to refer to the school language (which is not necessarily the students' mother tongue) and *L2* refers to the foreign language (which usually refers to a second language but also implies a foreign language in this context).

response patterns to the follow-up questions did not match their previously chosen type (Wolff & Sudhoff 2015: 25ff.). As Diehr and Frisch yielded similar findings in their survey of 70 bilingual teachers (Diehr & Frisch 2018: 250), it can be assumed that the use and the role of the two languages are not sufficient to define bilingual education.

Immersion

Another term which is often used in this context is *immersion*, which is often referred to as the origin of the European CLIL development[6]. This educational approach was first introduced in Canada in the 1960s in order to improve the students' second language proficiency (Wesche 2002). In the initial immersion programmes in Canada, the entire curriculum was taught in the second language, which was French in this context. While all subjects where taught in French, there was no explicit language teaching, i.e. no explicit teaching of French vocabulary, grammar or linguistic structures. This original approach is also known as *total immersion*, while later on also *partial immersion* programmes, which also use the school language to teach parts of the curriculum, were introduced (Wesche 2002). Apart from that, immersion programmes are also distinguished by their starting point in school (Wesche 2002). The classical form is called *early immersion* because it already starts in nursery school or at the age of four to six, while there are also middle (starting at the age of nine) or late forms of immersion (starting at the age of eleven or twelve). Though this teaching approach showed great success in Canada and helped students to achieve a near-native language level (Wesche 2002), attempts to compare these Canadian immersion programmes to European CLIL contexts as well, however, need to be seen critically as there are several differences between these programmes (cf. Lasagabaster & Sierra 2010). First of all, the Canadian immersion programmes used the French language, which is mostly a second language for the target group and which they are confronted with in their everyday lives (at least in those provinces in which French is used as an everyday language as well). In contrast to that, European CLIL settings usually imply the use of a foreign language (mostly English or French), which is not a second but a foreign language. Furthermore, teachers in Canadian immersion programmes are often trained teachers who are native speakers of French, while European CLIL teachers are mostly non-native speakers of the foreign language (Lasagabaster & Sierra 2010). Also, the early starting age of many immersion programmes cannot be compared to the rather late starting point of CLIL programmes, which are usually only

[6] This does not include the European schools, which Wesche considers as "'luxury' model[s] of immersion-like multilingual schooling" (Wesche 2002: 369) and which already started to develop in the 1950s in the administrative centres of the European Union.

introduced in secondary school[7]. It is because of these fundamental differences between the Canadian immersion programmes and the European CLIL approach that experts utter the warning not to apply immersion research results to European CLIL programmes (cf. Lasagabaster & Sierra 2010).

Other terms

Apart from the three frequently used terms *CLIL*, *Bilingualer (Sachfach-)Unterricht* and *immersion*, other terms are also occasionally used in the context of bilingual education. One example is *Fremdsprache als Arbeitssprache*, which is similar to *English as Medium of Instruction*, which is used in the English context. As the terms already suggest, these approaches emphasise the use of the foreign language primarily as a medium of communication without including specific language teaching and are therefore comparable to Type A of Diehr's classification of language use in bilingual teaching contexts (cf. Diehr 2012; Diehr 2016). An increase of the students' foreign language competence is then a by-product and only indirectly achieved (cf. Ball 2015). *Sprachsensibler Fachunterricht* (literally translated to language-sensitive subject teaching) is also used in relation to CLIL teaching. Leisen defines it as the conscious use of the language in the learning process and further explains that language is the key to successful content teaching (Leisen 2013: 3). One needs to consider, though, that this approach does not refer to the use of an additional language for the teaching of a content subject but to the conscious use of the school language in order to understand the taught content. Nevertheless, the concept of consciously considering the role and use of language in content subject teaching is also of relevance in CLIL and therefore further discussed in the development of the German Framework for CLIL Teacher Education (see chapter 8).

Controversy of terms

The previous paragraphs already show that while most of the discussed terms share certain components, such as the use of an L2 in order to teach a content subject, they also differ with regard to others, for example the question whether the L2 is used as a medium of instruction or directly implemented through active language work. With regard to *CLIL* and *Bilingualer Unterricht*, for example, the KMK states in their report from 2013 that their understanding of bilingual education corresponds with the European definition of CLIL (KMK 2013: 3) and elaborates that CLIL *occasionally* refers to teaching approaches which feature a stronger focus on foreign language learning as, for example, an integration of content and foreign language

[7] Even though the number of CLIL primary schools is increasing, the vast majority of CLIL offers can still be found at secondary schools (cf. Eurydice 2006).

teaching or immersion programmes (KMK 2013: 3). Through this statement, the KMK claims that their understanding of bilingual education – namely a strong focus on content learning while reducing the importance of language teaching – is what is generally understood as CLIL and regards the commonly agreed upon definition of CLIL by Coyle, Hood and Marsh (2010: 1) – namely an integration of content and language learning – as a special case of CLIL pedagogy. This apparent misunderstanding of the differences between *CLIL* and *Bilingualer Unterricht* is also addressed by Coyle, Hood and Marsh, who explain that "ignoring progressive language learning in a CLIL setting is ignoring the fundamental role played by language in the learning process. It reduces the learning context to teaching *in* another language" (Coyle, Hood & Marsh 2010: 33, original emphasis). They also criticise how CLIL students are supposed to use an additional language for the learning of a content subject if they are not taught *how* to use this additional language. De Bot adds to this that "[it] is obvious that teaching a subject in a foreign language is not the same as an integration of language and content" (de Bot 2002: 31). Again, this explains that the KMK's understanding of bilingual teaching, which is mainly teaching a subject in a foreign language, does not entirely correspond with the European understanding of CLIL, which demands an integration of language and content learning. This distinction, however, does not seem to be generally accepted as can be seen in the Eurydice report which was published on behalf of the European Commission and which, inter alia, lists the various terms for bilingual education which are used in the countries of the European Union. There, terms are first presented in their original language and then translated to English. For Germany, *Bilingualer Sachfachunterricht* is translated into *Content and Language Integrated Learning (CLIL)*, which is highly questionable with regard to the KMK's definition of *Bilingualer Sachfachunterricht* (Eurydice 2006: 38). Though the KMK almost thoughtlessly uses the terms *CLIL* and *Bilingualer Sachfachunterricht* as synonyms, Vollmer argues that functionally training the foreign language in bilingual settings and regarding foreign language learning as equally important as content learning, which he considers as the defining element of CLIL, has not yet been implemented in German contexts. He therefore constitutes that CLIL and *Bilingualer Unterricht* are not identical (Vollmer 2013: 125). This perspective is supported by Bonnet and Breidbach, who consider *Bilingualen Unterricht* to be a form of CLIL (Bonnet & Breidbach 2013: 26) and hence support the view of CLIL being an umbrella term, covering a broad range of bilingual teaching concepts. Diehr furthermore adds that equating the terms *CLIL* and *Bilingualer Unterricht* as it is also done by Wolff and Quartapelle in their handbook of German CLIL programmes in Italy (Wolff & Quartapelle 2011: 15), is rather problematic as the German form of bilingual education, which focuses more on the content subject but also

includes the use of the L1, is not identical to CLIL (Diehr 2012: 22). Hence, this paper follows Diehr's point of view and strongly argues that CLIL and *Bilingualer Sachfachunterricht* are not the same.

With regard to the use of *CLIL* and *immersion*, though, there seems to be greater agreement that both concepts are defined differently. As previously discussed, immersion settings usually do not feature language instruction while CLIL settings actively include language learning. As pointed out by Lasagabaster and Sierra, not only the role of the language but also the general teaching settings, the qualification of the teachers as well as the status of the language as either a second or a foreign language differ between CLIL and immersion settings and therefore, these concepts are usually not considered as synonymous (Lasagabaster & Sierra 2010). This is supported by Wolff and Quartapelle, who underline the differences between CLIL and immersion (Wolff & Quartapelle 2011: 15) as well as Ting, who argues that CLIL is not the same as immersion "but also more than the sum of its parts [i.e. language and content]" (Ting 2011: 314).

Wolff explains that the idea of language-sensitive teaching (*sprachsensibler Fachunterricht*), which was introduced by Leisen (2013), basically constitutes the idea of CLIL (Wolff 2013: 22). This is explained by the methodological approach of CLIL teaching, which, as Wolff explains, has run through a paradigm shift from foreign language teaching to content teaching. Accordingly, the foreign language is not moved into the background but the focus of the CLIL lesson is only moved to the foreign language if this is useful for content comprehension (Wolff 2013: 23). In the light of the previous definition of CLIL, which entails an integration of content and language learning, equating language-sensitive teaching with CLIL is debatable, though. This is, CLIL asks for more than only actively using the language in order to support content learning but demands explicit language work as an equally important aspect of CLIL teaching. Vollmer also contradicts this comparison of terms as he argues that CLIL moves beyond the sensitive use of the (foreign) language (Vollmer 2013: 125).

In an attempt to systematise the different terms of bilingual education, Wolff and Sudhoff provide an overview of the different definitions and conclude that most of them are developed in the context of individual countries and their form of bilingual education (Wolff & Sudhoff 2015). This also matches the 4Cs Framework which is surrounded by the *context* in which CLIL is implemented (see Figure 2.1, p. 7). Wolff and Sudhoff therefore suggest to develop a usage-based definition which focuses on multiple factors of bilingual education. Accordingly, such a usage-based definition needs to include the educational goals (e.g. developing intercultural competences or specialised, occupation-specific competences), the methodological approach

(e.g. main emphasis with regard to content and language learning as well as the use of the L1 and the L2), aspects with regard to the content of the programmes (e.g. the choice of the content subjects as well as the foreign language) and finally organisational aspects (e.g. modular forms of CLIL or bilingual tracks) (Wolff & Sudhoff 2015: 27–34).

Given the various definitions of content and language integrating approaches as well as the highly individual forms of implementation in German schools (see also chapter 2.3 for a more detailed description and analysis of the current forms of CLIL in Germany), this usage-based definition is a valuable contribution to defining and classifying the vast field of bilingual teaching approaches. Through that, every school can individually define their understanding of the approach. For this thesis, however, this usage-based definition is too specific and context-oriented as the German Framework for CLIL Teacher Education in Germany, which is developed in chapter 8, has to be adaptable to all the varying forms of bilingual education in Germany. Hence, a working definition, which, on the one hand, considers the aforementioned debate on the different terms *CLIL*, *Bilingualer Sachfachunterricht* and *immersion*, but, on the other hand, also includes the German perspective in which this thesis is located, needs to be developed.

Working definition

The mere existence of such a variety of different terms – *CLIL*, *Bilingualer Sachfachunterricht*, *immersion* etc. – which are used both unintentionally and intentionally as synonyms signal a difference between concepts, and the at times contradicting definitions and usages show that it is crucial to carefully differentiate between the different teaching approaches. As this thesis' purpose requires a generally valid definition and understanding of the terms, this working definition zooms out of the above-mentioned usage-based definition by Wolff and Sudhoff (2015) for schools to a more universally applicable approach. Though this thesis is located in the German context, it was decided not to use the mainstream term *Bilingualer Sachfachuterricht* but to adopt and to adapt the internationally used term *CLIL*, fully aware that the original definition does not fit the German context. While the German term *Bilingualer Sachfachunterricht* regards language only as a mean of transportation of content, *CLIL* also regards content as a mean of transportation of language. With the given status in Germany and the purpose of this thesis, it has to be clear that when using the term *CLIL* this means an intermediate state between the afore described distinctions. So, for the time being, the term *CLIL* within this thesis has to be understood as the pathway from the current German approach to teaching in a foreign language to the desired approach of using both language and content as

equal entities in a bi-directional way. In fact, the delta between the current German approach and the targeted bi-directional approach is what is researched, analysed, and conceptualised in the German Framework for CLIL Teacher Education (see chapter 8).

2.2. Development of CLIL

Based on the previous working definition of CLIL, the following historical flashback covers the different strands of development towards the current situation of CLIL education. On a European scale, CLIL started to develop in the 1970s as a result of the positive research results of Canadian immersion programmes. Initially, however, CLIL was only introduced in linguistically distinctive regions (for example due to their vicinity to neighbouring European countries) and not as large-scale programmes in mainstream education. In the starting ages of CLIL development in Europe, the term *CLIL* itself had not yet been introduced, however. Only in the 1990s, the term was coined and increasingly used (Eurydice 2006: 7). At the same time, CLIL gained further importance – also in mainstream education – through the *Resolution of the Council* and the *White Paper* which were both published in 1995 (European Council 1995; Commission of the European Communities 1995). The *Resolution of the Council* demanded an improvement and diversification in the area of language teaching and, on the one hand, explicitly mentions the "teaching of classes in a foreign language for disciplines other than languages, providing bilingual teaching" (European Council 1995: 3). The *White Paper*, on the other hand, demanded that every European citizen should become proficient in three European languages, i.e. the mother tongue and two community languages. Apart from that, the first foreign language should also be used to study content subjects in this foreign language. Also, raising the European citizens' language proficiency in other European languages, for example through implementing CLIL programmes, was meant to contribute to a greater feeling of unity among the citizens of the European Union. As a consequence, the formation of a European identity or citizenship should be enhanced (Commission of the European Communities 1995: 47), through which the importance of *culture* as one of the 4Cs of CLIL is highlighted. Hence, the idea of using a foreign language to teach the content subject presented itself as an innovative teaching approach to implement the European legislative decisions.

In Germany, the development of CLIL started even earlier than on the European level. As a result of the Second World War, the German and French governments decided that in order to prevent another war between these two nations, future generations would have to gain a better understanding of the neighbouring culture. This goal of reconciling the French and German nations was manifested in the *Treaty of Élysée* in the year 1963. One approach of

increasing this mutual understanding was the implementation of bilingual schools, especially in the areas close to the German-French border. Hence, in 1969, the first bilingual track was introduced in a higher secondary school in Singen in Baden-Württemberg, using French to teach the subjects History and Geography (KMK 2013: 3). In the following years, CLIL teaching in Germany primarily relied on French as a foreign language. Only in the 1990s, when CLIL also gained importance on European grounds, the English language also developed to be an important language for CLIL teaching approaches in Germany. Especially in the beginning of CLIL in Germany but also until today, schools usually decide for themselves if they want to introduce CLIL programmes and accordingly, most CLIL programmes are installed via bottom-up approaches. Despite the comparably long tradition of CLIL teaching in Germany, though, a notable increase of CLIL programmes in German schools only started in recent years. Hence, while only 366 schools offered a CLIL programme in 1999, this number increased to more than 1500 schools with CLIL programmes in the year 2013. Thus the number of CLIL schools has quadrupled in only 15 years (KMK 2013: 4)[8].

With an increasing number of CLIL schools in Germany, language diversity has increased as well. With French being the most common CLIL language in Germany for many years, English took over this position in the 1990s and is still the most common CLIL language in Germany, leaving French as the second most common CLIL language. In recent years, however, other languages have also been introduced in CLIL programmes, including other European languages (e.g. Spanish or Italian) but also Asian languages such as Mandarin or Turkish as well as minority languages such as Sorbian (KMK 2013: 4).

The reports of the KMK, which have been published in 2006 and in 2013, also offer the possibility to trace the development of CLIL in Germany. In the report from 2006, like in most European countries, the understanding of CLIL is that it is not defined as an extension of foreign language teaching but as an integration of content and language learning (KMK 2006: 7). As was already outlined in chapter 2.1, the report from 2013, however, defines CLIL as clearly focusing on content learning and an integration of content and language learning – as the European definition of CLIL demands – is primarily described as an exception rather than the rule (KMK 2013). Describing this integration of content and language learning as the most common form of CLIL in Europe in 2006, yet reducing it to an exception in 2013, conveys the impression that the KMK had a different understanding of CLIL in 2006 than in 2013 – an

[8] In their report, the KMK uses the term *"bilinguale Schulen"* as this mirrors their understanding of the concept (see also chapter 2.1). Based on the working definition of CLIL, though, this educational concept is also subsumed under *"CLIL schools"*.

understanding that used to be more oriented towards the internationally accepted definition of CLIL as an integration of content and language learning.

The interpretation of the KMK's understanding of CLIL being rather an integration of content and language learning in 2006 while shifting the focus in 2013 to the importance of the content subject is also visible in the statement that through an integration of a foreign language and a content subject, the learning environment would have to be adapted to both these aspects (KMK 2006: 8). The 2013 report also mentions that "erst allmählich verschob sich das Gewicht auf die Vermittlung von Sachfachinhalten"[9] (KMK 2013: 4). Hence, it is stated that the 2006 understanding of CLIL was more focused on content and language learning while the KMK gradually decided to move the emphasis away from concrete language teaching and learning and now focusses almost exclusively on content achievements. This impression is supported by the statement of the 2006 report that the curriculum of CLIL teaching should focus on the curricula of the content subject *and* the foreign language while the 2013 report repeatedly emphasises that the curriculum of the content subject forms the basis of CLIL teaching. Through explicitly asking to integrate the curriculum of the foreign language in the CLIL teaching approach in 2006, the importance of actively integrating the foreign language is stressed in the earlier understandings of CLIL (KMK 2006: 19; KMK 2013: 7).

Despite these changes in the understanding of CLIL from 2006 to 2013, it is nevertheless interesting that in the report from 2013, an entire subchapter is devoted to the didactic principles of CLIL teaching while in the previous report, no such chapter exists. Keeping in mind that the KMK gradually shifted the focus of CLIL towards the content subject and through that reduced the importance of the foreign language, it is somewhat surprising that the importance of an interdisciplinary *Didaktik*[10] is emphasised in 2013 but not in 2006 when the understanding of CLIL was still more that of an integration of content and language learning (KMK 2013: 7–8).

Another interesting difference between the two reports is also visible in the labelling of the various forms of CLIL in Germany. While the descriptions are almost identical in both reports (see chapter 2.3 for a more detailed overview of the current forms of CLIL in Germany),

[9] Translation by the author: The focus of teaching only gradually shifted towards the content subject.

[10] Unfortunately, no adequate translation for the concept *Didaktik* can be found in the English language. Often, the term is translated into 'teaching methodology', which does, however, not cover all aspects included in the concept of *Didaktik*. Though there are also different possibilities to define *Didaktik*, this thesis adopts Klafki's understanding of *Didaktik* as the theory of teaching and learning which includes the dimensions of what to teach and how to teach (Klafki 1979: 64–65). Accordingly, *Didaktik* includes the contents of teaching as well as teaching methodology.
Just as a side-note, this provides another example of lacking concept equivalence between two languages as they are addressed in Diehr's IDM, see chapter 2.1.

the respective names were changed. In 2006, the KMK used the term *Fremdsprache als Arbeitssprache* (similar to *English as Medium of Instruction*, see chapter 2.1) for the most common form of CLIL teaching in Germany. Seven years later, however, the KMK decided to change this name to *Bilingualer Sachfachunterricht*. Unfortunately, this change of terms is not further explained but it still leaves room for interpretation. Although it was previously argued that the 2006 report shows a greater understanding of CLIL as an integrative teaching approach, the use of the term *Fremdsprache als Arbeitssprache* suggests that language is merely understood as a medium of instruction and not as an explicit element of this teaching approach. The KMK's consideration not to use this term any longer might entail a conscious decision of increasing the importance of the role of the foreign language.

2.3. Current Forms of CLIL in Germany

As was already mentioned in the previous two chapters, CLIL teaching in Germany focuses mainly on the content subjects which are taught bilingually. The actual realisation of this approach presents itself in three different forms. The first one is that of bilingual tracks (*bilinguale Züge*) which usually start in grades five to six with at least one additional English lesson per week. This lesson is meant to increase the students' level of language proficiency and prepare them for the demands of studying a content subject through another language. From grade seven onwards, several content subjects are then taught in a foreign language. The weekly number of lessons per subject is increased by one additional lesson ensuring that the students' content achievements reach the same level as that of non-CLIL students (MBWWK 2011: 3). The schools are relatively flexible as to which subjects they offer in these bilingual tracks with humanities being more common than natural sciences or practical subjects[11] (KMK 2013: 8). One reason for this prominent role of the humanities in CLIL teaching is, inter alia, the historical development of CLIL in Germany. As was mentioned before, CLIL teaching was introduced in Germany in order to enhance the understanding of and for the French culture. Therefore, subjects such as History, Geography or Politics appeared to be more suitable. This development, however, is still visible today in a stronger representation of the humanities in CLIL tracks. Another reason for this phenomenon, however, is the availability of CLIL teachers. In Germany, teachers are usually trained in two subjects and CLIL teachers are often qualified in both the foreign language and the content subject that is taught bilingually. As it happens, the teaching combination of humanities and a foreign language is more frequent than that of natural

[11] In this thesis, 'practical subjects' refer to Arts, Sports/Physical Education, Music and Theatre.

sciences (apart from Biology) and a foreign language. As a result, fewer teachers who are able to teach natural sciences or e.g. Arts bilingually are at hand.

A less intensive form of CLIL teaching in Germany can be translated as bilingual content subject teaching (*bilingualer Sachfachunterricht*) and is defined as the use of the foreign language as the medium of instruction for at least one school year. Hence, students are not necessarily attending bilingual programmes for a longer period of time but might only be taught bilingually in one individual subject and only for one year. Again, the description of using the foreign language only as a medium of instruction highlights the emphasis of CLIL teaching in Germany on content achievements, which was already outlined in the previous subchapters (KMK 2013: 9). At this point, it needs to be remarked that the distinction between bilingual tracks and bilingual content subject teaching as it is made by the KMK seems a bit surprising as the general teaching approach of using a foreign language to teach a content subject is usually referred to as *bilingualer Sachfachunterricht* in Germany. Declaring it as a specific form of bilingual education, in contrast to bilingual tracks, which basically feature the same teaching approach, is therefore questionable.

A third option are so-called bilingual modules which constitute shorter sequences of bilingual teaching. These sequences usually cover one specific topic which is taught bilingually while other topics are taught in the school language. Comparable to the second form of CLIL education in Germany, this approach of bilingual modules does not necessarily include long-term CLIL programmes but rather focuses on short sequences of bilingual teaching (KMK 2013: 9). The advantage of these short modules is clearly the greater flexibility. While bilingual tracks require the school to offer CLIL teaching in several subjects over a longer period of time, bilingual modules are easier to set up and to provide teachers for.

Apart from these more frequent CLIL programmes, several schools in Germany are so-called binational schools and offer a double degree in cooperation with other European countries, such as the German-French AbiBac or the International Baccalaureate (IB) (KMK 2013: 9). Another example are *Europaschulen* (European schools), which are often mentioned in the context of CLIL programmes as they particularly focus on the development of foreign language competences as well as the integration of European topics and the partnership with other European schools. One way of achieving a high level of foreign language competence is, inter alia, through implementing CLIL teaching forms (Bunds-Netzwerk EuropaSchule e.V.).

2.4. Aims of CLIL and Research Results

Despite the different forms of CLIL programmes in Europe, all programmes pursue similar aims. While all approaches feature the development and improvement of foreign language competences, some include intercultural development, cognitive development and/or the development of subject content knowledge. Also, the improvement of affective and motivational aspects is often mentioned in the context of CLIL teaching. Research on these aspects, however, is unequally distributed. To gain an overview of these findings, the current status of CLIL research is discussed in the following pages[12].

Research on the target language proficiency

The aim that probably all CLIL approaches have in common is that of developing and improving students' target language proficiency. The KMK, for example, explains the possibility to gain higher language proficiency through a greater authenticity of using and applying the target language and also mentions the higher discourse competence in the field of the subject-specific language (KMK 2013: 6). Apart from these aspects, Wolff also adds that CLIL students' use of professional registers is better developed in comparison to that of non-CLIL students (Wolff 2011: 78–79). From a theoretical point of view, this higher target language competence is explained with the longer *exposure time*, which means that CLIL students simply use the target language more often and more intensively. Wolff adds, however, that dealing with authentic, real-world contexts and texts also contributes to improving the target language proficiency (Wolff 2011: 79).

In order to find evidence for the improved level of language competence of CLIL students, several studies have been conducted in recent years. The first study to mention in this context was conducted by Bonnet and investigated the potential of CLIL Chemistry teaching for foreign language learning (Bonnet 2002). In this project, 23 hours of CLIL Chemistry lessons were analysed with the help of a quantitative category system, which was developed on the basis of theories of Second Language Acquisition (SLA). Comparing the amount of teaching time which was relevant for (second) language acquisition to the amount of teaching time which was relevant for acquiring chemical knowledge, 47% of the analysed lessons featured situations relevant for language acquisition. In contrast to that, only 26% of the teaching time was spent on interactions relevant for Chemistry-related knowledge. Hence, Bonnet argues that almost

[12] The overview on CLIL research is meant to provide an impression of achievements through implementing CLIL programmes but should not be considered comprehensive. The focus of this overview is on research results of German CLIL programmes but international findings are included as well.

twice as much time of CLIL Chemistry lessons features the development of language competences as opposed to developing competences in Chemistry and therefore concludes that CLIL Chemistry offers opportunities for (second) language acquisition (Bonnet 2002: 132).

Bredenbröker conducted a study which was also located in Germany and which included 195 students (79 CLIL and 116 non-CLIL students) (Bredenbröker 2002). In a longitudinal quantitative study, the students' general foreign language competence, their reading comprehension and their grammatical competence were measured after the sixth, seventh and eighth grade. As CLIL-teaching traditionally only starts in grade seven, this design included possible differences between CLIL and non-CLIL students already prior to entering the CLIL programmes. Also, since the CLIL and the non-CLIL students were only taught separately in the respective CLIL subjects (i.e. Biology, Geography and History) and thus all students had the same teachers and received the same English lessons, the comparability of both groups was high. Accordingly, these two influencing factors which might have altered the research results could be ruled out (Bredenbröker 2002: 141). Concerning the general English language competence, Bredenbröker found that the CLIL students' competence developed more than the non-CLIL students' (Bredenbröker 2002: 143). Considering the aspect of reading comprehension, he concluded that the CLIL students are able to make use of more inference strategies when being confronted with unknown words (Bredenbröker 2002: 145). Finally, hardly any differences were found concerning the CLIL and the non-CLIL students' grammatical knowledge, which is explained by the fact that CLIL teaching often does not include explicit language teaching (Bredenbröker 2002: 147). If CLIL was to improve the students' foreign language competences in all competence areas, an integration of active language work – as the definition of CLIL entails it – would be necessary. Teaching programmes following the KMK's definition of *Bilingualer Sachfachunterricht*, which lacks this active language work, do apparently not achieve this goal.

The students' language awareness was focused on in a study by Fehling, in which she conducted a longitudinal study with three CLIL and three non-CLIL classes, starting at the beginning of grade seven and lasting for two years (Fehling 2005). The hypothesis that CLIL students show a higher level of language awareness could be substantiated as the CLIL students achieved significantly higher scores in a "Language Awareness Test" and also developed their language awareness significantly over the course of the study (Fehling 2005: 139). Apart from that, however, Fehling also found highly significant differences among the three different CLIL classes, which she explained, inter alia, with the CLIL teachers' different educational

backgrounds (Fehling 2005: 207–209). Hence, she concluded that especially the CLIL teachers and their educational background are of importance for the success of CLIL programmes.

The DESI-study, which is a large-scale study evaluating the general English language competence of students in Germany at the beginning and at the end of grade 9, also investigated the effects of CLIL teaching (DESI Konsortium 2006). The study included 219 schools, 40 of which offered CLIL programmes. The students' competences in the areas of listening comprehension, reading comprehension, text (re-)production, grammar, socio-pragmatics and writing were analysed with the help of standardised tests. Taking the CLIL and non-CLIL students' German language competence, educational background, socio-economic status, cognitive skills, mother tongue and gender into consideration, the CLIL students achieved significantly higher scores in all six test areas (DESI Konsortium 2006: 60). Unfortunately, however, this study was not longitudinal and therefore does not include long-term effects of CLIL or the students' prerequisites prior to entering the CLIL programmes.

Zydatiß' study, which included 191 students in Berlin, showed similar results (Zydatiß 2007). With the help of a quantitative test design, including C-tests and cloze-tests as well as tests on grammatical, lexical and communicative competences, he could show that the CLIL students achieved better results in all test areas. Roughly one half of the students even performed significantly better than the non-CLIL students (Zydatiß 2007: 228). Moreover, the students' oral skills were measured through analysing student dialogues and monologues with the help of a criteria-based evaluation scheme. The study showed that the CLIL students reached higher levels of oral skills, especially with regard to fluency and lexical variety (Zydatiß 2007: 272).

Concentrating on a different CLIL setting, Lasagabaster conducted a study in the Basque region in Spain in which students are mostly bilingual (Spanish and Basque) and the overall setting of CLIL implementation is hence slightly different from German programmes (Lasagabaster 2008). 198 students participated in the study and were divided into three groups: non-CLIL students, CLIL students who had participated in CLIL programmes for four years and CLIL students who had participated in CLIL programmes for only one year and were also slightly younger than the other participating students (Lasagabaster 2008: 35). Testing the students' English language competences in the categories of grammar, listening, speaking and writing through using standardised tests (i.e. the Oxford Placement Test), the results revealed that the CLIL students significantly outperformed the non-CLIL students. This even applied to those CLIL students who had only been in CLIL programmes for one year and who had been younger than the other students, which suggests that the CLIL programme compensates for a

shorter amount of English language instruction. Lasagabaster also controlled for influencing factors such as gender or the socio-economic status and found no statistically significant differences among the three test groups, which underlines the effectiveness of the CLIL approach in the Basque country (Lasagabaster 2008: 36–38).

Another study, which was part of the same general research project in the Basque country, focused on the students' spoken language production (Ruiz de Zarobe 2008). 161 students were differentiated according to their age group (14-15, 15-16 and 17-18 years old) as well as the educational programmes they took part in, including a group of non-CLIL students, a group of CLIL students who received one additional subject taught in English and one group of CLIL students who received two subjects in English and therefore had a greater exposure time to the English language (Ruiz de Zarobe 2008: 65). The speech production test focused on pronunciation, vocabulary, grammar, fluency as well as content and showed significantly higher scores for the CLIL students in all five test areas. Hardly surprising, the second CLIL group, which had received more CLIL lessons than the other CLIL students, also scored higher in comparison, which supports the assumption that a greater exposure time positively influences the students' English language competence. Moreover, the type/token ratio in the students' speech products suggest a higher lexical richness and variety in the case of the CLIL students (Ruiz de Zarobe 2008: 70).

A more recent longitudinal study in the German context was conducted by Rumlich, who analysed the effect of CLIL instruction on 1.403 students after the sixth and the eighth grade (Rumlich 2016). These students were separated into three groups: CLIL students who took part in CLIL tracks, non-CLIL students who visited a school with a CLIL programme but did not participate in the programme and regular students who visited a school that did not offer any CLIL programmes (Rumlich 2016: 56). Through the use of standardised test measures, the students' general English language proficiency was evaluated. The results reveal that CLIL students score significantly higher than non-CLIL and regular students. In contrast to previously mentioned studies, however, Rumlich also found that the observed differences between CLIL and non-CLIL/regular students cannot be attributed to the CLIL intervention but are mainly due to selection processes and more intensive English language teaching prior to entering the CLIL programme (Rumlich 2016: 432). He therefore concludes that "there is no indication for a noteworthy effect of CLIL" (Rumlich 2016: 437) and demands a greater focus on the quality of CLIL provision. Accordingly, for him, one possible factor influencing the success of CLIL programmes (in Germany) is the quality of CLIL teacher education (Rumlich 2016: 451).

The most recent study to be mentioned in this context was conducted by Merino and Lasagabaster in three Spanish provinces, one of which was bilingual (Basque-Spanish) (Merino & Lasagabaster 2017). Similar to the studies discussed above, the sample of 393 students (11-12 years old) was differentiated into three groups, based on their exposure to CLIL programmes. The non-CLIL group only received regular English teaching, the CLIL+ group received approximately 8.4 CLIL lessons per week and the CLIL- group received approximately 3.4 CLIL lessons per week (Merino & Lasagabaster 2017: 6). A longitudinal study, lasting for one year and focusing on reading, writing, listening, speaking and overall proficiency (i.e. through the use of the standardised KET test by the Cambridge University as well as a speaking test, asking the participants to describe a series of pictures) revealed that, again, the CLIL students performed significantly better than the non-CLIL students. Nevertheless, it was found that the improvement of the non-CLIL and the CLIL- group developed in parallel over the course of the study. As the students had just joined the CLIL programme when the study was conducted, this suggests that though the CLIL- students reach a higher level of language proficiency, this can most likely not be attributed to the CLIL instruction but must be due to other influences. The CLIL+ group, in contrast, developed significantly stronger than the other students, which leads to the assumption that a more intensive CLIL programme is necessary in order to achieve the intended results. Albeit, one also needs to consider that the CLIL+ students did not live in a bilingual community and thus did not learn English as their third language, which was the case for the non-CLIL and CLIL- group in the Basque country (Merino & Lasagabaster 2017: 10).

Though this overview of research on CLIL students' language proficiency shows that most studies agree on a higher foreign language competence of CLIL students, however, some studies also raise doubts if these effects can be solely attributed to the CLIL programmes. Hence, as Rumlich (2016) as well as Merino and Lasagabaster (2017) found, CLIL students are often preselected and specifically prepared prior to entering a CLIL programme and this advantage needs to be considered when evaluating the CLIL students' foreign language competences. The research by Ruiz de Zarobe (2008) as well as Merino and Lasagabaster (2017) also showed that the effects of CLIL seem to be larger the more intensive the programmes are, hence, supporting the assumed effect of a greater exposure time. Bredenbröker's (2002) study, though, also proved that active language work is inevitable in order to secure language acquisition in all competence areas which again supports the claim that the KMK's definition of *Bilingualer Sachfachunterricht* is not sufficient in order to improve the students' foreign language competences. Also, both Fehling's (2005) as well as

Rumlich's (2016) results suggest that the qualification of the CLIL teachers strongly influences the students' foreign language development.

Research on the content subject proficiency

Another aim of CLIL programmes is the development of the students' content subject proficiency, which should be at least on the same level, if not higher, as that of monolingually taught students. Notwithstanding, CLIL experts and teachers are in constant need of justifying and defending the CLIL approach against critics raising doubts as to a possible decrease of the CLIL students' content subject skills (cf. Wolff 2011; Lamsfuß-Schenk 2015). From a theoretical point of view, though, it is argued that CLIL students might even reach a higher level of content subject proficiency as they need to work with texts more intensively in order to understand them and hence run through *deep processing*[13] (Wolff 2011: 80). Still, the stronger increase of the students' content subject proficiency can hardly be seen as the main aim of the CLIL approach, which is also displayed in the KMK report explaining that the CLIL students' content subject competences should be activated in CLIL teaching programmes but are not necessarily more strongly developed than in regular teaching approaches (KMK 2013: 6). Presumably, it is for this reason that not as many research results dealing with CLIL students' content subject proficiency have been published so far.

Notwithstanding, the first study to mention in this context was conducted by Bonnet and dealt with CLIL students' Chemistry competences (Bonnet 2004). Through investigating group discussions of CLIL students in grade ten, Bonnet analysed how and to what extent meaning is constructed in CLIL Chemistry lessons in comparison to monolingual Chemistry lessons. The focus was not only on the product but also on the processes of meaning construction (Bonnet 2004: 131). With the help of a qualitative approach (*dokumentarische Methode*[14]) and comparisons to other studies on competences of Chemistry students, Bonnet concludes that the CLIL students reach at least the same level, if not higher levels of subject competence than non-CLIL students (Bonnet 2004: 270–272).

Focusing on History, Lamsfuß-Schenk investigated CLIL students' content subject competence in her study on *Fremdverstehen* (understanding the other culture) in CLIL History classes (Lamsfuß-Schenk 2008). Comparing two classes in ninth grade – one being taught in a CLIL approach with French as the foreign language and one being taught in German – she used

[13] In their framework for memory research, Craik and Lockhart, for example, define that "greater 'depth' [of processing] implies a greater degree of semantic or cognitive analysis" (Craik & Lockhart 1972: 675), which would hence lead to a better understanding of the taught content.

[14] With the *dokumentarische Methode* (literally translated to 'documentary method') the knowledge base that is responsible for our actions can be analysed (cf. Bohnsack, Nentwig-Gesemann & Nohl 2013).

a qualitative approach to analyse which processes of developing an understanding of "the other" culture students run through, whether these processes can be observed while dealing with historical aspects and how the choice of teaching methodology influences the students' processes of understanding "the other" (Lamsfuß-Schenk 2008: 75–76). In order to answer these questions, four exemplary History lessons were analysed qualitatively. The analysed material consisted of lesson transcripts, transcripts of reflective discussions with observers of the lessons as well as either open or closed student feedback (Lamsfuß-Schenk 2008: 74). The categories for analysing the material were developed inductively (Lamsfuß-Schenk 2008: 82). Lamsfuß-Schenk was able to verify her hypothesis that the CLIL students show a higher degree of awareness for themselves and "the other" and also showed a higher procedural knowledge of strategies for a change of perspective in historical contexts. This is mainly explained by the necessity for the CLIL students to work with the texts in greater detail, which supports the idea of *deep processing,* and also by the greater authenticity of texts and teaching material in the CLIL context, which leads to a more intensive involvement when dealing with historical sources. Still, it was also concluded that the CLIL students relied on more (language) support in the process of working with the texts (Lamsfuß-Schenk 2008: 247–251). As was also the case with the CLIL students' target language competence and based on selection processes, it must be assumed that the CLIL students participating in this study were generally stronger, both cognitively and with regard to their foreign language competences, than the non-CLIL students. Though this certainly has an influence on these study results, Lamsfuß-Schenk still assures her readers that the higher level of *Fremdverstehen* is not only due to the generally higher competence of CLIL students but is also mainly influenced by the CLIL teaching approach (Lamsfuß-Schenk 2008: 251)[15].

For the subject of Biology, Osterhage compared 129 CLIL with 107 non-CLIL students' subject specific competences with the help of a quantitative study, using a test which covered three basic concepts of Biology (Osterhage 2009). As the statistical analysis shows a significant difference between the CLIL and the non-CLIL students, the main differences were found in the areas of "convergent thinking", "dealing with numbers" and "dealing with diagrams" (Osterhage 2009: 47). Notwithstanding, Osterhage also found significant differences between the different schools and the different learning groups and consequently, one needs to be careful when interpreting these results as proof for a higher content subject proficiency due to CLIL teaching (Osterhage 2009: 47). Apart from that, the study did not explicitly consider the

[15] Unfortunately, though, Lamsfuß-Schenk does not provide any empirical proof for this assumption which is why this statement must be considered carefully.

participants' learning prerequisites, such as their general cognitive abilities or their socio-cultural background, and hence it cannot be ruled out that the higher test scores are (solely) based on the CLIL approach.

These projects all conclude that the CLIL students' either reach the same level of content proficiency than non-CLIL students or even outperform these. Hence, it can be assumed that the fear of CLIL students' content subject proficiency lacking behind that of non-CLIL students is unfounded. As the number of studies in this field is still comparably small, though, more research is necessary in order to further prove this assumption.

Research on motivation

Apart from developing the students' language and content competences, the support of motivational and affective aspects is also often connected to the CLIL approach. The KMK, for example, explains that through the interaction of language and content in authentic learning contexts, motivation is raised (KMK 2013: 6). Again, a number of research projects have investigated this assumption.

First, a study by Fehling, which was already mentioned earlier, needs to be considered again (Fehling 2005). Though the primary focus of her study was on the language awareness of CLIL students in contrast to non-CLIL students, she also included a questionnaire which addressed topics like the students' interest in learning English, their attitude towards the English lessons at school but also towards the foreign language in general (Fehling 2005: 107–108). She found out that CLIL students already show a higher level of interest in the English language before entering the CLIL programme but while the CLIL students' interest remains stable over the course of the study, the non-CLIL students' interest decreases. Also, she concluded that the CLIL students are more self-confident in using the English language and in speaking in front of the class. Though this higher degree of self-confidence is, again, already measurable at the beginning of the CLIL programmes, it also rises significantly in the following years (Fehling 2005: 172).

In her study, Abendroth-Timmer focused on the effect of bilingual or multilingual modules on CLIL students' motivation for the language and the content subject (Abendroth-Timmer 2007). With French and Spanish as the CLIL languages in this study, she employed a mixed methods approach and combined both questionnaires and interviews in order to answer the question to what extent motivation develops over the course of a CLIL module. In her study, she included students and teachers from three schools, representing mainly the higher grades (Abendroth-Timmer 2007: 134). The results reveal, on the one hand, that students generally

enjoyed the methodological change of the CLIL modules. On the other hand, especially students with a high interest in languages showed a higher motivation for learning the content subject (Abendroth-Timmer 2007: 263). Hence, one can assume that the CLIL students' higher motivation is not exclusively due to CLIL but is also influenced by their general interest in learning a foreign language.

In a more recent study, Verriere investigated the effect of CLIL modules in Mathematics on the students' interest and motivation (Verriere 2014). In six learning groups, representing grade seven until eleven, selected topics were taught via a CLIL approach and a mixed-methods study design was employed as accompanying evaluation. The students were asked to fill in questionnaires prior to, during and after the CLIL module while the teachers were interviewed at the same time (Verriere 2014: 125). In contrast to the study by Fehling, though, this study's focus was not on the students' motivation for the English language but the content subject – Mathematics. Verriere found out that the students' motivation increased during the CLIL modules, which was especially the case for girls and students who generally showed rather little motivation for Mathematics (Verriere 2014: 260). Though these results are promising, Verriere also remarks that in order for CLIL modules to positively influence the students' motivation, the teachers themselves need to show a high motivation for conducting CLIL modules as well as a high target language proficiency (Verriere 2014: 260) and she therefore highlights the importance of the CLIL teachers on the success of CLIL programmes.

Again, these studies suggest that the assumed positive effect of CLIL programmes on students' motivation can be proved. Especially Verriere's (2014) study, though, also elaborates that the students' higher motivation not automatically occurs as a consequence of CLIL but that especially the teachers' motivation and foreign language competence are of importance.

Research on the intercultural communicative competence (ICC)

Another learning aim which is often mentioned with respect to the CLIL approach is that of increasing the students' intercultural communicative competence (ICC). While the KMK, for example, mentions this increase of ICC as a consequence of CLIL teaching approaches (KMK 2013: 5), hardly any studies have tried to find proof for this assumption. Just a few articles and papers discuss the influences of CLIL teaching on the students' ICC on a theoretical level (cf. Häuptle-Barceló & Görrissen 2012; Hallet 2015), but proof for this assumption cannot be provided yet. Moreover, Sudhoff has developed a catalogue for analysing CLIL teaching material with regard to intercultural learning (Sudhoff 2010). This, however, is again not an empirical study but an analytic tool which analyses the characteristics and distinctness of ICC

in CLIL teaching material. Though this is an important contribution to this field of study, the research area of CLIL and ICC is still in need of further research in order to provide proof for the above-mentioned assumptions that CLIL positively influences the students' ICC.

2.5. Concluding Summary

Summarising, the juxtaposition of the terms *CLIL* and *Bilingualer Unterricht* is of great relevance for the thesis at hand as the terms are often used interchangeably although they differ with regard to the role of the foreign language. While the international understanding of CLIL attributes equal importance to learning both the content and the language, *Bilingualer Unterricht* highlights the importance of content learning and does not include active language teaching. For this thesis, it was chosen to use the term *CLIL* because the conscious integration of content and language learning is deemed especially necessary. Still, for the development of the German Framework for CLIL Teacher Education (see chapter 8), the current form of CLIL teaching in Germany must not be entirely neglected.

With regard to establishing the current state of the art of CLIL teacher education in Germany (see chapter 9), the different forms of CLIL in Germany are necessary in order to interpret the respective results of analysis. Hence, CLIL teaching in Germany is commonly realised in forms of bilingual tracks, including a two-year preparatory phase in grades 5-6 with at least one additional English lesson per week and the start of teaching at least one content subject bilingually in grade 7. Apart from these intensive language tracks, schools are also entitled to offer bilingual modules, implying that not an entire content subject has to be taught bilingually but rather several independent teaching units. Though the first CLIL programmes in Germany used French as a foreign language and focused on teaching the humanities – i.e. History, Geography and Social Studies – bilingually in order to achieve the goal of greater understanding and respect for the French culture, this has changed since the 1990s. Nowadays, the majority of German CLIL programmes use English as the foreign language and although the humanities are still predominantly found in CLIL programmes, the natural sciences as well as the practical subjects, such as Arts, Music or P.E. slowly gain momentum.

An overview of studies investigating the effects of CLIL teaching programmes, which was given in chapter 2.4, shows that especially the CLIL students' foreign language competence benefits from this approach. Also, the students' content-subject proficiency and motivation seem to increase compared to non-CLIL teaching programmes. Though most research results are promising and support the success of CLIL programmes, some studies also raise critical doubts as they state that the effects of CLIL highly depend on the quality of its provision. In

this context, the success of CLIL programmes is also often connected to the quality of CLIL provision, i.e. the quality of the CLIL teachers' education (e.g. Fehling 2005; Rumlich 2016). Due to this importance of the CLIL teachers' education, it is especially necessary to develop CLIL teacher education programmes, as it is done in this thesis.

3. Teacher Education

"He who can, does. He who cannot, teaches."
(George Bernard Shaw)

"Those who can, do. Those who understand, teach."
(Aristotle)

The teaching profession and its reputation have long been a topic of discussion. Some do not even regard it as a profession while others stress its importance. The two quotes by George Bernard Shaw and Aristotle mirror this controversy. Shaw downgrades the teaching profession as the job for those who are not proficient enough to work in other professions. Aristotle, in contrast, upgrades the importance of the teaching profession by explaining that those who are proficient to do something are not yet qualified to teach a certain content as long as they have not fully understood it. In the German context, the reputation of the teaching profession is reflected in Shaw's quote as it is, unfortunately, a common belief that teachers represent an academically weaker part of society and were not qualified or competent enough to strive for "higher jobs" (cf. Cortina & Thames 2013). Contrasting this general belief, others stress the importance of the teacher as having an influential impact on students' achievements. In his study, which entails a synthesis of more than 800 meta-analyses, Hattie attributed up to 30% of the variance in students' performance to what the teachers "know, do and care about" (Hattie 2003: 2). This importance of the teacher was also already pointed out in the studies on the CLIL students' performance, which were discussed in the previous chapter and which also proved the teachers' influence on the success of the CLIL programmes.

In order to develop the German Framework for CLIL Teacher Education in chapter 8 and to analyse and classify the identified CLIL teaching competences with regard to general teaching competences, this chapter starts with a section on defining the understanding of *competence* and *knowledge*. These definitions are the basis for the following chapter on widely known models of general teacher competences. Then, an overview of commonly accepted principles of good teaching is discussed. In a next step, the current guidelines of teacher education in Germany are outlined and the aforementioned aspects of general teacher competences and principles of good teaching applied.

3.1. Definition of Terms

Competence

Especially in the field of education, the term *competence* is of frequent use and in recent years, curricula have been changed from being knowledge-oriented to focusing on acquiring

competences (cf. König 2014). The actual meaning of what a competence is, however, is still a topic of discussion and no universal definition has been agreed upon yet. Therefore, the following chapter sheds light on several approaches to defining the concept of *competence*.

First of all, the difference between the two terms *competence* and *competency* seems to be relevant and important as some researchers define them differently while others use these terms interchangeably. Blömeke, Gustafson and Shavelson define *competence* as a broader term which "describes a complex characteristic from a holistic viewpoint" (Blömeke, Gustafsson & Shavelson 2015: 5), while *competency* "refers to the different constituents of competence" (Blömeke, Gustafsson & Shavelson 2015: 5). Hence, *competence* is understood to be on a meta-level. Interestingly, the German language only uses the expression *Kompetenz* and thus does not differentiate any further.

The pedagogical psychologist Weinert defined the term *Kompetenz* as follows:

> Dabei versteht man unter Kompetenzen die bei Individuen verfügbaren oder durch sie erlernbaren kognitive Fähigkeiten und Fertigkeiten, um bestimmte Probleme zu lösen, sowie die damit verbundenen motivationalen, volitionalen und sozialen Bereitschaften und Fähigkeiten um die Problemlösungen in variablen Situationen erfolgreich und verantwortungsvoll nutzen zu können. (Weinert 2014: 27f.)[16]

This commonly cited definition of competence (cf. Klieme 2004; Klieme, Harting & Rauch 2008; König 2014) claims that competences, unlike intelligence, are learnable and can therefore be improved and trained over time. Moreover, competences refer to the ability to solve problems in various situations and hence include the ability to apply existing skills and abilities. While Klieme strongly refers to Weinert's definition of *competence*, he also adds the following: "Kompetenz stellt die Verbindung zwischen Wissen und Können her und ist als Befähigung zur Bewältigung unterschiedlicher Situationen zu sehen"[17] (Klieme 2004: 13). Again, the focus is on applying knowledge and skills in order to handle various situations.

While Weinert's definition of *competence* is of special importance in the German context, various other approaches are adopted in international research projects. Blömeke et al. try to systematise these approaches and develop the following perspectives (Blömeke, Gustafsson & Shavelson 2015): Initially, the notion of competence is related to measuring performance in specific tasks which are based on real-life situations and which often focused on measuring

[16] Translation by the author: As a competence, one can understand the individual cognitive skills and abilities which are learnable and available in order to solve problems, as well as the corresponding motivational, volitional and social willingness and abilities in order to responsibly and successfully use these problem solutions in variable situations.

[17] Translation by the author: Competence creates the connection between knowledge and ability and can be seen as the ability to master different situations.

aptitude and intelligence and were used for testing future job perspectives. McClelland, however, criticises that instead of testing for aptitude and intelligence, one should rather test for competences in order to achieve more meaningful results (McClelland 1973). As the primary purpose of McClelland's approach was to identify future job opportunities, however, hardly any effort was made to find out how these competences are developed (Blömeke, Gustafsson & Shavelson 2015: 4).

Contrasting with McClelland's approach, educational research differentiates between generic competences, which are comparable to intelligence, and an information processing ability as well as domain-specific competences, which are more comparable to expertise. In this field, especially the definition by Spencer and Spencer is of importance:

> A competency[18] is an underlying characteristic of an individual that is causally related to criterion-referenced effective and/or superior performance in a job or situation. Underlying characteristic means the competency is a fairly deep and enduring part of a person's personality. […] Causally related means that a competency causes or predicts behavior and performance. Criterion-referenced means that the competency actually predicts who does something well or poorly, as measured on a specific criterion or standard. (Spencer & Spencer 1993: 9)

It needs to be pointed out that while Weinert stresses that competences are learnable and improvable, Spencer and Spencer rather describe competencies as "deep and enduring part[s] of a person's personality" (Spencer & Spencer 1993: 9) and even though the question whether competences are learnable or not is not directly addressed, one might assume that these deep parts of a person's personality are more comparable to inherited character traits which are hence not learnable.

Beyond the attempt to find a universal definition for the construct of *competence*, Blömeke et al. stress that competences should rather be seen as a continuum, which is visualised in Figure 3.1. Opposed to other interpretations of *competence*, their focus is not on the aspects of knowledge or performance but rather on the various steps which lead to a certain performance. Hence, the actual observable performance or behaviour is only the result of individual dispositions and situation-specific skills (Blömeke, Gustafsson & Shavelson 2015: 7). Based on an individual's dispositions, i.e. his or her individual cognitive and affective-motivational dispositions, a specific situation is perceived. This particular perception is then interpreted with the help of situation-specific skills and a decision is made. The actual performance is then the direct result of this decision-making. Especially the aspect of situation-

[18] Interestingly, this definition uses the term *competency*, which is – at least according to Blömeke et al. (2015) – a constituent of the broader term *competence*.

specific skills, which refer to perceiving and interpreting a situation as well as making a decision how to react in this specific situation, is comparable to Weinert's approach that competences are revealed in how certain solutions to problems are applied in varying situations.

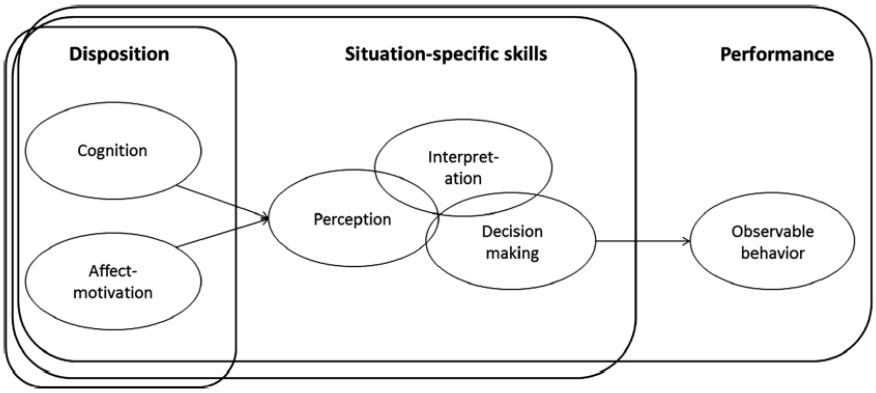


Figure 3.1 Modelling competence as a continuum (Blömeke, Gustafsson & Shavelson 2015: 7)

As was shown, the concept of *competence* is not universally defined and even the use of *competence* and *competency* is not consistent – some researchers use these terms interchangeably while others see competencies as the constituents of a competence. What most approaches have in common, however, and what is also the basis for the concept of *competence* in developing the German Framework for CLIL Teacher Education (see chapter 8), is that competences are not inherited but learnable abilities and skills which can be developed and improved over time. Moreover, competences are related to real-life situations and "enumerate the tasks as well as the cognition, conation, affect, and motivation involved" (Blömeke, Gustafsson & Shavelson 2015: 5) which is again of importance with regard to the German Framework for CLIL Teacher Education as this is also closely oriented towards the real-life tasks CLIL teachers have to face.

Knowledge

While there seems to be an ongoing discussion as to the definition and understanding of *competence*, less attention is paid to the term *knowledge*. Though the COACTIV group (see also chapter 3.2) refers to knowledge as being "a key component of teachers' professional competence" (Baumert & Kunter 2013: 28), they do not elaborate on how they understand this term but explain that there is no agreement as to how knowledge is structured or represented. Instead, they immediately move on to their understanding of professional knowledge, which is defined as being "dependent on education and training" and thus a "competence in the narrow sense" (Baumert & Kunter 2013: 30). Hence, (professional) knowledge is not only seen as a constituent of a competence but rather as a competence itself.

Before discussing the importance of knowledge for developing competences, it seems reasonable to understand what knowledge actually is. In order to answer this question, a short excursion into the field of pedagogical psychology reveals that one can differentiate between declarative and procedural knowledge. Declarative knowledge is understood as the "knowledge of *what*", which includes knowledge of pure facts but also of complex interrelations. Procedural knowledge, in contrast, can be understood as the "knowledge of *how*" as it refers to the ability to do something (Wild & Möller 2009: 4). Wild and Möller furthermore explain that the boundary between declarative and procedural knowledge is fuzzy but that one can argue that declarative knowledge can be verbalised while this is not (directly) possible for procedural knowledge. Also, declarative as well as procedural knowledge can be domain-specific (e.g. the Pythagorean theorem for the context of Mathematics) as well as interdisciplinary or not domain-specific (e.g. knowledge about different argumentative strategies) (Wild & Möller 2009: 5). These two forms of knowledge are complemented by metacognitive knowledge, which is understood as knowledge about knowledge and which can again be differentiated between declarative and procedural metacognitive knowledge (Wild & Möller 2009: 5). For the context of this thesis, the different dimensions of knowledge are of importance as, a (CLIL) teacher not only needs to know his subject and specific teaching strategies, but he or she also needs to know when to apply which teaching strategies or why a specific fact is the way it is so that he or she is able to explain this to the students.

3.2. General Teacher Competences

Shulman's dimensions of teacher knowledge

Shulman, who can be regarded as one of the founding fathers of research in the field of general teacher competences, analysed the development of the teaching profession and the competences that were considered fundamental for being a "good" teacher. While teacher examination tests in the US in the 19th century focused primarily on being proficient in the area of content and granted only little importance to pedagogical competences, this shifted towards a strong focus on these pedagogical elements in the middle of the 20th century, leaving subject-matter proficiency almost forgotten. Although Shulman criticises both approaches, he especially considers the lacking importance of appropriate subject-matter proficiency worth mentioning and thus refers to it as the "missing paradigm" (Shulman 1986: 6). Therefore, Shulman constitutes that teachers need to acquire content knowledge as well as general pedagogical knowledge (PK) but especially highlights the importance of content knowledge for every

teacher and distinguishes between three categories of content knowledge: subject matter content knowledge (CK), pedagogical content knowledge (PCK) and curricular knowledge.

The first category of subject matter content knowledge (CK) is defined by Shulman as "the amount and organization of knowledge per se in the mind of the teacher" (Shulman 1986: 9), which includes an understanding of the structure of the subject matter. This structure is further divided into substantive structures, which describe the ways in which the basic principles of a subject are organised, and the syntactic structures, which is the "set of ways in which truth or falsehood, validity or invalidity, are established" (Shulman 1986: 9). On the basis of these assumptions, Shulman explains that teachers not only need to know the subject matter itself but that every teacher should also be able to explain the subject matter: "The teacher need not only understand *that* something is so [sic]; the teacher must further understand *why* it is so." (Shulman 1986: 9, original emphasis). Shulman also adds that teachers should have at least the same level of CK as their mere subject matter colleagues and through that, again, claims that teachers need to be experts in the field of their subject discipline.

The second category is that of pedagogical content knowledge (PCK) and is defined as going "beyond knowledge of subject matter per se to the dimension of subject matter knowledge *for teaching*" (Shulman 1986: 9, original emphasis). This especially includes the knowledge of possible ways of representing and formulating the actual subject matter in such a way that it is understandable for others. Moreover, Shulman deems it necessary for a teacher to know not only one form of representation of the subject matter, but every teacher should be familiar with a numerous amount of representations in order to react to students individually. To be able to adapt the representations of knowledge to the individual students, the teacher also needs to know possible preconceptions the students might already have of a topic, and especially possible misconceptions and strategies of addressing these (Shulman 1986: 9–10).

Finally, curricular knowledge is understood by Shulman as the various programmes that were designed for teaching a specific topic, the corresponding teaching materials and the set of characteristics that make one programme more appropriate in a certain situation than others. Moreover, he also requires teachers to work interdisciplinary as he demands teachers to know the contents of other school subjects as well. Also, teachers should know the previous and following topics of their own subject matter. Through that, teachers are required to connect topics not only among each other in the field of their own subject matter, but also interdisciplinary with topics of other subject matters (Shulman 1986: 10).

While, of course, all these categories form the basis of teaching knowledge, Shulman himself emphasises PCK to be most important as it "represents the blending of content and

pedagogy into an understanding of how particular topics, problems, or issues are organized, represented, and adapted to the diverse interests and abilities of learners, and presented for instructions" (Shulman 1987: 8). He furthermore explains that PCK most likely distinguishes "the understanding of the content specialist from that of the pedagogue" (Shulman 1987: 8). Hence, he points out that a successful teacher not only needs to be proficient in the field of CK but especially requires PCK which can be considered as the essence of teaching as it incorporates CK and PK. Interestingly, Shulman speaks of knowledge instead of competences which contradicts the COACTIV groups' interpretation of the professional competence of being a teacher.

The COACTIV model of professional competence

The COACTIV group criticised that models of teacher competence were often primarily based on theoretical considerations and they therefore designed a project which attempted to "make a theoretical *and* empirical contribution to clarifying central concepts and to furthering the discussion on the professionalization of teachers" (Baumert & Kunter 2013: 25, original emphasis). Since Shulman's work is often referred to as the foundation of research on teacher competences, the COACTIV group also, inter alia, based their project on Shulman's ideas. While Shulman focuses primarily on the importance of teaching knowledge areas, the COACTIV group points out four aspects of professional competence which are constituents of successful teaching (see Figure 3.2).

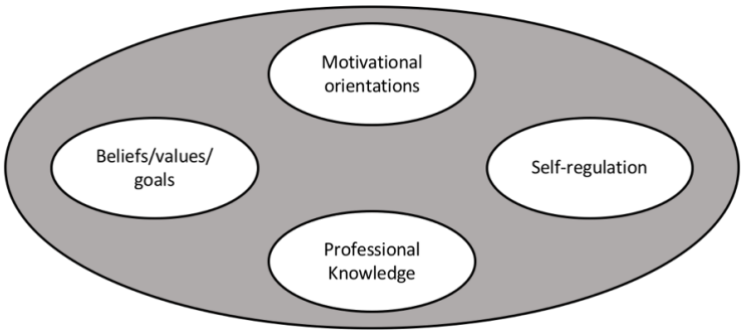


Figure 3.2 COACTIV model of professional competence (own depiction, based on Baumert & Kunter 2013)

As for the aspect of beliefs, values and goals, COACTIV first of all explains that knowledge and values or beliefs are sometimes conceived as separate, distinguishable categories of teacher competence although this distinction is often abandoned in research. Apparently, however, the COACTIV group decided to treat these aspects as separable because, as is visualised in Figure 3.2, *professional knowledge* and *beliefs/values/goals* are two individual aspects. The depiction

of circles not touching each other might even suggest that these domains of knowledge are neither connected nor interrelated (Baumert & Kunter 2013: 37–38)[19].

The aspect of professional knowledge is regarded as the "core of professionalism" (Baumert & Kunter 2013: 28) and therefore, the by far longest part in the COACTIV's article is devoted to the theoretical pre-assumptions of professional knowledge. Baumert and Kunter explain that the group agrees with Shulman's distinction of general pedagogical knowledge (PK), content knowledge (CK) and pedagogical content knowledge (PCK), which were therefore adopted for their research project as well (Baumert & Kunter 2013: 30). Curricular knowledge, however, which Shulman highlights as an important form of knowledge, is not mentioned together with PK, CK and PCK. Furthermore, the COACTIV group broadened the dimension of general pedagogical knowledge and added psychological knowledge (PK is therefore changed to PPK – pedagogical/psychological knowledge) and two more dimensions are added, namely organizational knowledge and counselling knowledge (Baumert & Kunter 2013: 30). These more detailed domains of professional knowledge in the realm of teaching professionalism are visualised in Figure 3.3.

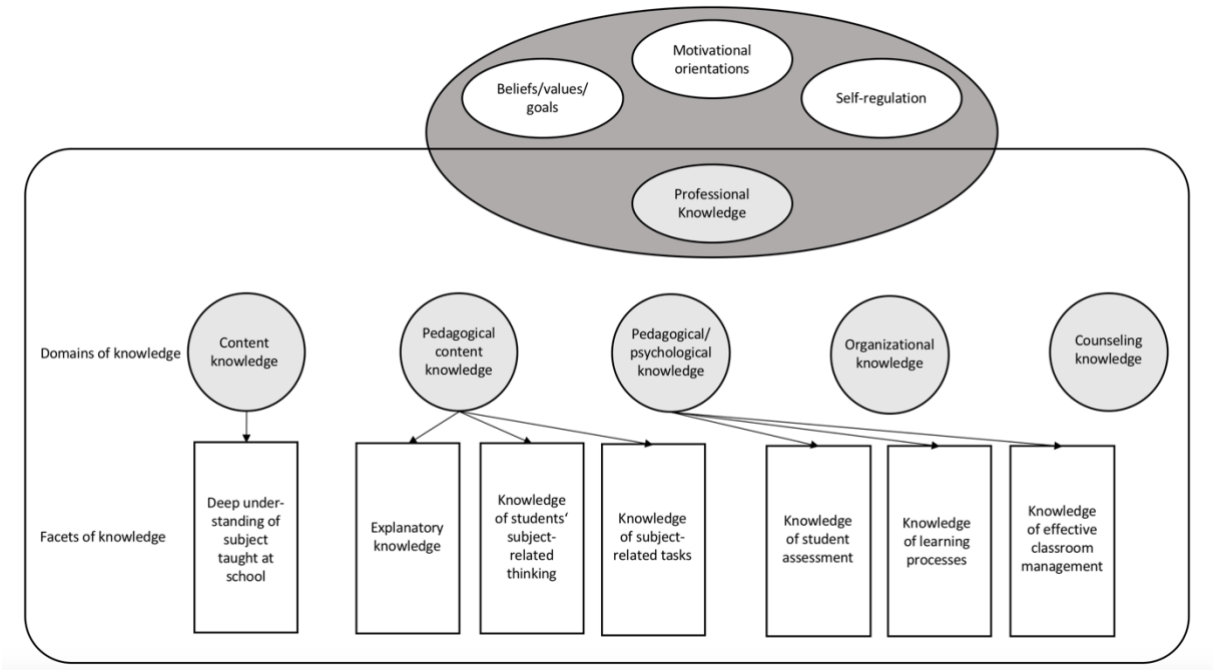


Figure 3.3 COACTIV model of professional competence, with the aspect of professional knowledge specified for the context of teaching (adapted by the author, based on Baumert & Kunter 2013: 29)[20]

[19] Even though Figure 3.2 is the authors' depiction, it shows an excerpt of another visualisation by the COACTIV group (Baumert & Kunter 2013: 29) in which the four domains of professional competence are also represented via four individual circles.

[20] Interestingly, the COACTIV model is supposed to be a generic model of professional teacher competences which is intended to be applied to the specifics of teaching Mathematics at a later point of the research project. Despite elaborating on these aspects and domains of professional competences on a general level of research, this model originally already refers to Mathematics teaching. As this thesis, however, does not focus on the

It is to some extent unfortunate that the COACTIV group's further explications of CK and PCK are already related to the context of Mathematics, despite the fact that the initial COACTIV model is supposed to be generic and thus not subject-related. For the context of Mathematics, COACTIV distinguishes between four forms of CK: "academic research knowledge, […] a profound mathematical understanding of the mathematics taught at school, […] a command of the school mathematics covered at the level taught and […] the mathematical everyday knowledge that all adults should have after leaving school" (Baumert & Kunter 2013: 33). These forms of knowledge, however, can also be abstracted to a more general level or transferred to other subject areas. Hence, on a more general level, content knowledge could comprise the following four forms: academic research knowledge, a profound understanding of the subject taught at school, a command of the school subject covered at the level taught and finally the subject-related everyday knowledge that all adults should have after leaving school. Although CK and PCK are covered in one chapter, Figure 3.3 suggests that these two domains of knowledge can be seen as separate entities with CK being the theoretical basis of and prerequisite for PCK.

PCK, however, is further distinguished into three dimensions, the first of which is the knowledge of tasks. This includes diagnostic knowledge of tasks but also the prior knowledge which is required in order for students to master a task as well as the effective orchestration of tasks in the classroom. The knowledge of student cognitions forms the second dimension and includes common students' misconceptions, typical errors and strategies but also comprehension processes and ways of assessment. Finally, the third dimension refers to explanations as well as multiple representations of the topic taught (Baumert & Kunter 2013: 33) and together with the first two dimensions, this understanding of PCK strongly correlates with Shulman's understanding of PCK.

The domain of PK or PPK is less context-specific and is subdivided into five facets (even though Figure 3.3 lists only three of them, which is, however, not further justified by Baumert & Kunter). The first facet is that of conceptual knowledge of the foundations of education, which includes educational theories, the *theory of institutions*[21] and the psychology of human development, learning and motivation. Next, general pedagogical knowledge of instructional planning is listed and exemplified as principles of lesson planning and instructional methods in a broader sense. The knowledge of classroom management is the third facet and includes

mathematical teaching context, the model was slightly adapted and any subject-specific references were generalised.

[21] Unfortunately, it is not further explained what these *theories of institutions* imply.

creating a supportive learning environment as well as different methods of learning. The fourth facet of knowledge is that of domain-general principles of testing and assessing as well as the evaluation of learning processes and the provision of feedback. Finally, the basic knowledge of the methods of empirical social research is the fifth facet of PPK (Baumert & Kunter 2013: 34–35).

The fourth domain of knowledge is referred to as counselling knowledge and is defined as "a socially distributed and largely nonsubject-specific form of knowledge that has to be bundled and interpreted for specific addressees in a given counselling situation" (Baumert & Kunter 2013: 36). This domain of knowledge requires diagnostic skills and can be applied in various situations, such as counselling parents and students confronted with upcoming decisions in the students' educational career.

Both the model by Shulman as well as by the COACTIV group can be considered as the primary models of teacher competences. Hence, all teacher education programmes need to be based on these and accordingly, they are also taken as the basis for developing the German Framework for CLIL Teacher Education (see chapter 8).

3.3. Principles of Good Teaching

Apart from the previously discussed general models of teacher competences, experts have also discussed the constituents of "good" teaching, which are discussed and compared in the following (cf. Glötzl 2000; Helmke 2005; Meyer 2016). Meyer, for example, lists ten features of good teaching which are based on several longitudinal studies (Meyer 2016: 15–18). According to Meyer, these features of good teaching should be understood as universal for all subjects and all school types and can therefore be applied to and adapted for all learning environments (Meyer 2016: 12). He furthermore adds that the subject-specific characteristics of the different subject disciplines need to be added to this list of general features of good teaching. Helmke adds some more aspects regarding principles of good teaching (Helmke 2005), which Alfes summarised to ten major points (Alfes 2018: 87–88). Again, these are supposed to be understood as universal for all subject disciplines. A third way of classifying the constituents of good teaching was presented by Glötzl. His list of eight principles of good teaching is based on theoretical assumptions and is therefore, at least to some extent, subjectively developed. Still, he argues that this list should be seen as a guideline for teachers who still need to add the specific perspectives and characteristics of the different subject disciplines (Glötzl 2000: 10).

As these principles of good teaching overlap in several instances, Alfes created an overview of these criteria and identified the areas in which Meyer, Glötzl and Helmke agree or disagree (see Table 3.1). On the basis of this comparison, she later on defined generally accepted criteria of good teaching (Alfes 2018: 90–91). In this overview, ✓ shows that the respective criterion is explicitly mentioned by the expert, while ○ represents that similar aspects are covered. Those aspects marked with × are not addressed. Those categories which are mentioned by at least two of the experts are defined as the basic principles of good teaching and therefore printed in italics (Alfes 2018: 92).

criterion	**definition/explanation/examples**[22]	**Meyer (2016)**	**Helmke (2005)**	**Glötzl (2000)**
lernförderliches Klima	*learning atmosphere that supports the learning process (e.g. through mutual respect, justice or the creation of cooperative learning environments)*	✓	✓	○
Methodenvielfalt	*variety of different, balanced teaching methods (not too many but also not too one-sided)*	✓	✓	×
Berücksichtigung der Individualität der Lerner	*consideration of learners' individuality (e.g. through dealing with heterogeneity and individually supporting the students)*	✓	○	×
Klarheit	*clarity and transparency with regard to the topic and the tasks, also through activating prior knowledge*	✓	✓	×
Strukturierung	*structuring (e.g. through clarity of the lesson goals and contents, defining routines and rituals or initiating structured learning processes)*	✓	✓	✓

[22] Alfes' list only presents the criteria and their classification which author lists them in their principles of good teaching. As appropriate translations of the German terms are sometimes difficult to find, though, the terms for the criteria are here given in the German original and English definitions, explanations and/or examples, based on Meyer (2016), Helmke (2005) and Glötzl (2000).

Motivierung	*motivation (e.g. through interesting teaching materials, an enthusiastic teacher as well as adapting the topics to the students' interests)*	✗	✓	✓
Sicherung	*consolidation of the learning goals (e.g. through autonomous learning and applying the content to new learning situations)*	✗	✓	✓
Leistungsorientierung	*performance orientation (based on general guidelines but also adapted to the students' capability)*	✓	✗	✓
hoher Anteil echter Lernzeit	high amount of "real" learning time (e.g. through good time management and a daily routine)	✓	✗	✗
sinnstiftendes Kommunizieren	meaningful communication (e.g. through learning diaries or student feedback)	✓	✗	✗
intelligentes Üben	intelligent practice (e.g. through the active implementation of different learning strategies or well-directed scaffolding)	✓	✗	✗
vorbereitete Umgebung	prepared learning environment (e.g. through the preparation of useful and functional learning tools)	✓	✗	✗
Klassenführung	classroom management (e.g. successful time management, effectively dealing with disturbances and initiation of rules and routines)	✗	✓	✗
Wirkungsorientierung	orientation towards effectiveness (e.g. teacher activities which influence the effectiveness of teaching, such as diagnosis)	✗	✓	✗
Unterrichtsgestaltung	lesson planning (e.g. including the curriculum)	✗	✗	✓

Aktivierung und Selbstständigkeit	*student activation and autonomy (e.g. through offering autonomous learning phases)*	✗	✓[23]	✓
Angemessenheit und optimale Passung	appropriateness of the learning goals and phases on the basis of the students' individual prerequisites	✗	✗	✓

Table 3.1 Criteria of good teaching (Alfes 2018: 91, adapted by the author)

Though these principles are all kept on a general level and hence appear rather vague, Meyer, Helmke and Glötzl all agree that the principles should function as a basis for all teachers and should be adapted for and applied to the subject-specific characteristics of the different subject disciplines. Accordingly, the general teacher competences singled out in comparing Shulman's and the COACTIV group's models in chapter 3.2 and as a result of Alfes' research presented in italics in the table above – i.e. *lernförderliches Klima*, *Methodenvielfalt, Berücksichtigung der Individualität der Lerner*, *Klarheit*, *Strukturierung*, *Motivierung*, *Sicherung*, *Leistungsorientierung* as well as *Aktivierung und Selbständigkeit* – can be regarded as prerequisites for successful teaching and are taken as the basis of developing the German Framework for CLIL Teacher Education (see chapter 8).

3.4. Teacher Education in Germany

Generally, the federal states individually organise their teacher education programmes and therefore, teacher education programmes may vary within Germany. In order to achieve a higher comparability of programmes and to ensure that teachers can move from one federal state to another without the necessity of running through a teacher education programme again, however, the KMK functions as a central coordinating committee on a national level and agreed on basic elements and contents of teacher education programmes in Germany, on which all further programmes must be based (for a detailed overview of the specifics of the teacher education programmes in the different federal states, see KMK 2017).

As different school types exist in Germany[24], respective teacher education programmes

[23] Alfes only attributes this aspect of activating the students and encouraging phases of autonomous learning to Glötzl's list of teaching principles and therefore, this aspect is not counted as one of the basic principles of good teaching. Since Helmke, however, also explicitly demands to activate the students (Helmke 2005; Alfes 2018: 88), Alfes' table is changed and the aspect also added to the basic principles of good teaching.

[24] Generally, the German school system differentiates between three educational phases (KMK 1972; KMK 1993; KMK 2004a):
primary education: usually lasts for four years (six years in Brandenburg and Berlin)
lower secondary education: usually lasts from grade five until grade nine or ten; differentiates between *Hauptschule*, *Realschule*, *Gymnasium* and *Gesamtschule* (though some federal states also use different names

differ as well[25]. Yet still, all programmes share that they consist of two phases, namely a study programme at a university or specific teacher education college (*Pädagogische Hochschule*) and a second phase at a German school (*Vorbereitungsdienst* or *Referendariat*). While the first phase focuses more on theoretical aspects and only includes shorter periods of practical experiences, the second phase of teacher education mainly focuses on the application of theoretical knowledge to practice. Nevertheless, the two phases are meant to be closely related and to build on each other (KMK 1997a: 2; KMK 1997b: 2).

The first phase of teacher education, i.e. the study programme, is again divided into two phases: the Bachelor of Education (B.Ed.) and the Master of Education (M.Ed.). In both phases, the contents of the study programmes first of all cover *Bildungswissenschaften* (educational sciences), which are meant to establish basic pedagogical and didactic skills and which are not directly connected to the individual subject disciplines. Apart from *Bildungswissenschaften*, teachers are usually trained in two subject disciplines and the study programme consists of specialised knowledge of the subjects and their respective didactic and methodological approaches (KMK 1997a: 2; KMK 1997b: 2). The focus, however, is rather on content knowledge than on pedagogical approaches (cf. Cortina & Thames 2013). Finally, a bachelor and a master thesis have to be written in order to show that the student is able to work academically (KMK 1997b: 2; KMK 1997a: 2).

As *Bildungswissenschaften* are a part of the study programme which is implemented in the teacher education for all school types, the KMK agreed on standards for this particular area. In these standards, the KMK defined four areas of competence: teaching, educating, evaluating, innovating (*unterrichten*, *erziehen*, *beurteilen*, *innovieren*) (KMK 2004b: 7–14). Table 3.2 shows these four areas of competence as well as the eleven competences they are distinguished into and provides their respective specification. Also, Table 3.2 compares the individual

for the different school types); *Haupt-* and *Realschulen* primarily provide the students with basic, general education and prepare them for an apprenticeship while *Gymnasien* provide a deepened, general education and prepare the students for higher secondary education. *Gesamtschulen* offer more than one school type and hence pursue different educational aims.

higher secondary education: usually lasts from grade eleven until grade twelve or thirteen; only offered at *Gymnasium*, *Gesamtschule* and *Berufsbildenden Schulen (BBS)*; after successful graduation, students receive the German *Abitur*, which is the entrance qualification for university studies.

Though these different school forms exist, the school system is nevertheless meant to be open for students to change the school type.

In this thesis, *Haupt-* and *Realschulen* are referred to as lower secondary schools, *Gymnasien* as higher secondary schools and *Berufsbildende Schulen* as vocational schools.

[25] The regular duration of the study programme for higher secondary school is, for example, ten semester, whereas lower secondary school study programmes only last for at least seven semesters (KMK 1997a: 2; KMK 1997b: 2).

competences to Shulman's and the COACTIV's group's general teaching competences, which are also further discussed in the following.

areas of competence	specification	in comparison to Shulman & COACTIV
teaching	*competence 1:* plan lessons with regard to situation-specific prerequisites (includes knowledge of educational theories, general and subject-specific methodology, and forms of tasks)	PK/PPK & PCK
	competence 2: create motivating and reassuring learning environments (includes knowledge of theories of learning and motivation)	PK/PPK
	competence 3: encourage students to become self-determined learners (includes knowledge of theories of life-long learning and cooperative as well as autonomous learning)	PK/PPK
educating	*competence 4:* know and consider the students' social and cultural background (includes knowledge of theories of children's development and cultural and gender-specific influences on students' development)	PK/PPK
	competence 5: convey (democratic) norms and values and encourage students to respect diversity (includes knowledge of democratic norms and possibilities of supporting students in developing these)	PK/PPK
	competence 6: find solutions for problems and conflicts in the educational context (includes knowledge of communication and conversation techniques as well as the analysis of conflicts)	PK/PPK
evaluating	*competence 7:* diagnose students' learning prerequisites and learning processes (includes knowledge of heterogeneity, learning processes as well as their diagnosis)	PK/PPK
	competence 8: evaluate and assess students on the basis of transparent assessment criteria	PK/PPK

	(includes knowledge of different forms of assessment as well as feedback strategies)	
innovating	*competence 9:* be aware of the specific demands of the teaching profession (includes knowledge of administrative and legislative basis of the German school system)	beliefs/values/goals
	competence 10: continuously evolve in the role as a teacher (includes knowledge of self- and external evaluation as well as studies in the educational field)	
	competence 11: participate in school projects (includes knowledge of the aims of the different school forms as well as processes of school development)	

Table 3.2 Application of general teacher competence models to general teacher competences defined by the KMK (KMK 2004b: 7–14)

The competence area *teaching* is further divided into three competences. The first competence covers planning lessons with reference to the individual situation-specific prerequisites. This includes the knowledge of educational theories, general and subject-specific methodology, different methodological concepts and forms of tasks (competence 1). The second competence is more concerned with the teacher's ability to create a learning environment which is motivating and reassuring. In order to achieve that goal, teachers are supposed to be familiar with theories of learning and motivation (competence 2). Finally, the third competence includes encouraging the students to become self-determined learners (competence 3) (KMK 2004b: 7–8). All of these aspects can be connected to the models of PCK and PPK, while the focus is clearly on PPK as the knowledge of general educational theories or methodological concepts is covered on a more general level. The application of these general theories to the individual subject matters, which belongs to the area of PCK, is also mentioned in this area of competence but is also element of the individual subject-specific curricula[26].

Next, the competence area *educating* is also divided into three competences, the first of which is concerned with the students' social and cultural background and how this might influence their learning achievements. Hence, teachers are required to know common theories

[26] Though the principles of good teaching (see chapter 3.3) are certainly an important element of successful teaching, they cannot be applied to these competences developed by the KMK. This is because the competences defined by the KMK remain on a meta-level, while Alfes' overview of the principles of good teaching is already much more precise and on a more detailed level.

of children's development as well as cultural and gender-specific influences on students' development (competence 4). Secondly, teachers are supposed to convey (democratic) norms and values and encourage students to respect diversity (competence 5). Moreover, teachers should be able to solve conflicts and problems in the school context as well as be familiar with common communication techniques (competence 6) (KMK 2004b: 9–10). Again, this area of competence is mainly connected to PPK as the prerequisites for the learning process and conveying values and norms is covered on a general and not on a subject-specific level.

The third area of competence – that of *evaluating* – covers two further competences. First of all, teachers are expected to be able to diagnose students' learning prerequisites and their learning processes which includes aspects of heterogeneity, diversity and knowledge of how learning prerequisites might influence the students' achievements (competence 7). Additionally, teachers are supposed to know how to evaluate and assess students on the basis of transparent assessment criteria and know the effect of feedback on the students' further development (competence 8) (KMK 2004b: 11–12). As was the case for the previous areas of competence mentioned in the field of educational science, the area of *evaluating* is also mainly connected to PPK as the aspect of assessment and evaluation is covered on a more general level.

The fourth and last area of competence is called *innovating* and is more concerned with the actual role of the teacher. Hence, as a first point, teachers are meant to be able to reflect upon the specific demands of being a teacher and to know the legislative frame of the teaching profession (competence 9). Also, teachers should be willing to continuously evolve in their role as a teacher through, inter alia, employing strategies of self- and external evaluation (competence 10). As a final aspect, teachers have to be involved in the developmental process of the school and be engaged in school-related projects (competence 11) (KMK 2004b: 13–14). This final competence area can be connected to the COACTIV group's aspect of beliefs/values/goals as it is concerned with the role of the teacher and how he or she is able to evolve in this role. This focus on the values and beliefs of the individual teacher is not covered to such a large extent in Shulman's model of teacher competence and therefore, this final area of competence of the educational sciences is hardly transferable to Shulman's theory.

In addition to *Bildungswissenschaften*, which cover various didactic elements on a rather general level, teacher education programmes in Germany also include studying two content subjects and again the elements of this study phase are established on a national level. According to the KMK, future teachers are supposed to acquire content knowledge, knowledge of the working methods of the respective subject disciplines and a content-specific *Didaktik*. These three elements, i.e. *Bildungswissenschaften* and the two subjects, are meant to form the

basis for the second phase of teacher education which is then on a more practical level (KMK 2008: 3).

While the KMK requirements concerning the content-specific education of future teachers is rather general, the German Association for *Fachdidaktik* (GFD) agreed on five areas of competences which all teachers would have to acquire for their respective subjects (GFD 2004a). The first of these areas of competences is concerned with the theory-based reflection of content-specific didactical knowledge. This implies the ability to apply didactic theories – both general educational as well as subject-specific theories – to practical situations. Moving on, the second area of competence comprises subject-specific teaching and includes the ability to plan lessons in accordance with the students' learning prerequisites and in varying degrees of difficulty. Moreover and as a third area of competence, future teachers must be able to assess and diagnose students with regard to subject-specific aspects. This, however, does not only apply to assessing and evaluating student achievements but also refers to the teachers' personal development. A fourth area of competence concentrates on subject-specific communication and includes the ability to communicate subject-specific topics but also to analyse communicative structures between subject-specific experts as well as with novices in the field. Finally, the fifth area of competences focuses on developmental and evaluative aspects as it includes the ability to participate in, comprehend and take part in educational research projects as well as the ability to support the development of the school and the subject-specific curricula (GFD 2004a: 1–2).

When applying the models of teacher competence by Shulman and the COACTIV group (see chapter 3.2) as well as the principles of good teaching (see chapter 3.3) to the GFD's five areas of competence, several areas of overlap become apparent. The aspect of CK covers a deep understanding of the actual contents of the respective subjects as well as orientational knowledge of how elements of the subject are interrelated. Also, future teachers are expected to develop CK on a meta level and be able to reflect upon their level of CK (KMK 2008: 3). All these elements clearly refer to Shulman's and the COACTIV group's understanding of CK. The aspect of subject-specific *Didaktik* as it is mainly covered by the GFD (GFD 2004b; GFD 2004a) can be connected to the areas of PCK since planning and conducting subject lessons on the basis of didactic theories as well as students' learning prerequisites and aspects of assessment and evaluation are included. These can also be found in the principles of good teaching (see chapter 3.3), which especially show areas of overlap concerning structuring teaching units as well as including students' learning backgrounds.

3.5. Concluding Summary

While the discussion as to a universal definition of the term *competence* is still ongoing, this thesis refers to the understanding of *competence* as being learnable and related to solving complex problems in real-life situations. In the field of teacher education, especially Shulman and the COACTIV group provide the definition of general teacher competences, which forms the basis for developing the German Framework for CLIL Teacher Education (see chapter 8). Shulman mainly refers to three facets: content knowledge (CK), pedagogical knowledge (PK) and pedagogical content knowledge (PCK), which the COACTIV group adapted (pedagogical knowledge (PK) is changed to pedagogical/psychological knowledge (PPK)) and extended (organisational and counselling knowledge are added). As the discussion in chapter 3.2 showed, these models of teacher education are meant to be universal and applicable to all subject disciplines and should therefore be acquired by all teachers. Though Shulman does not make use of the term *competence*, the COACTIV group explicitly explains that the different areas of knowledge constitute the teaching competence. The same applies to the principles of good teaching, which especially highlight the importance of knowing and applying a great amount of teaching methods, respecting learners' individuality as well as creating a clear and structured learning environment. Compared to the general teacher competences by Shulman and the COACTIV group, clear correlations to the aspects of PCK as well as PK/PPK as well as organisational knowledge can be found. Moreover, the five areas of competence defined by the GFS also show clear connections to the definition of CK and PCK.

The comparison of these general competence areas to the elements of German teacher education programmes, i.e. studying *Bildungswissenschaften* as well as two subjects, could show that all aspects of general teacher competences as well as elements of good teaching are addressed at least to some extent during the first phase of teacher education, which is conducted at university. As these guidelines are formulated on a general level and each federal state and each university relies on these to develop respective teacher education programmes, these teaching competences form the fundamental basis for the development of the German Framework for CLIL Teacher Education (see chapter 8).

4. CLIL Teacher Education – State of the Art

"Quite simply without appropriate teacher education programs the full potential of CLIL is unlikely to be realised and the approach unsustainable."

(Coyle 2010: viii)

As was pointed out in chapter 2.4, CLIL pursues a number of goals, such as an increased level of foreign language competence, a higher intercultural competence or an increase of the students' motivation. In order to achieve these goals, however, CLIL teachers need to be specifically qualified, a task which is "massive and complex" (Hillyard 2011: 9). The question of necessary teacher competences for CLIL teachers has been approached in several initiatives: While some (research) projects focus on compiling a list of specific teacher competences which are considered to be important for teaching in CLIL programmes, other working groups are more concerned with implementing teacher education programmes at various levels of teacher education (i.e. during university education or in-service). Hence, this chapter provides an overview of existing initiatives in the field of CLIL teacher education. Firstly, those projects which focus on CLIL teacher competences are discussed. In a second step, existing teacher education programmes for Germany but also for Europe in general are reviewed. Finally, this chapter concludes with a critical evaluation of the current status-quo of CLIL teacher education which ultimately functions as the basis for the research questions of this thesis which are discussed in chapter 5.

4.1. CLIL Teacher Competences

One of the large-scale projects on CLIL teacher competences, the "European Framework for CLIL Teacher Education" was developed in the course of the CLIL-CD (CLIL curriculum development) project, which was commissioned and funded by the European Centre for Modern Languages (Marsh et al. 2011). Intended for a European audience, the authors explain that this framework focuses on a macro-level of competences for CLIL teachers and cannot function as a universal list of competences for the differing CLIL programmes across Europe. Also, it is pointed out that this framework was created on the basis of "an examination of teacher education learning and curricular needs in CLIL contexts, and through a pan-European process of consultation" (Marsh et al. 2011: 3). Wolff further elaborates that the authors examined "a variety of teacher education programmes" (Wolff 2012: 110) and came to the conclusion that most programmes rather focus on the necessary content or language knowledge of CLIL teachers while omitting aspects of general pedagogy. As the range of content subjects or foreign

languages which might be implemented in a CLIL programme is vast, this framework is considered to be neutral with regard to the different content subjects and foreign languages (Marsh et al. 2011: 6). After these general remarks concerning the creation and use of the framework, the actual list of "Target Professional Competences" for CLIL teachers is provided. This list is structured with the help of eight main categories, which are then further defined and specified through extensive lists of competences (Marsh et al. 2011: 16–27). Even though this framework is quite wide-ranging, its universality for all European CLIL programmes make the actual contents rather superficial. Also, the authors stress that the framework functions as a reflection tool and not as a "prescriptive template" (Marsh et al. 2011: 3). Several aspects are not applicable to all contexts, such as the focus of assessment on content and language, which is not given in the German context (see chapter 2). Also, as German teachers are usually qualified for two subjects and hence CLIL teachers are mostly also qualified language teachers, the explicit focus on the teachers' target language competence is not as crucial for the German context as it might be for other European settings, in which teachers are either qualified for a content subject or a foreign language. Also, one might question if elements such as classroom management in general are CLIL-specific competences or if they should rather be attributed to general teacher competences (Marsh et al. 2011: 28).

Another large-scale project concerned with CLIL teacher competences was coordinated by Bertaux, Coonan, Frígols Martín and Mehisto, who developed "The CLIL Teacher's Competences Grid" (Bertaux et al. 2010). Unfortunately and opposed to the "European Framework for CLIL Teacher Education", no information is provided as to how this competence grid was developed or by whom the project was funded. Only a rather short introductory text explains that – as is also the case for the framework – this grid should only be seen as a general guidance and that the individual, educational contexts of the European school systems need to be taken into consideration. While the framework is divided into eight main categories, the grid first of all distinguishes between two major fields – "Underpinning CLIL" and "Setting CLIL in motion". As these titles already suggest, the first field is concerned with "competences and stakeholder relationships that are essential to laying the foundation for establishing and maintaining a CLIL programme" while the other field focuses more on implementing CLIL programmes (Bertaux et al. 2010: 1). These two fields are then subdivided into broader areas of competence, which are again subdivided into specific competences. These competences are then specified through indicators of competence which are formulated as "can-do"-statements. The structure of these competences is note-worthy with reference to the definition of the concept of *competence* in chapter 3.1, which elaborated on the different

connotations of *competence* as a more general term and *competency* as the constituents of a competence. This distinction, however, cannot be found in this competence grid as the authors use "indicators of competence" instead of the term *competency*.

At this point, both the "European Framework for CLIL Teacher Education" as well as "The CLIL Teacher's Competences Grid" are not further discussed as this is done in greater detail in chapter 6, when they are the basis for developing the German Framework for CLIL Teacher Education. A first comparison of these two large-scale projects, which is also further specified in chapter 6, however, already reveals that several aspects or areas of competence overlap while others are only part of one of the two lists of competences. This large number of similar aspects for both projects can probably be explained by the fact that several authors of the "European Framework for CLIL Teacher Education" were also involved in creating "The CLIL Teacher's Competences Grid". Also, it is striking that both documents were published within only one year, which might lead to the assumption that they were created simultaneously and – with a few exceptions – by the same authors. Apart from that, both documents share that they are intended for a European audience and must therefore be seen on a macro-level which cannot include the individual characteristics of the various CLIL settings across Europe. Hence, these lists of competences must be adapted for the local contexts before being implemented in teacher education programmes. First and foremost, the individual CLIL settings need to be considered as they vary largely across Europe, but the context of general teacher education must also be taken into consideration, such as that teachers in Germany are usually being trained in two subjects. Also, teacher education programmes in Germany already include general pedagogical aspects (see chapter 3.4), which therefore might not need to be included in special teacher education programmes for future CLIL teachers in Germany.

Apart from these large-scale research projects, some other research groups have also approached the question of CLIL teacher competences. The following small-scale project concerned with CLIL teacher competences was launched in the year 2006 and is also European-funded (Dafouz Milne, Llinares & Morton 2010). A team consisting of fifteen educators from six European countries (Czech Republic, Italy, Luxembourg, Spain, The Netherlands and the UK) aimed at identifying effective practice in secondary CLIL as well as "describe[ing] skills and rais[ing] awareness of scaffolding learning of content and language" (Dafouz Milne, Llinares & Morton 2010: 12). Finally, this work should result in a framework for CLIL teacher development. In order to reach these aims, a bottom-up approach was used to include local as well as national specifics and develop a framework that is flexible and applicable to multiple contexts. This framework is structured into eight areas of knowledge (see Figure 4.1).

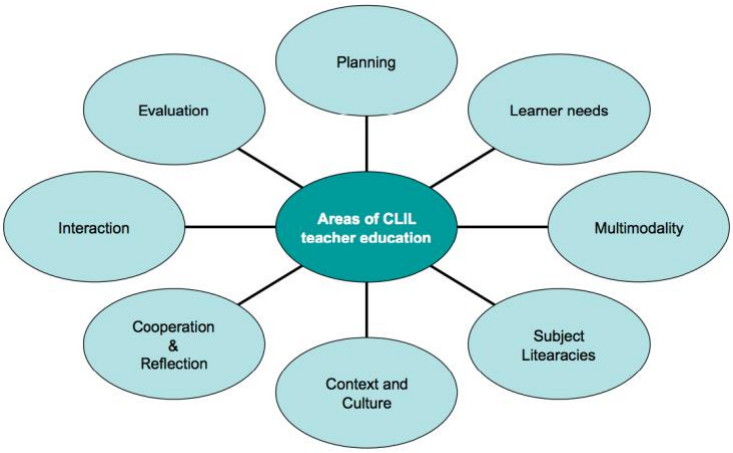


Figure 4.1 Areas of knowledge for CLIL secondary teachers (Dafouz Milne, Llinares & Morton 2010: 14)

Unfortunately, these areas of knowledge are not further defined nor specified and hence it is rather difficult to gain a deeper understanding of this framework. In order to develop these competences and implement them in a teacher education programme, a four-step sequence was designed (see Figure 4.2). According to this plan, teachers are first introduced to the theoretical background of the key areas and then move on to values, knowledge and skills. In this context, *values* refers to what CLIL teachers should appreciate, *knowledge* refers to what CLIL teachers should know about the topics and finally, *skills* focuses on what CLIL teachers should be able to do. After this theoretical basis, teachers are supposed to develop activities (Dafouz Milne, Llinares & Morton 2010: 16). Sadly, all these considerations are rather abstract and not applied to the various areas of CLIL teacher knowledge and only one short example is provided (Dafouz Milne, Llinares & Morton 2010: 17–18).

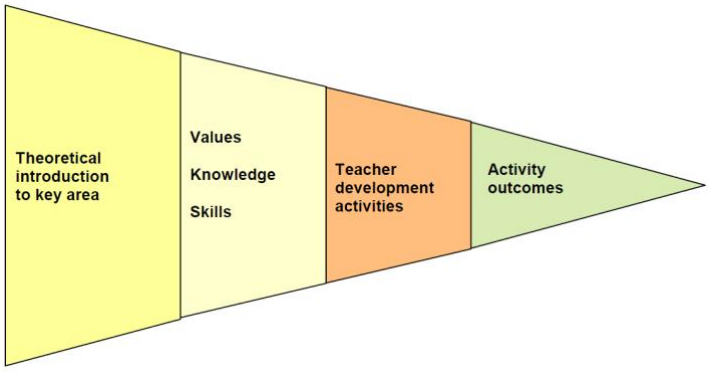


Figure 4.2 CLIL teacher development framework (Dafouz Milne, Llinares & Morton 2010: 15)

While several research projects are carried out on a European level and their applicability to local contexts is therefore limited, other projects are more regional and therefore especially adapted to individual contexts. Located in the Spanish community Extramadura, the government's attempt to establish bilingual programmes in every new school in the area has given rise to the importance of CLIL teacher education programmes. In order to design these

training programmes, a list of competences for teaching CLIL was generated, as "without reference to a benchmark or general framework it would be very difficult to establish teacher competences" (Alejo & Piquer Píriz 2010: 220). Taking the LANQUA[27] report (2008) as a basis, Alejo and Piquer Píriz (2010) identified five competence domains: objectives, language competence and language awareness, pedagogical approach, assessment and context. The domain of *objectives* is concerned with adapting the curriculum to an integration of content and language as well as the L1 and the L2. Also, teachers should be able to identify possible difficulties of a topic, both on the level of language as well as content. Next, the aspect of *language competence and language awareness* focuses highly on the teacher's language proficiency and requires that the teachers themselves are able to use the L2 appropriately but are also capable of providing appropriate language feedback for students. The domain *pedagogical approach* includes that teachers are able to design activities which make the content more accessible for students as well as to cooperate with other (foreign language) teachers. The aspect of *assessment* comprises that teachers should be able to assess language as well as content achievements. Finally, *context* requires that teachers are able to implement the CLIL approach into the local school context and keep up to date with developments of the CLIL approach. Also, teachers are expected to constantly develop in their role as a teacher (Alejo & Piquer Píriz 2010: 226–227). Taking these domains of competence as a basis, a needs analysis was conducted with four CLIL teachers based on personal interviews as well as their answers in a survey. The results reveal that teachers are not so much concerned with their general language competence, but rather lack "specific strategies and linguistic resources that will enable them to deal both with the cognitive fatigue resulting from using a foreign language and also with the more nuanced area of personal behaviour and values" (Alejo & Piquer Píriz 2010: 237). Also, the understanding of the CLIL approach and its goals and aims varied among the CLIL teachers and a difference between experts and non-experts in the field of language teaching was perceived (Alejo & Piquer Píriz 2010: 233–237). Hence, according to this study, CLIL teacher education programmes should mainly focus on the actual understanding of the CLIL approach and specific (linguistic) strategies (Alejo & Piquer Píriz 2010: 237). Due to the small sample of only four CLIL teachers, though, it needs to be carefully discussed if and to what extent these results can be generalised.

Also situated in Spain, another research project was launched in reaction to the

[27] LANQUA was an Erasmus project which was funded under the European Union's Lifelong Learning Programme and ran from 2007 to 2010. Aiming at the formation of a European network in the area of language teaching, the project was divided into five sub-projects, one of which was concerned with CLIL (http://www.celelc.org/projects/Past_Projects/lanqua/index.hdtml, last access 1 October 2020).

government's decision to implement CLIL schools and the resulting need for qualified teachers. The main aim of this research project was to answer the following two questions: What is the teachers' understanding of bilingual education, hence their subjective theories[28], and which training needs arise from this perception (Halbach 2010: 247)? According to these research results, five areas of CLIL teacher competences were detected. First of all, the teachers' English language competence was mentioned and especially spoken language skills deemed important. Secondly, the integration of content and language teaching was mentioned, which implies competences in the field of CLIL methodology. At the same time, however, the authors explained that the question if CLIL is a teaching method or an approach was still open for discussion. Next, the aspect of teaching literacy in the foreign language was given as it was considered important to teach students how to read and write in the foreign language. The fourth point was concerned with classroom management and focused on the added difficulties when a class is to be managed in a foreign language. Finally, the aspect of material development was mentioned, which still seemed to be of importance despite the increasing number of published CLIL school materials (Halbach 2010: 248–249). Unfortunately, Halbach does not further elaborate on how the data was obtained nor how it was analysed and the above-mentioned results gained. Apart from that and due to the Spanish educational system, in which teachers are usually only trained for one subject, it seems reasonable to mention the CLIL teachers' English language competence as the first training need. For the German context, in which this thesis is located, however, this focus on the teachers' foreign language competence might not be of the same importance as German CLIL teachers are mostly already trained in teaching the foreign language and hence their foreign language competence can usually be considered sufficient. Based on her research, Halbach developed a specialisation track "Teaching through English in Bilingual Schools" for the Master's degree (Halbach 2010: 250–251). While most of the modules focus on teaching and learning in the CLIL classroom and hence correlate with the five indicated training needs, it also contains modules dealing with poetry or literature or drama in the English language classroom. With regard to the programme's focus on teaching in CLIL classrooms, this seems rather surprising as no direct connection is indicated in the

[28] The importance of CLIL teachers' subjective theories is researched by Viebrock (2010; 2012; 2014) who defines subjective theories as "experiential knowledge that is highly subjective, but at the same time connected through cause-and-effect relations" (Viebrock 2012: 80). She found that CLIL teachers have "cross-curricular mindsets" (Viebrock 2012: 82) as they need to integrate the perspective of a content teacher as well as a language teacher. These different mindsets or subjective theories influence each other and sometimes even get in conflict. As a result, CLIL teachers can be overtaxed and run the "risk of returning to out-dated teaching formats and methods of instruction" such as "heavily teacher-centred approaches" (Viebrock 2012: 88). She therefore concludes that CLIL teacher training programmes should pay particular attention to these conflicting subjective theories and provide teachers with reflection strategies in order to deal with these possible conflicts.

research results.

Again concentrating on the Spanish context, another large-scale study investigates CLIL teachers' training needs. It is certainly worth noticing that all previously presented projects focused on CLIL-specific teacher competences while the following research project does not use the more abstract term of *competence* but rather refers to the teachers' training needs. The fairly recent study was conducted by Pérez Cañado and included a sample of more than 700 participants, representing students, teachers, teacher trainers and CLIL programme-coordinators (Pérez Cañado 2016). Although targeting an international audience and attempting to establish general CLIL teacher education needs, the sample still focuses predominantly on the Spanish context as more than 70% of the participants work in Spain. Employing a quantitative questionnaire study, five different categories (linguistic and intercultural competence, theoretical underpinnings of CLIL, ongoing professional development, methodological aspects and materials/resources) were developed and items created on the basis of recent research results[29] (Pérez Cañado 2016: 273–274). After extensive validation of the instrument, the study's participants were asked to rank their personal (current) level for the individual items and then indicate the general training needs for these items. A four-point Likert scale was adopted for both parts of the questionnaire. Interestingly, Pérez Cañado explains that a qualitative approach was chosen but the actual research study only presents the results of the questionnaires, using quantitative measures (such as Likert scales, ANOVAS and t-tests) to analyse and interpret the findings while neither the qualitative elements of the research study nor the respective results are included (Pérez Cañado 2016: 270). Notwithstanding, the results reveal that the majority of participants felt comfortable with regard to their linguistic and intercultural competence – although it is highly questionable if the level of B2 of the CEFR (Common European Framework of References for Languages) can be considered sufficient for CLIL teachers. As for the theoretical underpinnings of CLIL and the ongoing professional development, the majority of teachers do not consider their personal level as sufficient and declare a high demand for training. While these first three categories showed a strong majority among the participants, the categories of methodological aspects and material/resources achieved mixed results on the personal situation while a strong training need was advocated. Overall, the results show that all participants, representing different status groups, perceive strong training needs for all the mentioned categories – no matter how confident they feel in

[29] Unfortunately, Pérez Cañado does not further specify which research results were taken as a basis. The quality of the test instrument, though, was further insured via expert ratings and a double-pilot process (Pérez Cañado 2016: 274).

these categories themselves (Pérez Cañado 2016: 285). It is unfortunate, though, that the study focused mainly on pre-defined items. For all categories, the participants were given the possibility to add further aspects, but if this option was actually used by the participants is not further elaborated on. Also, a closer look at the individual items reveals that it seems striking that competences which were mentioned in previous studies (e.g. the accurate use of subject-specific language) are not represented in the questionnaire.

Contrasting the previously discussed studies, which primarily concentrated on the Spanish context, Wolff focuses on Germany and names a total number of fourteen additional competences or abilities future CLIL teachers need to be trained in (Wolff 2002). First of all, he mentions that CLIL teachers need to have a high, near native-like foreign language competence, which is higher than that of regular foreign language teachers. Additionally, CLIL teachers need to show a high flexibility in the use of different language registers and should be familiar with approaches of productive and receptive language production. Also, they should possess profound knowledge of theories concerning SLA and bilingualism and should be acquainted with the subject-specific language. Moving on, Wolff mentions familiarity with didactic theories and learning strategies of the foreign language as well as the content subject as two additional aspects. Next, CLIL teachers should be familiar with strategies of learner autonomy and possibilities to enhance the students' productive and receptive competences in the foreign language. Furthermore, strategies of describing cultural phenomena and knowledge of common scientific approaches of the content subject should be familiarised. Also, CLIL teachers should be acquainted with teaching material originating from the target culture and should have the ability to integrate new technologies in order to improve content learning in the foreign language. Finally, Wolff mentions that future CLIL teachers should be accustomed to the target culture, which might be achieved through longer stays abroad in countries of the target language (Wolff 2002: 260–262). Though this list of competences and abilities is already quite extensive, Wolff explicitly mentions that it cannot be regarded as complete and must be complemented by subject-specific elements of the various CLIL subjects (Wolff 2002: 263). Apart from adding subject-specific elements, some of the listed competences can also be seen critically with regard to their uniqueness for CLIL. Hence, knowledge of theories of SLA or strategies of learner autonomy as well as familiarity with the target culture can hardly be categorised as CLIL-specific as these should be displayed by all (language) teachers. Consequently, they cannot be taken as a sole basis for developing a framework for CLIL teacher education.

Also focusing on the German context, Gnutzmann lists four additional teacher competences for CLIL teachers (Gnutzmann 2015: 336–337). First of all, he mentions the competence of subject-specific discourse, which means that CLIL teachers must feel confident in using the subject-specific language for various discourse situations. Next, he mentions the competence of conveying knowledge to the students (*Vermittlungskompetenz*), which includes the ability to didactically prepare subject topics for the CLIL classroom. This also includes the selection or creation of appropriate teaching materials and scaffolding strategies. The third aspect focuses on the ability to convey intercultural competence through the CLIL approach. Finally, the fourth and last aspect is concerned with the ability to grade and give feedback in an appropriate manner. As for the German context, this means that grading and feedback focuses on content achievements but Gnutzmann highlights that this form of grading also needs to include the adequate use of the subject-specific language. He therefore agrees with the KMK guidelines which request that grading must only focus on content achievements but through adding that a high level of content achievements is only possible through adequate language use, Gnutzmann finds a way to include language feedback in the German CLIL context as well (Gnutzmann 2015: 337). The article, unfortunately, does not state how or on which basis these competences were identified but it can be assumed that they are the author's considerations or based on experience and are not the result of a particular study. Interestingly, Gnutzmann's list is considerably shorter than the previously discussed lists of competences and focuses more on competences which are specific for and unique to the CLIL approach. Hence, he does not include general aspects of classroom management or appropriately using media techniques. Also, it is worth noticing that he does not refer to the teachers' general foreign language competence but only adds the aspect of being competent in the subject-specific language. This might be due to the fact that teachers in Germany are qualified in two subjects and therefore, CLIL teachers are usually already trained in a foreign language and a content subject. Consequently and according to Gnutzmann, specific CLIL teacher education programmes in Germany do not need to focus on general foreign language competences as might be the case in other European contexts. Another characteristic of the German context can be found in the fourth competence listed by Gnutzmann, in which he highlights the importance of grading and giving feedback. While other lists of competences only grant little importance to this aspect and merely mention that assessment should focus on language and content, Gnutzmann highlights the importance of adequate language use for assessing content achievements and thus attaches special importance to grading and assessing in CLIL settings in Germany, even though German CLIL assessment should focus on content achievements exclusively.

4.2. CLIL Teacher Education Programmes

While the purpose of the previously mentioned research projects was to identify which teaching competences are necessary for providing effective CLIL teaching, the following working groups rather focused on how to develop respective teacher education programmes for (future) CLIL teachers. These include large-scale programmes which developed CLIL training modules for e.g. the European context but also small-scale programmes at local universities. Though, of course, several programmes exist at European universities, only those are mentioned that were accompanied by a research programme as the accompanying articles or publications contain more than a mere description of the programmes but also focus on the effects and implications of them. Hence, this chapter does not provide a comprehensive overview of existing teacher education programmes in Germany. Such an overview and systematisation is given in chapter 9.

The first initiative to be mentioned in this context is BILD ETTP (Bilingual Integration of Languages and Disciplines – European Teacher Training Programme), which was launched in 1997 as a cooperation of four universities from England, France, Germany and Poland (Mankel 2002a; Mankel 2002b). One of the main aims of this EU-funded initiative was to develop flexible modules for CLIL teacher education in all four cooperating countries. These modules, together with a collection of teaching materials for the different content subjects[30], were published digitally. The topics were divided into the three main areas accessibility of texts, learning strategies and learner autonomy and were designed both for CLIL teacher trainers as well as trainees (Mankel 2002b: 269). The focus for CLIL teacher trainers was more on the progression from practice to theory while the elements for trainees focused on the exact opposite direction, namely from theory to practice. It is worth mentioning, though, that the digitalised material was not intended as a workshop or fixed training programme but rather seen as a reference tool or as a source for inspiration. This is explained with the apparent difficulty to create a programme that is universally applicable for the different contexts of the participating countries (Mankel 2002a; Mankel 2002b).

Another initiative funded by the EU is the MOBIDIC (Modules of Bilingual Didactics and Methodology for Teacher Training) working group, which lasted from 2001 until 2004 (Comenius 2 2001). In total, a number of eight universities and teacher education organisations from Germany, England, France and Poland participated in the programme. As in the previously

[30] The teaching material was developed for eight subjects: History, Biology, Sports, Geography, Mathematics, Ecology, Music and Chemistry (Mankel 2002a; Mankel 2002b). Considering that – at least in Germany – the humanities are still predominantly found in CLIL programmes, this broad range of subjects is worth noticing.

mentioned programme, the aim of MOBIDIC was to develop modules to foster CLIL teaching through collecting and evaluating data (videos and questionnaires) of how CLIL teaching was realised in the participating countries. Based on this evaluation, the designed modules foster language and cultural awareness as well as the integration of multiple perspectives and should have lasting effects on intercultural education (Comenius 2 2001). Due to the fact that the contents were not made publicly available, a further analysis cannot be provided at this point.

For Germany, the technical university in Braunschweig developed a Master's programme for future CLIL teachers (Gnutzmann 2007a). The design and concept of this programme was based on the CLIL teacher competences that were mentioned by the KMK report on bilingual education in Germany[31]. In consequence, a specialisation option in the regular Master's programme was developed which is only available to students who have studied their content subject at an English-speaking university for at least a year. The offered subjects include History, Chemistry, Mathematics and Theatre. Especially the focus on natural sciences as well as artistic subjects is rather unusual and is explained with the lack of attention for these subjects in the CLIL community (Gnutzmann 2007a: 66). Implemented in their regular study programme, students of the specialisation modules then attend additional seminars concerned with e.g. the development of bilingual education or methods of planning and analysing bilingual lessons. The internship, which is a regular and mandatory component of the Master's programme, is conducted at a school with a bilingual programme and the master thesis needs to be written in the context of bilingual education (Gnutzmann 2007a: 72). Albeit the KMK report explicitly mentions a strong focus on sensitive assessment and evaluation strategies among the competences identified, those seem to hardly be factored into the certification programme of Braunschweig. Apart from that, it needs to be pointed out positively that students need to study their content subject at an English-speaking university in order to be accepted for the programme. Through this, it can be ensured that the subject-specific competence of students is sufficient for CLIL teaching[32].

A seminar, which focused on teaching History through CLIL, was implemented at the university of Hannover (Kupetz 2010) and contained elements of general concepts of bi- and multilingualism as well as their implementation in foreign language learning. It also included smaller research projects, which were carried out in CLIL classrooms in order to explore multilingualism in this context. The primary goal of this seminar was hence not preparing

[31] These competences are addressed in more detail in chapter 4.3 (cf. KMK 2006).

[32] Apparently, the programme is no longer available at the technical university in Braunschweig but is currently replaced by a new CLIL master's programme.

teachers for teaching CLIL, but rather on investigating the role of multilingualism in the CLIL classroom and on preparing students for conducting action research in classrooms. Still, one can assume that the students must have gained some insights into teaching CLIL as well. The question, however, if the students were actually prepared for teaching CLIL lessons over the course of the seminar, remains unanswered (Kupetz 2010). Kupetz concludes, though, that the seminar "helped in further shaping the CLIL concept" (Kupetz 2010: 90). The extent to which the participating students have been prepared for teaching CLIL by attending this seminar is questionable, especially since the preparation to actively teach these lessons only played a minor role in the curriculum.

The University of Education in Freiburg designed and conducted a seminar, aiming at preparing future CLIL teachers but addressing exclusively students of Biology (Appel 2003). Studying English, however, was no prerequisite. The seminar was split into three parts, the first one of which focused primarily on the students' (subject-specific) language competence and contained elements of translating biological key terms. The second phase was conducted in cooperation with a university teacher from Great Britain who elaborated on teaching principles for teaching Biology in an English-speaking context. Finally, the third phase required the students to prepare short teaching units for teaching a biological topic in CLIL, which were then conducted within the seminar setting (Appel 2003: 126). Based on qualitative interviews with the students and transcripts of the seminar sessions, Appel concludes that the (subject-specific) English language competence of many students was not sufficient for teaching CLIL Biology. This, however, is hardly surprising when considering that the students were not trained as English teachers and did not have to prove a specific level of English language competence. In order to provide successful CLIL teaching, a high level of language competence is hence deemed indispensable. Still, it was also appreciated that due to the lack of appropriate English language skills, the student teachers invested more time and effort into the didactic considerations for their teaching units than they would have done in German-speaking lessons (Appel 2003: 130).

With special attention to teaching History as a CLIL subject, the programme by Bongartz and Dziak-Mahler presents an approach which implements the use of action research in CLIL teacher education programmes at university level (Bongartz & Dziak-Mahler 2007). These action research projects, conducted by the participating students, in combination with including teacher interviews in theoretical seminars are supposed to achieve a greater link between theory and practice and are considered to be of great value for developing an individual identity as a (future) CLIL teacher (Bongartz & Dziak-Mahler 2007). The seminar, which was implemented

at the university in Cologne and stretched over one semester, was exclusively offered for future History teachers and consisted of three blocks – the first one focusing on theoretical background of CLIL teaching, the second one conducted at schools and the third one focusing on reflecting the experiences from the internship. According to the students' evaluation, this approach enabled students to gain a more concrete and differentiated idea of CLIL teaching but also left many open questions. Also, students valued the greater authenticity of their experiences in comparison to a more theoretical approach (Bongartz & Dziak-Mahler 2007).

A similar setting was implemented at the University of Education in Weingarten (Burmeister et al. 2013). A seminar, lasting for one semester, was meant to prepare students for teaching Biology through a CLIL approach. Again, the integration of theory and practice was deemed important and an initial, theoretical phase was followed by a practical phase, in which students planned and taught their own CLIL Biology lessons. This phase was then followed by a phase of reflection. The accompanying research on the effects of such an approach revealed that the majority of students were familiar with CLIL teaching approaches and also applied them in their own lesson planning. Nevertheless, a clear tendency towards focusing more on the *Didaktik* for Biology (rather than the foreign language) was observed. Still, it was concluded that students benefitted from the theoretical input (Burmeister et al. 2013: 154).

A more recent initiative on developing a CLIL teacher education programme for content subject teachers was implemented at Vilnus University in Lithuania (Vilkancienė & Rozgienė 2017). As part of the programme "Development of Content and Language Integrated Learning (CLIL) in Europe", the participating teachers attended 200 hours of language skills development, 50 of which were dedicated to subject-specific language work. Another 50 hours dealt with the CLIL methodology and 40 hours were spent in practical applications[33]. Moreover, some of the teachers participated in two-week intensive CLIL training courses in the UK, Germany or France (Vilkancienė & Rozgienė 2017: 197). The 72 participating teachers of secondary and vocational schools represented a varied number of content subjects and were trained for CLIL courses with either English, German or French as the target language. The teachers' individual target language competences were ranked between the CEFR levels A2 and B2 (Vilkancienė & Rozgienė 2017: 206). The programme, which was designed on the basis of the "European Framework for CLIL Teacher Competences" (Marsh et al. 2011), was evaluated through a mixed methods approach and focused on the teachers' self-evaluation. In a questionnaire, the teachers were asked to reflect upon their professional competence in the area

[33] Unfortunately, the article does not provide any further details as to the contents of the remaining hours.

of CLIL teaching with the help of ten items, using a 5-point Likert scale. These items represented the different areas of competence which are employed in the European framework. Moreover, the teachers were asked to answer three open questions and elaborate on their "personal attitude towards the attractiveness and the suitability" of the CLIL approach (Vilkancienė & Rozgienė 2017: 205). Vilkancienė and Rozgienė conclude that the participating teachers generally reported a positive development of their CLIL teaching competences but especially with regard to the practical implementation of the CLIL approach, a large number of teachers did not feel confident (Vilkancienė & Rozgienė 2017: 208). Also, several teachers mentioned that they did not consider their linguistic competences as appropriate (Vilkancienė & Rozgienė 2017: 211). Still, Vilkancienė and Rozgienė conclude that a 50-hour programme of CLIL methodology is appropriate in order to develop at least the basic skills of CLIL teaching (Vilkancienė & Rozgienė 2017: 212). This conclusion, however, needs to be carefully considered as their evaluation is solely based on the teachers' self-reflection and hence does not include possible external influences. Also, it is not taken into account that several teachers attended two-week intensive courses in the countries of the target language and hence received a considerable amount of additional training in comparison to the other participating teachers.

Having looked at various programmes to prepare and train (future) CLIL teachers, Heinemann investigated the importance and influence of CLIL teacher education programmes on their later career in a qualitative study (Heinemann 2018). Interviewing eight CLIL teachers, who represented different forms of CLIL teacher education programmes, and analysing these interviews via the *dokumentarische Methode*, Heinemann first of all concludes that being a CLIL teacher requires the teachers to identify themselves with the role of a content and a language teacher, which supports Viebrock's (2010; 2012; 2014) findings regarding the CLIL teachers' subjective theories (Heinemann 2018: 223) (also see Footnote 28, p. 55). He also found that CLIL teacher education programmes have the potential to provide the (future) CLIL teachers with professional knowledge in the field of CLIL teaching, which, however, is hardly surprising as this is the programmes' main intention. What is important, though, is that these training programmes must not only convey declarative knowledge but need to combine this declarative knowledge with implicit knowledge and possibilities for reflecting about the roles of a CLIL teacher (Heinemann 2018: 223–228).

4.3. Issues of CLIL Teacher Education

The previous two subchapters already hint at the assumption that in order to be a successful CLIL teacher, it is not sufficient to be only trained as a subject teacher with a high level of

foreign language competence. This is underlined by D'Angelo and Garcia Pascual, who state that "in order to promote a quality CLIL teaching it [is] not enough to count on a subject teacher who ha[s] mastered the foreign language targeted through CLIL teaching; not even a FL native speaker could guarantee quality CLIL learning" and they therefore argue that initial and in-service CLIL teacher education programmes are "fundamental to guarantee a quality CLIL" (D'Angelo & Garcia Pascual 2012: 76). Cenoz and Genesee argue similarly as they mention that "[i]t is not sufficient simply to know a language in order to teach it or to use it effectively to teach academic subjects. This requires specialised training." (Cenoz & Genesee 1998: 257). This argument is further backed up by Königs, who considers CLIL teaching as more than just adding up content and language teaching but who expects a CLIL teacher to be able to refer content and language teaching approaches to each other and, for instance, find synergies or anticipate challenges of an integration of content and language teaching (Königs 2007a: 52–53). Wolff, moreover, explains that teachers who are trained as content and as language teachers do not yet possess the necessary competences in order to promote language and content learning through a CLIL teaching approach (Wolff 2002: 258). Hence, even teachers who are trained in the foreign language and the content subject, which is mostly the case in German CLIL programmes, are not sufficiently trained for teaching CLIL and must receive further training. This further training then needs to specifically focus on the additional demands of integrating content and language learning.

This demand for an integration of the subject and language teaching perspective results in the need for specialised CLIL teacher education programmes which was already documented by Lamsfuß-Schenk and Wolff at the end of the last century. In 1999, they claimed that:

> Wenn bilingualer Sachfachunterricht ein weit verbreitetes Unterrichtskonzept in den europäischen Schulsystemen werden soll, müssen wir uns fragen, ob wir nicht spezifische Ausbildungsprogramme für daran zukünftig beteiligte Lehrer anbieten sollten, Programme in denen Sprachkompetenz und Sachkompetenz kombiniert werden. (Lamsfuß-Schenk & Wolff 1999: 3)[34]

Although this need for qualified CLIL teachers was already identified in the late 1990s and one could hence assume that appropriate CLIL teacher education programmes have been initiated in the meantime, Gnutzmann's article casts doubt on the question if much has happened since then. He argues that with the growing number of CLIL programmes, a stronger research focus

[34] Translation by the author: If bilingual education is supposed to become a wide-spread teaching approach in European educational systems, we need to ask ourselves if we should not offer specialised teacher education programmes for future teachers. Programmes in which language competence and subject content competence are combined.

is shifted onto CLIL teacher education and that it is now necessary to implement respective training programmes already at university level (Gnutzmann 2015: 333). He also supports the previously mentioned argument of CLIL teaching being more than just the sum of content and language teaching and asks for developing an integrated and interdisciplinary perspective on both content and language teaching principles (Gnutzmann 2015: 335). Again, this is supported by Hillyard, who underlines that "with the exponential growth [of CLIL programmes], the lack of competent, trained CLIL teachers has become more evident" (Hillyard 2011: 1) and she moreover highlights the importance of appropriate CLIL teacher education through adding that "the question of teacher training is massive and complex" (Hillyard 2011: 9). Coyle et al. also argue that CLIL teacher education is "the key to future capacity building and sustainability" (Coyle, Hood & Marsh 2010: 161) and that "urgent and significant changes" (Coyle, Hood & Marsh 2010: 161) are inevitable. They consider the development of CLIL teacher education programmes as a "priority" (Coyle, Hood & Marsh 2010: 163). Wolff moves this need for developing teacher education programmes even further, as he argues that CLIL teacher education "constitutes a fundamental part of all teacher training, that every teacher should [be] educated, in fact, as a CLIL teacher" (Wolff 2012: 107). This line of argumentation points to the discussion that all teachers should be trained in teaching their subjects in a language-sensitive way. As was already mentioned in chapter 2.1, *sprachsensibler Unterricht* does not refer to integrating a foreign language into content teaching but rather demands to consciously use the school language in all subjects taught. As was also discussed previously, Wolff considers these two approaches of *CLIL* and *sprachsensibler Unterricht* as similar or even alike and with the demand to educate all teachers as CLIL teachers, he does hence not mean that all teachers should implement a foreign language in their classroom but rather adopt the approach of *sprachsensibler Unterricht* and consciously use and train the school language.

All these requests for a greater focus on preparing CLIL teachers and developing respective CLIL teacher education programmes, might lead to the assumption that an increasing number of such programmes is evolving. Unfortunately, however, this does not seem to be the case. Mentz argues that by far not enough CLIL teacher education programmes in the first phase of teacher education (at university) are available in order to meet the high number of necessary CLIL teachers in Germany. He also adds that the training possibilities during the second phase of teacher education (*Vorbereitungsdienst*) are not sufficient to compensate for this lack of training programmes (Mentz 2015: 255–256).

Especially for Germany, Gnutzmann suggests to approach this shortage of CLIL teacher education programmes through establishing the opportunity to implement a CLIL-focus in

regular M.Ed.-programmes. This integrated approach would – according to Gnutzmann – include theoretical elements of CLIL teaching as well as their practical application during a practical phase and a CLIL-master thesis which includes an empirical study on questions within the context of successful CLIL teaching (Gnutzmann 2015: 341–342). This idea of integrating elements of CLIL teacher education into regular study programmes was already mentioned by Königs a few years earlier. But in order to successfully integrate such elements, didactic prerequisites need to be addressed in the Bachelor's degree already (Königs 2007a: 56–57). This integration of CLIL teacher education into the regular teacher education programme is, for example, already established at the Bergische Universität Wuppertal, which offers a specific CLIL Master of Education (for a comprehensive discussion of CLIL teacher education programmes at German universities, see chapter 9).

Keeping this in mind, it appears as if the necessity of specifically qualifying CLIL teachers is commonly agreed on. Numerous experts from the CLIL field agree that the success of CLIL teaching programmes largely depends on the quality of the CLIL teachers, regardless of the specific, regional settings of the CLIL approach. It is therefore rather surprising that – according to the Eurydice report – specific CLIL teaching qualifications are only necessary in six out of 24 European countries (Eurydice 2006: 42). This is, inter alia, explained by the fact that CLIL programmes are fairly new in many European countries and are often only realised in pilot projects. Though this might hold true for several other European countries, this, however, cannot be applied to the German context. As was outlined in chapter 2.2, CLIL teaching already has a rather long tradition in Germany and therefore would have had enough time to establish respective teacher education programmes. Of course, considering that the Eurydice report might be outdated being published more than ten years ago and things might have changed, a glance at the 2013 KMK supports this rather sobering result. According to this report, all teachers who are qualified for teaching a content subject and a modern foreign language are eligible to teach in CLIL programmes. Not enough, teachers who are not qualified as language teachers may also teach in CLIL programmes as long as they are being certified a sufficient level of language competence[35]. The necessity of being specifically qualified for CLIL teaching is neither addressed nor valued. On the contrary, the KMK explains that specific training programmes are to be offered which should ensure that CLIL teachers have an appropriate level of foreign language competence. This, however, does not include any training in the field of teaching foreign languages nor the specifics of teaching in CLIL programmes

[35] In this regard, "sufficient" refers to the level C1 of the CEFR (KMK 2013: 16).

and hence the KMK's recommendations for CLIL teacher education are reduced to the foreign language competence only (KMK 2013: 16–17). This obvious lack of awareness for the importance of qualified CLIL teacher education by the KMK is even more surprising when comparing the 2013 report to the report of 2006 (KMK 2006). In this report from 2006, the question of CLIL teacher education is given much greater attention and it is stated that only those teachers who are qualified as content subject and language teachers are entitled to teach in CLIL programmes. What is more, even those teachers are supposed to bring additional teaching competences, namely above-average general and subject-specific foreign language competences, specific competences in the area of (subject-specific) foreign language teaching, sensitivity with regard to assessment and providing feedback as well as specific competences for choosing and creating teaching material (KMK 2006: 21). Apart from that, it is seen as rather problematic if content subject teachers who are not specifically trained as language teachers but have a high level of (general) foreign language competence teach in CLIL programmes. According to the KMK, these teachers should only be allowed to teach in the CLIL strands if they have acquired specific competences of foreign language teaching. This also applies to native speakers who teach in CLIL programmes but who should receive further training in the areas of foreign language teaching as well as subject-specific language teaching (KMK 2006: 24). Hence, it seems as if the necessary qualifications for teaching in CLIL programmes have been reduced by the KMK from 2006 to 2013 instead of – as is requested by CLIL experts and as is indicated through the research results discussed in chapter 2.4 – developing appropriate CLIL teacher education programmes and through that raising the standards of CLIL teaching. Considering Lamsfuß-Schenk's and Wolff's above-mentioned quote, who asked for a further development of CLIL teacher education programmes in Germany in order to ensure the quality of CLIL provision already twenty years ago, it seems as if not much has changed in the meantime – at least not on the level of political decisions. Also, the apparent backwards development, which can be found in the KMK reports from 2013 in comparison to 2006 raises the question if the KMK is aware of the consequences of this lack of providing qualified CLIL teachers.

4.4. Concluding Summary

In order to develop the German Framework for CLIL Teacher Education in chapter 8, especially the "European Framework for CLIL Teacher Education" (Marsh et al. 2011) and the "CLIL Teacher's Competences Grid" (Bertaux et al. 2010), both issued by European institutions, are to be mentioned as large-scale projects. Both approaches list an extensive number of CLIL

teacher competences which are, however, mainly based on theoretical assumptions and should be understood as guidelines on a meta-level which have to be adapted for local contexts. Given their importance in the context of CLIL teacher education, these are strongly considered for the development of the German Framework for CLIL Teacher Education.

In addition to that, numerous small-scale initiatives which either tried to develop lists of CLIL-specific teacher competences or implemented local CLIL teacher training programmes showed promising results as to the increased CLIL teacher competences or at least the CLIL teachers' higher self-confidence. Notwithstanding, these projects also concluded that shorter programmes, often lasting for only one semester, might function as a reasonable starting point but are not sufficient to provide a profound CLIL teacher education. Therefore, their findings and conclusions are certainly considered for the development of the German Framework for CLIL Teacher Education but not to the same extent as the large-scale programmes. This is, inter alia, due to their individuality which makes it hardly possible to apply them to a larger context, i.e. the German field of CLIL teacher education.

Despite these numerous initiatives and research programmes, chapter 4.3 showed that the issue of CLIL teacher education is still unsolved. As was shown, experts seem to agree that CLIL teachers must be specifically trained in order for CLIL programmes to be successful. A fact which is supported by the sobering research results (see chapter 2.4). While German teachers already have the advantage of being trained in two subjects, it still needs to be emphasised that becoming a CLIL teacher is more than being a language and a content teacher and that CLIL is more than just the sum of these two components. Hence, there seems to be common agreement that CLIL teacher education programmes need to be developed which address this combination and integration of content and language teaching approaches. Interestingly and despite the fact that this discussion about developing new teaching programmes is already a "long-known" problem in Germany, little seems to be evolving. It is for this apparent lack of further initiatives in the realm of CLIL teacher education in Germany that this thesis develops a German Framework for CLIL Teacher Education which can function as a universal basis for developing specific CLIL teacher education programmes across Germany (see chapter 5 for the detailed research questions and the research design of this thesis).

5. Research Questions and Design

5.1. Research Questions

The previous chapters showed that if CLIL programmes are to be successful and reach the intended and expected aims of the approach, appropriate teacher education programmes are indispensable. Research in this field, however, is relatively scarce. The existing considerations concerning the necessary CLIL teaching competences are often on a meta-level or solely based on theoretical assumptions and therefore not immediately applicable to individual CLIL contexts. Especially in Germany, special prerequisites such as the strong focus on content achievements or teachers being trained in two subjects need to be taken into account when applying existing considerations concerning CLIL teacher education. Therefore, this thesis concentrates on the following research questions:

I) Which specific competences are crucial for CLIL teaching?

The first research question focuses on the specific competences which are necessary and crucial for CLIL teaching. These CLIL-specific teaching competences are generated through an approach which integrates the theoretical assumptions and considerations, which have already been briefly addressed in chapter 4, as well as the practical perspective of teachers who are experienced in teaching in CLIL programmes in Germany. Based on these two perspectives, a catalogue of CLIL-specific teaching competences is developed and compared to the general teacher competences (as discussed in chapter 3) which are included in German teacher education programmes. Therefore, these CLIL-specific competences can be considered as prerequisites for developing CLIL teacher education programmes. Through the integration of the theoretical and the practical perspective as well as the prerequisites of general teacher education in Germany, a German Framework for CLIL Teacher Education is developed. It hence incorporates not only the expertise of CLIL experts but also the practical experiences of teachers who are already teaching in CLIL programmes as well as of general teacher education programmes in Germany.

II) How is CLIL teacher education currently realised in Germany?

As the importance of CLIL teacher education programmes is emphasised by a number of CLIL experts and especially the first phase of teacher education is often regarded as most suitable for integrating CLIL teacher education programmes (see chapter 4.3), this research question focuses on the different CLIL teacher education programmes at German universities. In a

comprehensive survey, the different CLIL teacher education programmes at German universities are systematically analysed. Through this survey, an overview of existing CLIL teacher education programmes is created and the different programmes are categorised and systematised (see chapter 9). Next to the competences that need to be addressed in CLIL teacher education (see research question I), this research question develops hence the basis for structurally implementing CLIL teacher education programmes in existing educational structures.

Opposed to the first and third research question, the focus of this second research question is not so much on developing a new approach but rather on the systematisation of the current state of the art. Hence, the methodology by which this research question is going to be tackled is more descriptive and is therefore slightly different to the other two guiding research questions of this thesis.

III) How can the competences of the German Framework for CLIL Teacher Education be integrated in a study programme at a German university?

As a third step and on the basis of the previously developed German Framework for CLIL Teacher Education (see research question I) and the systematisation of the current state of the art of CLIL teacher education programmes in Germany (see research question II), this research question approaches the question of how to develop the competences of the German Framework for CLIL Teacher Education in a study programme at a German university. In order to do so, a study programme is developed at the University of Koblenz-Landau, Campus Koblenz which addresses students who are attending the teacher education programme and study English as well as a content subject. The elements of the German Framework for CLIL Teacher Education as well as the insights of the state of the art of CLIL teacher education in Germany are implemented in the shape of an additive and voluntary certificate programme. Chapter 10 presents the different elements of the certificate programme and how they represent the elements of the German Framework for CLIL Teacher Education as well as how their structural implementation fits the current state of the art of CLIL teacher education in Germany.

5.2. Research Design

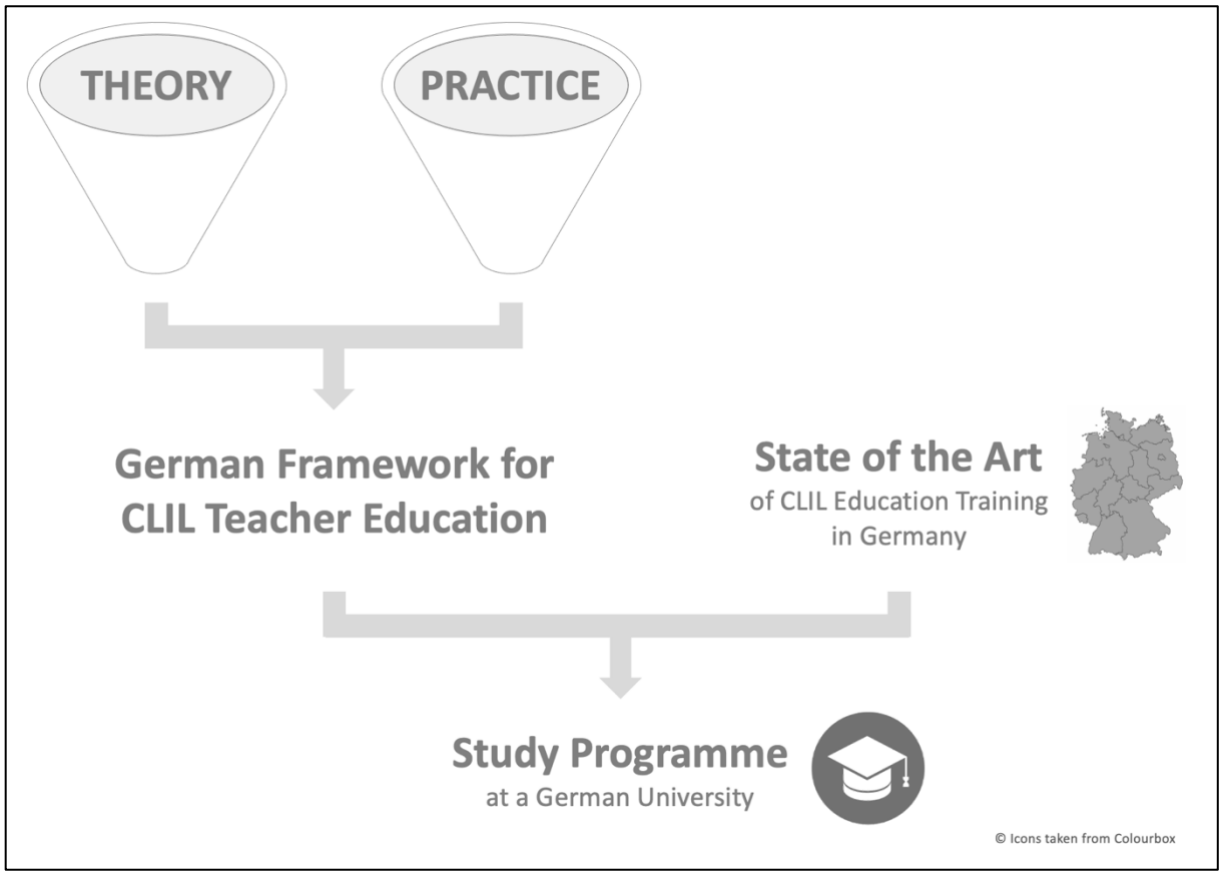


Figure 5.1 Visualisation of research design

Figure 5.1 visualises the research design incorporating the research questions. Addressing the first research question, a qualitative approach which combines both the theoretical and practical perspective is chosen. The "European Framework for CLIL Teacher Education" (Marsh et al. 2011) and the "CLIL Teachers' Competences Grid" (Bertaux et al. 2010), which have already been briefly introduced in chapter 4.1, are selected as the guiding documents, which include the theoretical perspective. For the practical perspective, a sample of 13 CLIL teachers from three different schools, representing different content subjects and educational backgrounds, is interviewed. In a next step, both the theoretical considerations (see chapter 6) as well as the interviews (see chapter 7) are systematised and analysed with the help of Qualitative Content Analysis (QCA, Kuckartz 2016). The results of the QCA for both theory and practice[36], visualised in Figure 5.1 through the two funnels, are then compared and similarities as well as differences identified (see chapter 8). Based on this comparison, a framework including the elements from both theory and practice is developed and compared to the standards of teacher

[36] In order to keep this study easier to read, the terms *theory* and *practice* from now on refer to the theoretical considerations, hence the theory-based standards for CLIL teacher education as well as the practical perspective, hence the interviews with CLIL teachers.

education in Germany. The comparison reveals those previously identified competences and elements of CLIL teacher education which are already implemented in regular teacher education programmes in Germany. On the basis of these results, the German Framework for CLIL Teacher Education is developed. Its components are structured in a way which enables the Framework to be adapted to different educational (CLIL) settings. Hence, depending on the (future) CLIL teachers' prerequisites, the German Framework for CLIL Teacher Education can be adapted and teacher education programmes can be designed in line with the teachers' educational background.

In a next step and in order to address the second research question, the state of the art of CLIL teacher education programmes at German universities is researched (see chapter 9). Hence, all German universities which offer teacher education programmes are investigated in a comprehensive survey whether specific CLIL teacher education programmes are offered. In a next step, those programmes are systematised on the basis of selected criteria, such as the programme's target group, the prerequisites for application, their duration or their embedding of a practical phase.

Finally, the developed German Framework for CLIL Teacher Education and the state of the art of CLIL teacher education in Germany serve as a basis to develop an exemplary CLIL teacher education programme at a German university (see chapter 10). It is designed in the form of a certificate programme at the University of Koblenz-Landau, Campus Koblenz. All students enrolled in the Master of Education and studying English as well as a content subject, are entitled to apply for the certificate programme. In the winter term 2017/2018, the programme started with a first cohort of 15 students, representing seven different content subjects. In a first step, the design of the certificate programme is developed on the basis of the German Framework for CLIL Teacher Education as well as the state of the art of CLIL teacher education programmes in Germany and the different elements of the programme are described and analysed in detail. Then, the first cohort of participants is presented and first experiences with the certificate programme are discussed.

6. Analysing the Competences Officially Required

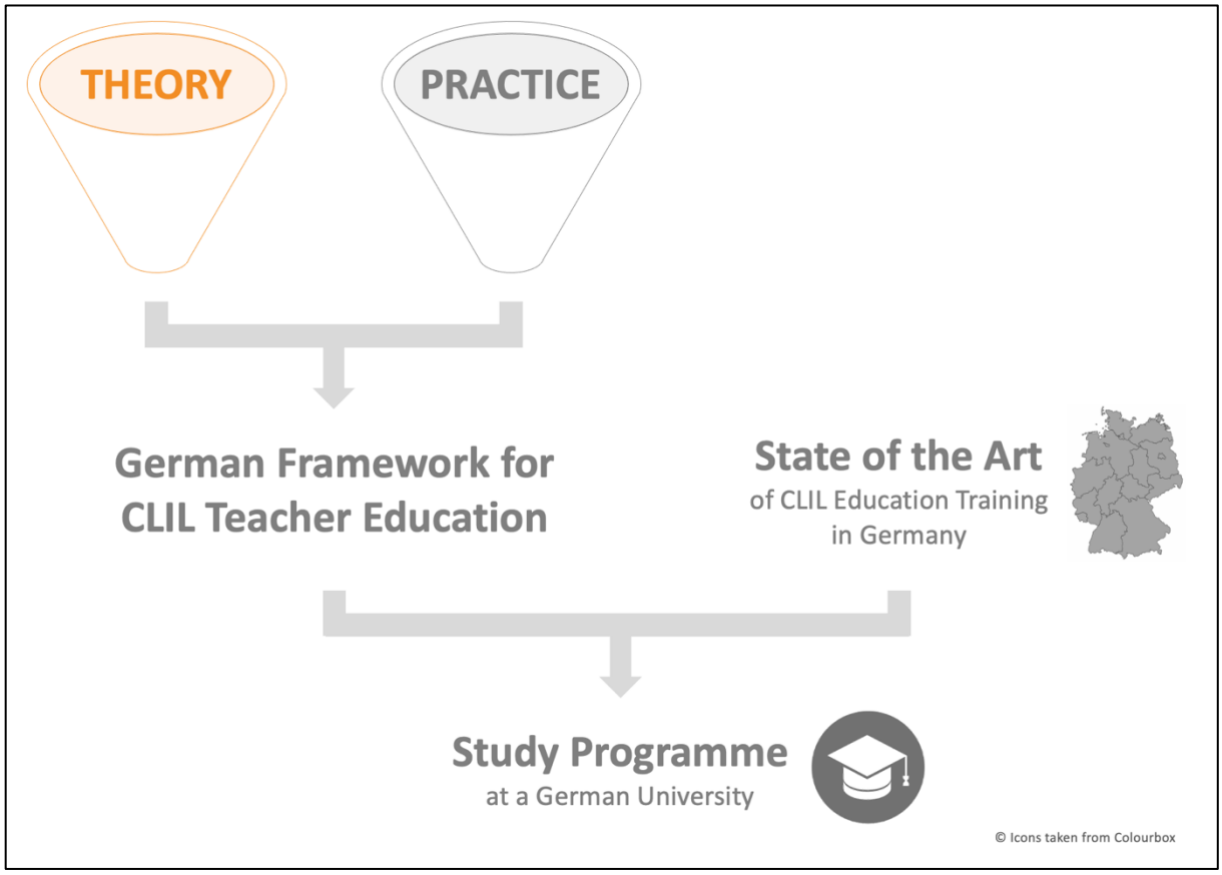


Figure 6.1 Visualisation of research design – Theory

As a first step of developing the German Framework for CLIL Teacher Education (see Figure 6.1), the "European Framework for CLIL Teacher Education" (Marsh et al. 2011) and the "CLIL Teachers' Competences Grid" (Bertaux et al. 2010) form the basis to analyse the CLIL teaching competences officially required. First, the two concepts are described and then the research methodology of Qualitative Content Analysis (QCA) is explained and justified. This is followed by the results of the analysis of the two concepts and its discussion with regard to developing the German Framework for CLIL Teacher Education.

6.1. Study Design

Though (research) projects in the field of CLIL teacher education are relatively scarce (see chapter 4), two developed concepts are of prime importance in the realm of CLIL teacher education. In contrast to most other projects, which are mainly small-scale projects and often difficult to apply to different CLIL contexts, the "European Framework for CLIL Teacher Education" (Marsh et al. 2011) and the "CLIL Teacher's Competences Grid" (Bertaux et al. 2010) are developed for a greater audience and issued on a larger scale. Hence, these two

theory-based standards are chosen as a basis for integrating the theoretical perspective into the development of the German Framework for CLIL Teacher Education[37]. Already at first glance, it is obvious that these two theory-based standards are on a meta-level, which is also stressed by the authors. Further, because they also overlap in several instances, which might be due to their similar authors and the similar time of publication, these two theory-based standards are analysed as well as systematised and a single overview of the theoretical considerations concerning CLIL teacher education is created. In order to do so, the method of Qualitative Content Analysis (Kuckartz 2016) was chosen.

6.2. Methodology

The method of Qualitative Content Analysis (QCA) evolved from Quantitative Content Analysis[38] in the early beginnings of the 20th century. Although initially criticised for not being sufficiently scientific because of including latent meanings and making use of interpretations, QCA steadily gained importance in various fields of research. It was Mayring who later on published the first method guide for QCA and is hence often referred to as the "founding father" of QCA (Kuckartz 2016: 23).

Despite the important role of QCA in the field of qualitative data analysis, a universal definition for QCA is yet to be found. Instead, only a list of characteristics of QCA was created by Schreier, which is commonly agreed upon (Schreier 2014a; Schreier 2014b). Accordingly, QCA works with and strongly relies on a system of categories which is – at least to some extent – created in direct connection to the analysed material. Moreover, QCA makes use of interpretations and includes latent meanings of texts, which hence distinguishes it from Quantitative Content Analysis. Based on rules and a systematic form of data analysis, QCA also meets the requirements of reliability and validity. It thus equally fulfils the standards of 'good' research (Schreier 2014a). In a nutshell, Schreier explains that QCA "reduces data, it is systematic and it is flexible" (Schreier 2014b: 170).

Another common method for qualitative data analysis is that of Grounded Theory, which is often compared to and juxtaposed with QCA. Developed in the US in the 1970s, Grounded Theory was mainly introduced by Glaser and Strauss (2010) and further developed by Strauss and Corbin (2003). The main aim of Grounded Theory is that of finding and developing theoretical models in close relation to the analysed material and mostly in order to explain social

[37] For a more detailed portrait of the two chosen documents, please refer to chapter 4.1,

[38] Quantitative Content Analysis was mainly introduced in the 19th century and uses a standardised, deductively developed category system to analyse text documents. The characteristic values of the text documents are quantified and statistically analysed afterwards (Döring & Bortz 2016: 553).

processes and phenomena. Hence, data collection, its analysis as well as the developed theory are closely related and the theory "emerges from the data" (Strauss & Corbin 2003: 12). Similar to QCA, Grounded Theory also strongly relies on building and finding categories which are solely developed on the basis of the material and therefore inductive. These categories are flexible and open for change throughout the entire process of analysis. In contrast, the category system for QCA can be developed deductively, inductively or through a combination of both and the categories are fixed and must not be changed once developed (Mey & Mruck 2011: 336). It is this genesis of categories which was decisive for choosing QCA instead of Grounded Theory for the thesis at hand. As first assumptions and theories have already been made in the field of CLIL teacher competences (e.g. The European Framework for CLIL Teacher Education or The CLIL Teachers' Competences Grid, see chapter 4.1), developing a category system solely based on the material without any prior influences, was hardly possible nor meaningful.

As no universal definition of QCA exists and different approaches and understandings of this method are used, Schreier attempted to systematise and juxtapose the existing models of QCA (Schreier 2014a). Accordingly, five different forms of QCA can be identified and distinguished. The first one is labelled as content-structuring QCA (*inhaltlich-strukturierende qualitative Inhaltsanalyse*) and hence, as the translation suggests, structures the content of the analysed material. As this is often also the first step for further analyses, Schreier understands this form as the core of QCA. She further mentions an evaluative form of QCA (*evaluative qualitative Inhaltsanalyse*), which is often based on first structuring the material before evaluating it. A formal form of QCA (*formale qualitative Inhaltsanalyse*) is used to describe the analysed material on the basis of syntactic, semantic or thematic structures. Moreover, the summarising QCA (*zusammenfassende qualitative Inhaltsanalyse*), as the name already implies, is employed in order to summarise particularly long material. As a fifth form, Schreier mentions a variation of QCA which is used to build different groups, often done on the basis of structuring the analysed material (*typenbildende qualitative Inhaltsanalyse*). In a next step, the groups' similarities and differences are analysed and the material can be classified on the basis of these groups (Schreier 2014a). This thesis employs the content-structuring form of QCA as it allows to structure the necessary components for developing the German Framework for CLIL Teacher Education. Though Mayring is often considered as the "founding father" of QCA, Kuckartz's understanding of the content-structuring QCA is relied on as his description of the analysis process is more detailed and comprehensive and consequently better applicable to multiple research settings (cf. Kuckartz 2016; Decker-Ernst 2017: 190). In accordance with Kuckartz's concerns of losing important information when applying Mayrings' analysis process

of paraphrasing (Mayring 2014; Mayring 2015), this step is omitted for this thesis (Kuckartz 2016: 76).

Following Kuckartz' form of content-structuring QCA, the following analysis was subdivided into seven steps, the first of which is characterised through initial work with the texts, hence highlighting the important passages and writing memos. The purpose of these memos is to collect first ideas for summarising and interpreting the material. In a next step, the main categories are developed. This is often done on the basis of already existing theoretical concepts and therefore deductively. As already mentioned, both the "European Framework for CLIL Teacher Education" and the "CLIL Teacher's Competences Grid" are already structured via different categories and hence it would have been difficult to develop main categories inductively and without being influenced by the already existing structures. Therefore, a combination of the categories from the framework and the grid formed the basis for the further steps of analysis. These nine main categories are displayed in Figure 6.2, employing the form of a puzzle to visualise the interconnectedness of the nine main categories. Afterwards, this set of main categories was applied to the entire material and all relevant text passages were coded. Then, the fourth and fifth steps were closely linked as for all nine main categories, the coded text passages (which are also called *codings*) were compiled and subcategories defined. As these subcategories are strongly connected to the analysed material, they were developed inductively. Afterwards and as a sixth step, the entire material was coded again, but this time with the newly developed set of main and subcategories. Through this approach, all competences listed in the framework and the grid could be attributed to at least one subcategory. According to Kuckartz, the development of the code system with its main categories and the respective subcategories also requires the development of a code book which includes all codes, their definition, an explanation when they are supposed to be used and a concrete example from the material. The code book for this analysis of the theoretical considerations can be found in the appendix (see chapter 13.1) (Kuckartz 2016: 100–111).

After completing the code book and analysing the entire material on the basis of this, the interpretation of the results followed Kuckartz' suggestion to employ a mixed methods approach, combining quantitative as well as qualitative data (Kuckartz 2016: 117–121). In this specific context and in order to develop the German Framework for CLIL Teacher Education, the focus was on creating extensive "case summaries" for the different main categories which can then function as a basis for adding the practical perspective in chapter 7. In addition, the frequencies of the main categories and the respective subcategories were used to draw

conclusions regarding the importance of the categories for the German Framework for CLIL Teacher Education.

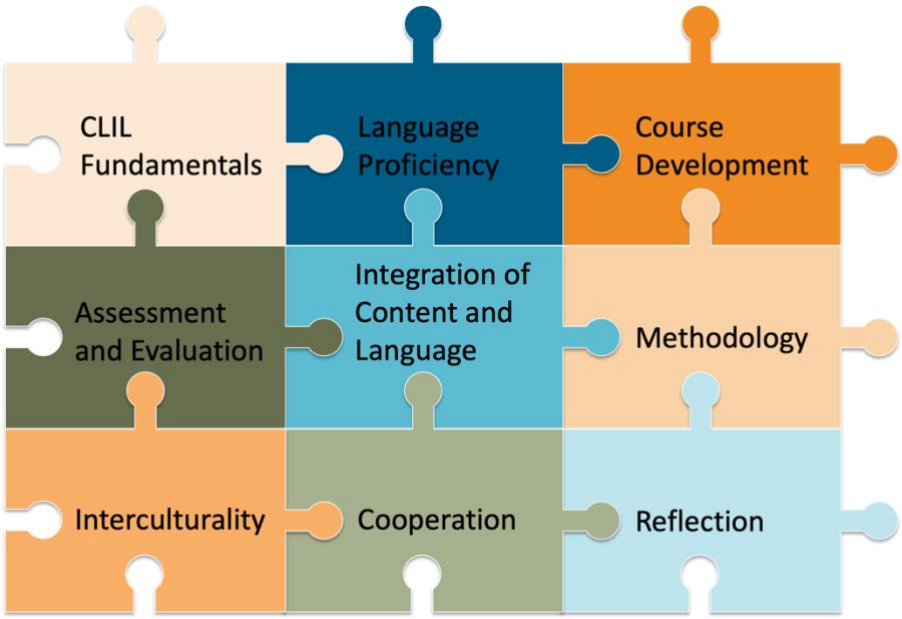


Figure 6.2 Main categories for QCA – Theory

In order to ensure the quality of qualitative research, the well-known quality criteria of objectivity, reliability and (internal and external) validity cannot be transferred to the qualitative field of research without adapting them to the specifics of the context (cf. Kuckartz 2016). Notwithstanding, the criteria of qualitative and quantitative research can be juxtaposed and parallels identified (cf. Miles, Huberman & Saldaña 2014; Kuckartz 2016). Accordingly, objectivity is understood as confirmability, which means that the researchers are as unbiased as possible. Though this should certainly be the case for all research, it is of prime importance in the field of qualitative research as qualitative approaches strongly rely on interpretations and are thus more in danger of being influenced by the researchers. Next, reliability is complemented with dependability and auditability and thus requires qualitative research to be consistent and stable. Concerning internal validity, the aspects of credibility and authenticity are added which especially includes dealing openly with areas of uncertainty and negative evidence. Finally, external validity is understood as transferability and fittingness and is concerned with the question whether the findings of the qualitative study can be transferred to other contexts (Miles, Huberman & Saldaña 2014).

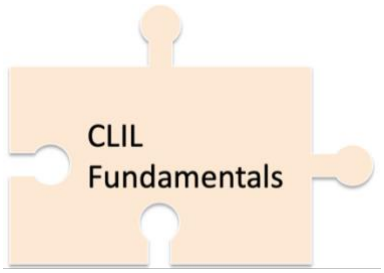
Though, of course, all these aspects are certainly also included in quantitative research, the way how they are ensured in qualitative research differs, which is mainly due to the different forms of analysed data. In the context of this thesis, working and discussing in a team was chosen to ensure and sustain reliability. Hence, after developing the code book, including definitions for all codes as well as instructions when to use them, two colleagues independently

coded the entire material with this code system. Afterwards, the team discussed not only all codings but also the code system and agreed on a finalised version of the code book, achieving a sufficient level of objectivity and reliability through this colleague review, thus following Kuckartz suggestions to create a high level of transparency (cf. Kuckartz 2016)[39]. While especially for the process of coding the material, some researchers suggest calculating intercoder-agreement and -reliability, this was not done in this thesis as the process of coding also entails segmenting the texts which is usually rather subjective and hence makes the calculation of statistical measures (e.g. Cohen's Kappa) difficult and hardly appropriate (Kuckartz 2016: 217). The entire analysis process was done with the help of MAXQDA, a software for qualitative and mixed methods research[40].

6.3. Results

The presentation of the results follows the structure of the main categories (see Figure 6.2), for each of which the subcategories are presented and a case summary is provided. These case summaries focus on the entire main category and all aspects which are coded for the respective categories. A more detailed definition and examples for the different main and subcategories can be found in the code book in the appendix (see chapter 13.1). Also, the frequencies of the categories are listed both on the level of the main categories but also for the subcategories within one main category.

At this point, it also needs to be remarked that neither the order of the main categories nor the subcategories should be understood as chronological or hierarchical but as equal components or pieces of the puzzle of CLIL teacher education.



CLIL-F1[41]	define CLIL and name its characteristics
CLIL-F2	contextualise CLIL with regard to the specific context

Table 6.1 Theory-based subcategories for „CLIL Fundamentals"

The first main category "CLIL Fundamentals" consists of two subcategories (see Table 6.1)

[39] At this point, Kuckartz provides a detailed checklist with questions concerning the research process which can function as guiding questions (Kuckartz 2016: 204–205). It would go beyond this thesis to list and discuss all of them at this point but they have been taken as the basis for developing the research process.
[40] https://www.maxqda.de
[41] A code was defined for each subcategory, which consist of an acronym of the respective main category and a consecutive number.

concentrates on the general concept of the CLIL approach (CLIL-F1). Hence, it requires CLIL teachers to know the core features and the benefits of the approach (e.g. Marsh et al. 2011: 19; Bertaux et al. 2010: 1) [42]. This also includes possible misconceptions of the CLIL approach (e.g. Marsh et al. 2011: 19; Bertaux et al. 2010: 1). Furthermore, CLIL teachers should be able to juxtapose the CLIL approach with other language and content learning approaches and name both the similarities and the differences (e.g. Bertaux et al. 2010: 1). With regard to the regional contexts of implementation, teachers are supposed to be able to adapt the CLIL approach to the local prerequisites, such as the curriculum or specific school policies (CLIL-F2, e.g. Marsh et al. 2011: 19; Bertaux et al. 2010: 1). Moreover, teachers need to represent the interests of the CLIL approach in school meetings (e.g. Marsh et al. 2011: 19; Bertaux et al. 2010: 2).

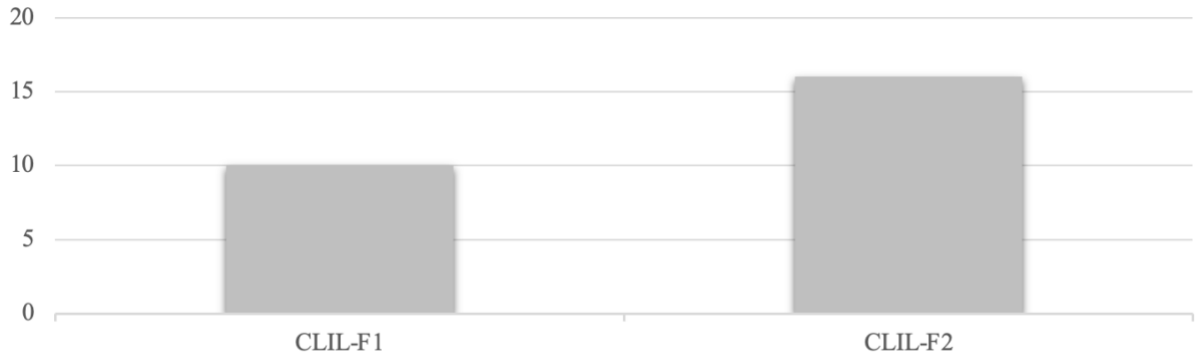


Figure 6.3 Number of codings for "CLIL Fundamentals" (n=26)[43]

Figure 6.3 shows how often the two subcategories for "CLIL Fundamentals" were coded. Out of the 26 codings which were attributed to "CLIL Fundamentals", ten refer to defining the CLIL concept and naming its characteristics (CLIL-F1) while 16 of the codings deal with the contextualisation of the CLIL approach (CLIL-F2).

LP1	use the target language proficiently
LP2	use the subject-specific language appropriately
LP3	work with content-specific texts

Table 6.2 Theory-based subcategories for „Language Proficiency"

The CLIL teachers' "Language Proficiency" covers three subcategories (see Table 6.2). First, the level of the general target language proficiency is supposed to be appropriate (LP1, e.g.

[42] The references refer to the page numbers of the respective documents.
[43] The scaling of this as well as the following bar charts was chosen with reference to largest number of codings per subcategory (17 codings for ICL1). This ensures greater comparability of the visualisations.

Marsh et al. 2011: 27; Bertaux et al. 2010: 2). Though, unfortunately, what "appropriate" means in this context is not further specified. Moreover, teachers should be able to adapt their language use to different (teaching) situations and the students' needs. Also, teachers must be able to use different registers, depending on the specific communicative situation (e.g. Bertaux et al. 2010: 2). Apart from these general language competences, teachers should also be able to use the subject-specific language appropriately, which includes not only the subject-specific terminology but also syntactic and grammatical structures (LP2, Bertaux et al. 2010: 2). Finally, teachers should have a general and subject-specific language competence which allows them to read and discuss content-specific, academic texts (LP3, Bertaux et al. 2010: 2).

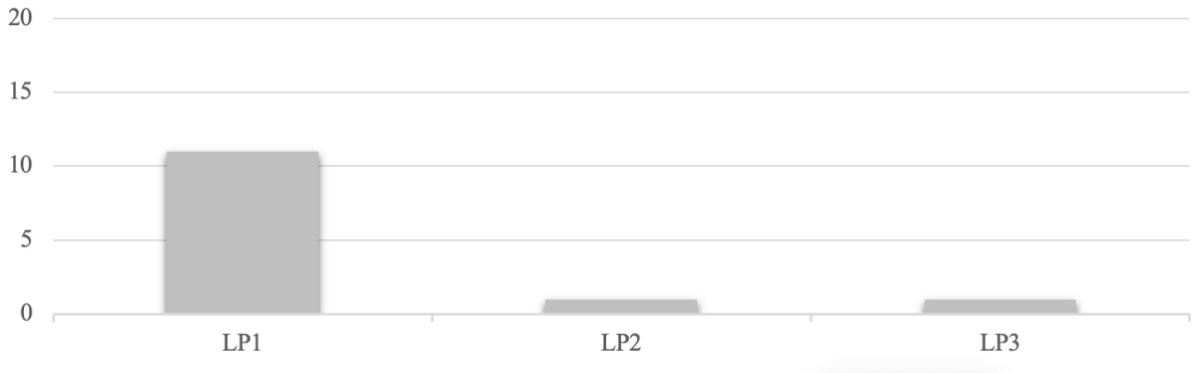


Figure 6.4 Number of codings for "Language Proficiency" (n=13)

Concerning the frequency of the three subcategories for "Language Proficiency", Figure 6.4 shows that the appropriate use of the subject-specific language (LP2) and the ability to work with content-specific texts (LP3) were only coded once, while eleven codings refer to the proficient use of the target language (LP1).

With fourteen subcategories, the main category "Course Development" (see Table 6.3) has by far the most subcategories and includes the largest number of codings as well. First of all, teachers are supposed to create and adapt (authentic) material (CD1), which includes knowing how to restructure authentic material in order to be aware of the students' learning needs, raise their interest in the topic and include the lesson's intended learning outcomes (e.g. Marsh et al. 2011: 26; Bertaux et al. 2010: 6). Also, teachers are supposed to create criteria for designing their own CLIL teaching materials and develop networks with fellow teachers in order to generate and especially exchange appropriate teaching material (e.g. Marsh et al. 2011: 26). With regard to creating a reassuring learning environment (CD2), teachers are expected to give students the feeling that they can experiment with the content and especially the foreign language and do not need to be afraid of making mistakes (e.g. Marsh et al. 2011: 27; Bertaux et al. 2010: 7). Furthermore, CLIL teachers are supposed to provide effective classroom

CD1	create/adapt (authentic) material
CD2	create a reassuring learning environment
CD3	provide effective classroom management
CD4	connect to students personally and respect diversity
CD5	create opportunities for incidental learning
CD6	create a rich learning environment
CD7	design interactive tasks
CD8	design tasks for different learning styles
CD9	approach a topic from different perspectives
CD10	analyse learners' needs and plan lessons accordingly
CD11	make learning relevant for the students
CD12	foster critical and creative thinking
CD13	develop meta-cognitive awareness and higher-order thinking skills
CD14	develop learner autonomy

Table 6.3 Theory-based subcategories for „Course Development"

management (CD3) including managing different forms of classroom interactions, such as group work or guided student discussion (e.g. Bertaux et al. 2010: 3). This also implies that teachers are able to use appropriate language for the different classroom situations, which is hence in strong relation to the main category "Language Proficiency" (e.g. Marsh et al. 2011: 27; Bertaux et al. 2010: 7). Moreover and as another part of providing effective classroom management, teachers must involve all students in the learning process and give them "a voice" (e.g. Bertaux et al. 2010: 7). Next, teachers should connect to students personally and respect diversity (CD4), requiring them to respect and accept the students' cultural, social, religious etc. backgrounds and also to include students with special educational needs. Also, teachers should especially try to include the students' different linguistic and cultural backgrounds in

the CLIL lessons (e.g. Marsh et al. 2011: 27; Bertaux et al. 2010: 4). Furthermore, the teachers' task is to create opportunities for incidental learning (CD5) of content, language and learning skills (e.g. Bertaux et al. 2010: 6) and create a rich learning environment (CD6) through providing authentic and meaningful tasks, providing diverse classroom settings and linking previous to new knowledge (e.g. Marsh et al. 2011: 23; Bertaux et al. 2010: 7). As CLIL fosters the integration of language and content learning, a special focus is on designing interactive tasks (CD7) which should be realised on the level of student-student and student-teacher interaction and communication (e.g. Marsh et al. 2011: 27; Bertaux et al. 2010: 7). Also, teachers are expected to design tasks for different learning styles (CD8), including anticipation of the learners' needs and the awareness of different learning styles, which are both cognitively and linguistically challenging (e.g. Marsh et al. 2011: 21; Bertaux et al. 2010: 5). With regard to the multiple perspectives included in the CLIL approach, teachers should approach a topic from different perspectives (CD9), which comprises different cultural perspectives but also the perspective of different subjects or fields of knowledge in order to develop an interdisciplinary approach (e.g. Marsh et al. 2011: 20; Bertaux et al. 2010: 5). Additionally, teachers need to analyse learners' needs and plan lessons accordingly (CD10, e.g. Marsh et al. 2011: 22; Bertaux et al. 2010: 4) and make learning relevant for the students (CD11) through linking previous and new knowledge, creating authentic learning contexts and discussing the learning outcomes together with the students (e.g. Marsh et al. 2011: 23; Bertaux et al. 2010: 3). As another point, teachers are supposed to foster critical and creative thinking (CD12), though, unfortunately, neither the framework nor the grid further specify how this is supposed to be achieved (e.g. Marsh et al. 2011: 22; Bertaux et al. 2010: 3). With regard to developing meta-cognitive awareness and higher-order thinking skills (CD13), teachers should especiallyfocus on developing linguistic awareness and how this awareness can be linked to content learning (e.g. Marsh et al. 2011: 20; Bertaux et al. 2010: 8). As a last point, teachers are asked to develop learner autonomy (CD14) through, for example, an appropriate choice of scaffolding strategies,

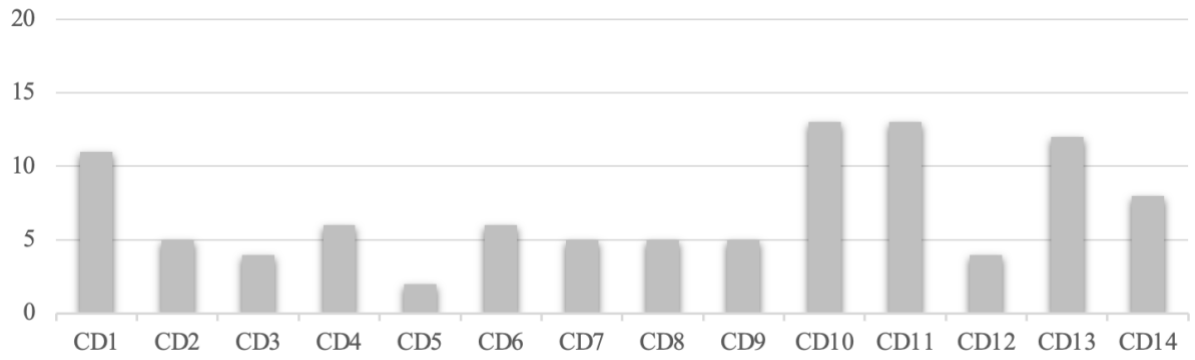


Figure 6.5 Number of codings for "Course Development" (n=99)

formative and self-/peer-assessment through which students take a greater responsibility for their own learning and are enabled to, for instance, research a topic independently (e.g. Marsh et al. 2011: 24; Bertaux et al. 2010: 7).

Out of the fourteen subcategories for "Course Development" (see Figure 6.5), two, i.e. analysing the learners' needs and planning lessons accordingly (CD10) as well as making learning relevant for the students (CD11), have thirteen codings each, hence these are the two subcategories with the largest number of codings followed by the development of meta-cognitive awareness and higher-order thinking skills (CD13) with twelve codings. With eleven codings, the creation and adaption of (authentic) material (CD1) comes next. Eight codings refer to developing learner autonomy (CD14) and six codings each to connecting to students personally (CD4) and to creating a rich learning environment (CD6). Five codings each refer to the creation of a reassuring learning environment (CD2), to the design of interactive tasks (CD7) and to different learning styles (CD8) as well as to approaching a topic from different perspectives (CD9). Finally, the subcategories with the fewest codings refer to providing effective classroom management (CD3) and to fostering critical and creative thinking (CD12) with four codings each and to creating opportunities for incidental learning (CD5) with only two codings. Whether or not the distribution of these codings – as well as all codings from the other main categories – is surprising, is discussed in chapter 6.4 in more detail.

ICL1	maintain a triple focus on language, content and learning skills
ICL2	foster the development of BICS and CALP[44]
ICL3	apply SLA and the CEFR
ICL4	support students in communicating with other target language users
ICL5	analyse the content in terms of language needs

Table 6.4 Theory-based subcategories for „Integration of Content and Language"

With regard to the "Integration of Content and Language", consisting of five subcategories (see Table 6.4), teachers are required to maintain a triple focus on language, content and learning skills (ICL1), which includes the ability to equally implement all three perspectives in course

[44] The terms BICS (Basic Interpersonal Communicative Skills) and CALP (Cognitive Academic Language Proficiency) fall back on Cummins (2000) and are discussed in more detail in chapter 8.

development processes (e.g. Marsh et al. 2011: 23; Bertaux et al. 2010: 5). Moreover, teachers should know different strategies of fostering the development of BICS and CALP (ICL2) and choose the appropriate ones in order to support the students in their development of BICS and CALP (e.g. Marsh et al. 2011: 20; Bertaux et al. 2010: 6). Also, teachers are supposed to apply SLA and the CEFR (ICL3) in order to reach the language goals of the CLIL approach. This might include knowledge about the influence of the students' L1 or the age of the learners on language acquisition and learning (e.g. Marsh et al. 2011: 20; Bertaux et al. 2010: 6). With regard to the CEFR, teachers should be able to use this framework to evaluate their own language competence but also to agree on language goals for the CLIL programme (e.g. Bertaux et al. 2010: 5). In order to develop the students' foreign language competence, teachers should support students in communicating with other target language users (ICL4), for example through organising exchanges with students of the target culture, which also includes virtual exchanges via internet communication (e.g. Marsh et al. 2011: 23; Bertaux et al. 2010: 6). Finally, teachers must analyse the content in terms of language needs (ICL5) which includes the choice of appropriate content and the analysis of the required language which is needed to concentrate on the respective topic. This analysis includes awareness for the (subject-specific) terms or structures unknown to the students, but also the language required for classroom discourse. Based on this analysis, teachers need to adapt and structure the lessons accordingly in order to ensure that students can concentrate on developing their content, language and learning skills (e.g. Marsh et al. 2011: 22; Bertaux et al. 2010: 6).

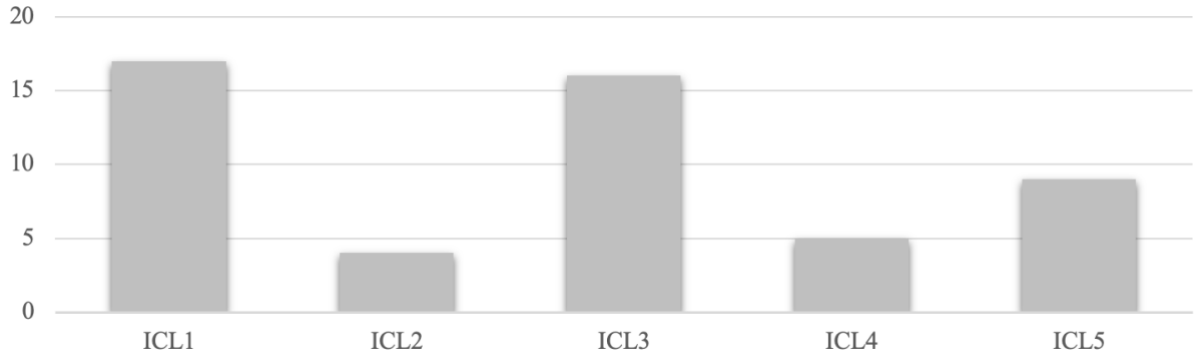
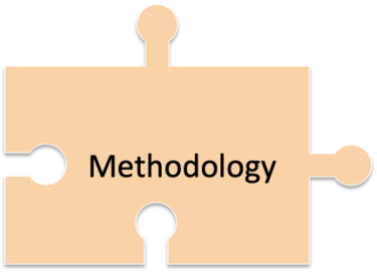


Figure 6.6 Number of codings for "Integration of Content and Language" (n=51)

As Figure 6.6 shows, maintaining a triple focus on language, content and learning skills (ICL1) as well as applying SLA and the CEFR (ICL3) are coded most frequently in the main category of "Integration of Content and Language" with 17 and 16 codings respectively. These are followed by analysing the content in terms of language needs (ICL5) with nine codings while supporting students in communicating with other target language users (ICL4) is referred to five times and fostering the development of BICS and CALP (ICL2) has four codings.



M1	use code-switching
M2	use appropriate media techniques
M3	use scaffolding techniques
M4	use non-classroom learning environments

Table 6.5 Theory-based subcategories for „Methodology"

Concerning "Methodology", which consists of four subcategories, (see Table 6.5), teachers should use code-switching (M1) as well as code-mixing and know the principle of translanguaging, though, unfortunately, it is not further specified for which purpose these methods are supposed to be used, i.e. in order to also foster the development of the school language or in order to secure understanding via translating unknown words (e.g. Marsh et al. 2011: 22; Bertaux et al. 2010: 6). With regard to using appropriate media techniques (M2), teachers should use ICT (Information and Communications Technology) in an appropriate way including a balance between digital and non-digital sources. Also, teachers should support the students in developing media literacy, including, for example, ethical questions which arise from the use of media (e.g. Bertaux et al. 2010: 9). As was already mentioned with regard to ICL4 ("support students in communicating with other target language users"), teachers can also use ICT to establish virtual exchange programmes with native speakers of the target language. In addition, teachers should make use of scaffolding techniques (M3), supporting the development of content, language and learning skills (Marsh et al. 2011: 20; Bertaux et al. 2010: 3). Through these scaffolding techniques, students should also be supported in developing greater learner autonomy (e.g. Bertaux et al. 2010: 7). Finally, teachers should use non-classroom learning environments (M4), which can also include virtual learning environments such as online discussion forums in order to achieve a greater level of authenticity (e.g. Marsh et al. 2011: 26; Bertaux et al. 2010: 3).

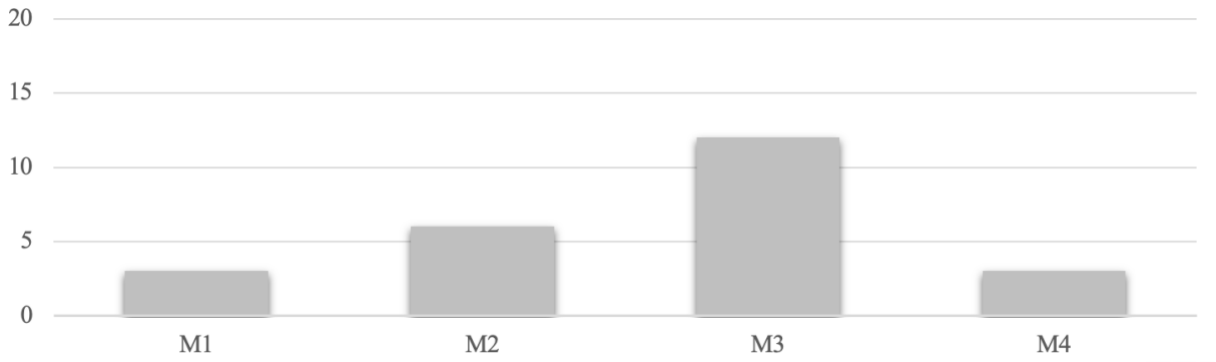


Figure 6.7 Number of codings for "Methodology" (n=24)

Concerning the frequency of the codings for "Methodology", Figure 6.7 shows that twelve codings are attributed to the use of scaffolding techniques (M3) and six codings refer to the appropriate use of media techniques (M2). The use of code-switching (M1) as well as non-classroom learning environments (M4) is coded with three codings each.

AE1	decide if errors are language- or content-driven
AE2	apply language correction strategies
AE3	be aware of CLIL-specific assessment needs and problems
AE4	use formative and summative assessment
AE5	use other forms of assessment
AE6	raise students' awareness to use assessment results as a starting point for learning

Table 6.6 Theory-based subcategories for „Assessment and Evaluation"

The main category "Assessment and Evaluation" (see Table 6.6) consists of six subcategories and includes the subcategory "deciding if errors are language- or content-driven" (AE1), which means that teachers should be able to identify if an incorrect answer is the result of the students' low language level or if the student has cognitive difficulties with the content as such. This distinction must then also be taken into consideration with regard to grading. If, for example, the assessment is supposed to focus on language skills and the students' mistakes are based on lacking content skills, teachers must decide how to evaluate this (Bertaux et al. 2010: 6; Bertaux et al. 2010: 8). Moreover, teachers need to apply language correction strategies (AE2), which should ensure the students' language growth without demotivating them to use the target language (e.g. Marsh et al. 2011: 22; Bertaux et al. 2010: 6). Also, teachers should be aware of CLIL-specific assessment needs and problems (AE3) and implement them in the assessment's design. These specific assessment needs and problems include, for example, the ongoing discussions about carrying out the assessment in the L1 or the L2 (e.g. Marsh et al. 2011: 24; Bertaux et al. 2010: 8). With regard to the use of formative and summative assessment (AE4) as well as other forms of assessment (AE5), teachers should create a balance between different forms, measuring content and language achievements or development (e.g. Bertaux et al. 2010: 3). The other forms of assessment include portfolio- as well as self- and peer-assessment (e.g. Marsh et al. 2011: 24; Bertaux et al. 2010: 8). Through the use of formative and self-assessment,

students are supposed to develop greater learner autonomy and reflection skills (e.g. Bertaux et al. 2010: 7). Also, students should be encouraged to use teacher and peer feedback as constructive feedback, taking greater responsibility for their learning (e.g. Marsh et al. 2011: 24). This leads over to raising students' awareness to use assessment results as a starting point for learning (AE6) which might be achieved through creating clear connections between assessment results and the intended learning outcomes. Through that, the students' attention is supposed to be guided towards the assessment results and reflection is encouraged (e.g. Marsh et al. 2011: 24; Bertaux et al. 2010: 8).

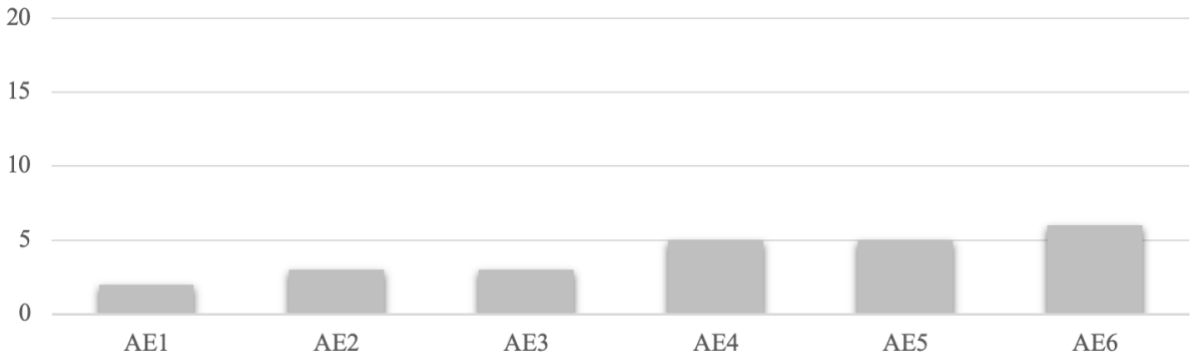


Figure 6.8 Number of codings for "Assessment and Evaluation" (n=24)

With regard to "Assessment and Evaluation" (see Figure 6.8), six of the 24 codings refer to raising students' awareness to use assessment results as a starting point for learning (AE6) and five codings each refer to using formative and summative assessment (AE4) as well as other forms of assessment (AE5). Three codings were found for both the application of language correction strategies (AE2) and the awareness of CLIL-specific assessment needs and problems (AE3). Finally, two codings refer to deciding if errors are language- or content-driven (AE1).

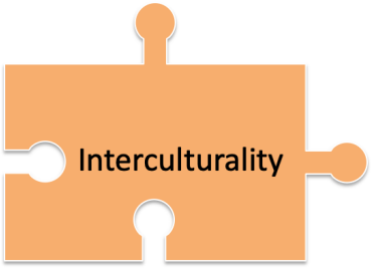
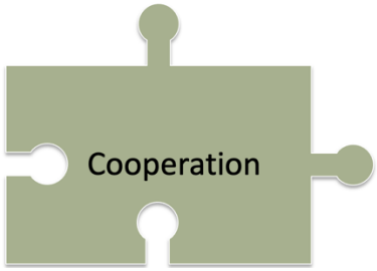
	**I1**	develop cultural awareness and ICC

Table 6.7 Theory-based subcategories for „Interculturality"

For "Interculturality" (see Table 6.7), only one subcategory was developed, namely developing cultural awareness and ICC (Intercultural Communicative Competence). Hence, teachers should raise the students' curiosity for the culture of the target language and move them beyond the stereotypical understandings of the other culture. This especially includes linguistic differences between the cultures, such as the different perception of linguistic concepts. To

achieve this aim, teachers should include texts and material from different cultural backgrounds (e.g. Marsh et al. 2011: 27; Bertaux et al. 2010: 6). This code was used ten times in total.



C1	... with school authorities
C2	... with parents
C3	... with other colleagues

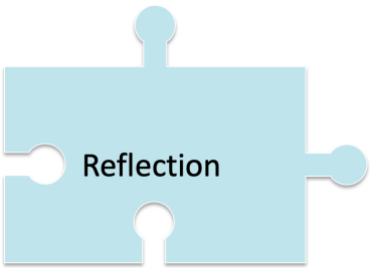
Table 6.8 Theory-based subcategories for „Cooperation"

Concerning "Cooperation" (see Table 6.8), three subcategories was developed. Teachers have to cooperate with school authorities (C1) and internal as well as external stakeholders of the CLIL approach in order to present and defend the interests of the CLIL approach (e.g. Marsh et al. 2011: 19; Bertaux et al. 2010: 4). Moreover, teachers need to be able to deal with parents (C2) and help them understand the CLIL approach and how they can support their children in the CLIL programmes (e.g. Bertaux et al. 2010: 1; Bertaux et al. 2010: 4). Also, teachers have to cooperate with other colleagues and work together with them, for example, to detect training needs or share innovative teaching methodology (e.g. Marsh et al. 2011: 22; Bertaux et al. 2010: 9). For all these three subcategories, teachers need to know and be able to apply different cooperation strategies.

Figure 6.9 Number of codings for "Cooperation" (n=29)

Figure 6.9 shows that almost half of the codings (15 out of 29) are attributed to the cooperation with other colleagues (C3), while nine codings refer to cooperating with school authorities (C1) and five codings were found with regard to cooperating with parents (C2).

As part of "Reflection", which consists of five subcategories (see Table 6.9), teachers need to critically analyse research articles on CLIL (R1) and also evaluate research projects with regard to the transferability to their own CLIL programmes and implement the results to improve their own teaching programmes (e.g. Marsh et al. 2011: 25; Bertaux et al. 2010: 9).



R1	critically analyse research articles on CLIL
R2	conduct and discuss research in the CLIL classroom
R3	use evaluation techniques to reflect upon the CLIL approach
R4	manage the roles of a CLIL teacher
R5	continuously develop the personal role as a CLIL teacher

Table 6.9 Theory-based subcategories for „Reflection"

Also, teachers should conduct and discuss research in the CLIL classroom (R2) and use the evaluation of these small-scale research projects for developing and improving their CLIL programmes (e.g. Marsh et al. 2011: 25). Moreover, teachers should know different evaluation strategies, interpreting research results (R3) with regard to their own CLIL programmes (e.g. Marsh et al. 2011: 25; Bertaux et al. 2010: 2). Teachers are also expected to know and manage the roles of a CLIL teacher (R4), for example being a language teacher in the one situation and a content teacher in the next (Marsh et al. 2011: 18). Finally, teachers are required to continuously develop the personal role as a CLIL teacher (R5) which includes principles of self-management and -reflection but also requires teachers to define the personal level of language and content competence and to identify personal training needs (e.g. Marsh et al. 2011: 28; Bertaux et al. 2010: 9).

With regard to "Reflection" (see Figure 6.10), ten codings refer to managing the roles of a CLIL teacher (R4). Another seven codings focus on the use of evaluation techniques to reflect upon the CLIL approach (R3) and six codings refer to the continuous development of the personal role as a CLIL teacher (R5). Concerning the critical analysis of research articles on CLIL (R1), four codings were found and three codings were attributed to conducting and discussing own research in the CLIL classroom (R2).

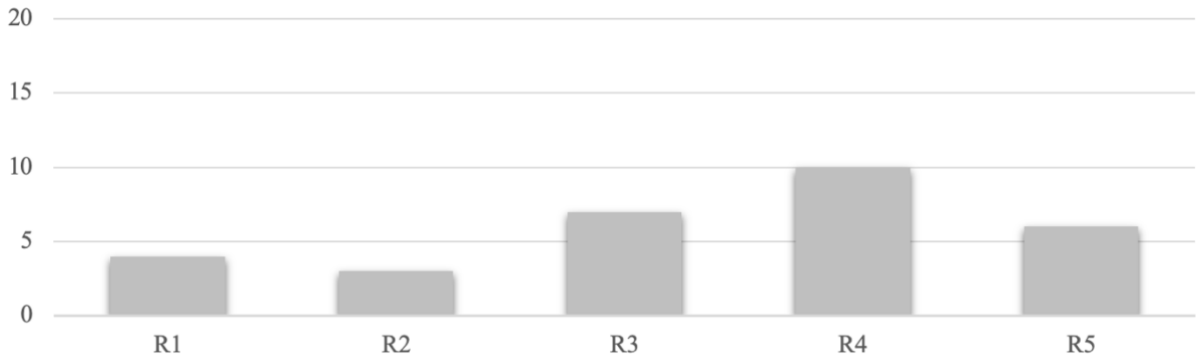


Figure 6.10 Number of codings for "Reflection" (n=30)

Main Categories

On the level of the main categories, Figure 6.11 shows the distribution of the 306 codings resulting from the QCA of the "European Framework for CLIL Teacher Education" and the "CLIL Teacher's Competences Grid". Almost a third of the total number of codings, i.e. 99 codings, refer to "Course Development". This is followed by the "Integration of Content and

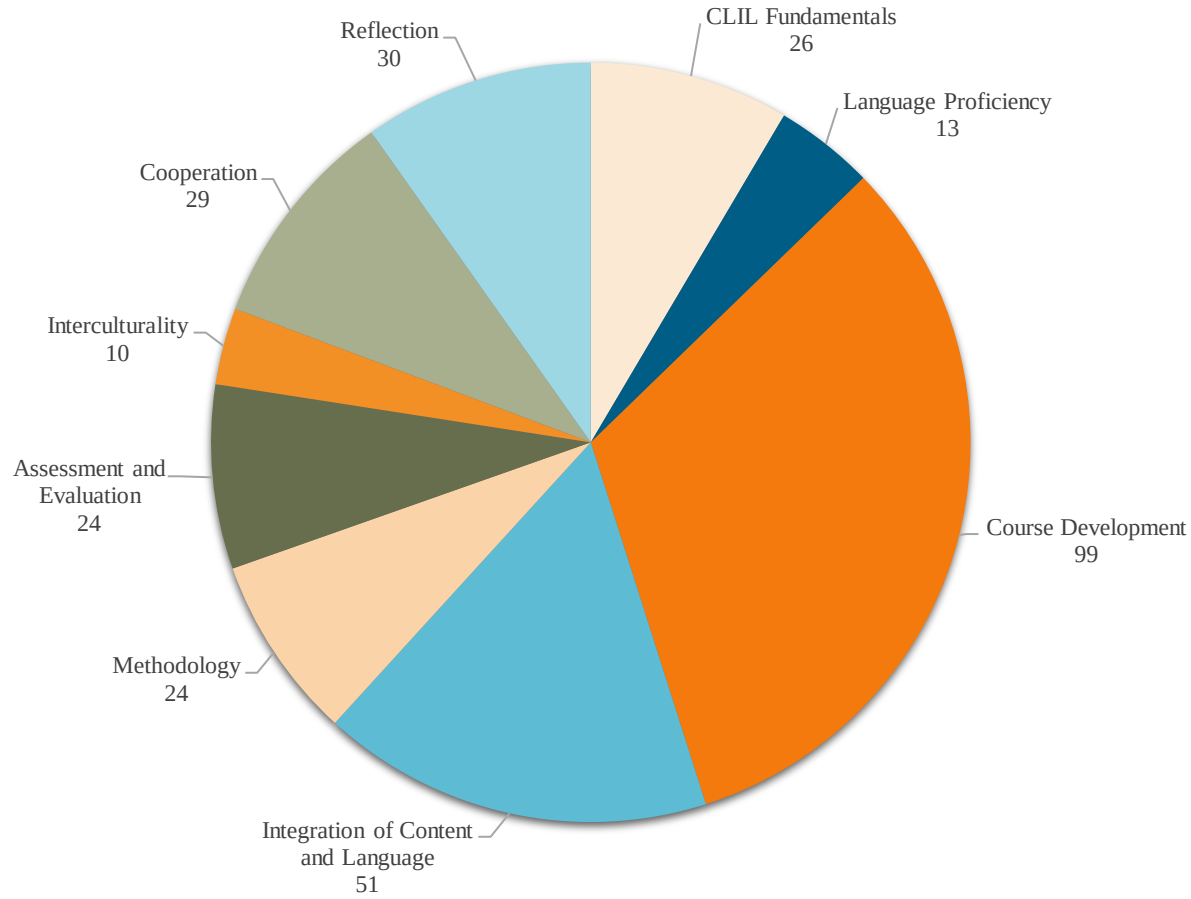


Figure 6.11 Number of codings per main category (n=306)

Language" with 51 codings (ca. 17%). Equalling roughly ten percent of the total number of codings, that is 30 codings, were attributed to "Reflection" and another 29 codings refer to "Cooperation". These are followed by 26 codings for "CLIL Fundamentals" and 24 codings

each for "Assessment and Evaluation" and "Methodology", representing roughly eight percent each. Concerning "Language Proficiency", 13 codings (ca. 4%) were found and the main category with the fewest number of codings is "Interculturality" with ten codings in total, equalling three percent.

While Figure 6.11 shows the overall distribution of the codings for both documents, a Code-Matrix Browser (see Figure 6.12) reveals the frequency of codes for the "European Framework for CLIL Teacher Education" and the "CLIL Teachers' Competences Grid". In this Code-Matrix Browser, the nine main categories are listed in rows and the two documents form a column each. Another column gives the number of codings per main category (which is identical to the numbers in Figure 6.11) and the bottom row states the number of codings per document. The squares represent the number of codings per document and main category. The larger a square, the more codings refer to the main category of the respective document. The size of each square is calculated in relation to the number of codings for the other main categories of the same document and not in relation to the entire number of codings. Hence, the square sizes of the "European Framework for CLIL Teacher Competences" cannot be compared to the square size of "The CLIL Teacher's Competences Grid" but the Code-Matrix Browser can only show the different foci of the two documents.

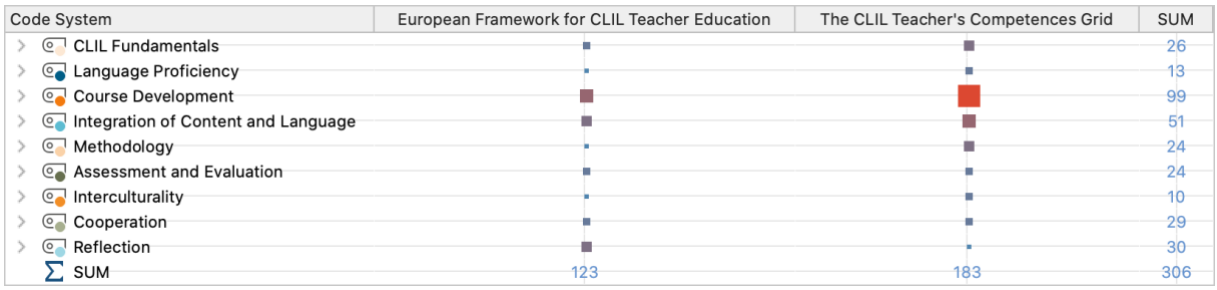


Figure 6.12 Code-Matrix Browser for main categories

As for the "European Framework for CLIL Teacher Education", the largest square and hence the greatest number of codings refer to "Course Development", which mirrors the overall majority of codings for this main category as was already displayed in Figure 6.11. The second largest square is attributed to "Reflection" and equally-sized squares are found for "Cooperation" and "Integration of Content and Language". Rather small squares and hence only small numbers of codings are found for the remaining main categories "CLIL Fundamentals", "Language Proficiency", "Methodology", "Assessment and Evaluation" and "Interculturality".

Concerning "The CLIL Teachers' Competences Grid", the largest square can again be found for "Course Development". Opposed to the "European Framework for CLIL Teacher

Education", however, the second largest square refers to the "Integration of Content and Language". All other squares are rather small, with the squares for "CLIL Fundamentals", "Methodology" and "Cooperation" being slightly larger than the remaining squares for "Language Proficiency", "Assessment and Evaluation", "Interculturality" and "Reflection".

6.4. Discussion of Results

Taking the frequency of the main categories as an indicator for the importance of the main categories with regard to CLIL teacher competences, a clear hierarchy can be observed. The main category of "Course Development" has the by far most codings and can therefore be considered to be most important for developing CLIL teacher competences. Considering that this is also the main category with the largest number of subcategories (14 in total) supports this assumption. Also, this large number of different subcategories renders "Course Development" as the most diverse main category, which hence includes a large number of different aspects. The main category "Integration of Content and Language" covers approximately 17 percent of all codings and can therefore be considered second most important. With these two main categories making up almost half of the entire number of codings, one can conclude that these form an important part of CLIL teacher education. Ranging from eight to ten percent of the total number of codings, the main categories of "Reflection", "Cooperation", "Assessment and Evaluation" as well as "Methodology" can be considered equally important. Finally, with less than five percent of the codings, "Language Proficiency" and "Interculturality" are considered as least important with regard to CLIL teacher education. While it is hardly surprising that "Course Development" and "Integration of Content and Language" belong to the most important categories for CLIL teacher education as this seems to be the core of CLIL programmes, it is even more surprising that the appropriate methodology is granted only little importance. Also, as one might assume that the content and language integrating approach adds new perspectives and challenges to the aspects of assessment and evaluation, it is surprising that this main category is also only given little attention. In addition, it is remarkable that less than five percent of the codings refer to the main category "Interculturality" as culture is one of the 4Cs of the CLIL approach and is hence usually given great importance (see chapter 2.1). Still, this obvious underrepresentation of this main category matches Coyle's evaluation of culture being the "forgotten C" (Coyle 2010: 54). In the light of MINT[45] subjects gaining increasingly importance in CLIL programmes, the discussion of this

[45] MINT is a German acronym for *Mathematik – Informatik – Naturwissenschaften – Technik* (Mathematics – Computer Sciences – Natural Sciences – Engineering).

cultural focus needs to be reconsidered. While the humanities obviously offer the opportunity to discuss cultural topics and to develop the students ICC, the MINT subjects are sometimes regarded as being non-cultural. Yet, the MINT subjects also offer the possibility to include a cultural perspective, such as discussing different understandings of the topic *recycling* in the Anglo-American culture(s) or the different measurement systems in Mathematics and thus in Physics or Geography respectively. What is more, the justification to use MINT subjects in CLIL programmes is not so much the cultural aspect but rather the fact that English is *the* scientific language which is predominantly used in the scientific world. Therefore, CLIL MINT prepares students for this potential future academic world. Still, CLIL MINT teachers' awareness needs to be specifically raised to the potentials of cultural aspects of MINT subjects, such as the different measurement systems, and CLIL teaching materials should also use every opportunity to include the cultural perspective in MINT subjects.

Main categories

While it is also interesting to consider the different main categories and their importance, the frequencies of the different subcategories also provide interesting insights into the importance of the different aspects of the main categories. Starting with "CLIL Fundamentals", one can clearly state that both subcategories – the definition of the CLIL concept and its contextualisation – are closely connected as one can only adapt the CLIL concept to the regional prerequisites when the concept itself is understood in depth. Still, the subcategory "contextualise CLIL with regard to the specific context" (CLIL-F2) is coded more often and it can therefore be concluded that being able to apply the CLIL concept is regarded more important than simply knowing the different aspects of the approach (CLIL-F1).

With regard to "Language Proficiency", the hierarchy of the three subcategories is even more prominent. A strong focus is granted to the proficient use of the target language (LP1) while hardly any attention is paid to subject-specific language skills (LP2 & LP3). Considering the fact that a CLIL teacher needs to teach the subject in the target language, it is surprising and highly questionable, though, that the subject-specific language competence is almost entirely neglected in the theoretical considerations.

Though the main category "Course Development" itself is already regarded as the most important, the different subcategories again show varying numbers of codings and are hence seen as of varying importance for CLIL teachers. Through the comparably higher frequencies of the subcategories concerning the analysis of learners' needs (CD10), the request to make learning relevant for students (CD11) as well as to connect to students personally (CD4) and to

design tasks for different learning styles (CD8), a rather strong focus towards student-centred approaches can be concluded. Also, the development of meta-cognitive awareness and higher-order thinking skills (CD13) as well as the focus on critical and creative thinking (CD12) make up a substantial part of the codings for the main category "Course Development". With regard to the CLIL approach itself, this is hardly surprising as *cognition* is one of the 4Cs of the CLIL approach (see chapter 2.1). The creation and adaptation of (authentic) material (CD1) is another aspect of importance as a relatively great number of codings is attributed to this subcategory. Again, this only seems understandable as one can assume that the design of appropriate material is in close relation to the general course design. Also, the use of authentic sources mirrors the general idea of the CLIL approach creating a more authentic language learning context. The aspect of *communication*, which is also part of the 4Cs approach, however, is granted rather little importance as only a small number of codings refers to the design of interactive tasks (CD7). Finally, the creation of rich and reassuring learning environments (CD2), the creation of incidental learning environments (CD5) and effective classroom management (CD3) are only of smaller importance as only a limited number of codings is attributed to these subcategories.

A closer look at the main category with the second most codings, the "Integration of Content and Language", reveals a clear tendency towards two of the five subcategories. These maintain a triple focus on language, content and learning skills development (ICL1) as well as the use of theories of SLA and the CEFR (ICL3). This mirrors the integrative approach of the CLIL concept, which emphasises the development of content and language skills and apparently considers these two parts of the 4Cs Framework, namely *content* and *communication*, as equally important. The focus on SLA supports this relevance of (explicit) language teaching in the CLIL approach. Also, the aspect of analysing the content with regard to language needs (ICL5) has a relatively large number of codings and must therefore be considered important for the integrative approach of the CLIL concept.

Concerning "Methodology", one can conclude a clear emphasis on the appropriate use of scaffolding strategies (M3) as this subcategory was coded most often in comparison to the other subcategories. Also, the focus on using scaffolding techniques for both content and language learning again underlines the understanding of the CLIL approach equally targeting content as well as language learning goals. Another aspect of relatively great importance is the appropriate use of media techniques and the development of media literacy (M2). As this does not have a direct connection to CLIL as such and consequently would hardly be regarded as a CLIL-specific competence, the occurrence of this aspect is unexpected at this point. Apart from that, it is also quite surprising that the aspect of code-switching (M1) has a rather small number of

codings implying to be perceived as rather unimportant. With reference to the ongoing discussion about the use of the L1 in CLIL settings (see, for example, Diehr's IDM (cf. Diehr 2016) in chapter 2.1), this seems rather controversial.

A similar picture can be found for "Assessment and Evaluation" as a relatively large number of codings is attributed to using different forms of assessment (AE4 & AE5) and raising the students' awareness to using these assessment results to reflect upon their own learning process (AE6). Again, however, one can raise the question if these aspects are really CLIL-specific as a balanced use of different forms of assessment are given in all teaching settings. Likewise, raising students' awareness to the importance of assessment results is of general and equal importance. One could argue similarly for the subcategory "applying language correction strategies" (AE2), which should be equally significant in regular language learning contexts. The two remaining subcategories which are CLIL-specific as they deal with CLIL-specific assessment needs (AE3) and the decision if errors are based on content or language (AE1), though, are coded only a few times and hence granted only little importance here. This might lead to the assumption that in CLIL settings, assessment and evaluation do not add new perspectives to the approach but rather refer to general aspects of assessment. Notwithstanding, this must be considered contradictory to the integrative approach of CLIL which focuses on content and language and therefore certainly adds challenges to the question of creating reliable, objective and valid assessment.

Concerning "Cooperation", working and cooperating with colleagues is considered most important (C3). This appears as reasonably considering the often innovative ideas of CLIL, which require teachers to cooperate. Still, cooperation among teachers is yet again an aspect of general relevance and hence not uniquely required in CLIL only. The same applies to the cooperation with parents (C2), though, it needs to be respected that most parents are not fully familiar with the idea of CLIL and teachers therefore might need to inform parents about the general concept and how they can support their children. With regard to cooperating with school authorities (C1), it can be argued that this is of special importance for CLIL teachers as the CLIL approach is an innovative approach at most schools. Consequently, CLIL programmes are oftentimes implemented as pilot projects, requiring teachers to cooperate with school authorities and ministries when attempting to temporarily or permanently implement such an approach in existing school programmes.

Considering the aspect of "Reflection", especially the "European Framework for CLIL Teacher Education" lists a comparably high number of codings referring to aspects of reflection and hence highlights the importance of this aspect of CLIL teacher competences. The

identification with the different roles of a CLIL teacher (R4) is mentioned most often, which seems comprehensible with regard to CLIL teachers being both content and language teachers at the same time and although they are required to maintain a balance of both, some teaching phases might focus more on one or the other. Hence, the role of the teacher changes continuously. The conduction and evaluation of own research projects and research articles (R2 & R3) as an aspect of CLIL teacher competences might also be justified by the innovative approach of the CLIL idea which still leaves room for developing and improving the CLIL approach.

7. Analysing Competences Practically Needed

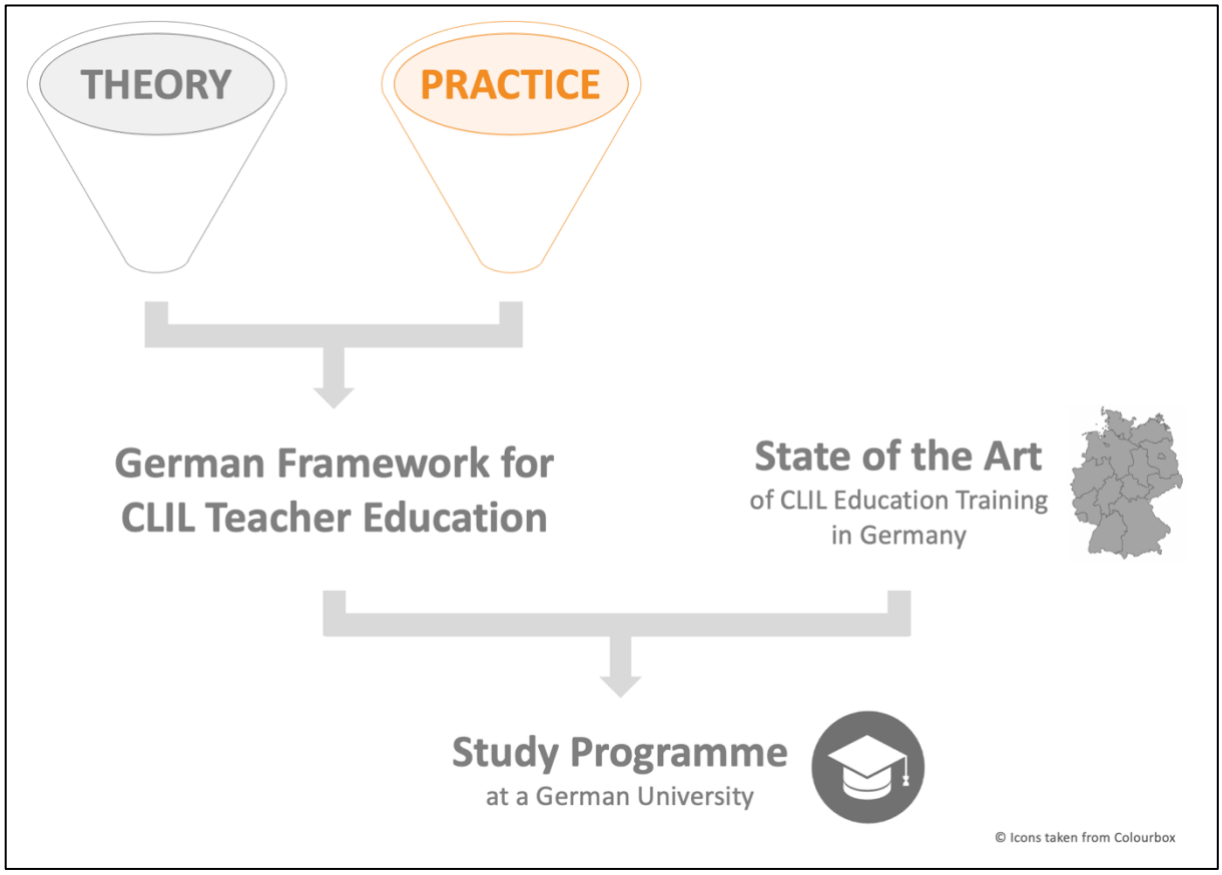


Figure 7.1 Visualisation of research design – Practice

In order to add the practical perspective to the development of the German Framework for CLIL Teacher Education (see Figure 7.1), interviews with experienced CLIL teachers, who have been teaching in German CLIL programmes for several years, were conducted. In the following, this chapter introduces the study design and the methodology for conducting and analysing the interviews and presents the results and the discussion of the data analysis.

7.1. Study Design

Again, a qualitative approach was chosen to add the practical perspective, for reasons which were already discussed in chapter 5.2. With the help of semi-structured interviews, expert CLIL teachers were interviewed concerning their educational background in the field of CLIL teaching and their experiences of teaching in CLIL programmes. The focus of these interviews was especially on the challenges of teaching in CLIL programmes, which are added to the challenges of "regular", non-CLIL teaching. The interviews were conducted between March and June 2017 and later on transcribed and analysed via Qualitative Content Analysis (see chapter 7.2 for a detailed account of this research methodology).

Data Collection

The participating teachers were interviewed with the help of semi-structured expert interviews (Gläser & Laudel 2009). Following Gläser and Laudel's definition of experts as sources of specialised knowledge (Gläser & Laudel 2009: 12), CLIL teachers can generally be considered as experts in the field of CLIL teacher competences since they have been working in the field of CLIL teaching for several years. To access this source of knowledge, a semi-structured interview was developed and conducted, characterised by a previously prepared list of open questions as a basis for the interviews. Generally, the interviewer guides through the interview and follows the principle of openness as the experts should have the opportunity to contribute their expertise and knowledge (Gläser & Laudel 2009: 111–115). According to Hopf, such qualitative interviews need to fulfil four criteria (Hopf 1978: 99–100): range, specificity, depth/intensity and personal context. *Range* refers to the requirement that the interview needs to leave enough room for addressing a broader range of topics and *specificity* calls on the interviewer to encourage the expert to give specific answers. Also, the interview should fulfil a certain level of *depth* or *intensity* so that the experts can add their specialised knowledge. Finally, the interviewer should also include the experts' *personal context* in order to be able to analyse and interpret the experts' answers.

For the study at hand, a combination of closed and open questions was included while the closed questions were merely used to obtain general information about the teachers' (educational) background. These questions were:

- *Which subject(s) do you teach in the CLIL programme?*
- *For how many years have you been teaching in the CLIL programme?*
- *How often do you teach in CLIL programmes?*
- *In which grades of the CLIL programme do you teach?*
- *Have you received special CLIL teacher education?*
    - *If yes:*
        - *In which phase of your teacher education?*
        - *How long did the CLIL teacher education programme take?*
        - *Was the CLIL teacher education programme specialised for one subject or on a general level?*
        - *Which contents were covered in the programme?*

If the teacher had attended a special CLIL teacher education programme, these closed questions were followed by the first open question: *How do you evaluate the importance and usefulness of this specific training programme for your everyday life as a CLIL teacher?*

Afterwards, another open question led over to the main purpose of the study as the teachers were asked: *Which specific competences do you consider necessary for teaching in CLIL programmes?* As required for a semi-structured interview, this question was kept open on purpose and left enough room for the teacher to touch upon a broad range of different aspects. Hence, Hopf's criterion of *range* is fulfilled. In order to also fulfil the criteria of *specificity* and *depth/intensity*, follow-up questions were prepared if the teachers needed further encouragement. These open questions were:

- *What are everyday challenges of teaching in a CLIL programme?*
- *How do your CLIL lessons differ from your non-CLIL lessons?*
- *Which teaching materials do you use and where are they taken from?*
- *How do you manage the integration of content and language?*
- *How do you organise assessment in your CLIL programme?*
- *To what extent do you include the school language (i.e. German) in the CLIL programme and which role does it have?*

The fourth and last criterion of *personal context* is fulfilled as well as the teachers are first of all asked about the specific CLIL teaching programmes they are directly involved in and secondly, the closed questions at the beginning of the interview allow to analyse and interpret the teachers' answers in the context of their teaching and educational background.

In order to create a greater feeling of confidence during the interviews, all interviews were conducted at the respective schools, hence in familiar surroundings. Also, the interviews were conducted in German, the teachers' mother tongue, so that the teachers are not distracted or intimidated by the use of a foreign language. The teachers' participation was on a voluntary basis and the teachers were assured that their anonymity is guaranteed.

The interviews lasted 25:20 minutes on average (ranging from 12:41 minutes to 36:19 minutes) and were audio-recorded and later on transcribed. The set of transcription rules was based on Mayring's understanding of a "clean read or smooth verbatim transcript", which is defined as follows:

> The transcription is done word for word, but all utterances like uhms or ahs, decorating words like, right, you know, yeah are left out. A coherent text, simple to understand but representing the original wording and grammatical structure is produced. Short cut articulation and dialect are translated into standard language (c'mon = come on). (Mayring 2014: 45)

As the focus of the study was on the actual content of the teachers' answers and not their use of dialect, pauses or intonation, these transcription rules were used as they maintain the content of the teachers' answers but at the same time the transcript remains easy to read and interpret.

Sample

A total number of 13 teachers were interviewed, from two schools in Rhineland-Palatinate and one in Hesse. All schools are *Gymnasien* and have been offering CLIL teaching programmes for a longer period of time. The first school – *school A* – introduced the CLIL programme in 1996 and hence has a CLIL tradition of more than twenty years. Following the most common approach as described in chapter 2.3, the CLIL programme starts with a two-year preparatory phase in school years five and six, during which one or two extra lessons of English teaching are added to the schedule. This is followed by teaching the subjects Geography and History in English in school years seven to ten. These CLIL subjects also receive an additional teaching lesson per week. Finally, students may choose to further attend the CLIL programme in school years eleven to thirteen which then adds Social Sciences as a third CLIL subject. The other secondary school in Rhineland-Palatinate – *school B* – offers a similar CLIL teaching programme which was introduced in 2009. Again, the preparatory phase in the fifth and sixth school year is followed by teaching different content subjects in and through English. Opposed to school A, however, the variety of the offered content subjects is broader. Hence, not only Geography and History are offered but also natural sciences (Biology and Chemistry) as well as Mathematics. The inclusion of natural sciences and Mathematics in the CLIL programme, however, is restricted to the school years seven to ten as only the humanities are offered in higher secondary courses. The third school – *school C* – offers a slightly different CLIL programme. Opposed to the other two schools, school C does not offer the same preparatory phase in school years five and six, simply adding additional English lessons to the curriculum. Here, the students participate in "Bili-Clubs" focussing on natural sciences. In years seven to nine, content subjects are then taught in English. These subjects, however, are merely natural sciences (Biology, Chemistry and Physics) as well as Mathematics. Sometimes, also Geography is offered. Also in years ten to thirteen, the focus is on natural sciences and only Social Studies is added. Furthermore, school C is certified as a *Europaschule* (see chapter 2.3) and together with the clear focus on natural sciences in their CLIL programme, it must be considered different to many other schools with CLIL teaching programmes. For the purpose of this study, the differing CLIL programmes in which the participating CLIL teachers work also offer the opportunity to include the different perspectives of possible implementations of CLIL into the curriculum.

As is displayed in Figure 7.2, the interviewed CLIL teachers represent seven different content subjects from the field of humanities and MINT and thus do not only cover the

"classical" CLIL subjects but mirror the schools' different CLIL programmes[46]. Adding up the total numbers shows that some teachers teach more than one content subject in the CLIL programmes.

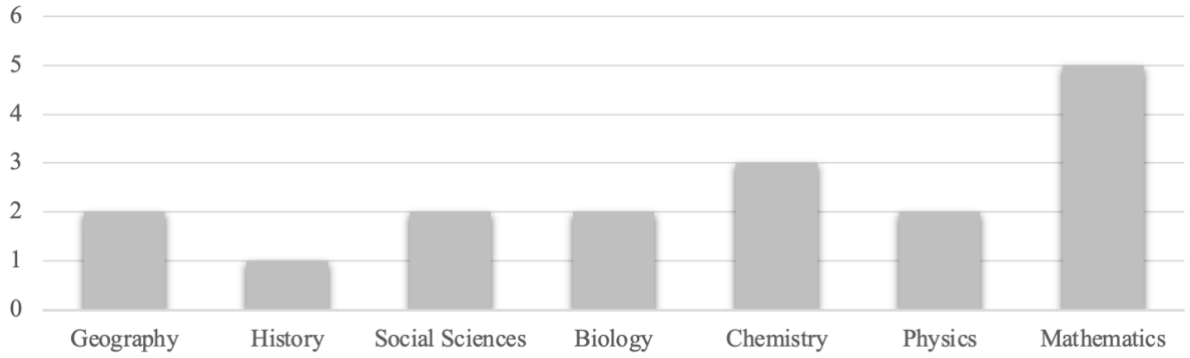


Figure 7.2 CLIL teachers' content subjects

Furthermore, Figure 7.3 shows that the teachers represent different educational backgrounds. While only one teacher had received CLIL teacher education during the first phase of teacher education, i.e. at university, six teachers completed teacher education programmes during the second, practical phase of teacher education. Also, six teachers participated in in-service qualification programmes, which were mostly organised in the form of one- or two-week intensive courses. It must also be noted, however, that two teachers had not received any CLIL teacher education at all. Again, the total numbers reveal that they do not add up to the 13 participating teachers which is due to some teachers participating in more than one form of CLIL teacher education.

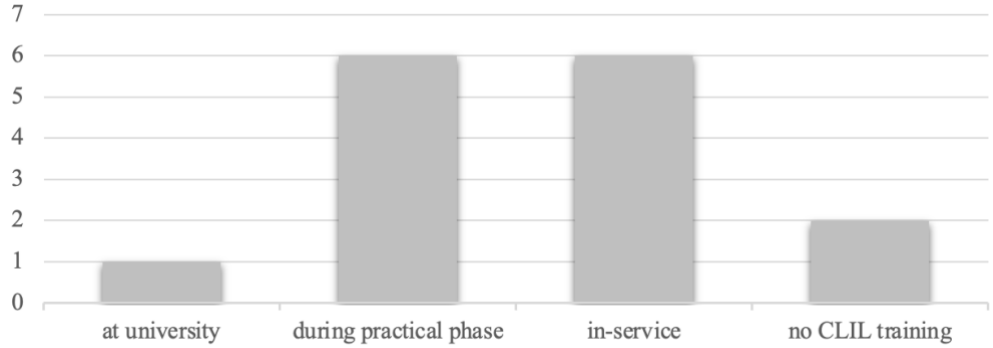


Figure 7.3 CLIL teachers' educational background

It is also important to mention that four of the participating teachers were not trained as English language teachers as is sometimes the case for CLIL teachers in Germany. Still, due to having

[46] One teacher also added that she has occasionally taught Sports/Physical Education in CLIL programmes but as she does not consider that to be comparable to all other CLIL subjects and hence her following answers to the interview questions do not necessarily apply to Sports/Physical Education either, Sports/Physical Education is not considered in the further analyses and interpretations.

worked and lived in English-speaking contexts for several years, their English language competences are considered sufficient in order to teach in CLIL programmes. Hence, this sample also represents the KMK's guideline for the qualification of CLIL teachers as a language teaching qualification is not deemed obligatory (see chapter 4.3). At this point, it also needs to be pointed out that these four teachers who are not trained as English language teachers all teach MINT subjects. Hence, the group of non-language teachers is only made up of MINT teachers. Notwithstanding, some of the MINT teachers are also trained as English language teachers which is why the group of MINT teachers cannot simply be equated with the group of the non-language teachers.

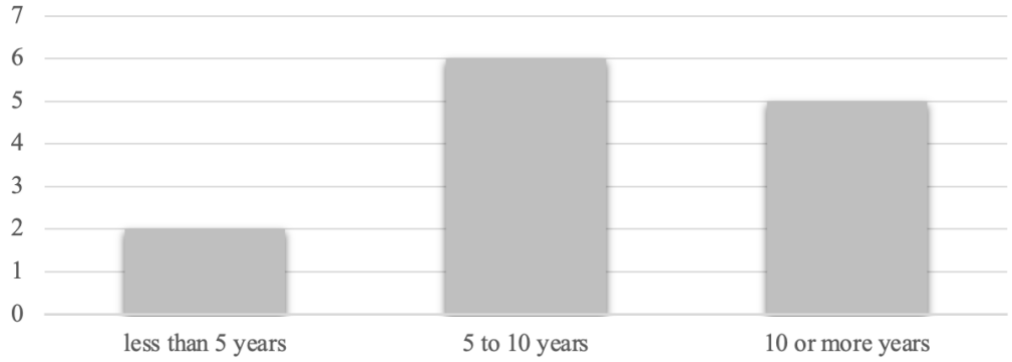


Figure 7.4 CLIL teachers' years of teaching experience in CLIL programmes

As displayed in Figure 7.4, only two teachers had been teaching in CLIL programmes for less than five years, while six teachers have between five and ten years of experience in teaching in CLIL programmes and the remaining five teachers had been teaching in CLIL programmes for more than ten years. The average of years of experience is 9,15 years, hence almost ten years of experience in teaching in CLIL programmes.

Regarding the frequency of teaching CLIL lessons, the number of weekly CLIL lessons taught ranges from three to 20 lessons per week with an average of 8.18 hours of weekly CLIL teaching. This rather broad range can be explained by the different content subjects as, for example, Mathematics is usually taught four to five lessons per week while most other subjects only make up two to three lessons of the weekly schedule. Also, the school's availability of CLIL teachers influences the individual hours of CLIL teaching since schools with several CLIL colleagues obviously spread the amount of CLIL lessons among a larger number of colleagues.

7.2. Methodology

The same methodology was used for the theoretical and the practical part of the study and the transcribed interviews were hence also analysed with the help of Qualitative Content Analysis

(QCA). Similar to the analysis of the theory-based standards, the category system was developed through a combination of deductive and inductive steps as the existing theoretical background served as a basis for deductively developing the main categories. The subcategories were then inductively developed in close relation to the transcribed interviews. In order to achieve a greater comparability of the results from the theoretical and the practical perspective, the same nine main categories were used for both parts of the German Framework for CLIL Teacher Education (see Figure 7.5).

Since the content-structuring form of QCA was again employed for analysing the interviews, the seven analysis steps, which Kuckartz describes and which have already been discussed in chapter 6.2, were followed again. Hence, after coding the entire material with the previously developed set of main categories, the subcategories were developed on the basis of the material and the entire interviews coded a second time. Again, a code book, including all codes, their definition, an explanation when to use them and a concrete example from the material, was developed. This code book for analysing the interviews can be found in the appendix (see chapter 13.2).

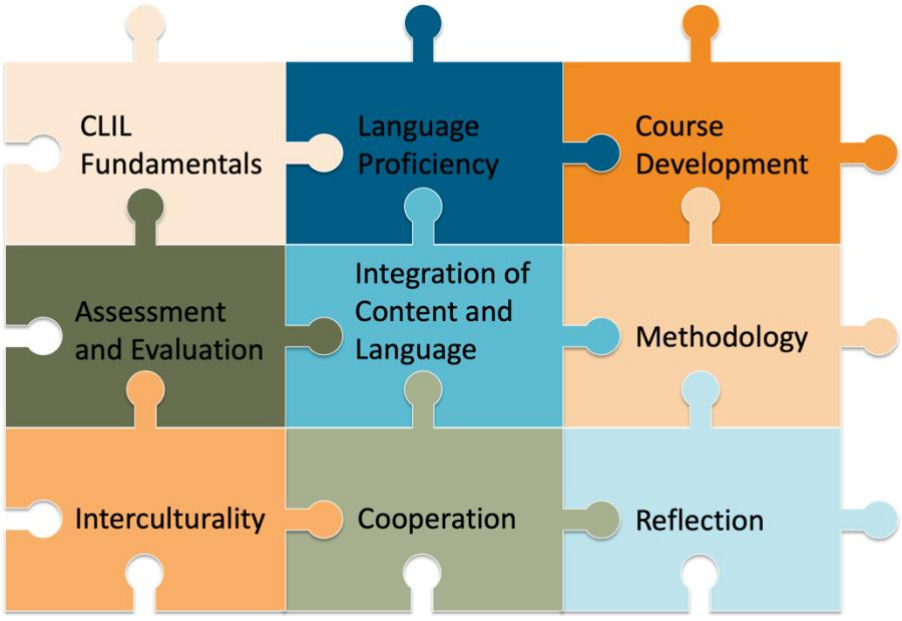


Figure 7.5 Main categories for QCA – Practice

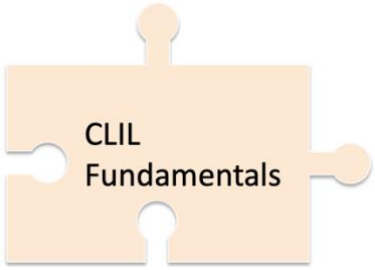
Regarding the further steps of analysing the coded material, extensive "case summaries" were created again as these function as the basis for developing the German Framework for CLIL Teacher Education in the next step. Also, the frequencies of the different categories were used as an indicator for the importance of the different elements of CLIL teacher competences.

Similar to the process of QCA for analysing the theoretical considerations, the entire material was independently coded by three coders in total. Afterwards, the developed subcategories, the code book as well as all codings were discussed in a team of three researchers

and adapted if necessary. Again, this ensures the quality criteria for qualitative research which were discussed in chapter 6.2.

7.3. Results

In analogy to the chapter on the theoretical considerations concerning CLIL teacher competences (see chapter 6.3), the subsequent pages follow the structure of the nine main categories (see Figure 7.5). For each main category, the inductively developed subcategories are listed and a case summary of the entire main category is provided. Again, a detailed account of the definitions and examples for the different main and subcategories can be found in the appendix (see chapter 13). Also, the frequencies of the categories are listed both on the level of the main categories but also for the subcategories within one main category. Again, the order of the main categories and the subcategories should not be understood as chronological or hierarchical but as equal components or pieces of the puzzle of CLIL teacher education.



CLIL-F1	define CLIL and name its characteristics

Table 7.1 Practice-based subcategories for „CLIL Fundamentals"

With regard to "CLIL Fundamentals" (see Table 7.1), only one subcategory was defined which covers the ability to define CLIL and name its characteristics (CLIL-F1). This includes the ability to distinguish between the CLIL approach and "just" teaching the content subject in English, hence only translating regular content lessons into the target language (e.g. I_11: 20)[47]. It is also explained that teachers need to be able to juxtapose CLIL to the German form of *Bilingualer Sachfachunterricht* and to apply the concepts to the respective school context (e.g. I_10: 20; I_04: 40). Also, CLIL teachers need to be aware of the differences between CLIL and TEFL as one teacher, for example, explains that planning a teaching unit on the United States differs from the setting of a regular English lesson and a lesson in CLIL Social Sciences and that she herself sometimes struggles to identify the differences (e.g. I_11: 20). Hence, as CLIL teachers need to know the differences between the different teaching concepts, they also need to be aware of the difficulties and the challenges which the CLIL programme entails for the students but also for parents and the school context. Therefore, CLIL teachers also need to be

[47] The references refer to the paragraphs of the transcribed interviews.

able to justify and defend the CLIL concept in the school context, i.e. against colleagues who are not involved in the CLIL programme (e.g. I_04: 42). The code CLIL-F1 was used seven times in total.

LP1	use the target language proficiently
LP2	use the subject-specific language appropriately
LP4[48]	show a level of language sensitivity

Table 7.2 Practice-based subcategories for „Language Proficiency"

Concerning "Language Proficiency" (see Table 7.2), three subcategories were developed. Teachers mention that the proficient use of the target language is necessary and important (LP1, e.g. I_07: 36, I_10: 30). Interestingly, though, the teachers' opinions concerning which level of target language competence the teachers need to have in order to be "proficient" enough varies. Hence, some teachers explain that the general English language competence needs to be higher than generally supposed and expected for regular English teachers (e.g. I_07: 36, I_08: 30). Others, however, explain that they still consider their English language competence as appropriate despite being aware of making frequent language mistakes themselves (e.g. I_09: 22). Regarding the subject-specific language competence (LP2), though, the teachers mostly agree on the importance of being proficient in the subject-specific language. Likewise, most teachers show awareness that this subject-specific language includes more than just the subject-specific vocabulary but also covers, for example, grammatical structures (e.g. I_05: 16). Although the teachers commonly agree that subject-specific language competence is of importance, most teachers also explain that they do not feel entirely confident in using subject-specific language and need to invest more time in preparing the respective CLIL teaching units as they first of all need to acquire the necessary language structures themselves (e.g. I_03: 30). According to the teachers, the aspired ability to anticipate and answer possible language questions during the lessons requires more intensive preparation of CLIL lessons, especially for the language aspect. Additionally, the teachers mention that it is necessary to show a certain level of language sensitivity[49] (LP4), for example in order to be able to include this language

[48] The numbering of the subcategories was already chosen with regard to the German Framework for CLIL Teacher Education which combines the subcategories from chapter 6 and chapter 7 and which is the reason for the non-continuous numbering here.

[49] Language sensitivity is often used synonymously with the concept of language awareness, which the Association of Language Awareness defines as "exploring the benefits that can be derived from developing a good

sensitivity when designing teaching material and incorporating native speaker sources (e.g. I_09: 38). Interestingly, especially those teachers who are not specifically trained as English teachers stress that qualified English teachers have this advantage of being language sensitive. Also, especially the non-language teachers explain that they do not consider their language sensitivity as sufficient and identify this as an important aspect they still need to work on (e.g. I_01:22, I_08: 36). As is also elaborated on in the code book, this code regarding the teachers' language sensitivity was not only coded when the teacher explicitly refers to the necessity of being language sensitive but also when the teacher indirectly showed that he or she is sensitive with regard to language use. A closer look at the coded passages from the text reveals that especially the CLIL teachers who are not trained as language teachers mostly address the aspect of language sensitivity directly while the qualified English teachers rather indirectly show their language sensitivity (e.g. I_10: 34).

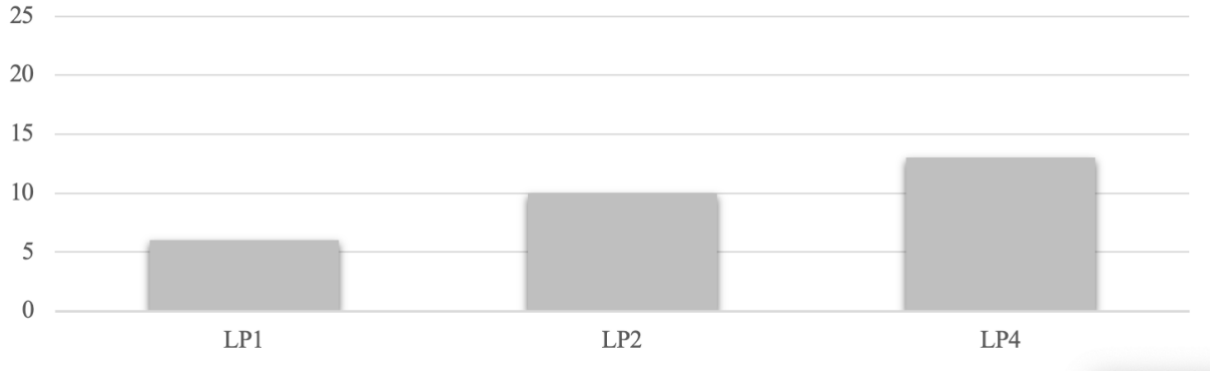


Figure 7.6 Number of codings for "Language Proficiency" (n=29)[50]

As Figure 7.6 shows, six of the 29 codings for "Language Proficiency" were attributed to the appropriate use of the target language (LP1) while ten codings refer to the appropriate use of the subject-specific language (LP2). The remaining thirteen codings belong to showing a level of language sensitivity (LP4).

The Code-Matrix Browser in Figure 7.7 visualises the distribution of the codings for the subcategories of "Language Proficiency" among different groups of interviewed teachers. The subcategories are listed in rows and the columns represent the different groups which are those

knowledge about language, a conscious understanding of how languages work, of how people learn them and use them" (https://lexically.net/ala/la_defined.htm, last access: 27 November 2020)

[50] Again, the scaling of this as well as the following bar charts was chosen with reference to the largest number of codings per subcategory (21 codings for CD1).

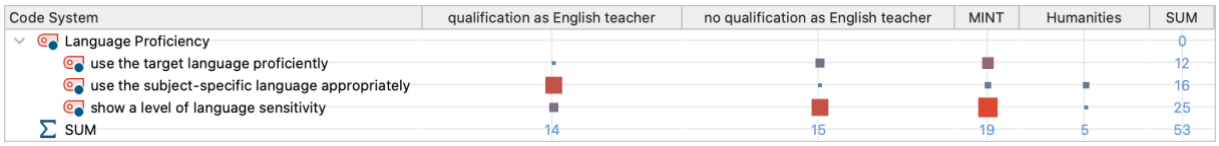


Figure 7.7 Code-Matrix Browser for "Language Proficiency"

CLIL teachers who are also qualified as English language teachers as opposed to those teachers who are not explicitly qualified as English language teachers. Furthermore, one column represents the teachers who teach MINT subjects in the CLIL programme and the last column represents those teachers who teach CLIL humanities[51]. Again, the squares represent the number of codings per group and subcategory and the larger a square, the more codings refer to the same subcategory of the respective group. The size of each square is calculated in relation to the number of codings for the subcategories of the same group of teachers and not in relation to the entire number of codings for "Language Proficiency". Hence, the square sizes of the different groups cannot be compared with each other but can only show the different foci of the respective groups.

For the group of CLIL teachers who are also qualified as English language teachers, the largest square can be found for the subcategory covering the appropriate use of the subject-specific language while the largest square for the CLIL teachers without explicit qualification as an English language teacher can be found with regard to showing a level of language sensitivity. A similar pattern becomes apparent with the groups of MINT teachers and humanities teachers. The level of language sensitivity forms the largest square with the MINT teachers while most codings of the humanities teachers refer to the appropriate use of the subject-specific language.

As a first point regarding "Course Development" (see Table 7.3), which consists of eight subcategories, teachers mention the necessity to create or adapt (authentic) material, as the use of existing teaching material is often difficult or simply impossible since teaching material does not exist for all subjects and topics (CD1). With the adaptation of existing, native speaker teaching material, teachers oftentimes experience a discrepancy in material being cognitively appropriate (i.e. the level of content complexity), yet linguistically too demanding for the intended use in class. Contrariwise, it is also sometimes the case that – vice versa – the language level is appropriate for the CLIL setting but the content does not address the topic in enough detail (e.g. I_09: 30). Therefore, teachers need to adapt these materials in order to use them in

[51] The teachers background as either English language teachers or teachers without English teaching qualification is not differentiated in these two columns as these groups partly overlap (see also chapter 7.4 for a more detailed explanation of this correlation).

CD1	create/adapt (authentic) material
CD2	create a reassuring learning environment
CD15	design student-centred tasks
CD16	analyse/evaluate existing material
CD17	select appropriate topics
CD18	be aware of heterogeneity
CD19	design preparatory phase for CLIL (in years 5/6)
CD20	maintain a balance between L1 and L2 use

Table 7.3 Practice-based subcategories for „Course Development"

their CLIL lessons, either by adapting the level of language complexity and adding scaffolding strategies or by raising the level of content complexity (e.g. I_11: 26, I_13: 54). With regard to using authentic material, such as newspaper articles or original sources, teachers again need to pay special attention to the level of language complexity and adapt the texts as well as implement respective scaffolding, if needed (e.g. I_04: 54). This aspect of creating new material and adapting existing material is what teachers emphasise as it is perceived as rather time-consuming (e.g. I_02: 24, I_03: 26).

The aspect of creating a reassuring learning environment (CD2) is mentioned by several teachers as they stress the importance of giving the students the feeling that they do not need to be afraid of using the foreign language or of making mistakes (e.g. I_01: 34, I_09: 42). Also, the use of the German language is allowed by some teachers, in contrast to exclusively sticking to the foreign language in explicit language learning contexts. Especially if students are on a lower level of language competence, teachers allow them to use the German language in order not to demotivate them (e.g. I_07: 48). Interestingly, especially the CLIL teachers who are not specifically trained as language teachers refer to this aspect of creating a reassuring learning environment and explain that students in their CLIL classes are less afraid of making mistakes as the teachers occasionally make mistakes themselves (e.g. I_08: 36).

The teachers also mention the necessity to develop student-centred tasks (CD15) as teachers in CLIL settings tend to think that the students do not possess the necessary language skills in order to perform tasks on their own. As a result, teachers often prefer to demonstrate the tasks themselves. Interestingly, the teachers are aware of this risk of teacher-centeredness

and therefore especially address this as an important aspect to consider when planning CLIL lessons (e.g. I_06: 44).

Apart from creating and adapting teaching material, teachers also explain that they need to analyse and evaluate existing material (CD16), mostly taken from two types of different sources. First of all, they refer to original, native-speaker teaching material from the target cultures. According to the teachers, however, these are often difficult to use in the German context as they follow different curricula and focus on different aspects than the ones that are required for the German context. Also, they sometimes follow different didactic approaches and are therefore hardly applicable (e.g. I_01: 26, I_13: 48). Regarding teaching material that German publishers published for the CLIL market, several teachers criticise that these materials are sometimes only translations of the German teaching material, hence rendering them inappropriate for the use in CLIL settings which demands for the integration of content and language learning (e.g. I_04: 40). As a consequence, when using existing teaching material for CLIL lessons, teachers need to be able to analyse and evaluate these with regard to their agreement with the German curriculum and to what extent they actually follow the interpretation of CLIL as an integrative form of teaching both the content and the language.

Concerning the aspect of selecting appropriate topics (CD17), teachers explain that not all topics are equally suitable for the CLIL approach and that they therefore need to carefully select appropriate topics. While for non-CLIL learning environments, this is done by the ministry publishing curricula which the teachers need to follow, hardly any ministerial curricula for CLIL programmes exist. Also, the German curricula mostly focus on the German context and feature examples from the German speaking community (e.g. the History curriculum focuses first and foremost on the German history). The CLIL approach, however, tries to implement the cultural perspective of the target countries and hence, dealing with examples from the target culture is required in CLIL lessons. Therefore, teachers explain that they sometimes ignore the German curriculum in order to do the CLIL approach justice but also report of having a bad conscience because they neglect the German curriculum (e.g. I_05: 46, I_11: 34).

With regard to being aware of heterogeneity (CD18), CLIL teachers assess this as an additional challenge in the CLIL context as they do not only need to pay attention to the students' heterogeneous levels of content knowledge but also need to take their different levels of foreign language competence into account (e.g. I_09: 38, I_10: 26). Hence, an additional level of heterogeneity is added with the CLIL context in contrast to non-CLIL learning environments, in which teachers, of course, also need to pay attention to heterogeneity.

Especially for the German form of CLIL implementation, teachers mention the design of the preparatory phase of CLIL in the fifth and sixth school year before the actual CLIL programme starts (CD19). As no official guidelines exist as to what needs to be implemented and covered during this time, teachers report of feeling left alone and therefore simply do what they consider appropriate. In some cases, teachers report that – together with their CLIL colleagues – they developed their individual curriculum for this preparatory phase in order to achieve a certain level of comparability, at least among one particular school (e.g. I_05: 56).

Finally, the aspect of using the school language and the target language in the CLIL setting (CD20) varies among the interviewed teachers. Most teachers are aware of the German guidelines of using the target language for roughly two thirds of the entire lessons and the school language for the remaining third. The way how this is applied, however, differs. Some teachers explain that they use one language for an entire topic and make their decision as to which language to use based on the complexity of the topic. If a topic is already complex content-wise, teachers tend to cover these topics in the L1 and use the L2 for the assumed easier topics (e.g. I_01: 32, I_03: 36). Other teachers, however, switch languages within a teaching unit or even within a single lesson. Then, the school language is used in order to summarise the key elements or to remove the language hurdle for complex aspects of a topic (e.g. I_05: 54, I_08: 46). In addition, teachers explain that the use of the school or the target language also depends on the students' age and language level. Accordingly, the older the students are and the more proficient they are in using the target language, the smaller – often also less than the required third of the overall teaching time – is the amount of using the school language (e.g. I_01: 30).

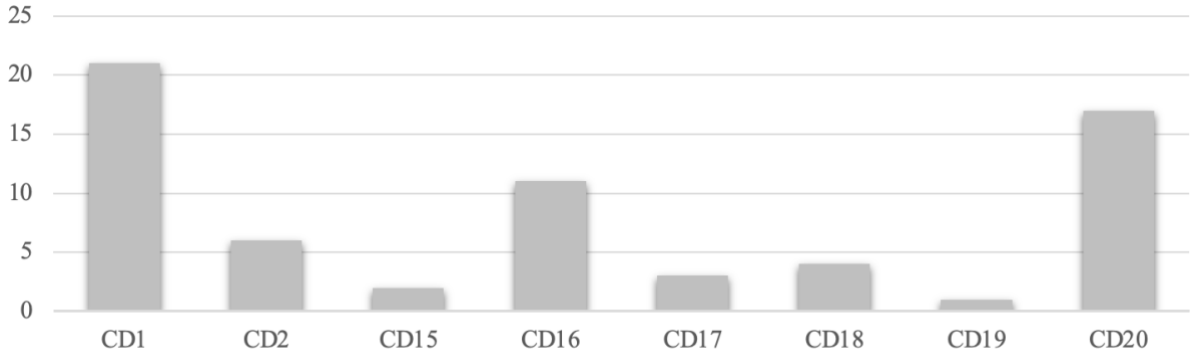
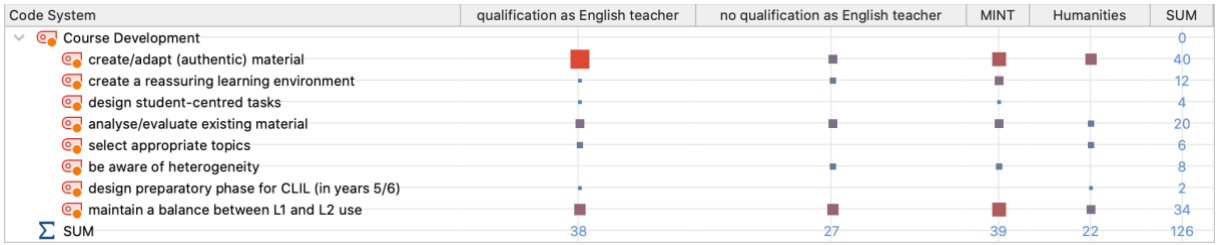


Figure 7.8 Number of codings for "Course Development" (n=65)

Out of the eight different subcategories for "Course Development" (see Figure 7.8), the creation and adaptation of (authentic) material (CD1) was coded 21 times, which makes this the subcategory with most codings. This is followed by maintaining a balance between the use of the L1 and the L2 (CD20) with 17 codings. Next, another eleven codings are attributed to the analysis and evaluation of existing teaching material (CD16). The creation of a reassuring

learning environment (CD2) is addressed in six codings and the awareness of heterogeneity (CD18) is mentioned four times. Three codings refer to the selection of appropriate topics (CD17) and two more codings refer to the design of student-centred tasks (CD15). Finally, only one coding is attributed to the design of the preparatory phase for CLIL (CD19).



Code System	qualification as English teacher	no qualification as English teacher	MINT	Humanities	SUM
Course Development					0
create/adapt (authentic) material					40
create a reassuring learning environment					12
design student-centred tasks					4
analyse/evaluate existing material					20
select appropriate topics					6
be aware of heterogeneity					8
design preparatory phase for CLIL (in years 5/6)					2
maintain a balance between L1 and L2 use					34
SUM	38	27	39	22	126

Figure 7.9 Code-Matrix Browser for "Course Development"

With regard to the distribution of the codings among the different groups of teachers (see Figure 7.9), one can identify the largest square for the qualified English language teachers referring to the creation and adaptation of (authentic) teaching material while smaller squares can be found for analysing and evaluating existing teaching material and maintaining a balance between the use of the L1 and the L2. Opposed to that, the CLIL teachers without a specific English teaching qualification had most codings referring to maintaining a balance between the L1 and the L2 and a smaller square regarding the creation and adaption of (authentic) teaching material.

The comparison between the subject groups shows the largest square for the MINT teachers with regard to maintaining the balance between the L1 and the L2 while the creation and adaptation of teaching material is coded almost as often. Smaller squares and hence fewer codings can be found for the analysis and evaluation of existing teaching material and the creation of a reassuring learning environment. With regard to the humanities teachers, the largest square refers to creating and adapting (authentic) teaching material while a smaller square can be found for maintaining a balance between the L1 and the L2.

Regarding the "Integration of Content and Language", consisting of five subcategories (see Table 7.4), most teachers emphasise that they try to avoid overtaxing the students through the additional language (ICL6). Therefore, they sometimes decide to use the school language to discuss important or complex topics as – at these times – they regard the foreign language as an additional cognitive burden for the students (e.g. I_01: 32, I_05: 54). One teacher provides the example of a class test set on a moderate level of content complexity but still the students' overall performance in this class test was weak. The teacher explained this with the relatively high language skills which were necessary in order to perform well in the class test. As a result, the teacher adapted the assessment scheme as he or she did not want the students to suffer from the additional complexity of performing the assessment in the foreign language (I_12: 46). Still,

	**ICL6**	avoid overtaxation through the additional language
	ICL7	include perspective of language and subject teaching
	ICL8	use the language as opportunity and not hurdle
	ICL9	focus on content teaching
	ICL10	integrate phases of (subject-specific) language teaching

Table 7.4 Practice-based subcategories for „Integration of Content and Language"

as the aim of CLIL is to increase the students' foreign language competence, the teachers also mention the importance to accustom students to the foreign language. Some teachers, however, also raise doubts about the general possibility to integrate content and language learning as they explain that students' general competences are decreasing and teaching them in CLIL programmes might be too demanding for some of them (e.g. I_11: 40).

With regard to the difficulty of integrating the content and the language perspective (ICL7), some teachers also report that they particularly struggle with integrating both didactic approaches and therefore decided to use the foreign language "only" as a working language and hence do not regard both components – content and language – as equal. Still, these teachers also report about having a bad conscience as they do not include the language the way it could or should be (e.g. I_12: 34). What is more, especially the CLIL teachers without a language teaching qualification see the qualified language teachers as having an advantage with regard to this content and language integration as they are at least familiar with both didactic and methodological perspectives (e.g. I_13: 44). In this regard, some teachers also emphasise that the additional language should be seen as an opportunity (ICL8, e.g. I_08: 30).

As for the balance between content and language learning, some teachers emphasise that their focus is on content teaching (ICL9) and they even regard a too strong focus on active language learning as a risk (e.g. I_06: 40). In contrast to that, some teachers mention that they explicitly include active language work despite primarily focusing on content learning (ICL10). This inclusion of active language work, however, is often limited to the subject-specific language and not to general language work, for example by working with vocabulary lists or including phases in which the subject-specific key vocabulary is discussed and practiced (e.g. I_01: 24, I_13: 44). As a consequence of focusing less on language than on content, some

teachers report about conflicts with English language teachers who are not involved in the CLIL programme and who criticise that the students use the foreign language without active language work and feedback (e.g. I_09: 44).

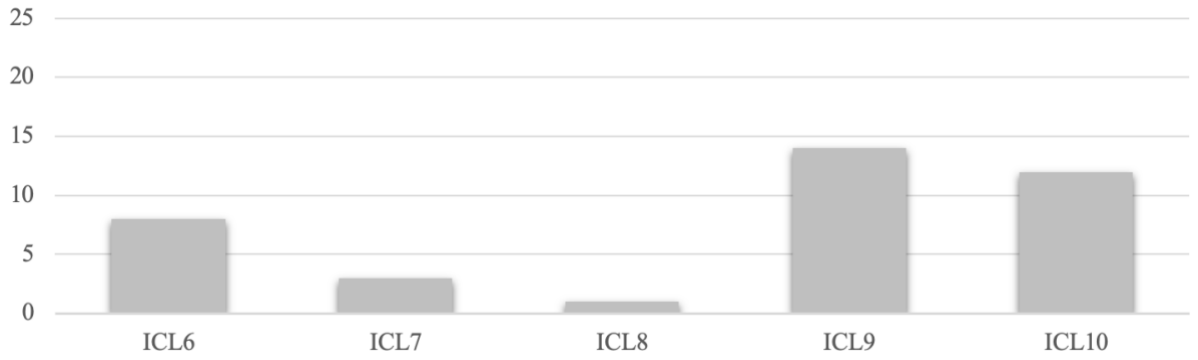


Figure 7.10 Number of codings for "Integration of Content and Language" (n=38)

Regarding the "Integration of Content and Language" (see Figure 7.10), 14 of the 38 codings refer to focusing on content teaching (ICL9) while another twelve codings are attributed to the explicit integration of phases of (subject-specific) language teaching (ICL10). Another eight codings were assigned to avoiding overtaxation through the additional language (ICL6) and three more codings refer to including the perspective of language and subject teaching (ICL7). Finally, one coding covers the use of the language as an opportunity and not treating it as a hurdle (ICL8).

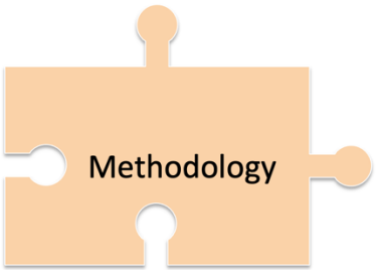
Code System	qualification as English teacher	no qualification as English teacher	MINT	Humanities	SUM
Integration of Content and Language					0
avoid overtaxation through the additional language					16
include perspective of language and subject teaching					4
use the language as opportuntity and not hurdle					2
focus on content teaching					25
integrate phases of (subject-specific) language teachi					21
SUM	23	15	21	9	68

Figure 7.11 Code-Matrix Browser for "Integration of Content and Language"

Concerning the distribution among the different groups of teachers, Figure 7.11 shows that most codings of the qualified English teachers refer to integrating phases of explicit (subject-specific) language teaching and the second largest square refers to keeping a focus on content teaching. Regarding the CLIL teachers who are not qualified as English language teachers, the largest square and hence most codings refer to the focus on content-teaching with the integration of phases of (subject-specific) language teaching as the subcategory with the second largest square.

Considering the different CLIL subjects, the MINT teachers have most codings with regard to the focus on content teaching, while the integration of phases of (subject-specific) language teaching has the second largest square. This is followed by a slightly smaller square for avoiding overtaxation through the additional language. Regarding the humanities teachers,

the same three categories as with the MINT teachers are mentioned but all three subcategories have received the same number of codings which is why they receive comparably small squares in the Code-Matrix Browser.



M1	use code-switching
M2	use appropriate media techniques
M3	use scaffolding techniques

Table 7.5 Practice-based subcategories for „Methodology"

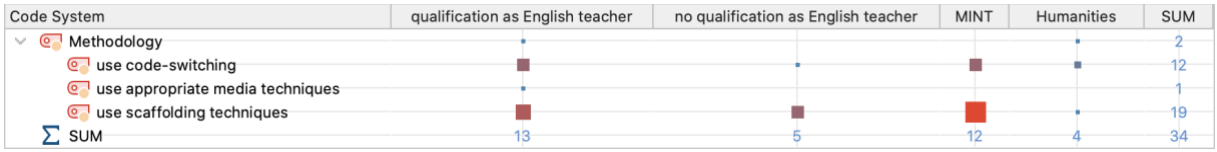
For "Methodology", three subcategories exist (see Table 7.5) Here, the use of code-switching is addressed by several teachers (M1). They explain that they especially include the subject-specific language in the school language as well to ensure that students are also able to discuss the respective topics outside of school. Also, teachers employ code-switching in order not to demotivate the students as they rather allow a student to change to the school language instead of not participating in the discourse at all. Still, the teachers explain further that the decision who is allowed to code-switch also depends on the students and their level of language proficiency: If a student is simply not able to explain something in the foreign language, the teacher allows code-switching, but if the student is too lazy to use the foreign language, code-switching is not allowed (e.g. I_07: 48, I_10: 32). In comparison to regular English-language teaching, some teachers also report that they are more relaxed to use code-switching in the CLIL setting as the focus is less on explicit language teaching (e.g. I_03: 40).

The use of appropriate media techniques is addressed with code M2. Here, one teacher explains that this is important for non-CLIL teaching as well but gains additional importance through the CLIL approach as using different forms of media enables the teacher to visualise complex topics and support students in understanding the content (I_13: 56).

Regarding scaffolding (M3), the teachers especially mention that they adapt original texts and add vocabulary help as well as shorten these original texts. When creating CLIL materials, teachers also include scaffolding, for example, by including help boxes which provide the students with language help and support them in discussing a topic in the foreign language or in creating a poster which they are later on required to present to the rest of the class (e.g. I_06: 44, I_08: 34, I_09: 38).

Figure 7.12 Number of Codings for "Methodology" (n=17)

The majority of codings in the category of "Methodology" (see Figure 7.12) refers to the use of scaffolding techniques (M3). This is followed by another six codings which are attributed to the use of code-switching (M1). Finally, one code refers to the appropriate use of media techniques (M2).



Code System	qualification as English teacher	no qualification as English teacher	MINT	Humanities	SUM
Methodology					2
use code-switching					12
use appropriate media techniques					1
use scaffolding techniques					19
SUM	13	5	12	4	34

Figure 7.13 Code-Matrix Browser for "Methodology"

The distribution among the different groups of interviewed teachers (see Figure 7.13) forms the largest square for the group of the qualified language teachers for the subcategory "use of scaffolding techniques" followed by a smaller square for the use of code-switching. The non-language teachers' largest square also refers to the use of scaffolding techniques while the use of code-switching only has a small square and hence a small number of codings. As for the different CLIL subjects, the MINT teachers mention the use of scaffolding techniques most often while the humanities teachers have the largest square for the use of code-switching.

AE1	decide if errors are language- or content-driven
AE7	create tests that are adapted to the CLIL context
AE8	grade subject-specific language
AE9	focus grading on content achievements

Table 7.6 Practice-based subcategories for „Assessment and Evaluation"

Regarding "Assessment and Evaluation", which consists of four main categories (see Table 7.6), the teachers explain that it is challenging to decide if errors are language- or content-driven

(AE1). Accordingly, the teachers mention that it is often not possible to determine why a student did not answer a certain question as this could either be a consequence of lacking language competences (either the student did not understand the task or was not able to express his or her answer in the foreign language) or of lacking content competences (the student understood the task language-wise but was not able to process the task content-wise) (e.g. I_11: 36). As an example from the field of Mathematics, which was also already mentioned with regard to ICL6, one teacher refers to a class test which she considered relatively easy on the content-level and was therefore surprised when she realised that the students struggled with the class test massively. Hence, the teacher explains that she tried to find out what the reason for these different perceptions was and assumes that the students struggled on the language-level as the test included a comparably large amount of language input (e.g. I_12: 48).

With regard to creating tests adapted to the CLIL context (AE7), teachers explain that they generally design assessments in English but allow students to use German terms or words if they cannot think of the English equivalents (e.g. I_10: 36). Though the KMK guidelines require teachers to focus grading on content achievements, teachers also explain that they grade subject-specific language (AE8), implying the correct spelling and the appropriate use in context. The students' subject-specific language competence is assessed both via explicit vocabulary tests but also implicitly in other forms of assessment (e.g. I_04: 58, I_09: 42). Notwithstanding, the teachers especially focus on the KMK requirements and focus grading on content achievements (AE9) and only mark language mistakes in written assignments without grading them. They add that language only influences the grade if the students' answers are not comprehensible due to severe language mistakes and compare this to the grading scheme in non-CLIL settings in which language is only graded if the students make too many language mistakes (e.g. I_04: 58, I_05: 48-52). While this grading scheme especially applies to written assignments, the teachers explain that exclusively focusing on the content is especially challenging during oral exams as teachers tend to be influenced by the students' pronunciation

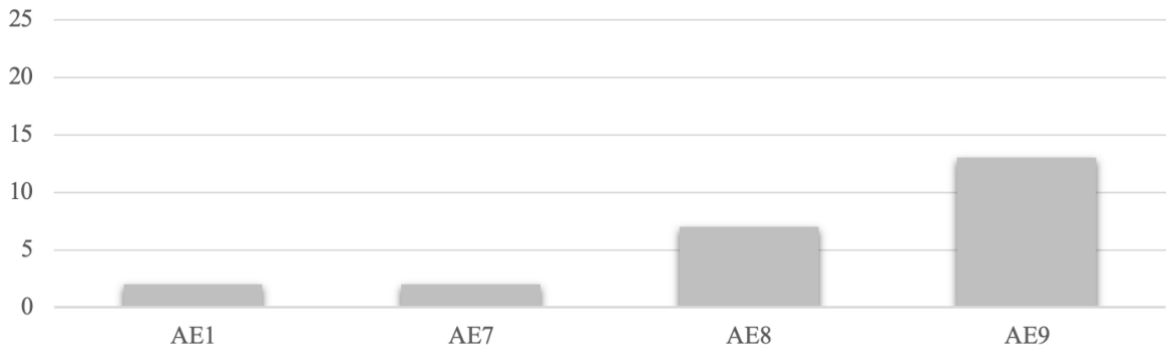


Figure 7.14 Number of codings for "Assessment and Evaluation" (n=24)

which they do not want to include in grading but sometimes is difficult to ignore (e.g. I_04: 60). The teachers further explain that feedback on oral communication is provided in dependence on their students' overall language skills. Accordingly, a student with weak language skills might not be corrected language-wise as much in order not to be demotivated (e.g. I_07: 48).

Figure 7.14 shows that thirteen of the codings for "Assessment and Evaluation" are attributed to the focus of grading on the content achievements (AE9), which hence represents more than half of the codings for this main category. This is followed by another seven codings for grading the subject-specific language (AE8). Finally, two codings each refer to deciding whether errors are language- or content-driven (AE1) and the creation of tests which are adapted to the CLIL context (AE7).

Code System	qualification as English teacher	no qualification as English teacher	MINT	Humanities	SUM
Assessment and Evaluation					2
decide if errors are language- or content-driven					4
create tests that are adapted to the CLIL context					3
grade subject-specific language					14
focus grading on content achievements					26
SUM	16	9	12	12	49

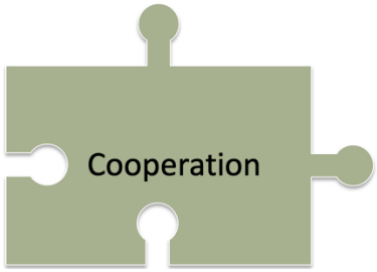
Figure 7.15 Code-Matrix Browser for "Assessment and Evaluation"

Furthermore, Figure 7.15 again shows the distribution of the codings among the different groups of interviewed teachers. Both the qualified English language teachers and the CLIL teachers without an English language teaching qualification have the largest square for the focus of grading on the content achievements. While the teachers without a specific language teaching qualification have no other large square, though, the qualified English language teachers have another relatively large square for the subcategory "grading the subject-specific language". A similar pattern can be found for the differences between the MINT and the humanities teachers. The MINT teachers only have one large square for referring to the focus of grading on the content achievements while the humanities teachers also have a large square for focusing on the content achievements but an equally sized square refers to grading the subject-specific language.

I1	develop cultural awareness and ICC

Table 7.7 Practice-based subcategories for „Interculturality"

Only one teacher touches upon the topic of "Interculturality" (see Table 7.7), which is mentioned in relation to material development (I1). The teacher explains that not enough teaching material for CLIL exists and she therefore needs to create teaching materials herself. Though, of course, she explicates that this is more time-consuming, she also argues that this allows her to use authentic sources or texts from the target culture which then also include the respective cultural perspective. This cultural perspective, which she considers relevant for the CLIL concept, is hard to implement if teachers only refer to teaching material translated from the L1 to the L2. Though this lack of appropriate teaching material is often considered as problematic since it requires CLIL teachers to invest more time in developing the respective teaching material, this teacher also points out the positive aspect of individually creating new CLIL teaching material. According to her, this allows to include a stronger cultural awareness in CLIL teaching. (I_04: 50, I_04: 52). In total, similar utterances occurred twice, and respectively, this code was also used twice.



C1	... with school authorities
C4	... with the English teacher
C5	... with other CLIL colleagues

Table 7.8 Practice-based subcategories for „Cooperation"

Concerning "Cooperation", consisting of three subcateories (see Table 7.8), teachers report about cooperating with school authorities (C1), especially when establishing a CLIL programme at a school which demands teachers to work with the particular school administration but also with the required ministry to permit the implementation of the programme (I_07: 18). Also, teachers report about working together with the ministry in order to develop or adapt curricula for the different CLIL content subjects (I_05: 40).

The teachers further explain that it is necessary to work together with the students' English teacher (C4) as the CLIL teacher is often not the students' English language teacher. Hence, the CLIL and the English teacher need to cooperate and discuss the necessary language skills the students need to participate in the CLIL lessons so that the English language teacher can address these language skills in the regular language lessons (e.g. I_05: 14).

Apart from that, teachers also report about the necessity to cooperate with the other CLIL colleagues (C5), for example to discuss general issues of the CLIL programme with all colleagues or to share input from workshops or teacher education courses (e.g. I_13: 64). The

teachers especially work together with those CLIL colleagues who teach the same content subjects to share individually designed materials or lesson plans. This form of cooperation also goes beyond the particular school the teachers work at and includes networks which the teachers founded as a result of conferences or workshops (e.g. I_01: 25-26, I_04: 30).

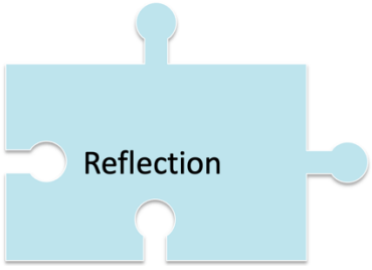
Figure 7.16 Number of codings for "Cooperation" (n=18)

Regarding "Cooperation" (see Figure 7.16), a total number of twelve codings refers to the cooperation with CLIL colleagues (C5), forming the clear majority of codings for this main category. For the cooperation with school authorities (C1) and with the English language teacher (C4), two codings were found each.

Code System	qualification as English teacher	no qualification as English teacher	MINT	Humanities	SUM
Cooperation					0
... with school authorities					4
... with the English teacher					4
... with other CLIL colleagues					23
SUM	12	4	7	8	31

Figure 7.17 Code-Matrix Browser for "Cooperation"

Concerning the distribution among the different groups (see Figure 7.17), the largest square for the qualified English language teachers refers to the cooperation with other CLIL colleagues. In the case of the CLIL teachers without an explicit English language teaching qualification, only a small number of codings was found for the entire main category of "Cooperation", which is why the only square for cooperating with other CLIL colleagues is comparably small. Regarding the different subjects, both the MINT and the humanities teachers show the largest square and hence the largest number of codings for cooperating with other CLIL colleagues.



R6	reflect upon the CLIL approach

Table 7.9 Practice-based subcategories for „Reflection"

The aspect of "Reflection" (see Table 7.9) is hardly mentioned by the CLIL teachers as they only explain that it is necessary to reflect upon the CLIL approach from different perspectives (R6, I_09: 26). This code was only used once.

Main Categories

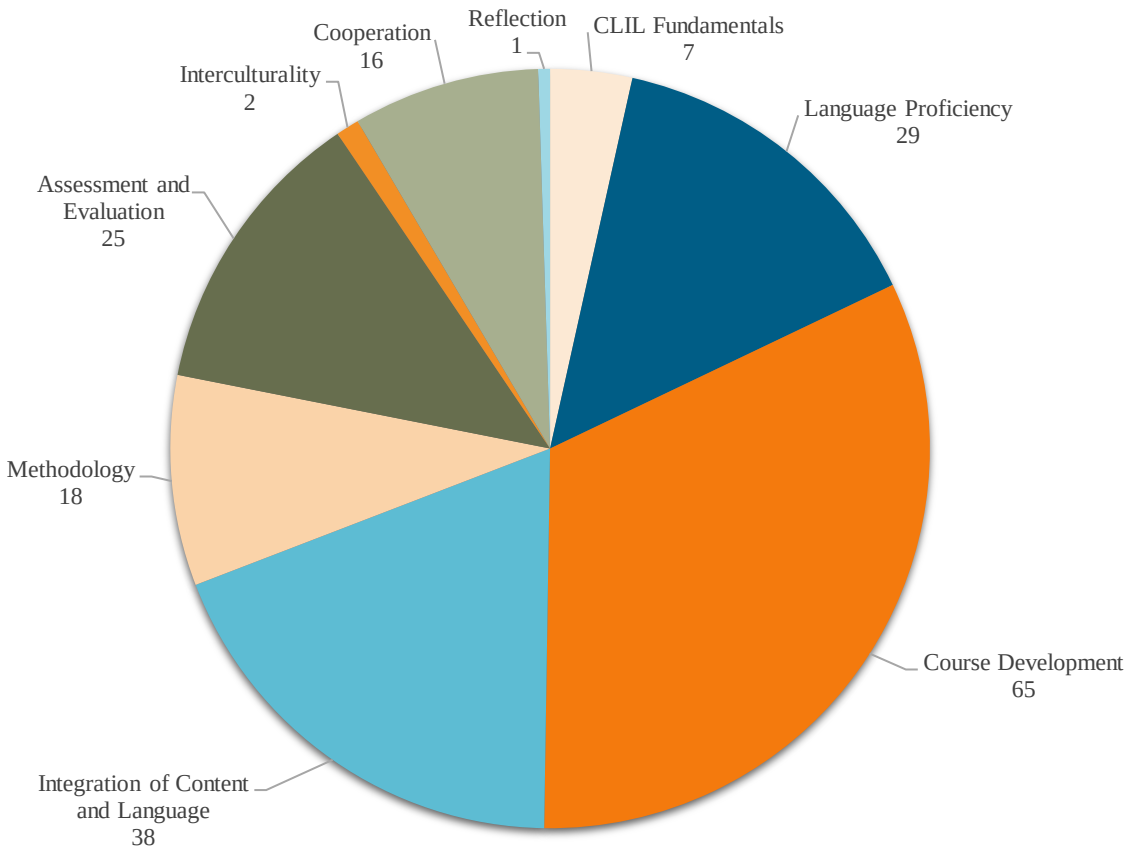


Figure 7.18 Number of codings per main category (n=201)

On the level of the main categories, Figure 7.18 shows the distribution of the 201 codings of the thirteen interviews. Accordingly, "Course Development" has 65 codings, which represents almost a third of the total number of codings and hence renders it the main category with most codings. This is followed by the "Integration of Content and Language" which has 38 codings, representing almost 20 percent. With 35 codings, equalling roughly 15 percent, "Language Proficiency" is the third most frequent main category. 25 out of the total number of codings or roughly 12% respectively are attributed to "Assessment and Evaluation". Another 18 codings refer to "Methodology", which represents almost ten percent. Concerning "Cooperation", 16 codings were found, corresponding to a total of eight percent of the total number of codings.

The two main categories with the fewest codings are “Interculturality” and “Reflection”, which only have one or two codings, representing less than one percent.

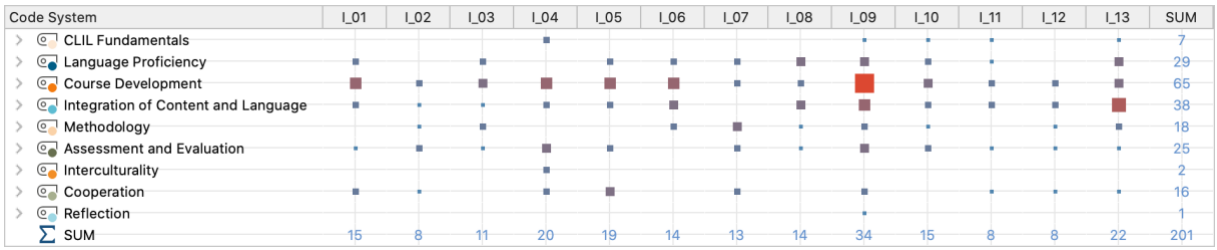


Figure 7.19 Code-Matrix Browser for main categories (per interview)

In order to allow a comparison between the different interviews, the Code-Matrix Browser in Figure 7.19 shows the distribution of codings for all interviews. Similar to Figure 6.12, the main categories are visualised in rows and the interviews form a column each. The far right column shows the number of codings per main category (which is identical to the numbers in Figure 7.18) and the bottom row states the number of codings per interview. Again, the squares represent the number of codings per interview and main category and the larger a square, the more codings refer to the respective main category. The size of the square is again calculated in relation to the number of codings of the respective interview and not in relation to the total number of codings. Hence, the square sizes of the different interviews cannot be compared with each other but only show the foci of the individual interviews.

For almost all interviews (apart from I_07, I_08 and I_13), the largest square and hence the largest number of codings refers to “Course Development”, which matches the overall majority of codings for this main category (as already displayed in Figure 7.18). For the remaining three interviews, the largest squares are found for “Methodology” (I_07), “Language Proficiency” (I_08) and “Integration of Content and Language” (I_13). In the case of I_11, a second square with the same size as the one for “Course Development” is found for “Integration of Content and Language”. Some smaller squares are distributed among the remaining main categories and are mostly found for “Language Proficiency”, “Integration of Content and Language”, “Methodology” and “Assessment and Evaluation”. The other main categories (“CLIL Fundamentals”, “Interculturality”, “Cooperation” and “Reflection”) only have small squares, if at all.

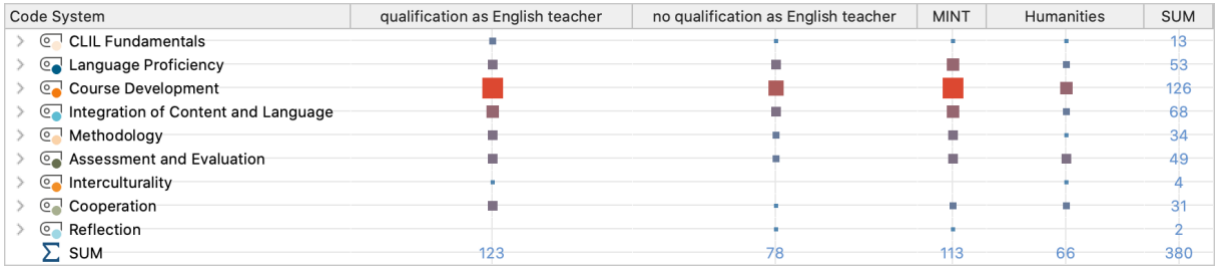


Figure 7.20 Code-Matrix Browser for main categories (per teacher group)

Regarding the different groups of interviewed CLIL teachers (see Figure 7.20), the English language teachers have the largest square referring to "Course Development", which is followed by smaller squares for the "Integration of Content and Language" as well as "Language Proficiency". The fourth largest square refers to "Assessment and Evaluation". With the non-language teachers, the largest square can again be found for "Course Development", which is followed by "Language Proficiency" and the "Integration of Content and Language". Correspondingly, the distribution of codings per main category among qualified language teachers and non-language teachers is rather similar. Concerning the different CLIL subjects, slight differences can be found, though. Again, the largest square of the MINT teachers refers to "Course Development", followed by the "Integration of Content and Language" as well as "Language Proficiency". Similarly, the humanities teachers have most codings and hence the largest square for "Course Development" but this is followed by "Assessment and Evaluation" and the "Integration of Content and Language". "Language Proficiency" only has a rather small square and thus only a small number of codings.

7.4. Discussion of Results

Taking the frequency of the different main categories as an indicator for their importance for CLIL teacher education, a clear hierarchy can be observed. Similar to the theoretical assumptions concerning CLIL teacher competences (see chapter 6), "Course Development" has by far the most codings and can hence be considered to be most important. Also, this is the main category with the largest number of subcategories, which supports the conclusion that this is the most important main category. The "Integration of Content and Language", which has received roughly one fifth of the overall number of codings, can hence be regarded as being second most important. Together with "Course Development", the codings for these two main categories amount to more than half of the total number of codings (51.2%). Evidently, these two aspects are fundamental categories of CLIL teacher competences as the integration of content and language learning is closely connected to course development. With portions from eight to 14 percent of the total number of codings, "Language Proficiency" (14%), "Assessment and Evaluation" (12%), "Methodology" (9%) and "Cooperation" (8%) range at a similar amount of codings and can therefore be considered as equally important. The rather small importance ascribed to "Methodology", though, seems surprising as different methodological approaches can be assumed to be employed through the integration of content and language learning. It rather indicates that the CLIL teachers do not seem to use other methodological approaches in their CLIL programmes. With less than a five percent share of the codings, "CLIL

Fundamentals" (3%), "Interculturality" (1%) and "Reflection" (0.5%) appear to be perceived as less important. Again, especially the lacking focus on "Interculturality" is surprising with regard to *culture* being one of the 4Cs of CLIL (see chapter 2.1) and the initial goals of bilingual education in Germany, which required a stronger understanding of the French culture (see chapter 2.2).

Concerning potential differences between individual CLIL teachers or groups of CLIL teachers as they are displayed in the Code-Matrix Browsers (see Figure 7.19 and Figure 7.20), only slight differences between the individual CLIL teachers can be observed as the majority of teachers consider "Course Development" to be most important, which is mostly followed by "Language Proficiency", "Integration of Content and Language" and "Assessment and Evaluation". With regard to potential differences between trained English language teachers and those teachers who teach in CLIL programmes without being especially trained as language teachers, hardly any differences can be observed either. Between the group of CLIL MINT and CLIL humanities teachers, though, slight differences are visible as both groups agree that "Course Development" is most important and also consider the "Integration of Content and Language" as important. However, while the humanities teachers also show a clear focus on "Assessment and Evaluation", the MINT teachers rather focus on "Language Proficiency". One possible explanation could be that assessment and evaluation is more challenging in the humanities since these subjects intensively rely on mostly long and complex texts and the integration of content and language learning especially adds challenges to designing and conducting assessment. This is further intensified since CLIL teachers are not supposed to grade language achievements in German CLIL programmes. The stronger focus of the MINT teachers could, on the one hand, hint at a greater importance of the CLIL teachers' (subject-specific) language competence in the MINT subjects. On the other hand, though, this might also be explained by the simple fact that the participating CLIL teachers who are not qualified as English language teachers are all MINT teachers and hence do not take the CLIL teachers' foreign language competence for granted as might be the case for the qualified English language teachers. These two groups of MINT teachers and teachers without an English language teaching qualification, however, are not entirely concurring, i.e. some of the MINT teachers also possessed an English language teaching qualification. Therefore, this observation cannot be fully explained without further research.

Main categories

With regard to the different main categories, the frequencies of the individual subcategories also provide interesting insights. Starting with "CLIL Fundamentals", which only has one subcategory with seven codings, leads to the assumption that being able to define the CLIL approach is not regarded as being particularly important for teaching in the CLIL programme (CLIL-F1). This, however, seems rather surprising as those teachers mentioning this aspect especially focus on being aware of the differences between the various forms of CLIL and how they differ to the KMK's definition of bilingual teaching. As one teacher also openly explains that she was not always sure that she understood the differences, it may seem as if some teachers are not entirely aware that there are differences and whether it is important to be able to apply the different understandings of the CLIL approach to the individual settings.

With regard to "Language Proficiency", the differing opinions concerning the required level of the teachers' general foreign language competence (LP1) is especially worth noticing. Accordingly, some teachers, in particular those who are not trained as language teachers, allege that it can still be considered appropriate if the CLIL teachers make frequent language mistakes themselves. As CLIL teachers should perceive themselves as language role models, this attitude is highly questionable. While there seems to be disagreement regarding the level of general foreign language competence, basically all teachers agree that the subject-specific language competence needs to be high and explicitly trained (LP2). They also show awareness that this subject-specific language does not only include the specific key terms but also grammatical structures and linguistic phenomena. Still, as all teachers consider this an important competence for CLIL teachers, several teachers also explain that their proficiency in the subject-specific language still needs improvement. With regard to the level of language sensitivity (LP4), it is interesting to see that this aspect is coded most often and can therefore be considered most important for CLIL teachers. As especially the non-language teachers address this language sensitivity and explain that they do not consider themselves to be sufficiently language sensitive, one might assume that this is an element of special importance. Contrasting the MINT and the humanities teachers with the MINT teachers focusing more on language sensitivity and the humanities teachers focusing more on the level of subject-specific language competence seems a bit surprising at first glance as, on the one hand, one might assume that the MINT subjects also require a high level of subject-specific language competence, but this distribution might also be explained by the fact that the MINT teachers are also primarily the non-language teachers and – as already explained – these teachers especially referred to the necessity of being language sensitive. The humanities teachers, on the other hand, are all also qualified as English

language teachers and can therefore be expected to possess the required level of language sensitivity and explicitly focus on this one element of language proficiency, which was not included in their general language teacher education – namely the subject-specific language. Again, as the two groups of the MINT teachers and the non-language teachers overlap only partly, no definite conclusions can be derived without further research.

Moving on to "Course Development", especially the two subcategories covering material evaluation (CD16) and creation (CD1) seem to be of importance as roughly half of the codings are attributed to these two subcategories. According to the frequency of codings, this aspect is followed by maintaining a balance between the L1 and the L2 (CD20). Though this seems to be of importance, it is worth noticing that the interviewed teachers employ different forms of realisation to this combination of the school language and the target language. Whereas some switch languages within a single lesson or a teaching unit, while others only use one language for a longer period of time. The teachers' different opinions on the role of the L1 and the L2 also matches the different types of CLIL teachers which Diehr (2012) identified and which were discussed in chapter 2.1. It is also interesting to see that most teachers argue to use the school language especially for those topics which they consider challenging and hence using the students' L1 is supposed to reduce the additional burden. The remaining subcategories, being the selection of appropriate topics (CD17), the awareness of heterogeneity (CD18), the development of the preparatory phase in grade five and six (CD19) as well as the creation of a reassuring learning environment (CD2), received only a rather small number of codings and are hence considered less important by the interviewed CLIL teachers. In the case of heterogeneity and its occurrence in all teaching situations, within and outside of the CLIL context, the label of being a CLIL-specific aspect does not seem to be appropriate at first glance. The teachers' argumentation, though, that the integration of content and language learning adds an additional form of heterogeneity as the teachers not only need to consider the students' different learning backgrounds from the content perspective but also from the perspective of the foreign language, seems comprehensible. The remaining subcategory which requires teachers to design student-centred tasks (CD15) also received few codings. Keeping Viebrock (2010; 2012) in mind, this is rather surprising as she especially argues that CLIL teachers run the risk of being too teacher-centred, explaining that this as a consequence of the conflicting mindsets of CLIL teachers. With regard to the frequency of codings for the different groups of teachers, it seems as if the qualified English language teachers focus more on the evaluation and creation of appropriate teaching material while the CLIL teachers who are not specifically qualified as English language teachers focus more on the use of the L1 in the CLIL classroom. This smaller focus

of the language teachers on the integration and use of the L1 might be explained by their background as language teachers since in regular English language lessons, teachers often try to avoid using the students' L1 and hence they might transfer this approach to the CLIL setting as well. Concerning the creation of a reassuring learning environment, it is also interesting to see how the non-language teachers argue that their students are less afraid of using the foreign language in the CLIL settings as their teachers make frequent mistakes themselves. Though it should certainly always be the aim to create a reassuring learning environment and encourage the students to use the foreign language, it is nevertheless questionable if the teachers' language mistakes are the appropriate encouragement. Also, the aim of the CLIL programme needs to remain in focus – if it is on improving the students' fluency, it might be justifiable to allow language mistakes but if the students' accuracy is in focus, this is rather counterproductive. The greater focus of the MINT teachers on maintaining a balance between the L1 and the L2 might again be explained by the simple fact that the non-language teachers are all MINT teachers and the results might be influenced by the overlap of these two groups.

Referring to the "Integration of Content and Language", especially the subcategory with most codes for the teachers' focus on content teaching (ICL9) can be regarded as most important. Considering the KMK's interpretation of bilingual education, which emphasises content teaching over active language teaching, the teachers' strong focus on the respective subcategory is hardly surprising as it mirrors the German teaching guidelines (see chapter 2.3). Though active language work is not required by the German guidelines, the subcategory with the second most codings is concerned with integrating phases of active (subject-specific) language teaching (ICL10). With regard to the debate as to what the aim of CLIL is, it is also interesting to see that the CLIL teachers feel they need to justify their focus on content teaching as the pure language teachers, who are not part of the CLIL programme, criticise the lacking focus on active language work. As the teachers' focus is mainly on teaching the content, it is also not surprising that the subcategory which refers to including the perspectives of the content and the language subject was coded only a few times (ICL7). Also, the teachers who did address this inclusion of both the content and the language perspective report about the difficulties they have with this. Rather on the contrary, more codings exist for the subcategory which addresses the teachers' concerns about overtaxing the students with the additional language (ICL6). Considering the distribution of codings among the different groups, the non-language teachers seem to put a stronger emphasis on teaching the content subject than the qualified English language teachers do, who focus more on including phases of (subject-specific) language teaching. A manifest conclusion at this point, is that the lack of a language teaching

qualification of some of the teachers results in their greater focus on the content perspective as they are simply not used to focusing on and including the language perspective.

Concerning "Methodology", most codings refer to the use of scaffolding techniques (M3). The majority of codings, though, refers to employing language scaffolding techniques, addressing hardly any scaffolding techniques which support content learning or the development of learning skills. Second most codings are attributed to using code-switching (M1), which can be seen as equally relevant for regular foreign language teaching and learning. The interviewed CLIL teachers, however, argue that code-switching receives an increased importance through CLIL as teachers, for example, also need to ensure that students are familiar with key vocabulary in the school language. The appropriate use of media techniques (M2) is another aspect of arguable specificity in the CLIL context. Though, the only teacher who addresses this aspect, explicitly explains that the appropriate use of media gains importance in CLIL programmes as it can function to employ different forms of visualising the content and by that support student understanding. A closer look at the distribution of codings reveals that especially the non-language teachers focus less on the use of code-switching. This contrast to qualified English teachers may arise from the increased awareness for code-switching among this group which teaches regular English lessons and applies their knowledge to CLIL lessons as well. Also, the distribution of codings shows a greater focus of the MINT teachers on using scaffolding techniques while the humanities teachers have more codings referring to the use of code-switching. On the one hand, using scaffolding techniques may be regarded to be of greater importance in MINT subjects but on the other hand, this distribution could again be explained by the MINT teachers also being the non-language teachers.

Moving on to "Assessment and Evaluation", the strong focus on content achievements is clearly visible as more than half of the codings refer to the focus on grading of the students' content achievements (AE9). Again, this only mirrors the German guidelines, which instruct that the students' language performance should only influence the grade if the content is no longer comprehensible (see also chapter 2.3). Still, even though the frequency of codings referring to this code is not surprising, it is worth noticing that some teachers explain that sticking to this guideline and "ignoring" language mistakes is often difficult. Hence, most teachers also explain that they actually include the correct use of the subject-specific language (AE8) in their grading schemes. Mirroring Gnutzmann's (2015) argumentation about the subject-specific language as a component of the content competences (see also chapter 4.1), the CLIL-teachers argue that the correct use of key terms is also part of the content-specific skills and should therefore be included in the grading scheme. With regard to the remaining

subcategories which focus on the creation of appropriate tests (AE7) and deciding if errors are language- or content-driven (AE1), only a small number of codings is attributed to these aspects. As designing CLIL assessment which follows the KMK guidelines but still fulfils the criteria of reliability, objectivity and validity must be seen as challenging, this small number of codings is surprising. This difficulty of creating appropriate CLIL assessment which still follows the KMK guidelines derives from the KMK requirement not to assess language while at the same time conducting large parts of CLIL assessment in the foreign language. Hence, students with a comparable low foreign language competence might struggle with understanding or answering to certain tasks in the foreign language. In consequence, these students are likely to receive worse grades, which, however, might be due to their low language competence and not based on their content subject competence. This, then, reveals a problem of valid assessment as one can argue that the assessment intends to grade content achievements only, while the foreign language competence is at least also indirectly responsible for the students' success. A closer look at the differences among the groups of teachers shows that all groups seem to focus on grading content achievements. Notwithstanding, the qualified language teachers also have a rather strong focus on including the subject-specific language which is not the case for the non-language teachers. Again, this might be explained by the language teachers being more aware and hence focusing more on the appropriate use of the foreign language than the CLIL-teachers who are not specifically trained as language teachers. A similar pattern can be observed between the MINT and the humanities teachers with the humanities teachers focusing more on the correct use of the subject-specific language. As in the previous cases, though, this might also be explained by the overlap of the humanities teachers also being qualified language teachers.

For "Interculturality", only two codings were found in the interviews seemingly classifying this as a less prominent topic for CLIL teachers (I1). Still, the teacher's argumentation that the lack of appropriate CLIL teaching material can be considered beneficial as this forces teachers to create (authentic) material with the increased opportunity to incorporate the intercultural perspective. Apparently, this teacher does not trust in the publishers' ability to create authentic teaching material which does include this intercultural perspective.

With regard to "Cooperation", the largest number of codings is attributed to the cooperation with other CLIL colleagues (C5), which seems hardly surprising as the CLIL programme is often newly established and hence forces the teachers to cooperate with each other. Also, due to the lack of appropriate teaching material, CLIL teachers share their

individually created teaching materials. While this cooperation among the CLIL teachers was expected, it is to some extent surprising that hardly any teacher addresses the cooperation with the English language teachers (C4). Especially with regard to the KMK's understanding of CLIL/*Bilingualer Sachfachunterricht*, which reduces active language work to a minimum in the CLIL classroom, a vivid collaboration of the CLIL teachers with the regular English language teachers was to be expected. This cooperation would then ensure that the students possess the required foreign language skills in order to follow the CLIL lessons. The distribution of codings reveals that the non-language teachers have hardly any codings in the entire main category "Cooperation" at all, which is again surprising as the lacking experience in the field of language teaching may encourage them to cooperate with the qualified language teachers.

Finally, the last main category "Reflection" was coded only once and hence seems to be of little importance to the CLIL teachers (R6). Consequently, it may seem that on the one hand, the notion of importance of reflection is not well established among CLIL teachers or, on the other hand, it could also show that they do not consider this to be CLIL-specific and hence did not address this aspect in the interviews.

8. German Framework for CLIL Teacher Education

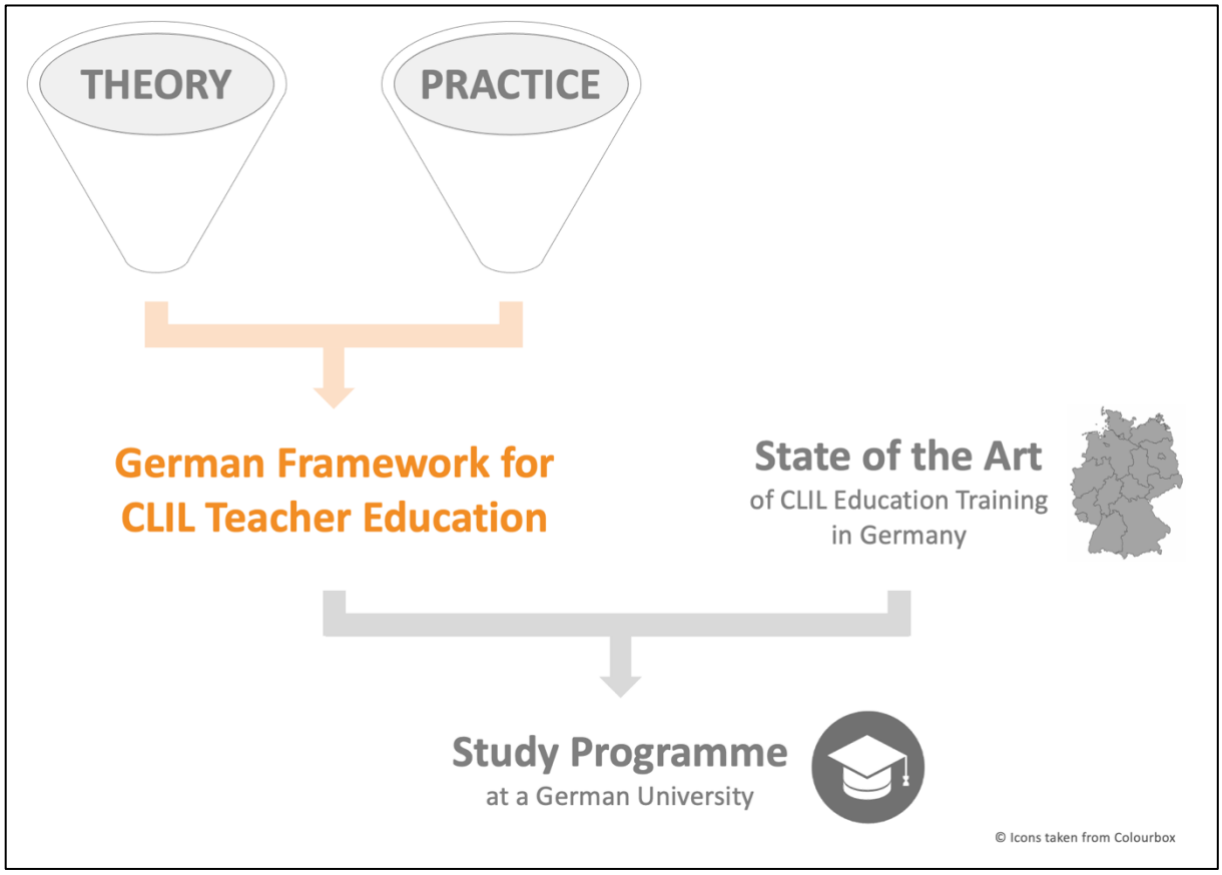


Figure 8.1 Visualisation of research design – German Framework for CLIL Teacher Education

In order to develop the German Framework for CLIL Teacher Education, the following chapter links the two perspectives of theoretical considerations and practical experience[52]. As is displayed in Figure 8.1, the results of the analysis of the competences officially required (see chapter 6) and of the analysis of the competences practically needed (see chapter 7) are compared and merged.

8.1. Approach

As the subcategories were created inductively, it is not surprising that some of the titles showed similar – but not identical – wording (e.g. "use appropriate media techniques" and "integrate appropriate use of media"). In order to create a greater comparability between the subcategories of theory and practice, the titles with similar wordings were slightly changed so that they are alike. A detailed list of the titles and their comparison (and adaptation) can be found in the appendix (see chapter 13.3). This adaptation of the titles, though, remains only on the level of

[52] As was already mentioned earlier on, the terms *theory* and *practice* refer to these theoretical considerations and the practical experiences which were analysed in chapters 6 and 7.

the title and does not affect the actual meaning of the respective subcategories and the elements which are coded within them as both theory and practice add different perspectives.

In a next step, the main categories and their corresponding subcategories are compared to the KMK's interpretation of CLIL/*Bilingualer Sachfachunterricht* as well as the guidelines and prerequisites of German teacher education. If applicable or necessary, the elements of the different categories are then adapted to the German context. As was already addressed in the previous chapters, the subcategories touch upon different competence areas, some of which might not be entirely CLIL-specific. Therefore, the following model was developed which includes the different areas of teacher competences (see Figure 8.2) and which functions as the basis for classifying and categorising the CLIL teacher competences.

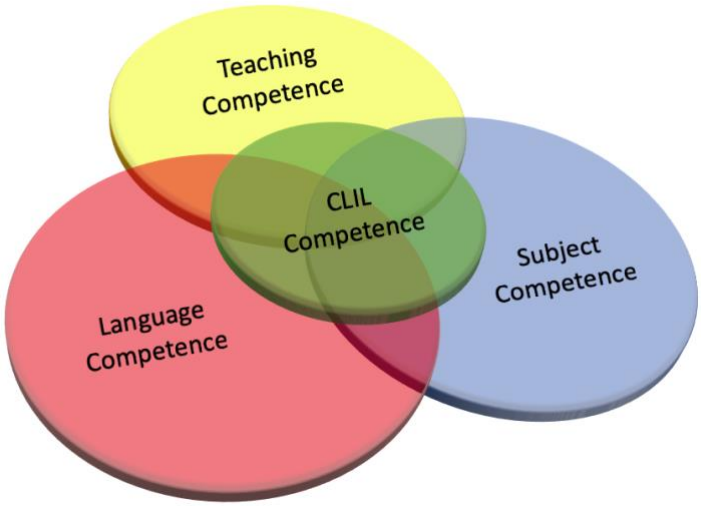


Figure 8.2 Areas of teacher competences

This model consists of four circles, representing the different competence areas: yellow for the general teaching competence, red for the (foreign) language competence, blue for the teachers' subject competence and green for the CLIL competence. The three circles in primary colours – representing the teaching competence, the language competence and the subject competence – are arranged in the form of a Venn diagram. A Venn diagram is typically used in order to represent the elements of three different collections of sets (in this case the elements of the three different competence areas) and all their logical interrelations.

Hence, the orange area of the teaching and the language competence, for example, represents the intersecting set of these two areas and consequently includes the elements of the language teaching competence[53]. The overlap between the teaching and the subject competence thus

[53] The size of the different areas must be seen as a result of the chosen visualisation and not as representative for the importance or complexity of the different competence areas.

represents the subject teaching competence and the overlap between the subject and the language competence represents the subject-specific language competence, which refers to the ability to talk about the content subject (e.g. Geography or Biology) in the foreign language (see Figure 8.3). While this Venn diagram displays the competence area of a German teacher qualified in a content subject and a foreign language, these three circles are not sufficient to add the perspective of teaching in a CLIL programme as CLIL teaching implies more than simply adding the content and the language perspective (see also chapter 4). Therefore, the diagram needs to be enhanced by another circle, representing the CLIL competence. This green circle is located on top of the previously described Venn diagram and hence symbolises an add-on to the regular teaching competences of a language and content subject teacher. Through this additional layer, new areas in the model arise which represent the already described competence areas but add the CLIL perspective (see Figure 8.3)[54]. At first glance, this visualisation reminds of the TPACK model[55], which represents the different competence areas in the field of digitalisation but which remains on a more general level. In this research on CLIL teacher competences, the focus is primarily on the overlapping areas as well as the fourth circle, representing an additional layer.

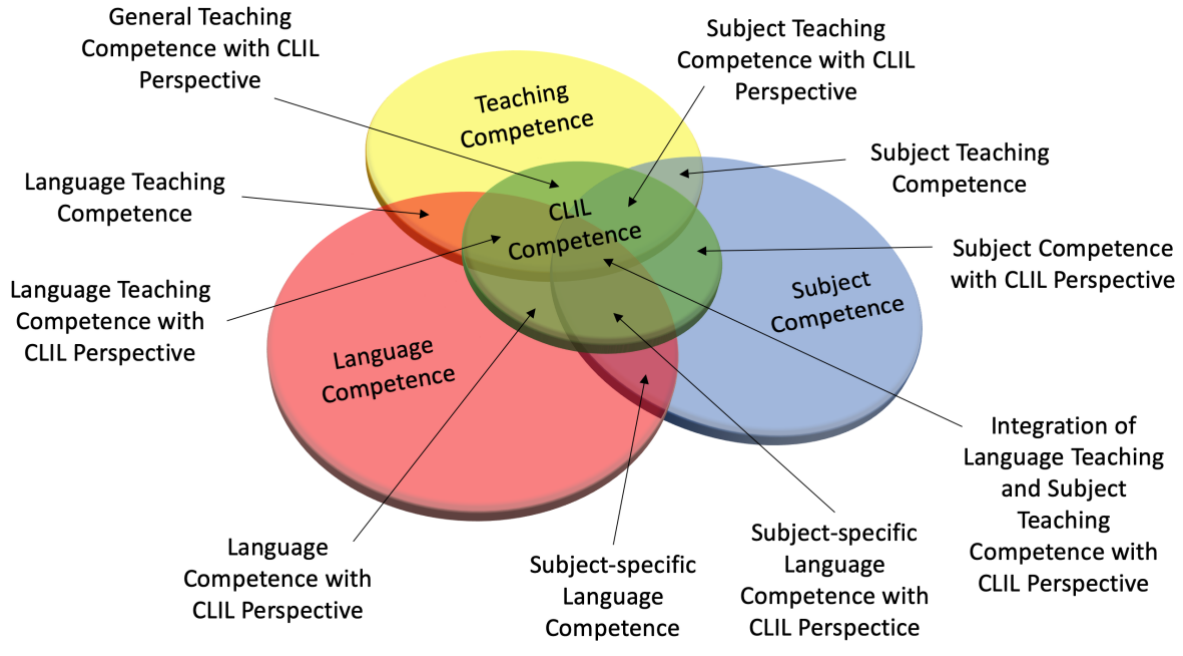


Figure 8.3 Areas of teacher competences – labelled model

[54] This form of visualisation also represents Viebrock's (2010; 2012) remarks considering the CLIL teachers' different, conflicting mindsets (see chapter 4.2) as it shows the different elements which are combined through teaching in a CLIL programme and which, according to Viebrock, get into conflict.

[55] For more information on the TPACK model, see https://www.gfdb.de/didaktik-tpack-modell (last access 30 July 2021)

Though the original model of areas of teacher competences is three-dimensional in order to display the added level of CLIL competence, this three-dimensional form of visualisation renders the localisation of the subcategories in the following step challenging. Hence, for reasons of better visualisation, the model is displayed in a two-dimensional version from now on (see Figure 8.4). This version, though, is not a new or different model but simply a different form of visualisation.

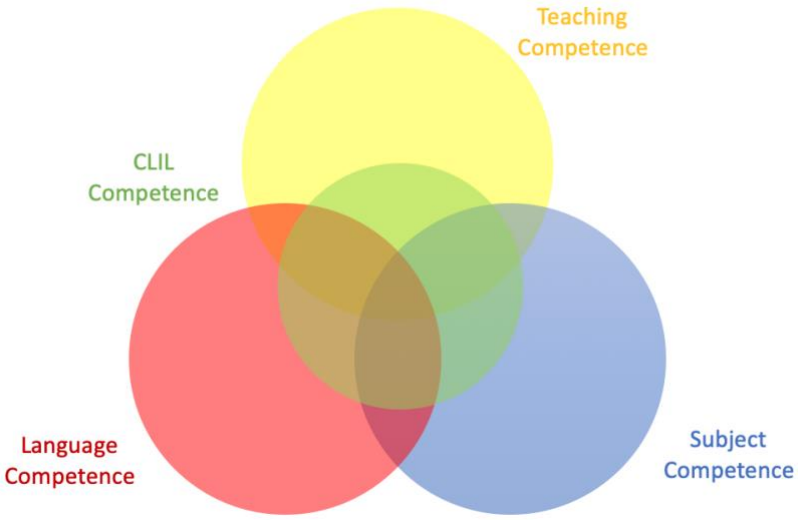
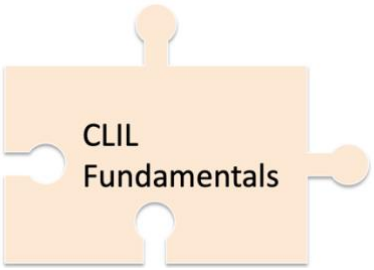


Figure 8.4 Areas of teacher competences – two-dimensional model

8.2. Classification of Competences

In the following, every main category is addressed individually. In a first step, the subcategories generated from the theoretical and the practical perspective are compared. Afterwards, the realisation of CLIL in Germany is applied to the understanding of the subcategories and the prerequisites of German teacher education programmes applied to the respective competences. Based on this, every subcategory is located within the model of teacher competence areas.



Theory	Practice
CLIL-F1 define CLIL and name its characteristics	

CLIL-F2	contextualise CLIL with regard to the specific context

Table 8.1 Subcategories for "CLIL Fundamentals"

For "CLIL Fundamentals" (see Table 8.1), only two subcategories were developed, one of which can be found both in theory and in practice. This particular subcategory is concerned

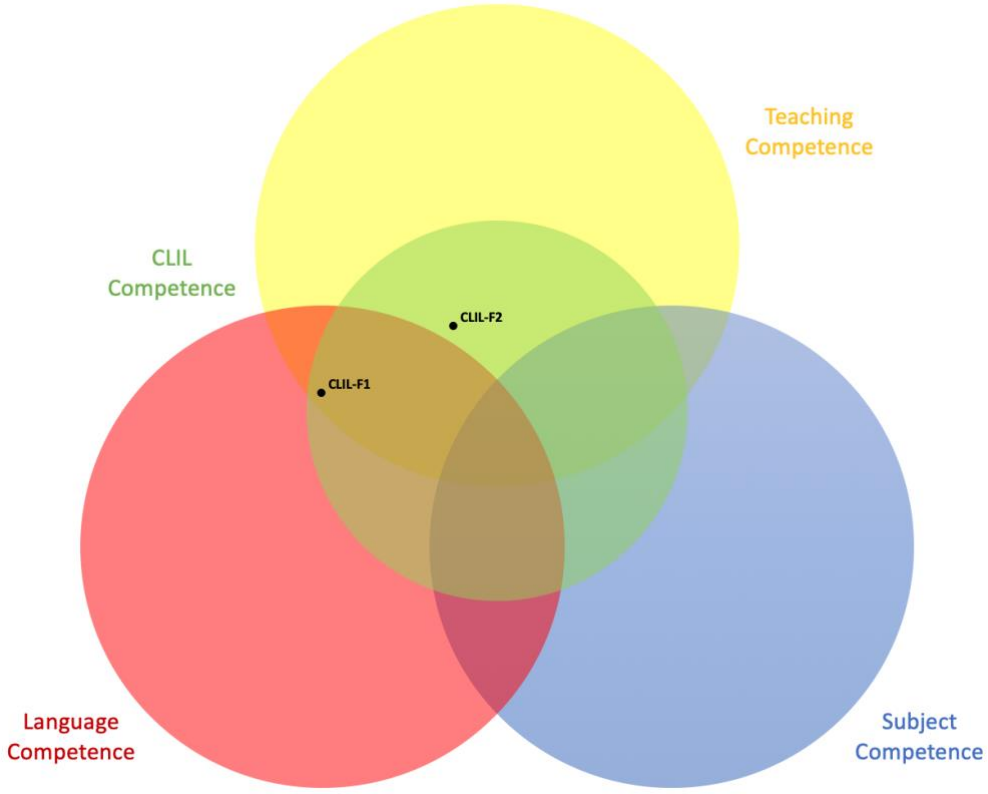


Figure 8.5 Areas of teacher competences – "CLIL Fundamentals"

with the definition of CLIL and the knowledge of its characteristics (CLIL-F1). The analysis of the codings in chapter 6 and 7 showed that both the theoretical guidelines as well as the teachers agree that CLIL teachers not only need to be able to define the CLIL approach but also to compare and juxtapose it with other language teaching approaches. Especially for the German context, several teachers also mentioned that knowing the difference between CLIL and *Bilingualer Sachfachunterricht* is important. In order to be able to compare CLIL to other language learning approaches, though, teachers need to be familiar with different theories of SLA, which is included in teacher education programmes for future foreign language teachers (KMK 2008: 44–46). Therefore, this subcategory can be classified as being part of the language teaching competence with special focus for CLIL teaching as teachers need to be able to apply their knowledge about SLA theories to the definition and realisation of CLIL.

The second subcategory for "CLIL Fundamentals" is concerned with being able to contextualise CLIL in the specific school context (CLIL-F2) which is only found in the

theoretical guidelines. The relatively high number of codings for this subcategory suggests that this competence is of greater importance than simply being familiar with the CLIL approach as such. The ability to contextualise CLIL in the school context, though, requires teachers to be familiar with the general school context and the curricula. Shulman (1986; 1987) defines this, however, as curricular knowledge and classifies it as part of teachers' knowledge (see chapter 3.2). Hence, it is a part of general teacher competences and needs to be applied to CLIL when establishing (new) CLIL programmes. Therefore, CLIL-F2 is localised in the field of general teacher competences with special perspective for the CLIL approach. The localisation of the two subcategories within the model of teacher competence areas is displayed in Figure 8.5[56].

Theory	Practice
LP1 use the target language proficiently	
LP2 use the subject-specific language appropriately	
LP3 work with content-specific texts	**LP4** show a level of language sensitivity

Table 8.2 Subcategories for "Language Proficiency"

In the case of "Language Proficiency" (see Table 8.2), the comparison of analysis of the input from theory and practice shows that two of the subcategories overlap. These are the proficient use of the target language (LP1) and the appropriate use of the subject-specific language (LP2). However, their importance within both theory and practice varies. The theoretical considerations put stronger emphasis on the target language proficiency than the interviewed CLIL teachers, which is reflected through a higher number of codings for LP1 in the theoretical part (see chapter 6.3). Also, the interviewed teachers do not agree on the necessary level of target language proficiency as some claim that an especially high level of foreign language competence is necessary for teaching in CLIL programmes while others argue that such an exceptionally high language competence is not essential. As also the theoretical considerations

[56] The localisation of the individual subcategories in the different sectors as well as the vicinity to the neighbouring sectors of the diagram do not convey any further meaning but are a result of localising all subcategories in one diagram.

do not specify how high the level or target language competence should be, it seems difficult to find common ground. For Germany, a glance at official requirements regarding CLIL reveals that the KMK expects CLIL teachers to reach the level C1 of the CEFR (KMK 2013: 16)[57]. With regard to the elements of general language teaching competences in German teacher education programmes, a near-native foreign language competence is required for foreign language teachers which also includes the adequate use of different registers as it is required in the theoretical codings of LP1 (KMK 2008: 44–45). Also, in the models of general teacher competences, Shulman (1986; 1987) as well as the COACTIV group (Baumert & Kunter 2013) define (subject-matter) content knowledge as one element of general teaching competences (see chapter 3.2). In the case of a foreign language teacher, this content knowledge refers to the proficient use of the foreign language. Hence, LP1 must be considered as not CLIL-specific but is already element of the foreign language competence.

For the appropriate use of the subject-specific language (LP2), hardly any codings were found in the theoretical, official guidelines while the interviewed teachers put a strong emphasis on this subcategory. While the teachers generally seem to agree that a high level of subject-specific language competence is necessary for successfully teaching in CLIL programmes, especially the qualified English language teachers highlight this aspect of language proficiency. This might refer to the fact that this group of teachers already possesses the necessary level of general language proficiency but struggles in the area of the subject-specific language proficiency. Hence, LP2 cannot be considered as part of the general language proficiency but refers to the overlap of foreign language competence and subject competence. Still, this subject-specific language competence is also not CLIL-specific as, for example, it might also be developed by experts in the field of the content subject who work in the target language culture.

Moving on to the ability to work with content-specific texts (LP3), which is only mentioned in the theoretical considerations, little emphasis is put on this subcategory. As this element is not further specified in the theory-based standards, one must assume that it refers to the ability and the necessary competence to read and especially process content-specific texts which are written in the foreign language. As this requires more than the general foreign language competence but also covers the subject-specific language, LP3 is also located in the overlapping sector of language competence and subject competence.

Finally, the fourth and last element of "Language Proficiency" refers to showing a high level of language sensitivity (LP4), a subcategory which was not found in the theoretical

[57] Berlin is the only federal state which requires CLIL teachers to reach the level C2 of the CEFR (KMK 2013: 121).

considerations but only in the interviews. Especially those CLIL teachers who are not trained as English language teachers emphasised this element and also explained that they consider qualified English language teachers to be more language-sensitive. This assumption finds confirmation in the guidelines for foreign language teachers in Germany which require language teachers to know and apply strategies of diagnosing possible challenges on the level of language learning (KMK 2008: 46). The current trend towards language-sensitive teaching (*sprachsensibler Fachunterricht*) not only in the language subjects but especially in the content subjects (cf. Leisen 2013; Leisen 2017) and adapting the own language use to that of the students (cf. Becker 2007a), however, leads to the conclusion that LP4 is not CLIL-specific but already achieved through general teacher education programmes. As the CLIL teachers without a language teaching qualification put special emphasis on this element, this language sensitivity apparently goes beyond the general teaching competence and is therefore classified as a language teaching competence.

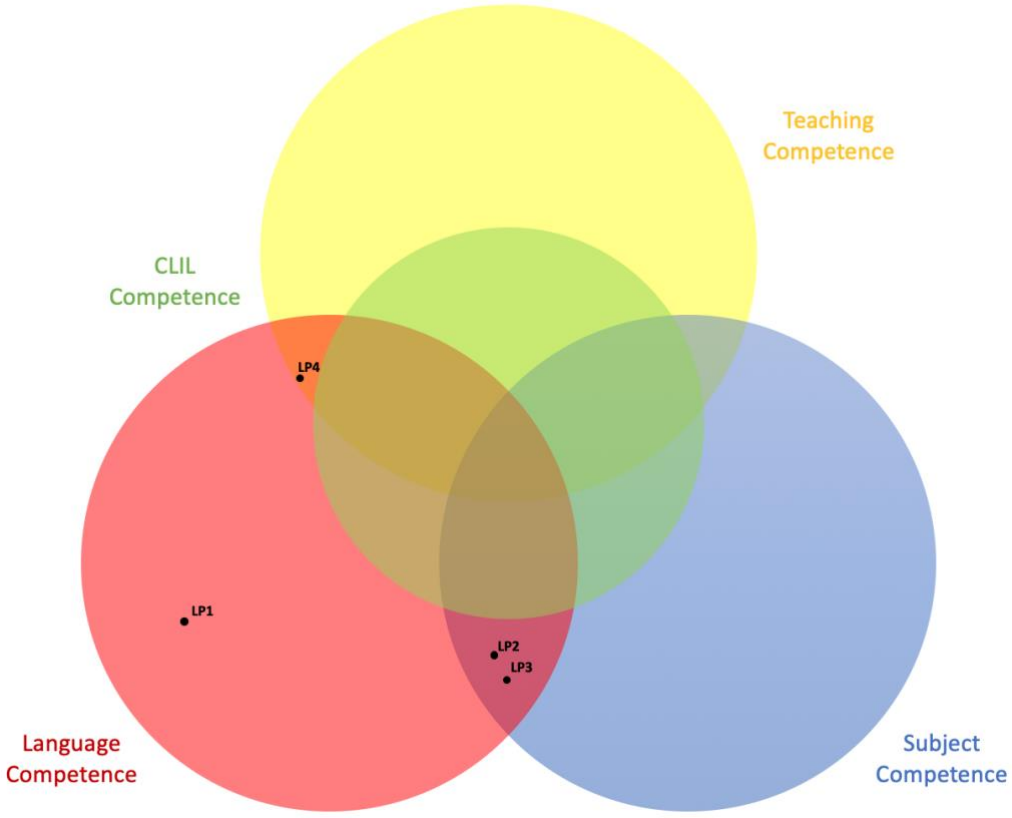


Figure 8.6 Areas of teacher competences – "Language Proficiency"

The localisation of the four sub-competences of "Language Proficiency" is visualised in Figure 8.6 and shows that three out of the four subcategories are concerned with (subject-specific) language skills while only LP4 also includes the teaching competence.

"Course Development" (see Table 8.3), which has 20 subcategories and is hence the main category with the largest number of subcategories, features only two subcategories which can

be found for both theory and practice (CD1 & CD2). The first one is the creation and adaptation of (authentic) material (CD1). Not only is this a subcategory found for theory and practice, it is also one of the subcategories with the largest number of codings suggesting that the creation and adaptation of (authentic) material is of great importance – both from a theoretical and a practical point of view. This is enforced by the interviewed CLIL teachers' explanation that hardly any appropriate CLIL teaching material exists and hence new material needs to be either created or original, target-language material adapted. The use and analysis of authentic texts as well as their didactic preparation for the use in the classroom, though, is not unique to the CLIL approach but can also be found in the guidelines for foreign language teaching competences (KMK 2008). Hence, it can be argued that CD1 belongs to the field of language teaching competences, which gains an additional dimension through the CLIL perspective as the respective material not only needs to be didactically prepared from a language but also from a content perspective.

The second subcategory which can be found in both theory and practice is concerned with creating a reassuring learning environment (CD2). At first glance, this competence could be regarded as a given with every teacher as students should always have the opportunity to experience and study in a reassuring learning environment. Hence, it is not surprising that this aspect can be found in the principles of good teaching (see chapter 3.3) or in handbooks and guidelines for general teacher competences (cf. Becker 2007a; Eder 2011; Zumhasch 2009). At second glance, though, the use of a foreign language as the medium of communication adds to possible insecurities in many students, which is why creating a reassuring learning environment can also be found in guidelines on language teaching (cf. Haß et al. 2016). For CLIL, the integration of content and language learning might enforce these insecurities, which is why the interviewed teachers especially highlight the importance of creating a reassuring learning environment. This is also supported by Mehisto et al. (2009), who ask CLIL teachers to encourage and especially reward risk-taking. Therefore, CD2 belongs to the general teaching competences but needs to be especially addressed for CLIL and is thus localised in the respective model accordingly.

As the first subcategory only found for the theoretical considerations, effective classroom management is mentioned (CD3). This, however, can also be argued to be part of the general teacher competences as the COACTIV group (Baumert & Kunter 2013) explicitly mentions effective classroom management as being part of the pedagogical/psychological knowledge of the professional knowledge that every teacher should have (see chapter 3.2). Moreover, the importance of effective classroom management is also postulated in the principles of good

Theory		Practice	
CD1 create/adapt (authentic) material			
CD2 create a reassuring learning environment			
CD3	provide effective classroom management	**CD15**	design student-centred tasks
CD4	connect to students personally and respect diversity	**CD16**	analyse/evaluate existing material
CD5	create opportunities for incidental learning	**CD17**	select appropriate topics
CD6	create a rich learning environment	**CD18**	be aware of heterogeneity
CD7	design interactive tasks	**CD19**	design preparatory phase for CLIL (in years 5/6)
CD8	design tasks for different learning styles	**CD20**	maintain a balance between L1 and L2 use
CD9	approach a topic from different perspectives		
CD10	analyse learners' needs and plan lessons accordingly		
CD11	make learning relevant for the students		
CD12	foster critical and creative thinking		
CD13	develop meta-cognitive awareness and higher-order thinking skills		
CD14	develop learner autonomy		

Table 8.3 Subcategories for "Course Development"

teaching (see chapter 3.3). This is supported by experts from the field of educational research who highlight the connection between classroom management and student achievements (cf. Apel 2009; Gröschner & Kleinknecht 2013; Haag & Streber 2013; Wellenreuther 2015). As no evidence is given that the provision of effective classroom management is of greater importance or needs to be handled differently in the CLIL classroom, CD3 is classified as a general teaching competence and localised accordingly.

Next, CLIL teachers are supposed to connect to students personally and respect their diversity (CD4). Again, this can be considered fundamental for the general teaching competence as general teaching guidelines contain elements of how to connect to students without prejudices or meet the students personal needs (cf. Becker 2007a). Additionally, the KMK explicitly addresses this aspect in their standards for the development of general teacher competences (see chapter 3.4) as they require teachers to know the students' social and cultural prerequisites and acknowledge and respect these (KMK 2004b, see competences 4 and 5). Therefore, CD4 is also classified as a general teaching competence without any special requirements for CLIL.

Moving on to creating opportunities of incidental learning (CD5), the localisation within the competence areas is rather challenging as the theoretical considerations provide hardly any examples of what is meant by opportunities for incidental learning. A possible interpretation touches upon the topics of problem-based learning as students are confronted with complex problems and through solving these, the students apply existing knowledge and acquire new knowledge (cf. Neber 2009; Gräsel 2009; Wellenreuther 2015). As this is part of the general teaching competence, though, and no dimension is added trough the CLIL perspective, CD5 is localised in the respective area of the general teaching competence.

A similar challenge can be found for creating a rich learning environment (CD6), which is again not further specified in the theoretical guidelines. The assumption that this rich learning environment is achieved through the use of authentic learning contexts and a varied use of methodology allows for the conclusion that CD6 belongs to the general teaching competence as these aspects are found in handbooks on general aspects of teaching as well (cf. Becker 2007b; Becker 2007a).

Another aspect of the theoretical considerations regarding "Course Development" is that of designing interactive tasks (CD7). Again, though, this aspect can also be found in general teaching guidelines and in research on how to foster learning processes through interaction and cooperation (cf. Becker 2007a; Fischer & Neber 2011; Dubs 2011; Biederbeck 2018).

Therefore, CD7 is regarded as part of the general teaching competence and classified accordingly in the respective model.

Next, CLIL teachers are supposed to design tasks for different learning styles (CD8). Referring to the general teaching competences which the KMK defines (see chapter 3.4), however, the diagnosis of the students' learning prerequisites and their individual learning styles as well as the according adaptation of learning processes belongs to their list of general teaching competences for *Bildungswissenschaften* (KMK 2008, see competence 7). Hence, this aspect can be classified in the model of teaching competences accordingly.

As another aspect, CLIL teachers are supposed to approach a topic from different perspectives (CD9). Though the topic of multiperspectivity is not explicitly mentioned in the KMK guidelines on *Bildungswissenschaften*, the CIEL group (Giel, Hiller & Krämer 1974) already developed models for multiperspective teaching in the 1970s. As CLIL teaching especially enables the integration of different perspectives, such as the different (cultural) understandings of a topic (see, for example, the Integrated Dynamic Model by Diehr 2016) and the 4Cs Framework lists *culture* as one cornerstone of CLIL (see chapter 2.1), CD9 can be classified as a general teaching competence with a greater importance in the CLIL setting.

The competence to analyse the learners' needs and plan the lessons accordingly (CD10) is again a point on the list of general teaching competences which was released by the KMK. Hence, especially the first and seventh competence refer to analysing the students' learning preconditions and to adapting the lessons accordingly (KMK 2008). This is supported by research on students' learning prerequisites and recommendations on how to include these prerequisites in the process of lesson planning (cf. Becker 2007b; Schrader 2009; Stöger & Gruber 2011; Maier 2017; Meyer 2018). Therefore, one could argue that CD10 again belongs to the area of general teaching competences. Notwithstanding, CLIL teachers need to analyse the students' needs on the level of foreign language and content learning. In regular monolingual content instruction though, the teacher primarily needs to focus on the students' learning needs in the field of the content taught. Likewise, in regular foreign language instruction, the teacher primarily focuses on the students' needs on the language level. As these two dimensions need to be combined in the CLIL classroom, CD10 is classified as a general teaching competence which gains an additional dimension through CLIL.

Moving on to the request that CLIL teachers should make learning relevant to the students (CD11), especially the use of problem-based and authentic learning scenarios is mentioned. This again, however, can also be found in general teaching recommendations as, for example, Gräsel explains that learning environments should be authentic, problem-based and connected

to the students' real-life (Gräsel 2009). Consequently, CD11 is to be classified as a general teaching competence which does not need to be addressed differently through CLIL.

The development of critical and creative thinking (CD12), which is, unfortunately, not further specified in the theoretical considerations, should be understood as a leading aim of school education in general (cf. Weiß 2012). The educational standards for the subjects German, Mathematics and English or French, for example, list the development of critical and creative thinking at several instances (KMK 2012a; KMK 2012b; KMK 2012c). Consequently, CD12 is also localised in the area of general teaching competences.

Regarding the development of meta-cognitive awareness and higher-order thinking skills (CD13), a differentiation between these two aspects is necessary. Reference to Bloom's taxonomy of learning shows that the development of higher-order thinking skills is a general aim of education (cf. Bloom et al. 1956; Anderson & Krathwohl 2001). The same applies to the development of meta-cognitive awareness, which might also be regarded as a general aim of teaching. Meta-cognitive awareness, though, also implies meta-linguistic awareness, which is likewise requested by the theoretical guidelines of CLIL teacher education, which were analysed in chapter 6. Correspondingly, this aspect of developing meta-linguistic awareness is of importance in regular foreign language teaching (cf. Gnutzmann 2007b; Haß et al. 2016), placing the development of the students' meta-linguistic awareness in the area of the language teaching competence. With regard to CLIL, though, the integration of content, the students' L1 and the L2 offers additional opportunities. Moreover, a focus on the development of meta-linguistic awareness is necessary, for example through comparing the different subject-specific terminology in the L1 and the L2 (cf. Gnutzmann & Jakisch 2013). Only recently, the potential of working with different subject-specific terminology in the L1 and the L2 has been argued in Diehr's Integrated Dynamic Model (Diehr 2016). Therefore, the development of higher-order thinking skills and meta-cognitive awareness is the general aim of teaching while the focus on meta-linguistic awareness is rather an element of foreign language learning. This is why CD13 is located at the interface between the general teaching competence and the language teaching competence. As the development of meta-linguistic awareness is of special importance and especially possible in CLIL programmes, CD13 needs to be specifically addressed for CLIL.

Finally, the last subcategory for the theoretical considerations of "Course Development" requires CLIL teachers to develop learner autonomy (CD14). With regard to general teaching competences, though, developing students' learner autonomy is of importance for all educational settings (cf. Levin & Arnold 2009), which is why the KMK guidelines on *Bildungswissenschaften* devote one competence exclusively to the knowledge and application

of different methods to foster learner autonomy (KMK 2004b, see competence 3), considering learner autonomy as one of the principles of good teaching (see chapter 3.3). Consequently, CD14 is localised in the area of general teaching competences.

To continue with the first subcategory from the practical perspective, one coding refers to the design of student-centred tasks (CD15). At first glance, this clearly seems to belong to the general teaching competences, or at least to the language teaching competence as, for example, task-based language learning requires the implementation of student-centred tasks in the language learning process (cf. Haß et al. 2016; Jacobs & Renandya 2016). Viebrock's (2010; 2012) research on CLIL teachers' mindsets and the resulting risk of being too teacher-centred in CLIL lessons, however, is also mirrored in the interviewed teachers' explanations that they tend to think that their students are unable to follow the lesson without their close guiding (see also chapter 4.3). Therefore, CLIL teachers' need to be especially aware of this risk and also need to know strategies to circumvent these. One possible strategy could be the adapted framework for task-based language learning which is specifically addressed to beginners of a foreign language. Accordingly, it suggests to provide an extensive pre-task and more sets of shorter tasks during the actual task cycle in order to better prepare the learners for the challenges of task-based learning in the foreign language (Willis 2005). As creating student-centred tasks in CLIL settings is of great importance in order to prevent the aforementioned risk of CLIL lessons being too teacher-centred, CD 15 is considered to be part of the regular language teaching competence which needs to be especially addressed for CLIL.

The following subcategory deals with the CLIL teachers' ability to analyse and evaluate existing teaching material (CD16) and is hence similar to CD1, which deals with the creation of material. The distinction between these two categories was explicitly made in accordance with the two different dimensions of material development addressed by the interviewed CLIL teachers. With regard to analysing and evaluating existing material, the uniqueness to the CLIL approach is arguable as guidelines and articles are concerned with the analysis of schoolbooks as well (cf. Heckt 2009; Böttcher & Zala-Mezö 2015). For CLIL teaching, though, this aspect needs to be specifically addressed as CLIL material obviously needs to consider language and content aspects likewise. As CLIL programmes, other than regular monolingual instruction, often does not use specific schoolbooks thoroughly discussed and commonly agreed upon, evaluation of CLIL material is a regular task. Consequently, CD16 can be regarded as a general teaching competence with an additional dimension through the CLIL perspective.

Next, CLIL teachers' mention the selection of appropriate topics (CD17). Again, the choice of topics as such belongs to the general teaching competence as – ideally – all topics fit

the respective curriculum (cf. Becker 2007b). This reference to the curriculum also matches Shulman's (1986; 1987) definition of teachers' content knowledge which explicitly includes curricular knowledge. Accordingly, allocating CD17 to the general teaching competence seems consistent. The interviewed teachers, though, argue that the selection of topics for CLIL lessons is especially challenging as both the content and the foreign language need to be integrated. Also, the German curricula mostly refer to German contexts (e.g the German history) and hence CLIL teachers' need to find compromises which consider the German curricula but also include the CLIL perspective. Hence, CD17 is localised in the area of general teaching competence with a special dimension through CLIL.

Another subcategory which seemingly refers to a general teaching competence, at least at first glance, is the awareness of heterogeneity (CD18). In the KMK guidelines on general teacher competences, the teachers' ability to recognise and include the students' heterogeneity in the learning process is explicitly addressed (KMK 2004b, see competence 4 and 7). Accordingly, heterogeneity is frequently discussed in the school context (cf. Boller, Rosowski & Stroot 2007; Schmid 2011) and is considered as one of the principles of good teaching (see chapter 3.3). Before classifying CD18 as a general teacher competence, though, the additional dimension CLIL adds to the aspect of heterogeneity needs to be taken into consideration. Not only students' content-related but also their linguistic prerequisites affect their learning and hence, CLIL teachers – other than their monolingually teaching colleagues – need to analyse and respect both. Due to this double heterogeneity through CLIL, CD18 is localised in the area of general teacher competences gaining another dimension through CLIL.

As already discussed in chapter 2.3, German CLIL programmes feature a unique preparatory phase in years five and six. Correspondingly, CLIL teachers are expected to be able to design this phase, marking a unique requirement exclusively for CLIL teachers. Thus, it is not surprising that this subcategory was not found in the theoretical considerations but the fact that only one teacher mentioned this aspect in the interviews is all the more surprising, though. However, diminishing the importance of this single mentioning may appear inappropriate as the teacher perceives the task of designing the preparatory phase without any ministry guidelines on contents or aims as rather challenging. As the ability to design this preparatory phase requires the teachers' knowledge about the language and the content curricula, CD19 again fits to Shulman's (1986; 1987) definition of curricular knowledge as one element of teachers' general content knowledge. As the CLIL teacher needs to apply this curricular knowledge to the aims and purpose of CLIL, CD19 is classified as part of the general teaching competence requiring a special attention through CLIL.

Finally, the last subcategory is concerned with maintaining a balance between the L1 and the L2. Even though the KMK regulates this through using the L2 for two thirds of the teaching time while using the L1 for the remaining third (KMK 2013), the CLIL teachers' answers showed that the realisation of this requirement differs. Hence, CLIL teachers select the use of either the L1 or the L2 on the basis of the students' language level or the complexity of the topic. Also, some teachers switch between the languages within one lesson while others teach entire teaching units in one language. Including the students' L1 is already part of the language teaching competence as teachers are supposed to consider the students' mother tongue, for example when introducing new vocabulary or grammar which might conflict or interfere with the L1 (cf. Weskamp 2007; Klippel & Doff 2015; Haß et al. 2016). For the KMK's definition of CLIL/*Bilingualer Sachfachunterricht*, which – as the name already suggests – includes two languages, the balance between the L1 and the L2 is of even greater importance. The key terminology of the CLIL subjects, for example, needs to be known by the students in both the L1 as well as the L2. At this point, Diehr's (2016) Integrated Dynamic Model is of relevance again as it aims at developing a subject literacy in the L1 and the L2. Diehr also claims that the simple translation of subject-specific key terms is not always possible as the respective concepts might not be entirely equivalent. Therefore, CD20 is regarded as part of the language teaching competence which gains special importance and another interpretation through CLIL.

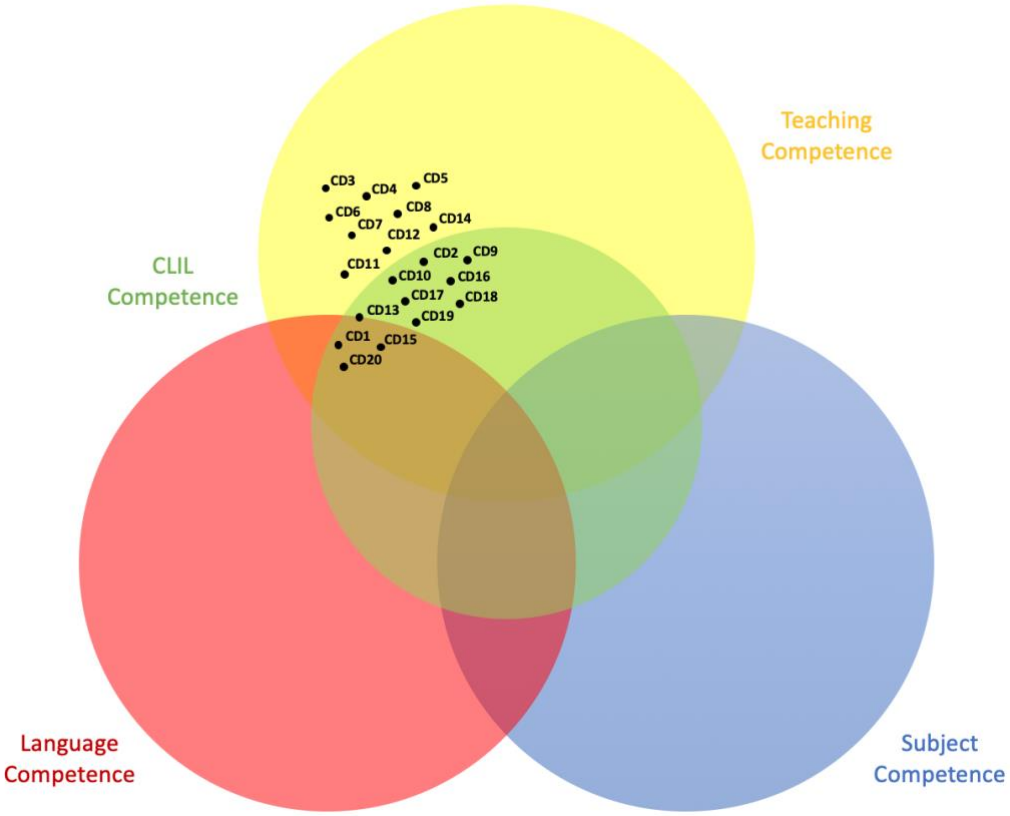


Figure 8.7 Areas of teacher competences – "Course Development"

As is visualised in Figure 8.7, all subcategories of "Course Development" are – at least to some extent – connected to the teaching competence. Almost half of these are even classified as not CLIL-specific and hence include aspects which belong to the general teaching competence (CD3 – CD8, CD11, CD12, CD14). Interestingly, this only applies to subcategories which were derived from the theoretical guidelines while the subcategories deduced from the interviews also refer to general teaching competences or language teaching competences but – in contrast – they all gain an additional dimension or special importance through CLIL (CD15 – CD20).

	Theory		Practice
ICL1	maintain a triple focus on language, content and learning skills	**ICL6**	avoid overtaxation through the additional language
ICL2	foster the development of BICS and CALP	**ICL7**	include perspective of language and subject teaching
ICL3	apply SLA and the CEFR	**ICL8**	use the language as opportunity and not hurdle
ICL4	support students in communicating with other target language users	**ICL9**	focus on content teaching
ICL5	analyse the content in terms of language needs	**ICL10**	integrate phases of (subject-specific) language teaching

Table 8.4 Subcategories for "Integration of Content and Language"

As for the "Integration of Content and Language" (see Table 8.4), a total number of ten subcategories was identified equally distributed among theory and practice. The comparison of the subcategories for both theory and practice shows no overlaps. To begin with the first subcategory, maintaining a triple focus on language, content and learning skills (ICL1) received most codings within this main category and can hence be considered as being of relatively great importance for the theoretical considerations. This triple focus, which finds no direct equivalent in the interviews, needs to be questioned for the German context, though, as the KMK's understanding of CLIL/*Bilingualer Sachfachunterricht* requires a strong focus on content

teaching and regards the foreign language rather as a medium of communication and not as explicit learning goal (see chapter 2.3). Hence, for the German context, ICL1 would have to be changed to a stronger focus on content teaching which then again equals ICL9, a subcategory developed for the practical perspective which requires CLIL programmes to focus on content teaching. Therefore, ICL1 does not fit into the developed model of teacher competence areas as it is simply not applicable for the German understanding of CLIL teaching approaches.

ICL2 focuses primarily on the students' language skills as it requires CLIL teachers to foster the development of BICS and CALP. The distinction between these two terms was originally introduced by Cummins (2000), who refers them to the dimensions of everyday language on the one hand and academic language on the other hand. As Cummins originally denotes these terms to bilingually raised children and the development of their language skills, this distinction is often transferred to CLIL. Hence, CLIL teachers are supposed to "help learners to bridge the gap between BICS and CALP" (Dale & Tanner 2012: 35; see also Coyle, Hood & Marsh 2010; Ball 2015). Though Hallet argues that regular English language teaching focuses on the development of BICS while CLIL teaching is supposed to develop CALP (Hallet 2013), this strict separation of BICS and CALP must be questioned as also in regular English language teaching programmes, students are supposed to develop academic language skills, which includes, for example, the ability to write argumentative, formal texts (KMK 2012a)[58]. Therefore, it can be argued that the teachers' ability to foster BICS and CALP is not CLIL-specific but already part of regular English language teaching. Notwithstanding, the appropriate use of the subject-specific language, including both BICS and CALP, is added in CLIL settings, which is why ICL2 is localised as part of the language teaching competence with the additional CLIL competence.

Also, in the field of language learning, ICL3 requires CLIL teachers to be able to apply theories of SLA and the CEFR to support students in reaching the language goals of CLIL. Again, this subcategory received a relatively large number of codings within the theoretical considerations and must therefore be considered as rather important for the authors of these documents. The knowledge about possible influences of the learners' L1 or the differences between language learning and language acquisition, though, cannot be regarded as CLIL-specific as knowledge about the theories, methods and models of SLA as well as their application is also required for regular foreign language teachers (KMK 2008, see also Bausch,

[58] Interestingly, Hallet originally argued against this separation of developing BICS in regular English language teaching and CALP in CLIL settings, also elaborating that especially in higher grades, regular English language teaching requires complex language work as well (Hallet 1998: 117).

Christ & Krumm 2007; Haß et al. 2016). Therefore, ICL3 can be classified as being part of the language teaching competence.

Next, CLIL teachers are expected to support students in communicating with other speakers of the target language, for example through organising (virtual) exchange programmes (ICL4). This, however, is an equally important part of regular language teaching competence as well (cf. Wicke 2007; Ertelt-Vieth 2007; Haß et al. 2016) and therefore ICL4 is classified as a language teaching competence.

The fifth and last subcategory for the theoretical guidelines of CLIL teacher education refers to the ability to analyse the content in terms of language needs (ICL5). As the KMK requires foreign language teachers to be able to analyse texts linguistically for their use in the foreign language classroom, this analysis of students required language skills is to some extent also part of the language teaching competence (KMK 2008). With CLIL teaching, though, it is of special importance as the perspective of the content subject is added (cf. Ball 2015). Therefore, ICL5 can be considered as part of the language teaching competence which gains additional importance through adding the CLIL competence.

The first subcategory of the practical perspective is concerned with avoiding placing excessive demands on students through adding the foreign language to content teaching (ICL6). During the interviews, some teachers voiced their concern that the students' general level of competence is too low in order to be able to process the content with and through a foreign language. On the one hand and as a consequence, some teachers even question the entire CLIL approach. On the other hand, teachers explain that they slowly accustom the students to the use of the foreign language and hence avoid overtaxing them. Consequently, carefully taking students' heterogeneous (language) learning prerequisites into account and adapting their CLIL teaching units accordingly is indispensable. Respecting the students' heterogeneous language prerequisites, though, is already incorporated in regular language teacher competences (KMK 2008). As the integration of content and language learning, including the subject-specific language, adds new perspectives to this language teaching competence, ICL6 is classified as a language teaching competence with CLIL perspective.

Moving on to integrating the perspective of both language and subject teaching (ICL7), the KMK's understanding of CLIL is again of importance. Though the European understanding of CLIL regards language as an "equal member of […] CLIL" (Ball 2015: 63), the KMK's definition of *Bilingualer Sachfachunterricht* puts stronger emphasis on content than on language teaching (see chapter 2.1). Keeping this in mind, it is not surprising that only a small number of teachers mention that they try to include the language and the content perspective.

According to Vollmer (2013), though, the separation of content and language learning is not possible and he therefore argues that the KMK's understanding of *Bilingualer Sachfachunterricht* should gradually move towards the European understanding of CLIL, which regards language and content learning as equally important. Therefore, he explains that both perspectives need to be included. This integration through CLIL, though, is more than simply adding the didactic concepts of content and language learning, positioning ICL7 in the very heart of the model of competence areas. Here, all competence areas intersect, combining language teaching competences with the subject teaching competence and adding the CLIL perspective.

Next, teachers are supposed to use the foreign language as an opportunity and should not regard it as a hurdle (ICL8) being also valid for regular foreign language teaching. Hence, this aspect can be considered to be part of the language teaching competence. Still, as the integration of content and language adds to the potential of regarding the foreign language as a hurdle, CLIL teachers need to be especially competent and sensitive in this regard, which is why ICL8 is classified as a language teaching competence with CLIL perspective.

The following subcategory, which features the focus on content teaching (ICL9), again needs to be considered with regard to the KMK's understanding of *Bilingualer Sachfachunterricht*. As previously mentioned, content learning is given greater importance than language learning and as a result, the interviewed teachers – especially those without an explicit language teaching qualification – mention this focus on content teaching relatively often. Hence, this subcategory must be regarded as part of the subject teaching competence. Since the use of the foreign language adds an additional perspective to teaching the content, even if no active language work is included, ICL9 can be localised in the area of subject teaching competence with CLIL perspective.

Finally, the last subcategory of the "Integration of Content and Language" refers to integrating explicit phases of (subject-specific) language (ICL10). Although no active language work is explicitly required in the KMK's understanding of *Bilingualer Sachfachunterricht,* most teachers argue that in order to be able to discuss a topic in the foreign language, students need to be able to use the subject-specific language appropriately. Therefore, the majority of the interviewed CLIL teachers explain that integrating active, subject-specific language is of importance. With regard to localising ICL10 in the competence model, teaching the subject-specific language can again be regarded to be in the centre of the model as it includes the subject-specific language, the general teaching competence as well as the language teaching competence.

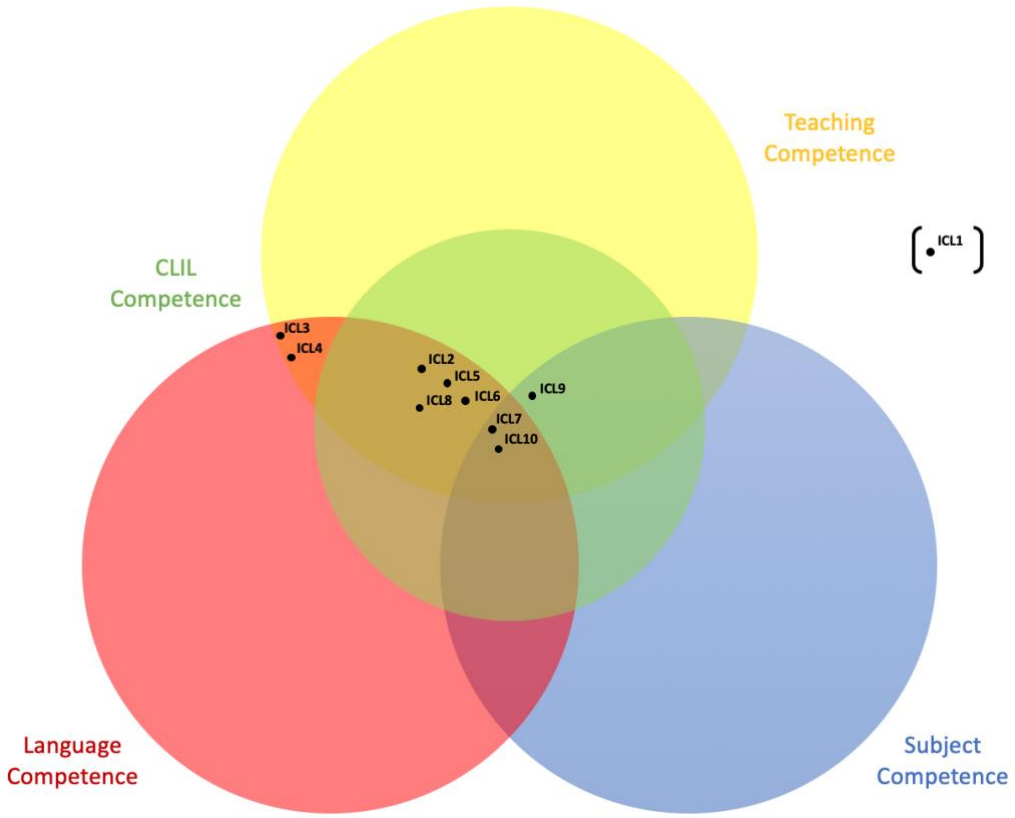
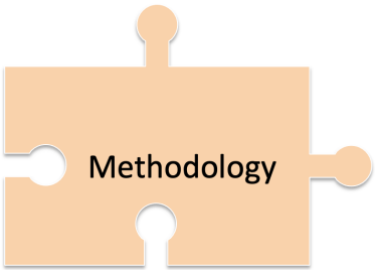


Figure 8.8 Areas of teacher competences – "Integration of Content and Language"

The localisation of the ten subcategories of the "Integration of Content and Language" is visualised in Figure 8.8. Generally, comparing the subcategories for theory and practice shows several differences, which can – to some extent – be explained by the different understanding of CLIL and *Bilingualer Sachfachunterricht*. With the stronger focus on content teaching in Germany, the respective subcategories simply mirror the teachers' attempts to stick to the corresponding guidelines. Also, the subcategories' localisation shows that the majority of the theoretical assumptions are already part of the regular language teaching competence (ICL3 & ICL4) and only occasionally, the CLIL perspective is added (ICL2 & ICL5). The interviewed teachers, however, mention several aspects which are more concerned with the challenges of integrating the language in content learning and are hence localised in the very centre of the model (ICL7 & ICL10).

For the main category of "Methodology" (see Table 8.5), a total number of four subcategories were identified, three of which were found both in theory and in practice. Beginning with the use of code-switching (M1), this subcategory was mentioned more often in the interviews than in the theoretical guidelines. Unfortunately, how to use code-switching, code-mixing or translanguaging is not further specified in theory. In the interviews, though, the CLIL teachers explain the different purposes to use code-switching in the CLIL classroom, e.g.



Theory		Practice
	M1 use code-switching	
	M2 use appropriate media techniques	
	M3 use scaffolding techniques	
M4	use non-classroom learning environments	

Table 8.5 Subcategories for "Methodology"

introducing subject-specific language in the L1 as well as the L2 or providing summaries in the L1 in order to secure that students can follow the content. Though the concept of code-switching is not unique to CLIL but also relevant to other foreign language learning contexts (cf. Bullock & Toribio 2009), the interviewed teachers explicitly differentiate the use of code-switching in the regular foreign language classroom and the CLIL classroom. According to their explanations, code-switching is used more often in the CLIL classroom, for example, in order to establish the subject-specific contexts in the L1 and the L2 (again, see the Integrated Dynamic Model by Diehr 2016). Interestingly, this reference to the use of code-switching strategies was primarily mentioned by those CLIL teachers who are also qualified as English language teachers (see the Code-Matrix Browser for "Methodology", Figure 7.13). As the knowledge of SLA, to which code-switching can clearly be associated, is part of the language teaching competences released by the KMK (2008), this seems hardly surprising, though. Hence, the CLIL teachers without the foreign language teaching qualification are less familiar with theories of SLA. Notwithstanding and as code-switching has different uses and functions in CLIL (cf. Königs 2013), M1 is categorised as part of the language teaching competence, which gains an additional dimension through CLIL.

Moving on to the appropriate use of media techniques (M2), the codings in the theoretical guidelines refer this subcategory to a balanced use of different forms of media (e.g. electronic and non-electronic forms) but also to the development of the students' media literacy. With regard to the guidelines released by the KMK, though, the knowledge of different media

concepts and their application is part of the general teaching competence (KMK 2008, see competence 1). Not surprisingly, the appropriate use of media in the classroom is frequently found in teachers' handbooks (cf. Becker 2007b; Becker 2007a; chap. 5 in Arnold, Sandfuchs & Wiechmann 2009; Kammerl 2010; Six & Gimmler 2018; Mengelkamp & Baadte 2018). Therefore, the use of appropriate media techniques apparently belongs to the general teaching competences. The one CLIL teacher who refers to the use of media in the CLIL classroom, though, explains that the use of media is of greater importance for CLIL as it provides the teacher with more opportunities for visualisation and hence supports the students' understanding of both language and content. Accordingly, M2 is classified as a general teaching competence with increased importance in the CLIL classroom.

Next, the third subcategory which was found for both theory and practice deals with the use of scaffolding techniques in the CLIL classroom (M3). Interestingly, while the theoretical guidelines refer the use of scaffolding techniques to supporting language, content and learning skills, the interviewed CLIL teachers primarily – if not exclusively – focus on language scaffolding. Also, the majority of CLIL teachers do not use the term scaffolding but rather describe scaffolding strategies without naming them explicitly. The origin of scaffolding strategies goes back to Vygotskij (2017) and his theory of the zone of proximal development (ZPD), which is characterised as the gap between the learners' current competence level and the competence level the learner can reach through the support of an expert. Accordingly, the use of scaffolding techniques is found in handbooks on general teaching competences (cf. Wellenreuther 2015) but also in the field of language teaching (cf. Weskamp 2007; Klippel & Doff 2015). Undoubtedly, the integrated teaching of content and language also requires scaffolding techniques adapted to this integrative learning approach (cf. Dale & Tanner 2012; Fehling, Hämmerling & Schramm 2013; Thürmann 2013). Accordingly, M3 is classified as a general teaching competence to which an additional dimension is added through CLIL.

Finally, the fourth and last subcategory for "Methodology" deals with the use of non-classroom learning environments and was only found in the theoretical guidelines (M4). As only a small number of codings refers to this aspect, without further specifying how these non-classroom learning environments should be included in the CLIL classroom, this methodological aspect seems less important compared to, for instance, the appropriate use of scaffolding techniques. Furthermore, non-classroom learning environments are also implemented in non-CLIL teaching contexts (cf. Thomas 2009) and therefore M4 is classified as a general teaching competence which does not gain any special dimension through CLIL.

The classification of the four subcategories for "Methodology" is visualised in Figure 8.9.

The three subcategories (M1 – M3), which were derived from theory and from practice, are located within either the general teaching competence or the language teaching competence but gain an additional dimension through CLIL. The singular subcategory only found in theory (M4) belongs to the general teaching competences, without any direct reference to CLIL.

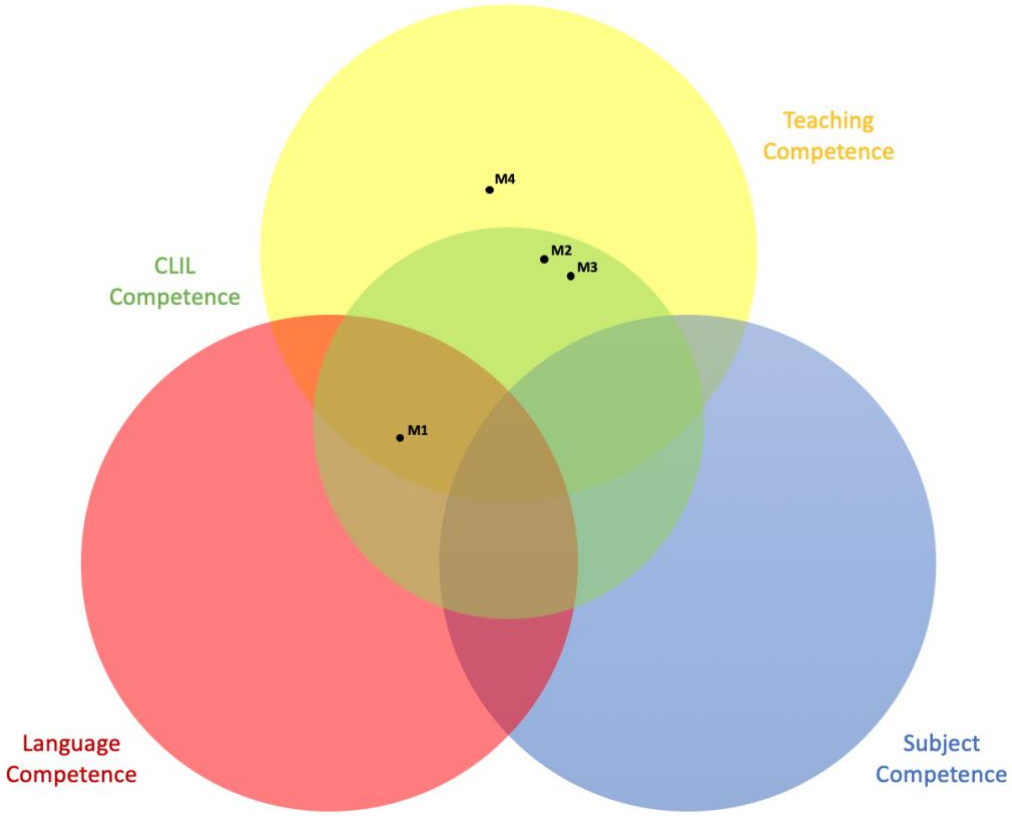


Figure 8.9 Areas of teacher competences – "Methodology"

A first comparison between the subcategories for "Assessment and Evaluation" (see Table 8.6) shows that only one overlapping subcategory of theory and practice can be identified. Hence, the decision if errors are language- or content-driven (AE1) was found in both the theoretical guidelines as well as the interviews. Though AE1 received only a comparably small number of codings, the interviewed CLIL teachers explain that it is often challenging to determine if a wrong student answer is based on problems in the language or the content area. Although this distinction is clearly of special importance in the CLIL classroom (cf. Koch 2002), it also requires teachers to possess diagnostic skills in order to determine what an error is based on. As this diagnostic competence is also element of the guidelines on *Bildungswissenschaften* (KMK 2004b, see competence 7) and can also be found in handbooks on education in general (cf. Ricken 2009; Jäger 2009), AE1 is classified as a general teaching competence which gains an additional dimension and special relevance through CLIL.

Continuing with the first subcategory from the theoretical considerations, which asks CLIL teachers to apply language correction strategies (AE2), this subcategory's aim is to ensure

Theory		Practice	
AE1 decide if errors are language- or content-driven			
AE2	apply language correction strategies	**AE7**	create tests that are adapted to the CLIL context
AE3	be aware of CLIL-specific assessment needs and problems	**AE8**	grade subject-specific language
AE4	use formative and summative assessment	**AE9**	focus grading on content achievements
AE5	use other forms of assessment		
AE6	raise students' awareness to use assessment results as a starting point for learning		

Table 8.6 Subcategories for "Assessment and Evaluation"

the students' language growth without demotivating them. According to the guidelines for foreign language teachers, the knowledge of different theories of language learning, which also include language correction strategies (KMK 2008), AE2 can be classified as a language teaching competence. This classification is supported by several articles and handbooks explaining the importance of language errors and mistakes for the individual learning processes (cf. Königs 2007b; Kleppin 2013; Klippel & Doff 2015; Haß et al. 2016).

With regard to the awareness of CLIL-specific assessment needs and problems (AE3), the theoretical guidelines do not explicitly specify these problems and needs but respective handbooks for CLIL teachers mention, for instance, the decision in which language to conduct the assessment or on which aspect to focus, that is language, content or both (cf. Coyle, Hood & Marsh 2010). With regard to the German guidelines for CLIL-teaching, the KMK clarifies that assessment in CLIL settings has to focus on content achievements without explicitly focusing on or grading language achievements (see chapter 2.1). Hence, this focus on content achievements needs to be added to this understanding of CLIL-specific assessment needs and

problems (cf. Koch 2002; Diehr 2013). As the knowledge of different assessment strategies and potential challenges of assessment are already included in the KMK guidelines for *Bildungswissenschaften* (KMK 2004b, see competence 8) and can also be found as one facet of the COACTIV groups' understanding of pedagogical/psychological knowledge (Baumert & Kunter 2013), AE3 can be classified as a general teaching competence which, however, certainly gains an additional dimension through the challenges of integrating content and language learning.

As for the balanced use and integration of formative and summative assessment in the CLIL classroom (AE4), the KMK guidelines for *Bildungswissenschaften* provide reference, requiring teachers to know and apply different forms of assessment (KMK 2004b, see competence 8). The COACTIV model, which defines knowledge of student assessment as a part of the pedagogical/psychological knowledge, conforms with these guidelines (Baumert & Kunter 2013). Furthermore, teachers' handbooks deal with the appropriate implementation of formative and summative assessment (cf. Maier 2013; Maier 2015, see chap. 7 and 8) and accordingly, AE4 can be classified as a general teaching competence.

A similar argumentation applies to the use of other forms of assessment (AE5), including self- and peer-assessment as well as portfolio-assessment. Again, the KMK guidelines for *Bildungswissenschaften* (KMK 2004b, see competence 8) as well as the understanding of pedagogical/psychological knowledge of the COACTIV group apply (Baumert & Kunter 2013). Accordingly, these other forms of assessment are regarded as an innovative approach to student assessment (cf. Sacher 2013) with no CLIL-specification as such. Hence, AE5 is also classified as a general teaching competence.

The last subcategory for the theoretical guidelines requires CLIL teachers to raise the students' awareness to use assessment results as a starting point for learning (AE6). Undisputable and similar to AE4 and AE5, this subcategory is not CLIL-specific as, ideally, teachers should always try to encourage students to reflect upon their assessment results. Once more, this assumption is verified by the KMK guidelines for *Bildungswissenschaften*, which require teachers to know the potential of assessment results as a basis for future learning (KMK 2004b, see competence 8). Accordingly, AE6 is also classified as a general teaching competence.

Moving on to the first subcategory derived from the interviews asking CLIL teachers to create tests that are adapted to the CLIL context (AE7), the interviewed teachers explain that they need to adapt their test designs to the integration of content and language learning. As general test design is also integrated in the KMK guidelines on *Bildungswissenschaften* (KMK

2004b, see competence 8) and in teacher handbooks (cf. Becker 2007c; Sacher 2009), AE7 belongs to the general teaching competences. However, as the test design needs to be adapted to the CLIL context and hence has to integrate the language and the content perspective, an additional dimension is added through CLIL.

As was already mentioned for AE3, CLIL assessment in German settings focuses on content achievements exclusively. Hence, while language mistakes are not supposed to be taken into account, some of the interviewed CLIL teachers argue that they grade the correct use of the subject-specific language (AE8) and even conduct explicit vocabulary tests. Although the mere translation of subject-specific terms is often a moot point regarding possibility or meaning (see Diehr 2016 for the distinction between total or partial equivalences of concepts), the correct use of the subject-specific language, which not only includes vocabulary but also grammatical and syntactic structures, can be considered as part of the students' content knowledge (cf. Koch 2002). Accordingly, AE8 first of all requires the teachers' subject-specific language competence, i.e. the own ability to use the subject-specific language, to be a prerequisite for grading student language. The aspect of grading, though, is part of the general teaching competence (KMK 2004b, see competence 8). Therefore, AE8 is located in the centre of the model of teacher competence areas as it combines the subject-specific language competence with the general teaching competence and also adds the CLIL perspective as the teacher needs to carefully decide what the current focus of assessment is. Interestingly, AE8 was primarily mentioned by those teachers who are also qualified as English language teachers which may lead to the assumption that the non-language teachers focus more on the students' content achievements and do not regard the subject-specific key terms as part of the content competences.

Finally, the last subcategory for "Assessment and Evaluation" especially addresses the previously mentioned focus of grading on content achievements (AE9). As this subcategory has the comparably largest number of codings and some teachers even explicitly mention the KMK guidelines, the importance of this aspect seems to be profound for the interviewed CLIL teachers. The localisation of AE9 within the model of areas of teacher competences is challenging, though. On the one hand, grading the students' content achievements is arguably part of the subject-teaching competence (KMK 2004b, see competence 8). On the other hand, some of the interviewed teachers explain that only grading the students' content achievements is difficult as the CLIL teacher is oftentimes also a language teacher and hence feels the urge to correct possible language mistakes and therefore, the aspect of language assessment as a component of the language teaching competence, is also added to AE9. Additionally, the

comparison to AE8 shows that a CLIL teacher needs to carefully differentiate between subject-specific language mistakes and general language mistakes, which again touches upon the teachers' subject-specific language competence as the teacher first of all needs to be aware of the differences him- or herself. Accordingly, AE9 also needs to be localised in the very centre of the model of areas of teacher competences as it requires CLIL teachers to combine the different aspects of content teaching as well as language teaching and adds the CLIL perspective.

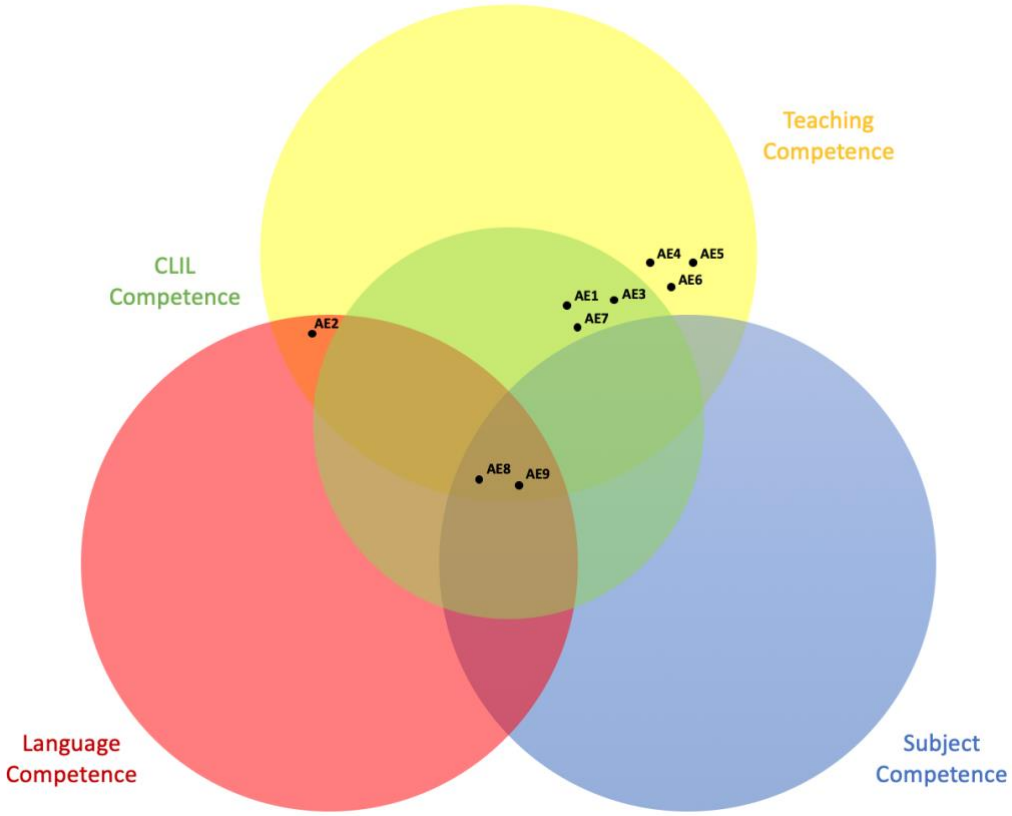


Figure 8.10 Areas of teacher competences – "Assessment and Evaluation"

As is displayed in Figure 8.10, four of the overall nine subcategories for "Assessment and Evaluation" are not classified as connected to CLIL but belong to the general teaching competences or the language teaching competences (AE2, AE4 – AE6). As was also the case for the previous main categories, the affected subcategories were all derived from the theoretical guidelines. Only one of the subcategories from theory (AE3) as well as the only subcategory which was found for both theory and practice (AE1) is classified as gaining an additional dimension through CLIL. The remaining subcategories obtained from the interviews (AE7 – AE9) are all attributed a CLIL perspective, two of which are even located in the very centre of the model. Apart from that, the comparison between theory and practice displays once more the different understanding of CLIL in Europe and in Germany. As the KMK's definition of *Bilingualer Sachfachunterricht* shifts a greater focus onto content teaching, the respective

subcategories from the interviews display this greater focus on assessing content achievements and only assess the subject-specific language, which is considered as a crucial element of the content competence as such. The subcategories derived from the theoretical guidelines, which reflect the European understanding of CLIL, hence also focus on language grading.

Theory	Practice
I1 develop cultural awareness and ICC	

Table 8.7 Subcategories for "Interculturality"

For the main category "Interculturality" (see Table 8.7), only one subcategory was identified, asking CLIL teachers to develop cultural awareness and ICC. The subcategory can be found both in theory and in practice. With regard to the theoretical guidelines, the emphasis is especially on the linguistic aspect of ICC, that is the different use of language to describe a

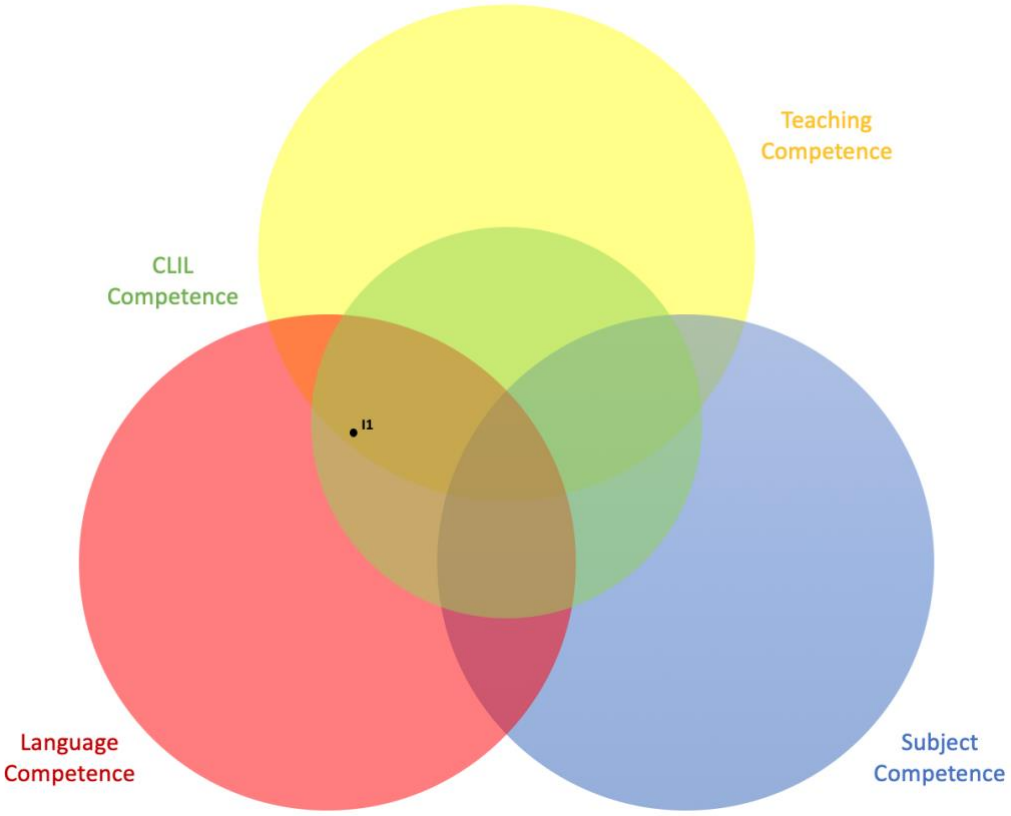
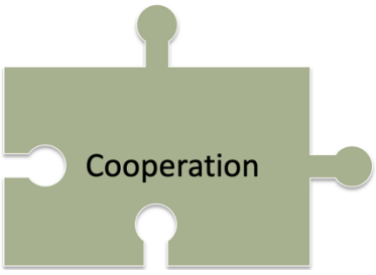


Figure 8.11 Areas of teacher competences – "Interculturality"

specific concept. Apart from that, it also involves the use of texts or material from different cultural backgrounds. The localisation of this aspect in the model, though, is again challenging. Although the guidelines for *Bildungswissenschaften* require teachers in general to comprise intercultural dimensions (KMK 2004b, see competence 4) and the development of ICC is also implemented in the *Bildungsstandards* for the subject German (KMK 2012b: 13), the development of ICC is often especially connected to foreign language learning (cf. the guidelines for foreign language teaching KMK 2008, or handbooks on foreign language teaching Weskamp 2007; Haß et al. 2016). Byram's model of ICC designed for foreign language teaching environments (Byram 1997) backs up the mandate of ICC to be part of language learning. Accordingly, the development of ICC could be considered as part of the general teaching competence but due to its greater importance in the field of language learning, it is rather an element of the language teaching competence. As CLIL also focuses on the different cultural understanding of subject-specific concepts, the CLIL perspective undoubtedly adds another dimension to the development of ICC. Also, *culture* is one of the 4Cs and therefore forms one of the defining elements of CLIL (see chapter 2.1). Hence, I1 is localised as a language teaching competence which gains an additional perspective and special importance through CLIL (see Figure 8.11).



Theory		Practice	
C1 … with school authorities			
C2	… with parents	**C4**	… with the English teacher
C3	… with other colleagues	**C5**	… with other CLIL colleagues

Table 8.8 Subcategories for "Cooperation"

Moving on to the second last main category, "Cooperation" has a total number of five subcategories (see Table 8.8), one of which was found for theory and for practice and requires CLIL teachers to cooperate with school authorities (C1). Unfortunately, cooperating with, for example, the educational ministry, is not explicitly mentioned in the guidelines for *Bildungswissenschaften* nor found in any teacher handbook. Hence, it does not seem to be a

decisive element of teacher competences. Notwithstanding, the theory-based standards as well as the interviewed CLIL teachers mention the necessity to cooperate with school authorities in order to implement a CLIL programme in existing school systems. This aspect, however, requires the CLIL teachers to know the general structures of the educational systems, which is also a competence in the KMK guidelines on *Bildungswissenschaften* (KMK 2004b, see competence 9). Furthermore, one teacher explains that the curriculum for CLIL Geography is outdated and that she therefore cooperates with the ministry in order to either encourage the development of a new curriculum or to find ways of adapting the existing one. Hence, this also requires curricular knowledge, which Shulman (1986; 1987) defines as one of the dimensions of teacher knowledge. Accordingly, C1 belongs to the general teaching competences but it gains another dimension and also greater importance through CLIL as teachers need to be able to find ways of integrating CLIL programmes in existing educational contexts.

Next, the subcategory of cooperating with parents (C2) was only found in the theoretical guidelines and asks teachers to cooperate with the parents so that they are able to support their children in their school careers. This, again, is also mentioned in the KMK guidelines for *Bildungswissenschaften* outlining that teachers are supposed to work together with the parents and discuss different options for supporting the students (KMK 2004b, see competences 6 and 7). As the theoretical guidelines do not provide any aspects which would make the cooperation with parents different in a CLIL programme, C2 is classified as a general teacher competence.

As a third form of cooperation found in the theoretical guidelines, CLIL teachers are supposed to cooperate with other colleagues (C3). These colleagues might be other CLIL teachers but may also be other language or subject teachers. The aim of these forms of cooperation is, inter alia, to identify training needs or to share innovative teaching methodology. The knowledge of cooperative structures within the school in order to develop the own teaching personality, however, is also part of the KMK guidelines for *Bildungswissenschaften* (KMK 2004b, see competence 10) and sharing experiences with other colleagues as well as observing other colleagues' lessons is also found in teacher handbooks (cf. Kempfert & Ludwig 2015; Buhren 2015). Therefore, C3 is also classified as a general teaching competence.

Derived from the practical perspective, the following subcategory requires CLIL teachers to cooperate with the English language teacher (C4) in order to discuss the necessary language skills students need to acquire to follow the CLIL lessons and how the training of such skills can be implemented in regular English language teaching. Again, the KMK guidelines for *Bildungswissenschaften*, according to which teachers need to be familiar with cooperative structures within the school context, can be applied (KMK 2004b, see competence 10). As the

cooperation between the CLIL teacher and the English language teacher is a rather specific form of cooperation especially necessary in CLIL programmes (cf. Dale & Tanner 2012) and which is probably not necessary in regular teaching programmes, C4 is classified as a general teaching competence which gains an additional dimension through CLIL.

Finally, the last subcategory for "Cooperation" asking CLIL teachers to cooperate with one another (C5), is also the one with the largest number of codings within the interviews. The interviewed teachers report about networks they created to share experiences, teaching materials or individually designed exams. The interviewed teachers value the importance of these networks in unison. Similarly to the previous subcategories for "Cooperation", the KMK guidelines for *Bildungswissenschaften* require teachers to be familiar with cooperative structures (KMK 2004b, see competence 10) but again, the CLIL approach adds further necessity to this level of cooperation. As CLIL programmes are often newly-established and appropriate teaching material hardly available, cooperation between the CLIL colleagues needs to be closer than in regular teaching contexts. Therefore, C5 is also classified as a general teaching competence which gains a greater importance through CLIL. It is again worth noticing that the distribution of codings shows that especially those CLIL teachers who are also qualified as English language teachers mention this aspect of cooperating with other CLIL colleagues, which leads to the assumption that the non-language teachers are apparently not aware of the necessity of cooperative structures in the CLIL programmes.

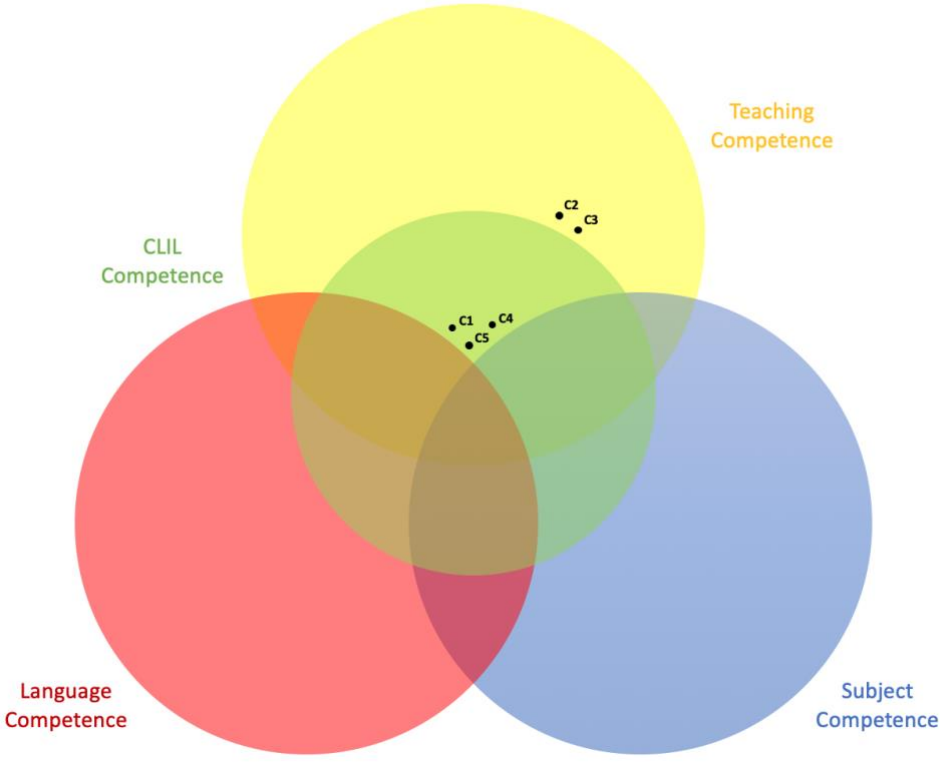
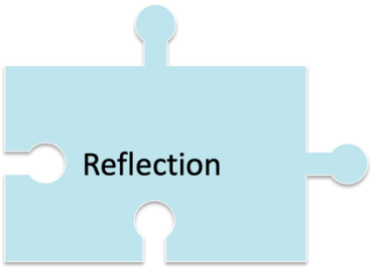


Figure 8.12 Areas of teacher competences – "Cooperation"

As is visualised in Figure 8.12, all subcategories of "Cooperation" are classified within the field of the general teaching competences, some of which, however, gain an additional dimension through CLIL. Similar to the previous main categories, these are especially those subcategories, which were derived from the interviews (C1, C4, C5) while those subcategories which were exclusively found in the theoretical guidelines are not attributed a special CLIL-reference (C2, C3). Especially the aspect of cooperating with other colleagues (C3), which was only found in the theory-based standards, however, is rather similar to two subcategories from the interviews (C4, C5) with the difference that the subcategories from the practical perspective are more differentiated than the ones from the theoretical perspective. Accordingly, this distinction seems to be of special importance for the teachers.



Theory		Practice	
R1	critically analyse research articles on CLIL	**R6**	reflect upon the CLIL approach
R2	conduct and discuss research in the CLIL classroom		
R3	use evaluation techniques to reflect upon the CLIL approach		
R4	manage the roles of a CLIL teacher		
R5	continuously develop the personal role as a CLIL teacher		

Table 8.9 Subcategories for "Reflection"

The final main category "Reflection" includes six subcategories (see Table 8.9), none of which were found for theory and for practice. Beginning with the first subcategory derived from the theoretical guidelines, CLIL teachers are required to critically analyse research articles on CLIL (R1). With regard to the KMK guidelines for *Bildungswissenschaften*, however, teachers are already required to familiarise themselves and evaluate projects in the area of educational research (KMK 2004b, see competence 10). Hence, R1 can be regarded as a general teaching

competence. Also, as analysing research articles on CLIL does not entail any additional competences than analysing or evaluating other research projects as such but rather requires teachers to be familiar with CLIL – which, however, is not part of R1 but belongs to other main categories (e.g. CLIL-F1) – no additional, CLIL-specific dimension is added to R1.

Apart from analysing and evaluating research, CLIL teachers are also required to conduct and discuss their own research projects with their students in the CLIL classroom (R2). Though this aspect is not further specified, it could be summarised as being part of the guidelines for *Bildungswissenschaften* as they require teachers to plan and conduct projects in school in order to gain insights regarding educational research and school development (KMK 2004b, see competence 11). Accordingly, R2 can be classified as a general teaching competence.

Moving on, CLIL teachers are also required to use evaluation techniques to reflect upon the CLIL approach (R3) and thus secure and improve the quality of the CLIL programme. Again, this is also included in the guidelines for *Bildungswissenschaften* as the KMK requires teachers to use self-evaluation but also external evaluation techniques to reflect upon the quality of their teaching (KMK 2004b, see competence 10). Similar to R1, no additional, CLIL-specific competences seem to be necessary as evaluation and reflection are covered through the knowledge about different evaluation techniques as such. Therefore, R3 is also classified as a general teaching competence.

Next, the subcategory with most codings calls for teachers to manage the different roles of a CLIL teacher (R4). Unfortunately, this mandate is not further specified but it presumably targets at the different phases of a CLIL lesson in which a teacher's role alternates between being a subject teacher and a language teacher, i.e. being a CLIL teacher. The KMK guidelines for *Bildungswissenschaften* address the different teacher roles only briefly as they ask teachers to know the demands of the teaching profession (KMK 2004b, see competence 9). Teacher handbooks and research articles on the different roles of a teacher in general, however, already address the complexity of combining the different roles of a teacher, such as being an educator, expert, friend or role model (cf. Becker 2007a; Rothland 2009; Gehrmann 2009; Berner & Isler 2011; Arnold & Gassmann 2011). Accordingly, managing the different roles of a teacher is a general teaching competence. Through CLIL however, another dimension is added as the teacher also needs to manage the roles of being a language teacher or a content teacher or both, depending on the aim and phase of the CLIL programme (cf. Viebrock 2010; Viebrock 2012; D'Angelo 2013). Therefore, R4 is classified as a general teaching competence with an additional perspective due to CLIL.

In direct relation, teachers are also required to continuously develop their role as a CLIL teacher (R5), which, however, is also implemented in the guidelines for *Bildungswissenschaften* as the KMK asks teachers to regard the teaching profession as a life-long learning task (KMK 2004b, see competence 10). Parallel to R1 and R3, considering the teaching profession as a life-long learning process and knowing how to successfully develop the personal role as a teacher is not a CLIL-specific competence. Consequently, R5 is classified as a general teaching competence.

The only subcategory for "Reflection" which was derived from the interviews and which only received one coding, already suggests that the aspect of reflection does not seem to be a prominent topic for the interviewed CLIL teachers. Notwithstanding, one teacher explains that it is helpful to reflect upon the CLIL approach and regard it from different perspectives (R6). As this is already subsumed under the guidelines for *Bildungswissenschaften* (KMK 2004b, see competence 10), R6 is classified as a general teaching competence.

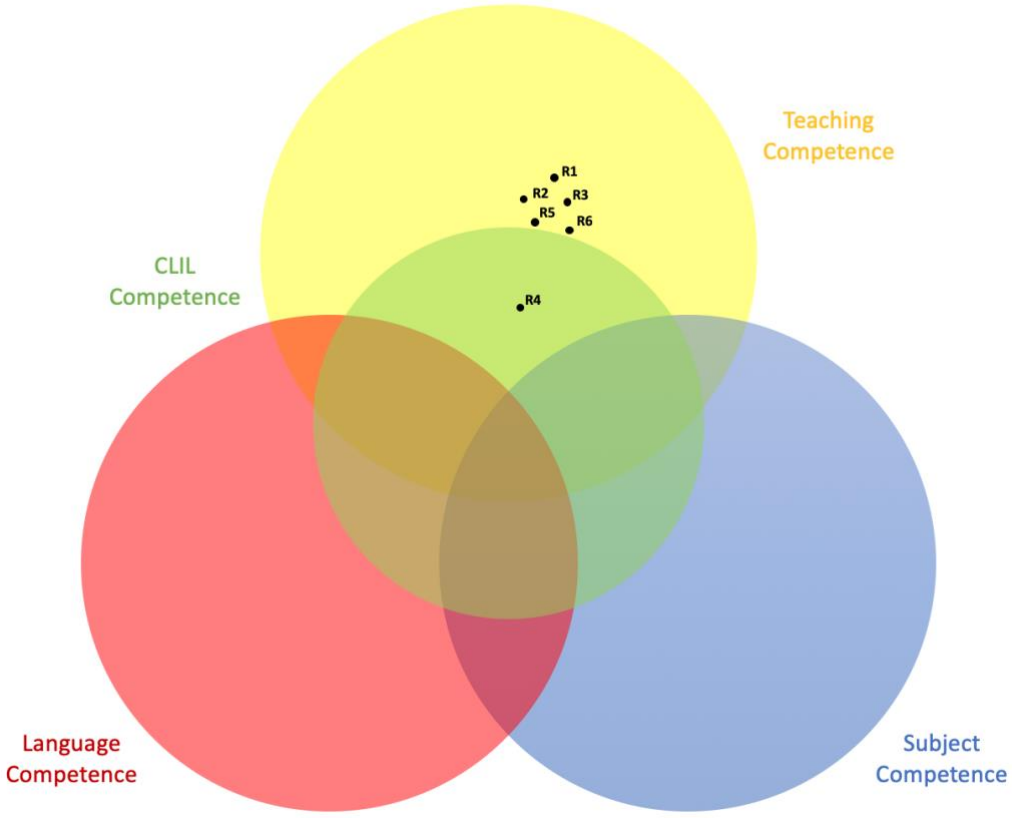


Figure 8.13 Areas of teacher competences – "Reflection"

The visualisation in Figure 8.13 shows that all subcategories for "Reflection" are classified in the area of general teaching competences, with only one gaining an additional dimension through CLIL (R4). Accordingly, the topic of reflection does not seem to be particularly CLIL-specific but is part of the teaching profession as such. This would also serve as an explanation

why only a limited number of the interviewed teachers addressed the topic of reflection as they, presumably, did not regard it as a topic of the CLIL discussion.

Overall comparison

In order to compare the subcategories derived from the theoretical considerations, the interviews as well as those subcategories which were found in the input from both theory and practice, Figure 8.14 shows the classification of all 61 subcategories. The subcategories theoretically derived are visualised in black, while the subcategories taken from the interviews are grey. Those subcategories which represent both the theoretical as well as the practical perspective are shown in white.

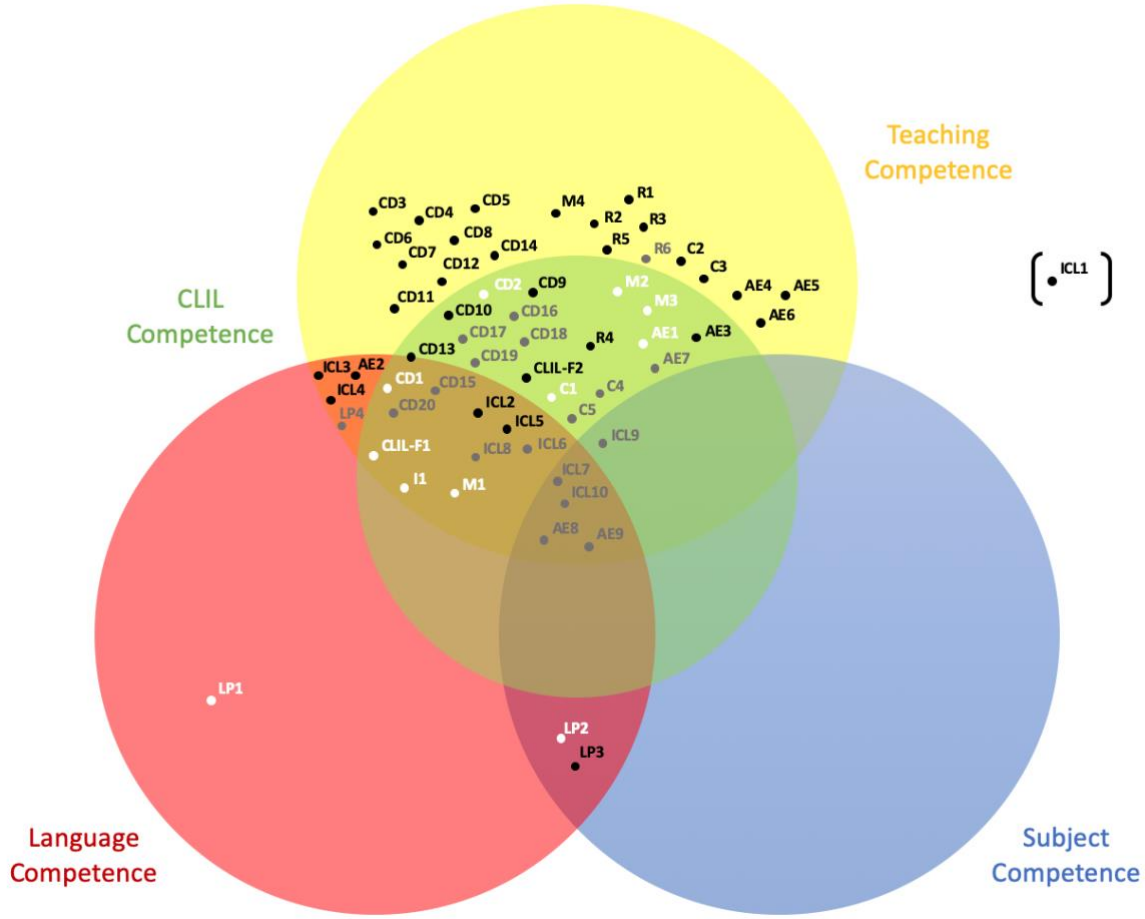


Figure 8.14 Areas of teacher competences – all subcategories

The distribution shows that the vast majority of the subcategories is localised in areas connected to the yellow circle representing the teaching competence. The only three subcategories without any connection to the teaching competence all belong to "Language Proficiency" (LP1, LP2 and LP3) and are solely concerned with the CLIL teachers' (subject-specific) language competence. Slightly surprising, the largest number of subcategories – 20 in total – is found in the area for pure teaching competence (yellow sector), without any direct reference to CLIL.

The majority of these subcategories addresses aspects of "Course Development", "Assessment and Evaluation" as well as "Reflection". This sector is followed by the green sector, representing the teaching competence with CLIL focus, which contains 19 subcategories (also counting CD13 at the junction to the language teaching competence with CLIL focus). Again, the majority of subcategories refer to "Course Development", but also to "Assessment and Evaluation" and "Cooperation". Within the dark-orange sector of the language teaching competence, only four subcategories are classified, two of which belong to the "Integration of Content and Language". Moreover, eleven subcategories (again also counting CD13 which is at the junction to the general teaching competence with CLIL focus) are classified as language teaching competences which gain an additional dimension through CLIL. These primarily cover aspects of the "Integration of Content and Language" as well as "Course Development". While not a single subcategory refers to the pure subject teaching competence, one subcategory from the "Integration of Content and Language" is classified as subject teaching competence with CLIL focus. Finally, the remaining four subcategories, equally representing the "Integration of Content and Language" as well as "Assessment and Evaluation", are localised in the very heart of the model and hence incorporate all four competence areas: language, content, teaching and the CLIL perspective.

Out of the overall 61 CLIL teacher competences, a total number of 18 competences is connected to the language teaching competence (four of which are not directly connected to CLIL). Considering this relation, the sole requirement of high foreign language competences and the concurrent waiving of a required CLIL-specific qualification for CLIL teachers in Germany appears highly questionable. The fact that CLIL teaching in Germany is not supposed to integrate explicit language teaching although almost a third of the CLIL teacher competences are language teaching competence, while only five of the CLIL teacher competences include the subject teaching competence strikes as contradictory. This puts further emphasis on the postulation that CLIL teachers especially need to be language teachers which also entails that language learning and teaching should be a central element of German CLIL programmes.

Another interesting comparison is that of the competences which are classified as having a special importance for or gaining an additional dimension through CLIL, hence, all those subcategories located within the green circle of the CLIL competence. This distinction is also visualised in Figure 8.15. It shows the number of competences with CLIL focus (dark grey) and without CLIL focus (light grey). While the left bar represents all 61 subcategories, the two middle ones show the distribution of subcategories for both theory and practice and the very right bar shows those subcategories which were found in theory and in practice.

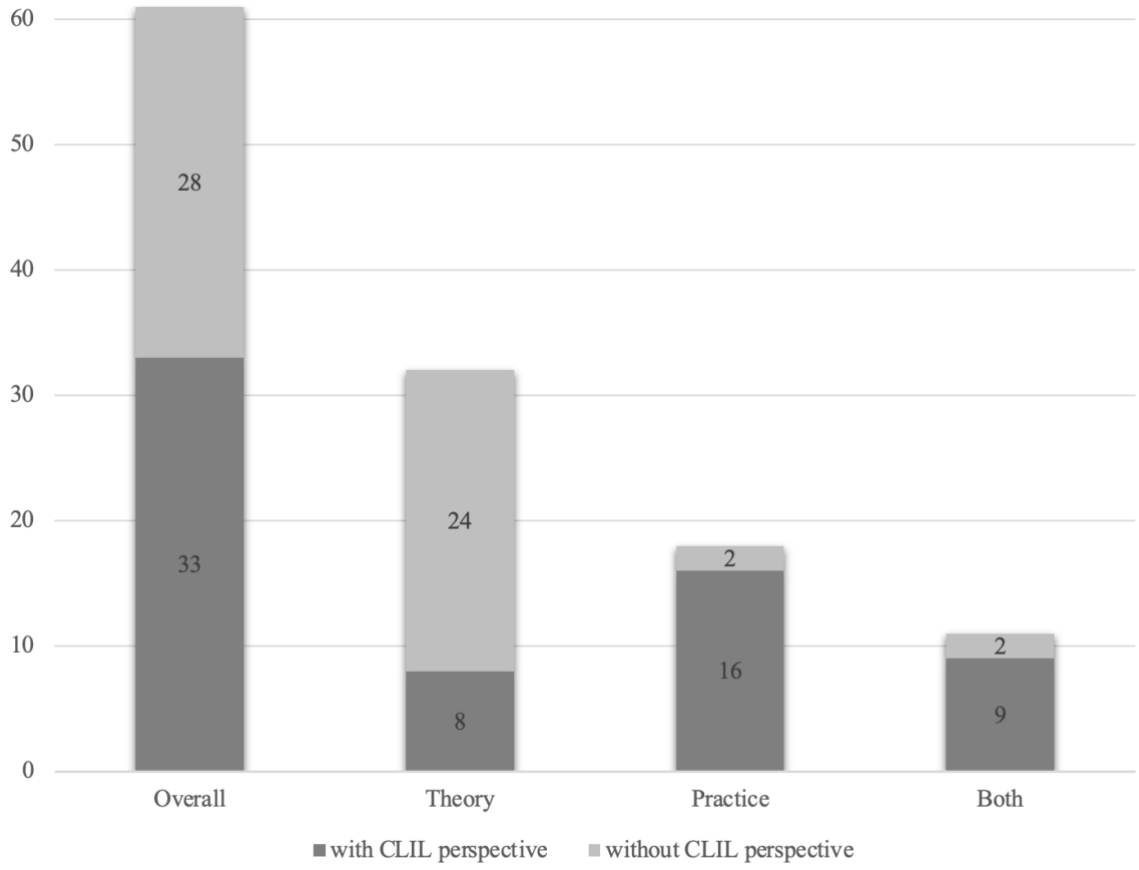


Figure 8.15 Distinction of subcategories between CLIL and non-CLIL perspective

Surprisingly, of the 32 subcategories derived from the theoretical considerations, only eight, representing a fourth of the subcategories, have a direct connection to CLIL. Those subcategories developed on the basis of the interviews, however, show a strong focus on CLIL-specific competences as 16 out of the 18 subcategories, making almost 90 percent, gain an additional dimension through CLIL. A similar distribution can be found for the subcategories representing both theory and practice since nine out of the eleven subcategories show a specific focus on CLIL. Again, this represents more than 80 percent. Overall, more than half of the subcategories (33 out of 61) are classified as having a special relevance for CLIL. With more than half of the identified competences requiring to be specifically considered in CLIL programmes, the KMK guidelines, which do not require German teachers to be specifically qualified for teaching in CLIL programmes but regard the subject teaching competence and the foreign language proficiency as sufficient (see chapter 4), have to be contested. Keeping in mind that those teachers who teach in CLIL programmes without having run through specific CLIL training programmes are hence not familiarised with more than half of the competences required for successful CLIL teaching, it seems hardly surprising that research reveals that

CLIL programmes in Germany currently fall short of the high expectations that are connected to them (see chapter 2.4). In order to systematically prepare teachers for teaching in CLIL programmes, this framework serves as a basis for developing specific CLIL teacher education programmes and can be applied to the different educational contexts of CLIL programmes within Germany.

8.3. Application of the German Framework for CLIL Teacher Education

As was shown on the previous pages, the 61 competences of the German Framework for CLIL Teacher Education were classified within different competence areas (see Figure 8.14). Accordingly, the Framework can be applied to different educational contexts and adapted to the teachers' prior knowledge. In order to do so, the first step is to identify all those competence areas which future CLIL teachers already have acquired and only those sectors of the model which have not been covered need to be implemented in a specific teacher education programme.

As an example for the German context, teachers are already qualified for two subjects and – as outlined in chapter 4.3 – the majority of CLIL teachers in Germany are qualified for

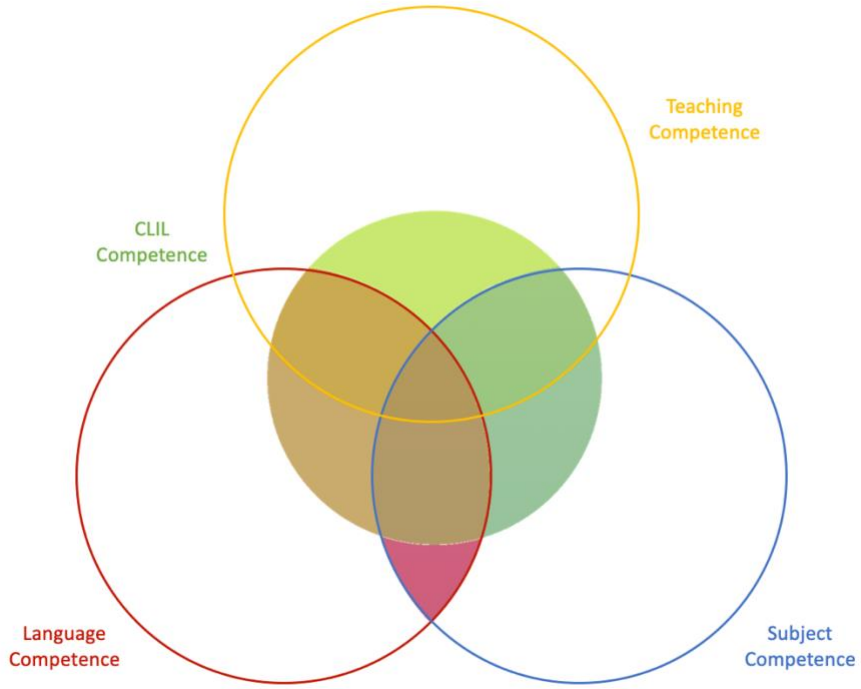


Figure 8.16 Areas of teacher competences – adapted framework for prerequisites of prototypical German CLIL teachers

teaching a content subject as well as the foreign language that is used in the CLIL programme. Accordingly, these teachers would only need to cover those competences within the green circle

representing the CLIL competence. Apart from that, it cannot be presupposed that a teacher who is qualified as a subject and as a language teacher also displays the subject-specific language competence. Hence, the two competences in this sector of the model also need to be integrated in this exemplary teacher education programme. These competence areas are visualised in Figure 8.16, represented through the coloured sector of the model while those competence areas which are already achieved are visualised via blank circles.

Another example for the context of Germany, which was also the case for some of the interviewed teachers, are teachers who originally did not qualify as a teacher but studied a content subject and initially worked in this field, for example as a scientist or researcher. In cases in which such a scientist has lived and worked abroad before returning back to Germany to eventually enter the educational system and teach the content subject, both the foreign and the subject-specific language competence as well as the subject competence are given. If such a teacher is then immediately required to teach in CLIL programmes, he or she is not trained or experienced in the CLIL-specific competences of the green circle and similarly also lacks the general teaching as well as the language and subject teaching competences, which would therefore need to be included in a special CLIL teacher education programme. Again, Figure 8.17 visualises those competence areas which still need to be covered in the respective CLIL teacher education programme for this exemplary target group and the areas of the subject as well as the language and the subject-specific language competence are left blank.

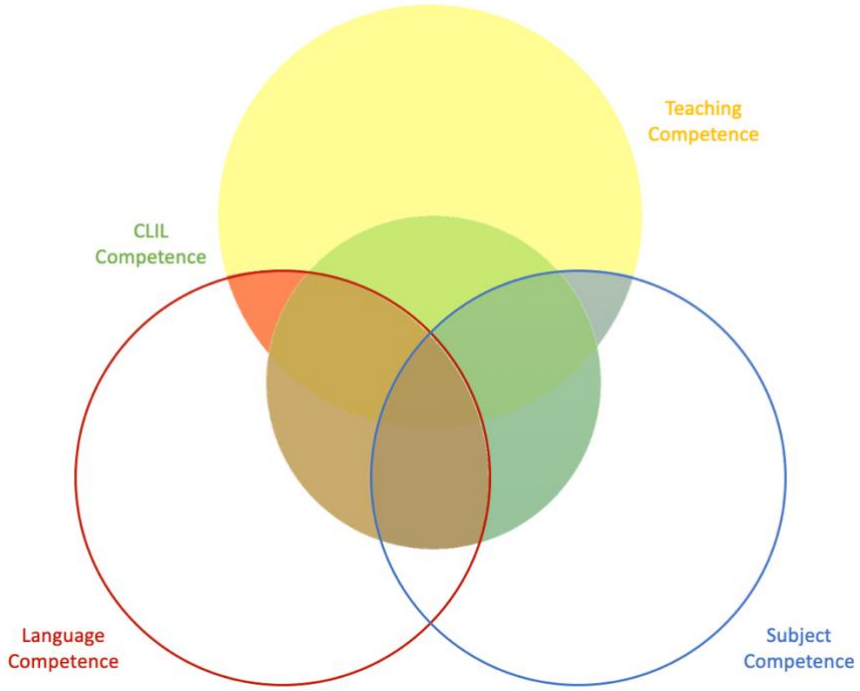


Figure 8.17 Areas of teacher competences – adapted framework for prerequisites of subject expert with language competence

Summarising, when designing a programme for future CLIL teachers, these guiding questions can function as a checklist for identifying the necessary contents of the programmes, based on this German Framework for CLIL Teacher Education:

CHECKLIST
What are the contents for the programme?
☐ Which competence areas have the participants already acquired?
☐ language competence
☐ subject competence
☐ general teaching competence
☐ language teaching competence
☐ subject teaching competence
☐ subject-specific language competence
➔ The remaining competence areas and the individual competences build the necessary content for the CLIL programme

Table 8.10 Checklist – German Framework for CLIL Teacher Education

9. Programmes on University Level

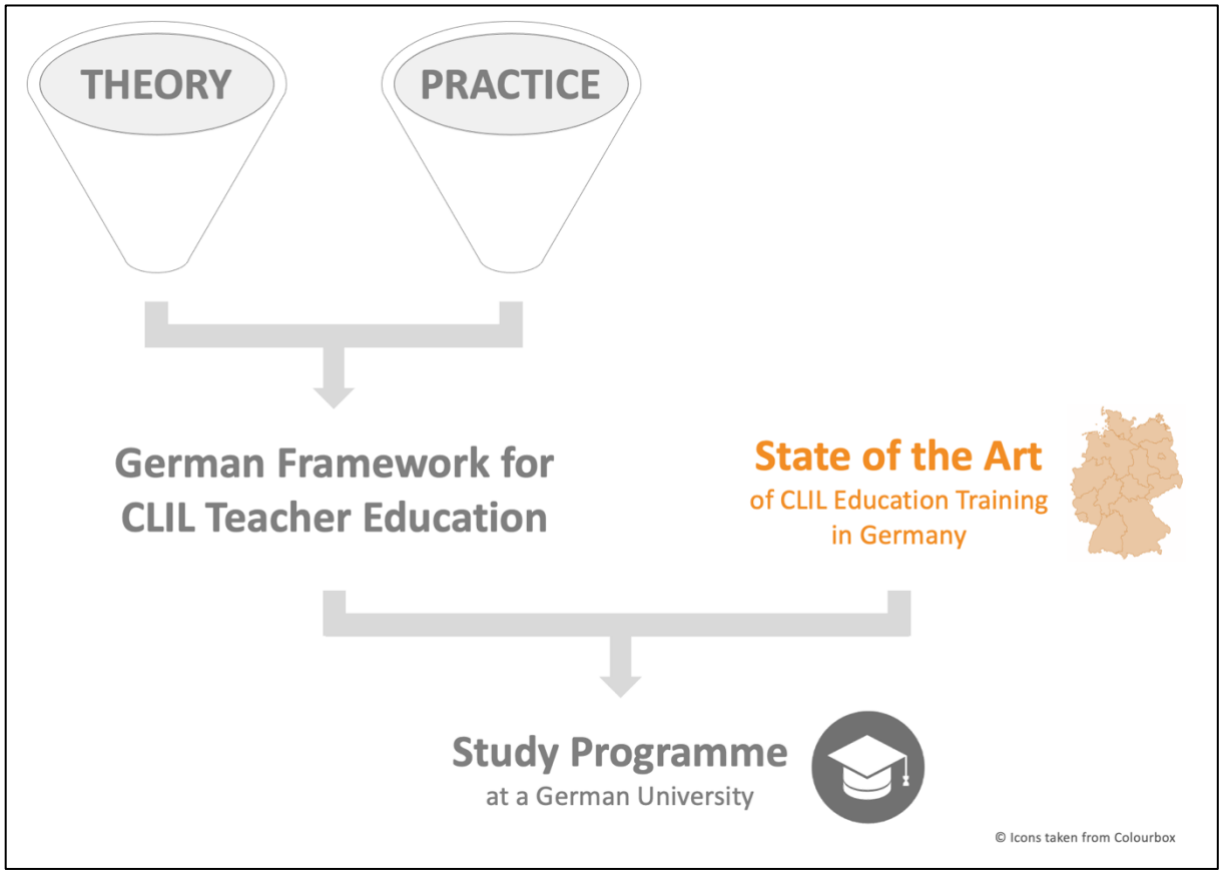


Figure 9.1 Visualisation of research design – State of the Art

While the development of the German Framework for CLIL Teacher Education (see chapter 8) focused on the CLIL teacher competences, hence the contents of CLIL teacher education programmes, the following chapter systematises and discusses possible structures for implementing CLIL teacher education programmes at German universities (Figure 9.1). As already shortly addressed in chapter 4.3, Gnutzmann argues that the implementation of the B.Ed./M.Ed. system in German teacher education provides the opportunity to implement CLIL teacher education programmes in the regular M.Ed. study programme (Gnutzmann 2015: 341–342). According to Wolff, several European universities already make use of this opportunity and offer study programmes in which a language and a content subject are integrated (Wolff 2013: 22). Research contributions trying to systematise CLIL teacher education programmes at German universities, though, show no significant development in the last 15 years. Hence, Blell and Kupetz list a number of 15 universities and teacher education colleges which offer a CLIL programme in 2005 (Blell & Kupetz 2005: 13–14), while in 2015, Gnutzmann provides another list of 16 CLIL teacher education programmes at German universities (Gnutzmann 2015: 339–

340). Although these lists overlap only partially, it still raises the question if an increase of CLIL teacher education programmes can be observed in Germany.

What these lists by Blell and Kupetz as well as Gnutzmann also show is that the described programmes not only differ with regard to their contents but especially with regard to their structural implementation. Therefore, the following chapter systematises the existing CLIL teacher education programmes at German universities. First, the approach is described which is followed by the results of the analysis and the discussion of these results. As the landscape of CLIL teacher education is in constant change, though, these results can only be a "snapshot" of the state of the art of CLIL teacher education at German universities.

9.1. Approach

As a basis for establishing the state of the art of CLIL teacher education at German universities, a web-based research of all German universities and teacher education colleges which offer teacher education programmes was conducted with regard to whether they currently offer any CLIL programmes. If so, the available information was classified according to the following categories:

- *target group:* 1st, 2nd or 3rd phase of teacher education?
- *type of school:* GS (primary school), Sek I (lower secondary school), Sek II (higher secondary school), BBS (vocational school), Gesamtschule (comprehensive schools)[59]
- *CLIL languages*
- *content subjects*
- *prerequisites:* e.g. studying the CLIL language or having a certain competence level in the CLIL language
- *credit points (CPs)*
- *cooperation with* Didaktik *of subject discipline*
- *integration of subject-specific language*
- *integration of a practical phase*
- *final degree of the programme*

If the universities' websites did not provide all necessary information, the respective universities were contacted by phone or via mail and the remaining information obtained.

[59] The classification of the CLIL programmes with regard to the types of school was sometimes challenging as the names for the different school types vary among the different federal states (see also chapter 3.4).

Due to this approach, only those programmes are listed and systematised which are advertised on the universities' websites. Programmes which are not found online are, hence, not included. Also, the approach exclusively focuses on those programmes currently (still) offered and excludes those no longer available but still found on the universities' webpages. Finally, only entire programmes are included which consist of more than just one seminar on CLIL teaching which is implemented in the regular teacher education programme.

9.2. Results

To begin with, Figure 9.2 shows the twelve German universities which currently offer a CLIL teacher education programme[60]. The shades of the different federal states refer to the absolute number of CLIL programmes offered within the respective federal state. Accordingly, the darker the shading, the more universities offer a CLIL teacher education programme.

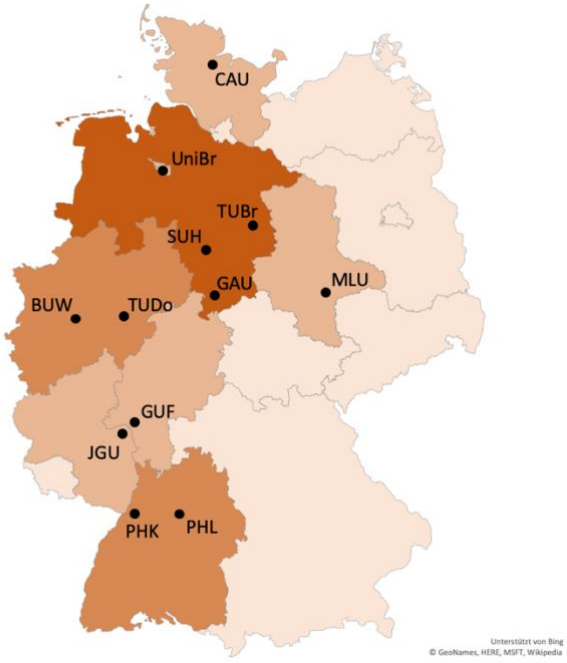


Figure 9.2 Absolute numbers of universities with CLIL programmes per federal state

At first glance, it can be observed that the majority of CLIL teacher education programmes can be found in the western federal states. Also, Lower Saxony is the federal states which offers three, hence the largest number of CLIL teacher education programmes while the other federal states only offer one or two programmes. Several federal states, such as Bavaria, Berlin, Hamburg or Brandenburg do not offer any CLIL teacher education programmes at all[61].

[60] The abbreviations for the different universities can be found in the List of Abbreviations, page XII.

[61] In some cases, CLIL teacher education programmes used to be implemented at universities in these federal states. At the time of this research, however, these were no longer existent.

While these absolute numbers of CLIL teacher education programmes per federal state are certainly of interest, it needs to be considered that some federal states, such as Lower Saxony, are larger than others and hence also more general teacher education universities are found in these federal states. Therefore, Figure 9.3 shows the relative distribution (i.e. percentages) of universities with CLIL programmes in relation to the overall number of universities with teacher education programmes per federal state. So, for example, Lower Saxony has a total number of eight universities with a teacher education programme. Three of these universities also offer a CLIL teacher education programme, which represents 38% of the total number of universities with a teacher education programme in Lower Saxony. Again, the darker the shading the higher is the percentage of universities with CLIL programmes in the respective federal states.

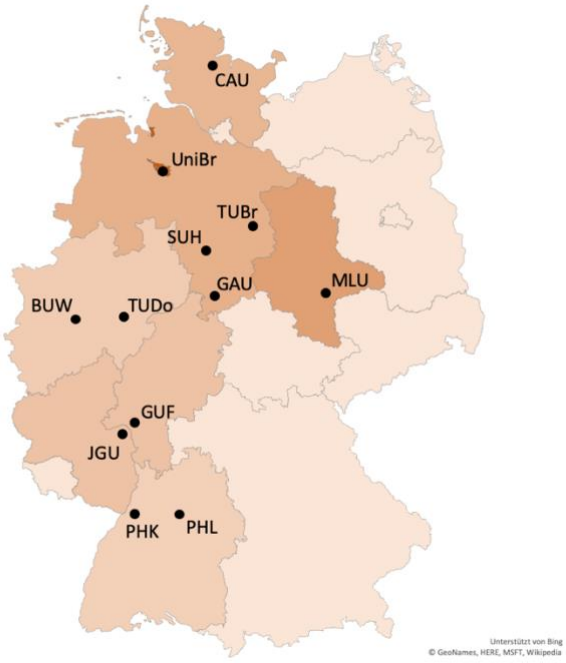


Figure 9.3 Relative numbers of universities with CLIL programmes per federal state

This, now, paints a different picture as Bremen is the federal state with the highest relative number of university CLIL teacher education programmes (100%)[62], followed by Saxony-Anhalt with 50%. The programmes in Lower Saxony, which made up the highest absolute number of CLIL teacher education programmes, though, only represent 38% of the teacher education universities in the federal state. Overall, for entire Germany, the total number of twelve CLIL teacher education programmes in relation to 68 universities with general teacher

[62] This exceptionally high percentage, though, also needs to be considered with reference to the fact that Bremen only has one university with teacher training programmes in general.

education programmes represents 18%, hence not even every fifth German university with a teacher education programme also offers a specialised CLIL programme.

The characteristics of the individual programmes are discussed in the following, distinguishing between those programmes with consist of a full study programme and those which offer an additional certificate programme.

Study Programmes

Table 9.1 shows the analysis of the two CLIL study programmes, differentiated by their target group, hence distinguishing between the first, second or third phase of teacher education. The study programme at the university in Wuppertal (BUW) addresses students in the first phase of teacher education whereas the programme at the teacher education college in Karlsruhe (PHK) targets teachers in the third phase of teacher education. While the programme at the BUW only addresses secondary school forms, the programme at PHK also targets primary school teachers. With regard to the different CLIL languages, BUW offers English and French, while the PHK offers English only. In order to join the study programmes, participants need to have completed a study degree in both cases and also need to show a certain level of language competence. While the BUW requires the participants to study the CLIL language, the PHK only requires the level C1 of the CEFR without any special language teaching experiences. Apart from that, participants at the PHK need to have been working as a teacher for at least one year before applying for the study programme.

In both cases, the programmes are organised in cooperation with representatives of the didactic perspective of the subject disciplines, hence ensuring that the CLIL programme not only includes the language teaching perspective. Likewise, both programmes integrate subject-specific language. While this subject-specific language is implemented in the different components of the programme at the BUW, a special seminar on the characteristics of subject-specific language is offered at the PHK. Also, the programme at the BUW includes a practical phase (which is also part of the regular M.Ed. programme) whereas no such practical phase is included in the programme at the PHK. Finally, both programmes require their participants to write a master thesis in order to receive the degree (BUW; PHK 2018a).

With regard to the different CLIL subjects which are offered in the two different study programmes, Table 9.2 shows the represented content subjects. Hence, the PHK offers five subject disciplines both in the area of MINT as well as the humanities. At the BUW, three content subjects from the MINT area and one humanities subject is offered. Regarding the CLIL languages, though, Biology and Chemistry are only offered in combination with English as the

	1st phase							2nd phase								3rd phase						
School types	**GS**	**Sek I**	**Sek II**	**BBS**	**Gesamt**	**other**		**GS**	**Sek I**	**Sek II**	**BBS**	**Gesamt**	**other**			**GS**	**Sek I**	**Sek II**	**BBS**	**Gesamt**	**other**	
			BUW	BUW	BUW											PHK	PHK	PHK		PHK		
CLIL languages	**English**		**French**		**Spanish**			**English**		**French**			**Spanish**			**English**		**French**			**Spanish**	
	BUW		BUW													PHK						
Prerequisites	**language competence**	**language as subject**	**study degree**	**stay abroad**	**job experience**	***intro to Didaktik***		**language competence**	**language as subject**	**study degree**	**stay abroad**	**job experience**	***intro to Didaktik***			**language competence**	**language as subject**	**study degree**	**stay abroad**	**job experience**	***intro to Didaktik***	
	BUW	BUW	BUW													PHK		PHK		PHK		
Cooperation with Didaktik of subject disciplines	**Yes**				**No**			**Yes**				**No**				**Yes**				**No**		
	BUW															PHK						
Integration of subject-specific language	**Yes**				**No**			**Yes**				**No**				**Yes**				**No**		
	BUW															PHK						
Integration of practical phase	**Yes**				**No**			**Yes**				**No**				**Yes**				**No**		
	BUW																			PHK		
Degree	**Yes**				**No**			**Yes**				**No**				**Yes**				**No**		
	BUW															PHK						

Table 9.1 Systematisation of CLIL study programmes

CLIL language, while Mathematics or History can be studied in combination with English or with French.

		PHK	BUW
MINT	Biology	X	X (only with English)
	Chemistry	X	X (only with English)
	Physics		
	Mathematics		X (with English or French)
	Computer Science		
Humanities	History	X	X (with English or French)
	Geography	X	
	Social Sciences		
	Politics	X	
	Economics		
	Religion (cath.)		
	Religion (prot.)		
	Ethics/Philosophy		
Practical subjects	Music		
	Arts		
	Sports/Physical Education		
	Theatre		

Table 9.2 Content subjects offered in CLIL study programmes

An overview of the different CLIL subjects (Figure 9.4), classified as MINT subjects, humanities or practical subjects, shows that slightly more than half of the offered CLIL subjects belong to the MINT area while the humanities represent slightly less than half of the CLIL subjects. Practical subjects, such as Arts or Sports, are not found in any of the two study programmes (BUW; PHK 2018a).

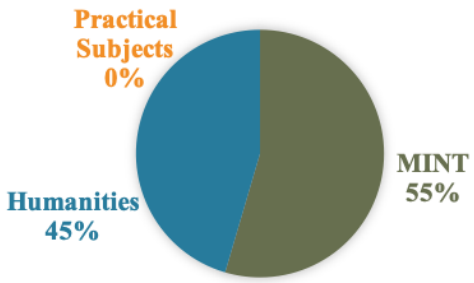


Figure 9.4 Distribution of content subjects in CLIL study programmes

Finally, the programme at the BUW implies a total number of 120 credit points while the programme at the PHK includes 60 credit points (BUW; PHK 2018a).

Certificates

Similarly to the CLIL study programmes, Table 9.3 shows the analysis of the eleven CLIL certificate programmes[63], which are again differentiated by their target group, hence

[63] The term *certificate* is not universally defined and hence the different programmes which are all labelled as *certificates* vary significantly as is analysed in the following chapter.

distinguishing between the first, second or third phase of teacher education. While the majority of the programmes only addresses future teachers in the first phase of teacher education, the programmes at the PHK and the GUF solely address teachers in the third phase of teacher education (e.g. PHK 2018b; GUF). Apart from these, the programme at the TUBr targets at (future) teachers in either the first or the third phase of teacher education and participants of the programme at the MLU may be in the first, second or third phase of teacher education (TUBr 2019; MLU 2019). With regard to the different school types, a strong tendency towards the lower and higher secondary schools can be observed (Sek I and Sek II), whereas primary (GS) or vocational schools (BBS) are only addressed in few programmes[64]. The option "other", refers to SEN (Special Educational Needs) schools (TUDo 2019) or business schools (CAU 2019).

With regard to the CLIL languages, the trend of German CLIL programmes towards using English as the foreign language is also visible in the certificate programmes. Hence, the majority of programmes only offer English as the CLIL language (e.g. PHL; TUBr 2019; GAU). Only the JGU, the MLU and the CAU also offer French as the CLIL language and the MLU even offers Spanish in their CLIL programme (JGU 2019; MLU 2019; CAU 2019).

As was also the case for the CLIL study programmes, the certificates mostly require their participants to show a certain level of foreign language competence. While the majority of programmes, such as the ones at the PHL, the TUDo or the MLU, require that the foreign language is also studied as a subject (e.g. PHL; TUDo 2019; MLU 2019), a smaller number only requires the level B2 (e.g. SUH 2019) or C1 (e.g. PHK 2018b) of the CEFR. Also, in order to partake in some of the programmes, the participants need to possess a study degree, mostly the Bachelor of Education (e.g. TUDo 2019). Also, in some programmes, participants need to have successfully attended introductory seminars in the field of linguistics or *Didaktik* (e.g. TUBr 2019; MLU 2019). Finally, the CAU requires their participants to have spent at least three months abroad, which is not necessarily included in the regular English teacher education and hence postulates an additional language requirement (CAU 2019).

Almost two thirds of the programmes implement cooperative structures with the subject disciplines to integrate both the language and the content teaching perspective (see Figure 9.5), while only a comparably small

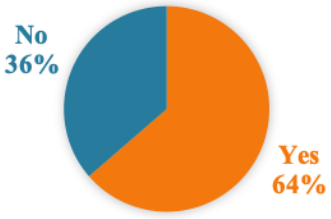


Figure 9.5 Distribution of "Cooperation with Didaktik *of subject disciplines" in CLIL certificates*

[64] It needs to be remarked, though, that not all universities offer teacher training programmes for all school types. Hence, the representation of the school types in the CLIL certificate programmes is not primarily based on the conscious decision to include or exclude certain school types but rather on the general teacher training programmes at the respective universities.

	1st phase						2nd phase						3rd phase					
School types	**GS**	**Sek I**	**Sek II**	**BBS**	**Gesamt**	**other**	**GS**	**Sek I**	**Sek II**	**BBS**	**Gesamt**	**other**	**GS**	**Sek I**	**Sek II**	**BBS**	**Gesamt**	**other**
	PHL UniBr TUBr SUH TUDo	PHL TUBr SUH TUDo MLU	UniB TUDo TUBr JGU GAU MLU (SUH) CAU	UniBr TUDo	GAU SUH TUDo MLU	TUDo CAU		MLU	MLU		MLU		PHK GUF TUBr	PHK GUF TUBr MLU	PHK GUF TUBr MLU	GUF	PHK GUF MLU	
CLIL languages	**English**		**French**		**Spanish**		**English**		**French**		**Spanish**		**English**		**French**		**Spanish**	
	PHL UniBr TUBr GAU SUH	TUDo JGU MLU CAU	JGU MLU CAU		MLU		MLU		MLU		MLU		PHK GUF TUBr MLU		MLU		MLU	
Prerequisites	**language competence**	**language as subject**	**study degree**	**stay abroad**	**job experience**	**intro to *Didaktik***	**language competence**	**language as subject**	**study degree**	**stay abroad**	**job experience**	**intro to *Didaktik***	**language competence**	**language as subject**	**study degree**	**stay abroad**	**job experience**	**intro to *Didaktik***
	SUH JGU	PHL (JGU) UniBr MLU TUBr CAU TUDo	TUDo	CAU		TUBr MLU		MLU				MLU	PHK (GUF)	GUF TUBr MLU	PHK GUF			(TUBr) MLU
Cooperation with *Didaktik* of subject disciplines	**Yes**				**No**		**Yes**				**No**		**Yes**				**No**	
	PHL UniBr GAU		SUH JGU MLU		TUBr TUDo CAU		MLU						PHK MLU				GUF TUBr	
Integration of subject-specific language	**Yes**				**No**		**Yes**				**No**		**Yes**				**No**	
	TUBr GAU SUH TUDo		JGU MLU CAU		PHL UniBr		MLU						PHK TUBr MLU				GUF	
Integration of practical phase	**Yes**				**No**		**Yes**				**No**		**Yes**				**No**	
	PHL UniBr TUBr GAU		SUH TUDo CAU		JGU MLU						MLU		TUBr				PHK GUF MLU	
Degree	**Yes**				**No**		**Yes**				**No**		**Yes**				**No**	
	UniBr SUH TUDo MLU		PHL TUBr GAU		JGU CAU		MLU						PHK MLU				GUF TUBr	

Table 9.3 Systematisation of CLIL certificates

number of programmes do not have any established cooperation (e.g. TUBr 2019; TUDo 2019). For those programmes which established a cooperation, though, it needs to be distinguished between, on the one hand, those programmes which offer polyvalent seminars (e.g. PHK 2018b) and hence closely cooperate with the subject disciplines and, on the other hand, those programmes which do not have any formalised cooperation (e.g. UniBr 2018; SUH 2019; JGU 2019) but that are in continuous exchange and, for example, jointly supervise bachelor or master theses.

Figure 9.6 Distribution of "Integration of subject-specific language" in CLIL certificates

With regard to integrating subject-specific language, again, almost two thirds of the programmes include this subject-specific language in their certificate programmes (see Figure 9.6). Those programmes, though, either offer entire seminars (e.g. PHK 2018b; TUDo 2019; MLU 2019), while others only (indirectly) include subject-specific language in other elements of the certificate programmes (e.g. GAU; SUH 2019; TUBr 2019).

Concerning the integration of a practical phase, the programmes vary significantly, ranging from class observations and teaching a small number of CLIL lessons (e.g. PHL; TUBr 2019) to a 4-week internship (TUDo 2019). In some cases, these practical phases are also framed by an accompanying seminar in order to support the students in processing the experiences from the practical phase (e.g. GAU). While, again, roughly two thirds of the programmes include some form of a practical phase, five programmes (JGU 2019; MLU 2019; PHK 2018b; GUF; MLU 2019) do not include a practical phase (see Figure 9.7).

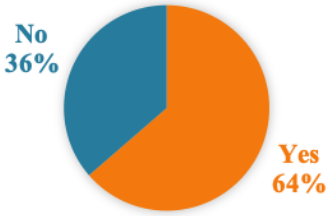


Figure 9.7 Distribution of "Integration of practical phase" in CLIL certificates

Finally, almost half of the programmes require their participants to take a final exam in order to complete the programme, for example through a master thesis in the CLIL field (e.g. UniBr 2018)[65], an oral exam (e.g. TUDo 2019) or a written exam (e.g. MLU 2019). In other cases, no final exam or assignment is required but receiving the CLIL certificate is based on a pass/fail system, which "only" requires the students to actively attend the programme (e.g. PHL).

[65] This master thesis is usually not additionally but the master thesis which is a regular component of the M.Ed. programme then needs to be written in the field of CLIL.

Next, Table 9.4 shows the different content subjects which are offered in the certificate programmes and classified as either MINT subjects, humanities or practical subjects. While some programmes are open to a large number of possible CLIL subjects (at TUBr 2019, for example, all content subjects are possible, even if they are not offered as regular study programmes at the university), other programmes only offer a limited number of content subjects. As an example, the JGU only offers History, Geography and Social Sciences, hence subjects from the field of humanities (JGU 2019). Also, some certificates offer all the content subjects which are offered at the respective university (e.g. SUH 2019) whereas others limit the possible CLIL subjects (e.g. TUDo 2019). The reasons for these limitations, though, cannot be deduced.

		PHK	PHL	UniBr	GUF	TUBr	GAU	SUH	TUDo	JGU	MLU	CAU
MINT	Biology	X	X	X	X	X	X	X	X		X	X
	Chemistry	X	X	X	X	X	X	X	X		X	X
	Physics		X	X	X	X	X	X	X		X	X
	Mathematics		X	X	X	X		X	X		X	X
	Computer Science					X		X			X	X
Humanities	History	X	X	X	X	X	X	X	X	X	X	X
	Geography	X	X	X	X	X	X	X		X	X	X
	Social Sciences					X			X	X	X	
	Politics	X	X	X	X	X	X	X				X
	Economics					X		X	X			
	Religion (cath.)		X	X		X		X	X		X	
	Religion (prot.)		X		X	X		X	X		X	X
	Ethics/Philosophy					X					X	X
Practical subjects	Music		X	X	X	X		X	X		X	
	Arts		X	X		X		X	X		X	X
	Sports/Physical Education		X		X	X		X	X		X	X
	Theatre					X						

Table 9.4 Content subjects offered in CLIL certificates[66]

Figure 9.8 shows the distribution of the content subjects, which are offered in the CLIL certificates, to the categories *MINT*, *humanities* or *practical subjects*. This distribution shows that almost half of the offered subjects belong to the field of humanities, while slightly more than a third of the subjects are MINT subjects. The remaining 19% are practical subjects. Of course, these numbers only refer to the subjects

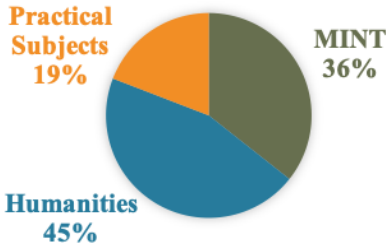


Figure 9.8 Distribution of content subjects in CLIL certificates

[66] For some universities, Politics and Economics are treated as a combined subject while others offer these as separate subjects. The same applies to catholic and protestant Religious Education – in some cases, these are two separate subject disciplines, while others offer a combined subject discipline which is not specified for one denomination.

which are theoretically offered in the CLIL certificates at the individual universities and on the basis of this data no statement can be made concerning the actual choice of the content subject made by the participating students and the real distribution of the content subjects.

Finally, Figure 9.9 shows the number of credit points (CPs) that are attributed to the individual certificate programmes. While the GUF, TUDo, JGU and CAU do not quantify their programmes through CPs[67], the overview of the remaining programmes shows a rather broad range. Hence, the programme at the PHL only includes nine CPs while the programme at the SUH includes 30 CPs and the one at the UniBr even includes 50 CPs (PHL; SUH 2019; UniBr 2018). With regard to the comparably high number of CPs at the UniBr, though, it needs to be remarked that 21 of these credit points are attributed to the master thesis which is required in order to receive the degree. As the UniBr is the only certificate which requires the students to write a master thesis as part of the certificate programme, the 21 CPs attributed to the master thesis at the UniBr are explicitly highlighted.

The arithmetic mean of the CPs for the different certificate programmes delivers an average of 19 CPs for the CLIL certificate programmes. As the master thesis which is required at the UniBr is rather exceptional in comparison to the other certificate programmes, the 21 CPs of the master thesis are not included in the arithmetic mean in order not to distort the result.

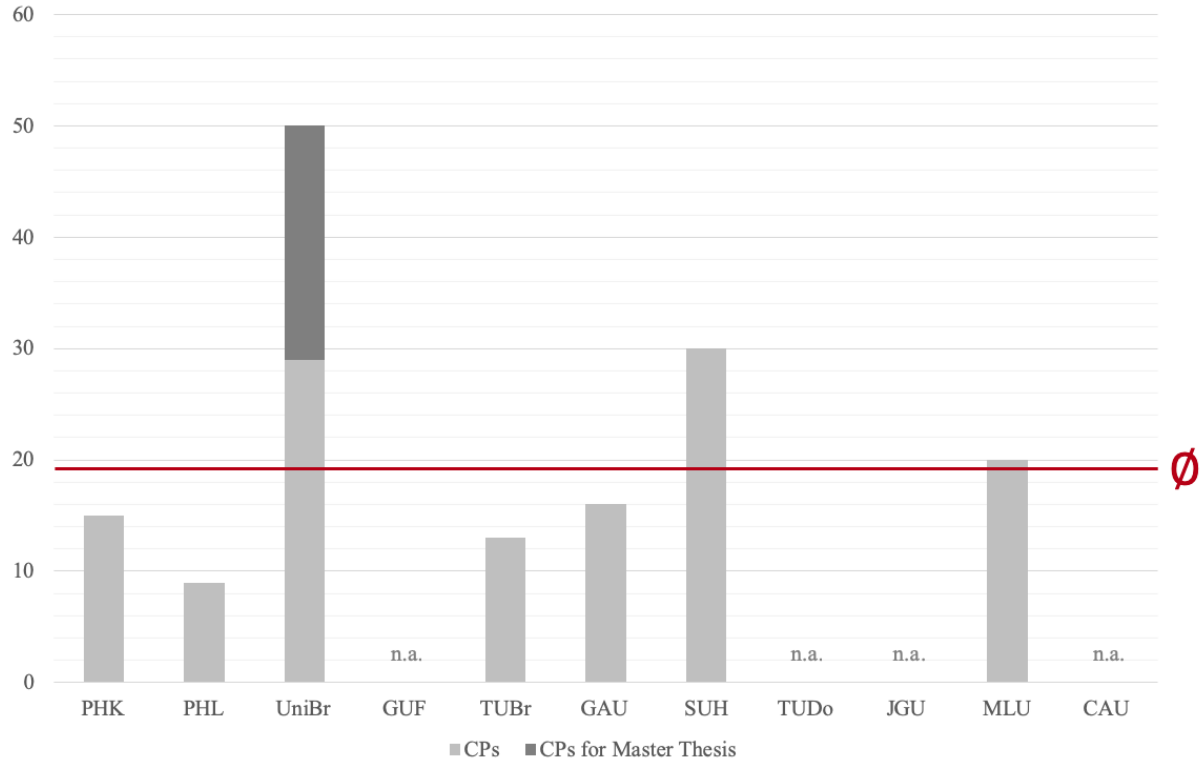


Figure 9.9 Credit points (CPs) of CLIL certificates

[67] As these certificate programmes are additional and not a part of official study programmes, some universities only provide the number of working hours which need to be invested in order to complete the programme.

9.3. Discussion of Results

As the systematisation and overview of the CLIL teacher education programmes in Germany shows, the majority of programmes can be found in the Western regions of Germany. At first glance, one could assume that this is still rooted in the origin of CLIL programmes in Germany, which were initially introduced in those regions close to the French border and focused on French-speaking CLIL programmes for a longer period of time (see chapter 2.2). Considering that since the 1990s, German CLIL programmes increasingly focus on developing English language competences as well as intercultural communicative competences, though, this assumption cannot be considered as a satisfying explanation for the lack of CLIL teacher education programmes in eastern parts of Germany.

In general, the total number of twelve universities which offer a CLIL programme, not even representing a fifth of all German universities with teacher education programmes, cannot be considered sufficient. Hence, Mentz criticism that the number of universities with CLIL teacher education programmes do not meet the need of an increasing number of qualified CLIL teachers, still holds true (Mentz 2015: 255).

It was also shown that the majority of programmes are targeted at teachers in the first phase of teacher education. Especially the fact that hardly any university programmes address teachers in the second phase of teacher education, though, is hardly surprising as most federal states also offer CLIL qualification programmes in the second phase of teacher education.

The majority of programmes focusing on secondary schools is also not surprising as CLIL programmes are also mostly established at (higher) secondary schools (cf. KMK 2013). Especially the classification of the programmes with regard to the school types needs to be interpreted carefully as the school types vary among the federal states and the teacher education programmes vary accordingly. It is also not further surprising that most programmes focus on English as the CLIL language, with only a limited number of programmes also offering French or Spanish. Since English is the most common CLIL language in Germany, especially CLIL English teachers are needed.

As CLIL fosters the integration of language and content learning, most programmes require their participants to show a certain level of foreign language competence. While some universities only accept those (future) teachers who actually also study the language as a subject, at other universities the mere language competence on level B2 or C1 of the CEFR is sufficient. Only requiring the mere language competence agrees with the KMK guidelines according to which CLIL teachers do not necessarily need to be qualified as foreign language

teachers (KMK 2013). Notwithstanding, accepting teachers without explicit foreign language teaching competences as CLIL teachers should be critically reflected upon, especially with the German Framework for CLIL Teacher Education and its lists of a comparably large number of language teaching competences required (see chapter 8). If CLIL teacher education programmes accept these teachers without the foreign language teaching competence and do not include foreign language teaching competences in the CLIL programme, either, these teachers then lack a fundamental part of the CLIL teacher competences.

The systematisation and analysis of the CLIL teacher education programmes also shows that the majority of programmes established a cooperation with experts in the field of the different subject-specific teaching methodologies (*Fachdidaktiken*). Even though the forms of such a cooperation vary, considering both the perspective of the language as well as the subject disciplines is necessary also on the level of teacher education as (future) CLIL teachers need to be able to establish this integration in their CLIL lessons as well. Apart from that, the content subject has to be the driving force in CLIL programmes in Germany (see chapter 2) and hence the perspective of the subject needs to be included in all teacher education programmes in order to do justice to these requirements.

Also, the majority of programmes integrate subject-specific language. With regard to the German Framework for CLIL Teacher Education, which includes several competences in the field of subject-specific language (e.g. LP2 or ICL2), this integration is indispensable. Especially those programmes offering a large number of different CLIL content subjects, though, need to establish ways to address the characteristics of the different subject disciplines.

With regard to integrating a practical phase, again, the majority of programmes organise varying forms of practical phases, often in combination with an accompanying seminar. Considering Heinemann's (2018) as well as Bongartz and Dziak-Mahler's (2007) concerns that successful CLIL teacher education needs to include a practical phase and guide the (future) CLIL teachers in systematically connecting theory and practice as well as reflecting the CLIL approach (see also chapter 4.2), such a practical phase must also be seen as a mandatory element of all CLIL teacher education programmes.

Interestingly, only roughly half of the programmes require their participants to successfully pass a final exam, even though, for example, Gnutzmann (2015) argues that integrating the CLIL teacher programmes in the regular M.Ed. study programme, which most of the programmes did, also provides the opportunity to require a CLIL master thesis. This, however, is only done by a limited number of programmes. While this CLIL master thesis is only one possible example of a final exam, implementing any form of a final exam should be

highly recommended as this requires the participants of the CLIL teacher education programmes to apply all elements of the programme together and to display the acquired CLIL competences.

The overview of the subjects represented in the different CLIL programmes shows that the programmes mainly offer a qualification for CLIL in the MINT area or the humanities, leaving the practical subjects behind. It needs to be mentioned again, though, that this does not provide a statement about the actual representation of these subjects in the different programmes as no details are provided as to which content subjects the (future) CLIL teachers joining the programmes mainly enrol for.

Finally, the comparison of the different certificate programmes shows that they consist of 19 credit points on average. This arithmetic mean does not consider the two CLIL study programmes as their number of CPs is significantly higher and would therefore detort the

CHECKLIST
What is the structure of the programme?
☐ What are the general prerequisites?
☐ What is the target group (i.e. phase of teacher education & school form)?
☐ Which CLIL languages should/can be offered?
☐ Which content subjects should/can be offered?
☐ Which entry requirements should/can be set (e.g. foreign language competence or teaching experience)?
☐ How and to what extent can the didactic perspective of the content subject be included (e.g. through cooperation or polyvalent seminars)?
☐ How and to what extent can subject-specific language be included (e.g. as an individual seminar or integrated in other seminars)?
☐ How and to what extent can a practical phase be included (e.g. as an internship)?
☐ How many credit points should/can the programme include?

Table 9.5 Checklist – State of the art of CLIL teacher education in Germany

arithmetic mean of the certificate programmes. Considering that these certificate programmes usually last for more than one semester and are taken in addition to the regular study programmes, this number of 19 credit points, which equals a total number of 475 to 570 working hours[68], can be seen as a reasonable work load which, on the one hand, enables future CLIL teachers to receive a profound CLIL teacher education and, on the one hand, does not prevent the participating students from making progress in their regular teacher education programmes. Generally, it makes sense to allocate credit points to CLIL teacher education programmes as this creates greater comparability of the different programmes and is of useful benefit when participants of the CLIL programmes apply at schools as, with the help of credit points, the included workload is universally described.

Similarly to the German Framework for CLIL Teacher Education (see chapter 8), this state of the art of CLIL teacher education in Germany provides an important basis for developing new CLIL teacher education programmes. Accordingly, the following checklist (see Table 9.5) provides an overview of the most important aspects which need to be considered prior to developing such a CLIL teacher education programme.

[68] Usually, one credit point equals 25 to 30 working hours (cf. page 2 of the appendix of KMK 2003).

10. CLIL Certificate

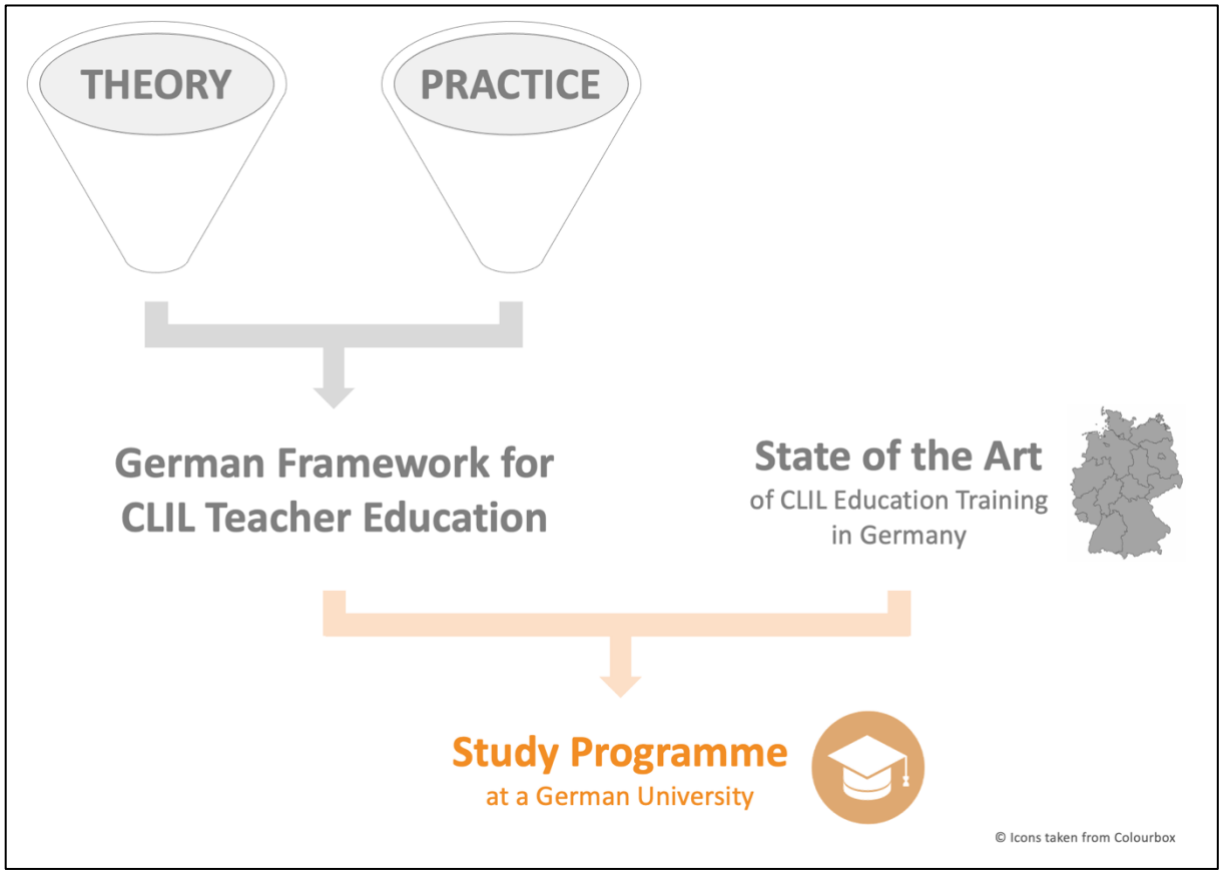


Figure 10.1 Visualisation of research design – Study programme

As is visualised in Figure 10.1, the final part of this thesis combines the previous chapters on the development of the German Framework for CLIL Teacher Education (chapter 8) as well as the state of the art of CLIL teacher education in Germany (chapter 9) and develops a certificate programme at a German university. This certificate programme is addressed at students who are enrolled in the M.Ed. and study English as well as another content subject. Accordingly, the following chapter presents the designed certificate programme and discusses the elements of the programme on the basis of the German Framework for CLIL Teacher Education. Also, the structure of the certificate programme is developed and then discussed following the findings of the state of the art of CLIL teacher education in Germany. In a last step, first insights into the first cohort are presented and discussed.

10.1. Design of the Programme

Following the German Framework for CLIL Teacher Education as well as the state of the art of CLIL teacher education in Germany, Figure 10.2 provides a checklist which guides through developing a CLIL teacher education programme. This checklist combines the two checklists

from the German Framework for CLIL teacher education (see Table 8.10, page 170), which covers the perspective of the required contents of a CLIL teacher education programme, as well as the checklist from the state of the art of CLIL teacher education in Germany (seeTable 9.5, page 185), which adds the perspective of the (possible) structure of the CLIL teacher education programme.

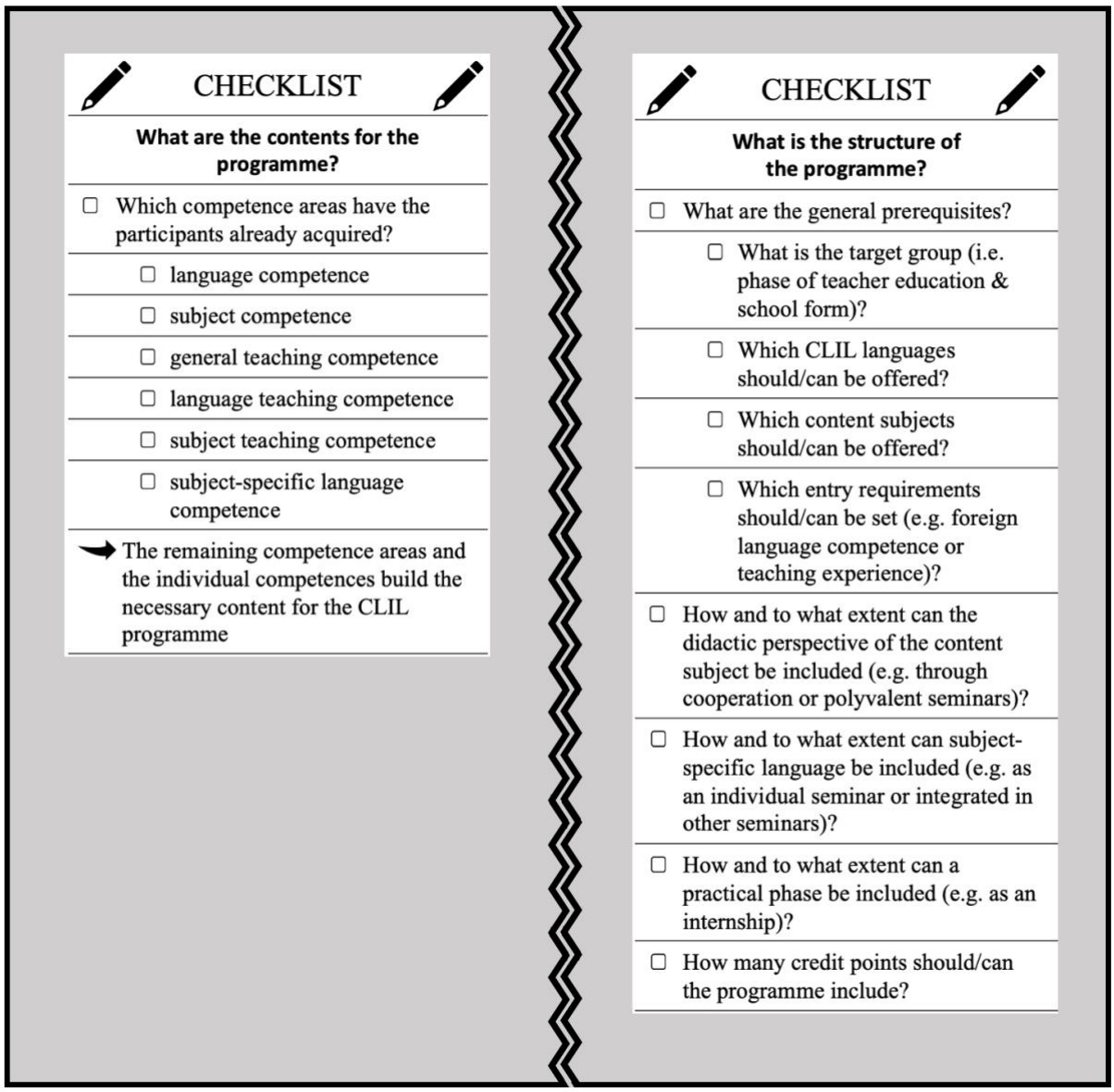


Figure 10.2 Checklist – design of a CLIL teacher education programme

Following this checklist, first the prerequisites for developing the CLIL teacher education programme are identified and through that, the required CLIL teacher competences identified. Taking these as a basis, the contents of the programme are defined and possible ways of implementing these in a certificate programme presented and discussed.

Prerequisites for developing the programme

The CLIL certificate programme is designed and implemented and the University of Koblenz-Landau. This university originated from a teacher education college and was founded in the year 1990. Though extending its programme throughout the years and especially offering study programmes in the field of psychology or computer science, teacher education is still considered as one of the core competences of the university. Also, the University of Koblenz-Landau is the only university in the federal state Rhineland-Palatinate which offers teacher education programmes for all possible school types. Consisting of two campuses which are geographically separated by almost 200 kilometres, the general teacher education programmes at the two campuses are comparable, with the only difference that training for vocational school is only possible in Koblenz, while training for special needs schools is only possible in Landau (Universität Koblenz-Landau 2009). As the thesis at hand focuses on a CLIL teacher education programme which is implemented at the campus in Koblenz, the following information only focuses on the respective campus.

As was also explained in chapter 3.4, all future teachers study two subjects and *Bildungswissenschaften* as a third subject. At the beginning of their studies, the students do not decide which school type they want to focus on but only choose so later on as the first four semesters are not specialised for the different school types. From the fifth semester onwards, students who choose the training programme for primary school do not study their two subjects any longer but are trained in primary education while students of the other school types continue to study their two subjects and *Bildungswissenschaften*. Additionally, for the B.Ed., students take part in three internships in schools of three weeks each. After successfully completing the modules of the B.Ed. programme, students write their bachelor thesis in one of their subjects in their sixth semester and continue with the M.Ed. The modules of the M.Ed. are specialised for the different school types and the duration of the programmes vary accordingly (the M.Ed. for *Grundschule* lasts two semesters, for *Realschulen plus* three semesters and for *Gymnasium* as well as *Berufsbildende Schule* four semesters). During the M.Ed. programme, students conduct another three-week internship. Finally, students write a master thesis, (usually) in another subject than the one they chose for the bachelor thesis (Universität Koblenz-Landau 2009; Universität Koblenz-Landau 2010).

Following Gnutzmann's (2015) recommendation to implement CLIL teacher education programmes in the Master of Education, the developed certificate programme addresses students who are enrolled in the Master of Education programme and who study English and another content subject. Accordingly, it can be assumed that the participants have successfully

completed the B.Ed. programme, including *Bildungswissenschaften*[69]. The components of *Bildungswissenschaften* in the B.Ed. are split among three modules and are displayed in Table 10.1.

	Credit Points	**Contents/Competences**
Module 1	10 CP	• pedagogic theories of the development of children and adolescents • central aspects of different learning theories • interaction between teacher and pupils • education and its varying implications • reflection of own (educational) biography • choice of appropriate media techniques and reflecting its use
Module 2	12 CP	• analysis of lessons with regard to different learning theories and methodologic aspects • basic dimensions of lesson planning and reflection of lessons • basic knowledge of interaction and communication in the school context • analysis of and constructively dealing with conflicts • analysis of a learning group's heterogeneity and developing strategies for differentiation • importance of cooperation and teamwork
Module 3	8 CP	• psychological and sociological theories of the development of children and adolescents • central aspects of different learning theories • basic knowledge of diagnosis of learning processes and assessment • methods for individual support • knowledge of the influence of social background and intercultural dimensions • strategies of recognising discrimination and special talents • theories and functions of coaching

Table 10.1 B.Ed. Bildungswissenschaften *(Universität Koblenz-Landau 2009; Universität Koblenz-Landau 2019)*

[69] The following information refers to the contents of the B.Ed. programme for secondary schools. Future primary school teachers run through a different study programme. As the certificate programme is not addressed at future primary school teachers, these different elements are not further specified. The reasons for excluding future primary school teachers from the programme are further discussed with regard to the structural implementation of the certificate programme.

As is shown in Table 10.1, representing the contents and competences which are mentioned in the module handbook for the B.Ed. *Bildungswissenschaften*, students already acquired basic concepts of learning theories, media literacy, differentiation, cooperation and coaching as well as lesson planning and analysis. Hence, several of the CLIL teaching competences of the German Framework for CLIL Teacher Education are already addressed in this general element of teacher education.

Apart from completing the modules for *Bildungswissenschaften* which are implemented in the B.Ed. programme, students who are entitled to apply for the CLIL certificate also need to study English as one of their subjects. Accordingly, they have also completed the modules of the B.Ed. English programme, which also includes the modules with a didactic focus as displayed in Table 10.2.

	Credit Points	**Contents/Competences**
Module 1	6 CP	*Module 1.3: Introduction to Teaching English as a Foreign Language (2 CP)* • theories of (natural) language acquisition • language learning in the school context • foreign language learning from the teaching perspective
Module 5	8 CP	• external conditions of the different school types • analysis of language and texts as a basis for lesson planning • description and planning of English lessons with regard to cultural, linguistic or literary theories

Table 10.2 Didactic modules in B.Ed. English programme (Universität Koblenz-Landau 2009; Universität Koblenz-Landau 2016)

During the lecture in the first module as well as the seminars in the fifth module of the B.Ed. English programme, students are already familiarised with theories of SLA as well as language learning in the school context. Also, students describe and plan their first English lessons and are also trained to analyse and diagnose their students' language needs.

Finally, as is shown in Table 10.3, students of English also conduct two modules which focus on their individual language skills. Hence, students are supported in developing appropriate communication skills as well as reaching the level C1 of the CEFR. Additionally, students spend at least three months in an English-speaking country as part of the B.Ed. English programme in order to develop near-native like language competences and to dive into the culture of the target country.

	Credit Points	Contents/Competences
Module 2	9 CP	• phonetic skills (pronunciation and transcription) • appropriate (oral and written) communication • appropriate verbalisation of complex facts • critical self-evaluation and improvement in the four competence areas (listening, speaking, reading and writing) • approaching the level C1 of the CEFR
Module 7	15 CP	• deepening (oral and written) language skills during a three-months stay abroad • reaching the level C1 of the CEFR

Table 10.3 Language modules in B.Ed. English programme (Universität Koblenz-Landau 2009; Universität Koblenz-Landau 2016)

Of course, Table 10.2 and Table 10.3 do not represent the entire B.Ed. English programme which consists of seven modules in total and also covers literary studies, cultural studies as well as linguistics (Universität Koblenz-Landau 2009; Universität Koblenz-Landau 2016). Though, of course, these modules are crucial elements of the study programme, they are not explicitly relevant for the development of the CLIL certificate and hence not further elaborated on.

With regard to the students' second subject, which needs to be a non-language subject in the case of the students who want to apply for the CLIL certificate, the respective B.Ed. study programmes all include at least one, mostly two modules on the didactic principles of the content subject (Universität Koblenz-Landau 2009).

Accordingly, as the students who are entitled to enrol for the CLIL certificate have already successfully completed the B.Ed. programme, including English, a content subject and *Bildungswissenschaften*, it can be assumed that they already have the teaching competence (through *Bildungswissenschaften*), the language competence (through module 2 and 7 of the B.Ed. English) and the language teaching competence (through module 1 and 5 of the B.Ed. English) as well as the subject competence and the subject teaching competence (through the respective modules in the B.Ed. programme). Though these competence areas are certainly further developed in the Master of Education as well as the practical, second phase of teacher education (and also later on with regard to lifelong learning), these competence areas are nevertheless considered as sufficiently mastered by the participants of the CLIL certificate. Assuming that the students of the CLIL certificate have already acquired (at least the basics of) these competences, Figure 10.3 shows the prerequisites of the CLIL certificate participants. The blank areas represent the available competences which are therefore not included in the

certificate programme. In contrast, the coloured areas are not yet mastered by the participants and therefore need to be included in the CLIL certificate programme.

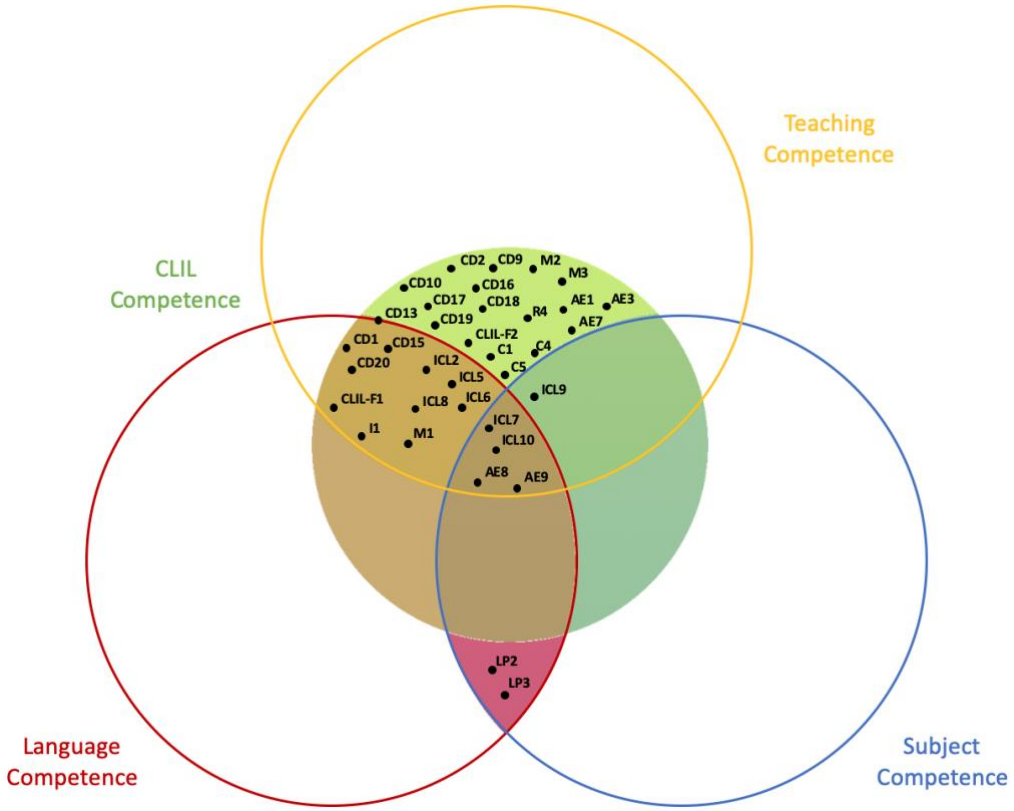


Figure 10.3 Areas of teacher competences – prerequisites of CLIL certificate participants

Content of the CLIL programme

As is visualised in Figure 10.3, the target group of the CLIL certificate programme has already acquired some of the competence areas of the German Framework for CLIL Teacher Education. The remaining competence areas are the entire CLIL competence, i.e. the green circle, which touches upon the language competence, the subject competence and the teaching competence, as well as the subject-specific language competence, i.e. the purple shape. Within these competence areas, a total number of 35 competences remain and hence form the basis for the contents of the CLIL certificate programme. A closer look at these remaining competences shows that most of the competences are related to the general teaching competence (e.g. C1[70], CLIL-F2, M2, AE1, CD9 etc.) or the language teaching competence (e.g. I1, ICL2, CD1, M1 etc.), which implies that they are already generally displayed by the participants and only need to be specifically addressed for the CLIL context. Also, these competences cover a wide range of topics, symbolised through the large number of different codes, which represent the different

[70] An overview of the codings as well as the respective competences can be found in the back of this thesis.

main categories of the analyses in chapters 6, 7 and 8. As these competences form the basis for successful CLIL teaching, it is necessary to address them already towards the beginning of the certificate programme, for example in an introductory seminar. However, because of the large number of different competences and the varying topics they touch upon, one seminar cannot be sufficient but a second seminar must ensure that these theoretical basics of CLIL teaching are mastered by the participants of the programme. Moreover, Figure 10.3 shows that some of the competences (i.e. LP2, LP3, ICL9) are located within the blue circle of the subject-competence and are hence subject-specific. Therefore, the CLIL certificate must address these for every subject individually through a subject-specific element (which is also demanded by the checklist, see Figure 10.2). The only remaining competence from the field of "Reflection" (i.e. R4) also calls for an element of the certificate which targets the participants' reflective competences. In order to connect the theoretical knowledge of the seminars to the practical experience, the analysis of the state of the art of CLIL teacher education in Germany (see chapter 9 as well as the checklist, see Figure 10.2) showed that the implementation of a practical phase is beneficial and necessary. Consequently, the CLIL certificate, which is developed in this context, also needs to implement such a practical phase after completing the theory-based seminars. Finally, the analysis of the state of the art of CLIL teacher education in Germany also demanded a final exam for CLIL teacher education programmes, which is, according to Gnutzmann (2015), ideally in the form of a master thesis with CLIL focus (again, see also the checklist, Figure 10.2).

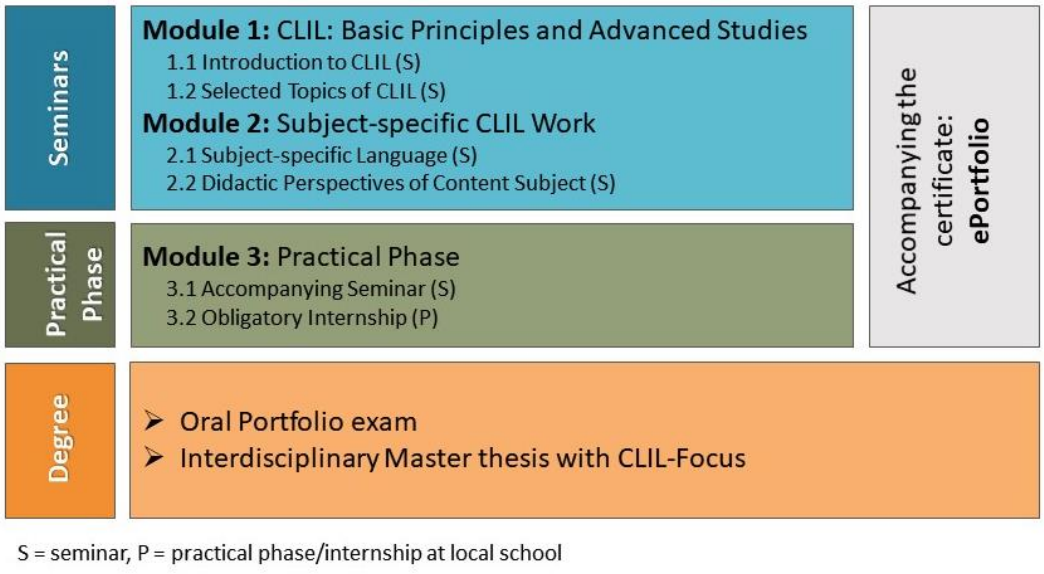


Figure 10.4 Overview of CLIL certificate programme

Based on these derivations, which consider the findings from the German Framework for CLIL Teacher Education (see chapter 8) as well as the state of the art of CLIL teacher education in

Germany (see chapter 9), a CLIL certificate programme was developed and its structure is displayed in Figure 10.4. Overall, the certificate programme is made up of three modules. The first two modules, which are highlighted in blue, are offered at university and mainly lay the theoretical foundation. The first of these two modules "CLIL: Basic Principles and Advanced Studies" provides the demanded overview of the numerous CLIL-specific competences, which were mentioned above. Next to this, the second module provides the requested subject-specific perspective and is therefore called "Subject-specific CLIL work". As was pointed out above, the connection between theoretical knowledge and its practical application also needs to be included, which is why the third module, coloured in green, contains a practical phase and an accompanying seminar, which is meant to guide the students in connecting their theoretical knowledge from the first two modules to their practical experiences from the internship. Moreover, the certificate programme includes an accompanying ePortfolio (light grey), which targets the participants' reflective processes. Ultimately, the required final degree is implemented via an interdisciplinary master thesis, which needs to focus on a CLIL-related topic. In addition to that, an oral portfolio exam completes this element of the final degree. Together, these two components are visualised in orange.

Based on these considerations regarding the contents and the structure of the CLIL certificate programme, the different modules and elements of the programme are discussed in the following. For the development of these individual components, the remaining competences of the German Framework for CLIL Teacher Education are the guiding principle.

Module 1: CLIL: Basic Principles and Advanced Studies

As discussed above, this first module needs to address the numerous competences, which are CLIL-specific but also related to the general teaching competence as well as the language teaching competence. As the number of competences is too large to be covered in only one seminar, this module is split into two seminars, beginning with an "Introduction to CLIL" and continuing with "Selected Topics of CLIL".

Introduction to CLIL

In order to systematically cover the different CLIL-specific competences which are to be implemented in this introductory seminar, the required CLIL-specific competences were categorised into different thematic blocks. In total, four of these thematic blocks build the overall structure of the seminar and combine those competences, which are closely related. The first thematic block is labelled "CLIL Background" and, as the title already suggests, mainly covers CLIL-F1 ("define CLIL and name its benefits"). This includes the definition of CLIL,

Bilingualer Sachfachunterricht and immersion concepts as well as the development of CLIL in Europe and particularly in Germany. Moreover, the aims and potential benefits as well as the current research findings in the field of CLIL need to be addressed here. Another competence which touches upon this background of CLIL is CD19 ("design preparatory phase for CLIL (in years 5/6)") as the different forms of CLIL teaching also belong to this thematic block.

In the second thematic block "CLIL Principles" all those competences are combined which relate to the different CLIL approaches and the CLIL-related educational theories. These competences are CD13 ("develop meta-cognitive awareness and higher-order thinking skills"), CD20 ("maintain a balance between L1 and L2"), ICL1 ("foster the development of BICS and CALP"), M1 ("use code-switching"), M2 ("use appropriate media techniques"), M3 ("use scaffolding techniques") and I1 ("develop cultural awareness and ICC"). Hence, this block discusses the relevance of BICS and CALP (cf. Cummins 2000), the development of higher-order and lower-order thinking skills (cf. Bloom et al. 1956), the use of scaffolding and code-switching as well as the appropriate use of media in the CLIL classroom.

A third block of the introductory seminar focuses on "CLIL Materials" and functions as a first step in the process of creating or adapting (authentic) material (CD1) or analysing and evaluating existing material (CD16). During this block, however, only a short insight is included as this seminar only functions as an introduction to CLIL teaching and the design and evaluation of material is intensively dealt with during the subsequent elements of the certificate programme.

Afterwards, the fourth block "CLIL Assessment" combines all the assessment-related competences and first of all covers CLIL-specific assessment needs and problems (AE3). Apart from that, the German regulations of assessment in the CLIL classroom, i.e. focusing grading on the students' content achievements (AE9) as well as grading subject-specific language (AE8), are also subsumed under this thematic block. Finally, the different possibilities of deciding whether errors are language- or content-driven need to be examined as well (AE1).

During the entire seminar, the focus is primarily on establishing the theoretical foundation of the different concepts and approaches. Although, of course, practical examples must already be provided and the discussions always need to be oriented towards their implementation in practice, this seminar serves as a basis for the following elements of the certificate programme, especially the practical phase in module 3, in which the practical application of the different concepts is in focus.

Selected Topics of CLIL

Also part of the first module, the seminar "Selected Topics of CLIL" intensifies and applies the contents of the "Introduction to CLIL". As mentioned above, the introductory seminar cannot cover all the different competences in detail but rather provides a thorough overview. Therefore, this second seminar focuses on particular competences in more detail. These competences could either be selected by the designers of the entire certificate programme or could take the participants' preferences into account. Hence, the participants could decide on different topic areas from the "Introduction to CLIL" on which they particularly want to work in more detail. Possible topics for this could be scaffolding (M3), code-switching (M1) or the design of CLIL-specific assessment (AE3). In a first phase of this seminar, these topics could be discussed in more detail, for example with the help of expert groups and in-class discussions. As these competences are all connected to the general teaching competence or the language teaching competence, though, the focus should not be on general definitions of these concepts but rather on their application to CLIL.

As the competence of analysing and evaluating existing teaching material (CD16) can also only shortly be addressed in the introductory seminar, it should therefore be considered in more detail in this second seminar. Hence, as a first step, the participants of the programme could analyse existing CLIL teaching material from different publishers and for different audiences, paying special attention to the previously discussed concepts and how they are applied in the teaching materials. Through this analysis, several competences from the introductory seminar, such as maintaining a balance between the L1 and the L2 (CD20), fostering the development of BICS and CALP (ICL2), the use of code-switching (M1) as well as the use of appropriate media techniques (M2) and of scaffolding techniques (M3) can be trained.

Subsequently, after analysing existing teaching material, participants of the programme also need to be trained in the competence of creating and adapting their own teaching material (CD1). When focussing on this one competence, however, several other competences need to be considered in order to be able to create new CLIL teaching material. These competences are the selection of appropriate topics (CD17), contextualising CLIL with regard to the chosen school context (CLIL-F2), approaching a topic from different perspectives (CD9) as well as analysing the learners' needs and prerequisites (CD10). Also, the participants need to be trained in analysing the content in terms of language needs (ICL5) and avoiding overtaxation of the students (ICL6). As a prerequisite of designing new material, participants need to be able to apply the German regulations for CLIL teaching and therefore focus on content teaching (ICL9)

but are also required to include phases of (subject-specific) language teaching (ICL10) and keep the balance between using the L1 and the L2 (CD20). Hence, integrating the perspectives of language and of content teaching is also required (ICL7). Within the actual teaching material, student-centred tasks need to be created (CD15) and opportunities for code-switching need to be implemented (M1). Also, appropriate media techniques (M2) and scaffolding strategies (M3) need to be found and employed. Finally, the designed material needs to include the cultural perspective of the target culture and through that support the development of cultural awareness and ICC (I1).

In addition to designing new teaching material, the competences in the field of CLIL assessment must also be addressed in more detail. These are the awareness of CLIL-specific assessment needs (AE3), creating tests which are adapted to the specific CLIL context (AE7) and which consequently consider the German regulations for assessment in the CLIL classroom. This requires a strong focus on assessing the students' content achievements (AE9) while grading subject-specific language (AE8) at the same time. As one option of implementing all of these assessment-related competences, participants could, for example, design a fictional CLIL assessment which considers all the above-mentioned aspects or analyse and evaluate real-life CLIL assessment, which is taken from a CLIL school.

Similarly to the "Introduction to CLIL", the focus of the "Selected Topics of CLIL" is again mostly on building the theoretical basis for CLIL teaching but, through analysing and designing CLIL teaching material, also includes first phases of applying the theoretical knowledge. As the designed teaching materials, though, would be for an invented teaching situation only, the analysis of the learners' needs or the contextualisation of the CLIL concept would be, of course, fictional and require the students to simply imagine a CLIL teaching scenario.

Module 2: Subject-specific CLIL Work

As mentioned above, some of the required competences, which need to be addressed in this CLIL certificate, are subject-specific, and consequently, this second module does not concentrate on the general aspect of CLIL teaching but explicitly concentrates on the specifics of the different content subjects. As the competences LP2 ("use the subject-specific language appropriately") and LP3 ("work with content-specific texts") rather focus on subject-specific language skills, while ICL9 ("focus on content teaching") focuses on the subject-specific, didactic characteristics, this module must again consist of two seminars which consider these two different dimensions of subject-specific CLIL work.

Subject-specific Language

This first seminar focuses on "Subject-specific Language" in the CLIL classroom, especially focusing on the two respective competences LP2 ("use the subject-specific language appropriately") and LP3 ("work with content-specific texts"). Moreover, this seminar could also function as a transition to the practical phase in the third module, in which students should also teach their own CLIL lessons. Therefore, next to these two obviously subject-specific competences LP2 and LP3, though, this seminar should also focus on several more competences which are closely related to the linguistic dimension of CLIL and are hence relevant for teaching a CLIL lesson and creating CLIL teaching materials. These competences include the analysis of the learners' needs (CD10), analysing the content in terms of language needs (ILC5) and choosing an appropriate topic for the respective CLIL situation (CD17). From a linguistic point of view, the competence of analysing and evaluating existing teaching material (CD16) as well as fostering the development of BICS and CALP (ICL2), using scaffolding techniques (M3), avoiding overtaxing the students (ICL6), integrating phases of (subject-specific) language work (ICL10), using the language as an opportunity for learning and not regarding it as a hurdle (ICL8), integrating the perspective of language and content teaching (ICL7) are of importance in this context. Therefore, the aim of this seminar is, on the one hand, to develop the participants' personal level of subject-specific language but, on the other hand, also to raise their awareness for the linguistic specifics of their content subjects and how to implement them in a CLIL lesson. Accordingly, the differentiation between the different levels of subject-specific language is of importance.

Hence, communication within a specific discipline is carried out on the level of experts communicating with each other while communication in the classroom, in contrast, is on the level of an expert, i.e. the teacher, with novices, i.e. the students. Therefore, subject-specific language in a teaching context is not only the medium of communication but also a learning objective (cf. Leisen 2015). For the CLIL classroom, this results in the integration of three different teaching perspectives: teaching the content (*Fachdidaktik*), teaching subject-specific language (*Sprachlerndidaktik im Fach*) and teaching the foreign language (*Fremdsprachendidaktik*). The first two of these dimensions are also present in a non-CLIL classroom but the third dimension is added through CLIL. Leisen, who also coined the concept of *sprachsensibler Fachunterricht* (see chapter 2.1), summarises these three dimensions in a didactic triangle of CLIL teaching (see Figure 10.5) and also differentiates between different levels of language, such as the everyday language, the subject-specific language, the language of the teaching context or symbolic language, which is of special importance in the

mathematical or scientific context. All these levels of language are summarised under the concept of *Bildungssprache* (Leisen 2015).

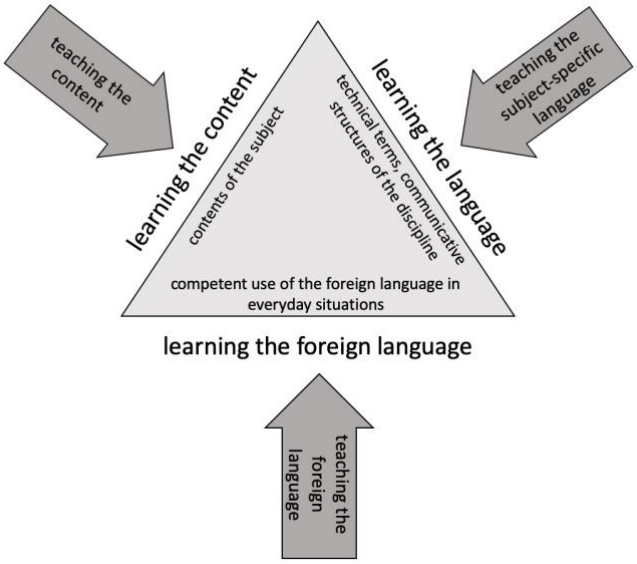


Figure 10.5 Didactic triangle of CLIL teaching (Leisen 2015: 228, translated by the author)

Taking these assumptions regarding the different language uses in a CLIL classroom as a basis, a traditional seminar in which all students participate and learn at the same time and at the same pace cannot address the different specifics of the represented content subjects. Therefore, a new seminar form needs to be found for this component of the CLIL certificate. One opportunity of addressing the characteristics of the different content subjects in detail would be an online seminar. Such an online seminar could be structured into different online modules which then cover different aspects of the respective subject-specific language. In a first module, the participants could reflect upon the different roles of language in their subject disciplines, for example through considering typical opportunities for speaking and the functions of language for the subject. Afterwards, a second unit could be connected to the curricula for both the content subject and the foreign language in order to identify the required language needs in the content subject in comparison to the time they are covered in the foreign language classroom. Following this analysis, the third module could ask the students to linguistically analyse one topic of their subject with regard to the required language competence. Such an analysis would then not only include subject-specific vocabulary but also grammatical and syntactical structures. Building up on this linguistic analysis, a fourth module could ask the participants to analyse existing or creating new teaching material for the topic of their linguistic analysis.

Through this possible setup, the three dimensions of Leisens' didactic triangle (see Figure 10.5) are all addressed and the individual characteristics of the different content subjects can be

adequately covered. Moreover, the two subject-specific language competences (LP2 and LP3) are discussed in detail.

Didactic Perspectives of Content Subject

Within the second seminar of module two, the focus is on integrating the didactic perspective of the different content subjects. As found out in the analysis of the state of the art of CLIL teacher education in Germany, one possible way of doing so is through seeking and establishing close cooperations with experts from the individual content subjects. The aim of these cooperative structures is to find ways of smoothly integrating aspects of CLIL into the regular didactic modules of the individual content subjects through which the participants of the certificate are able to apply the theoretical knowledge from the first module of the certificate to the didactic procedures and routines of their subject disciplines. The study programmes of the different content subjects are structures differently, though. Therefore, no universal form of the "Didactic Perspectives of Content Subject" can be identified but individual solutions must be developed for the different content subjects. Notwithstanding, the focus of this module must, first of all, be on the subject-specific competence ICL9 ("focus on content teaching") but other competences which require the integration of the language and the content perspective need to be included as well. These are the appropriate use of subject-specific language (LP2) reading content-specific texts (LP3), including the perspective of language and content teaching (ICL7), focusing on content teaching (ICL9), analysing the content in terms of language needs (ICL5) as well as developing intercultural awareness and ICC through integrating the subject-specific cultural dimensions (I1). Additionally, the competence R4 ("manage the roles of a CLIL teacher") is also closely connected to the previously mentioned competences as this integration of the content and the language perspective ultimately requires this identification as a CLIL teacher. As a concrete example from the subject Biology, all students of the didactic module of the regular M.Ed. Biology programme are asked to choose a scientific article, analyse as well as didactically reduce it and design a short teaching unit, taking the scientific article as a basis. The participants of the certificate, then, would not prepare a monolingual Biology teaching unit but could prepare a CLIL teaching unit on the topic they have chosen. In order for the participants to successfully integrate the perspective of both the content and the language, feedback would need to be provided from the didactic experts of the CLIL team, including the expert of the content subject and the expert of the foreign language. In a similar fashion, the didactic seminars of the other content subject need to be analysed and possible access points for implementing the CLIL perspective need to be identified.

Module 3: Practical Phase

As CLIL teachers are supposed to be particularly challenged through integrating the content and the language, implementing a practical phase in CLIL teacher education programmes is considered especially important (see also chapter 4; cf. Bongartz & Dziak-Mahler 2007; Viebrock 2010; Viebrock 2012). Again, the implementation of this practical phase is also indicated via the analysis of the state of the art of CLIL teacher education and the respective checklist for developing CLIL teacher education programmes (see Figure 10.2). Therefore, a practical phase consisting of an obligatory internship and an accompanying seminar is one of the core elements of the developed CLIL certificate. Of course, designing their first ever CLIL lesson is challenging for the students and the list of competences of the German Framework for CLIL Teacher Education which is connected to the design of the own CLIL lessons shows the complexity of this phase of the internship. Accordingly, it cannot be expected that the students are able to successfully put all the aspects and competences into practice but the internship should rather serve as a first opportunity to transfer the theoretical aspects of CLIL teaching to practice and gain first experiences in the field of CLIL teaching. As the two previous modules mainly discussed theoretical aspects of CLIL and only provided limited practical application, this third module must then address all the competences which are also covered in the first two modules. Only then, a connection of theoretical knowledge and practical application for each individual competence can be achieved. In addition to that, the competences CD2 ("create a reassuring learning environment"), CD18 ("be aware of heterogeneity") as well as the competences in the field of cooperation C1 ("…with schools"), C4 ("…with the English

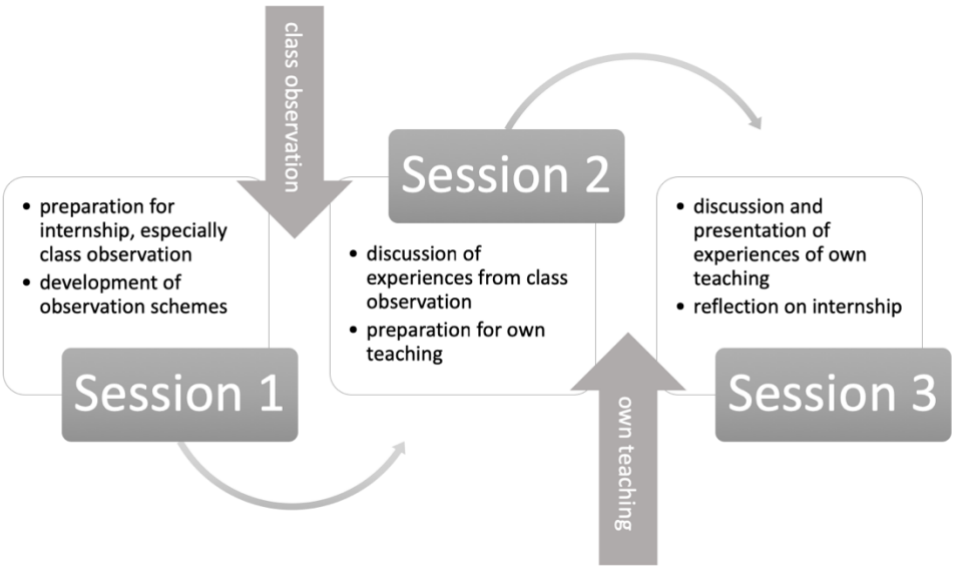


Figure 10.6 Module 3 of CLIL certificate – practical phase

teacher") and C5 ("…with other CLIL colleagues") are especially relevant in the context of this practical phase as they can only be properly discussed in the context of a real CLIL setting. As is visualised in Figure 10.6, the actual internship should entail class observations at a local school and the teaching of individually designed CLIL lessons at the same school in a next step. Both phases are visualised via the grey arrows. The accompanying seminar, visualised through the grey boxes labelled with the respective session number, frame the actual practical phase through a first session prior to the class observations, one session in between class observations and their own teaching as well as a third session after teaching the individually designed CLIL lessons (cf. Fein & Juchem-Grundmann – submitted).

As this practical phase builds up on the previous two modules, the first session of the accompanying seminar should systematise the participants' prior knowledge in order to prepare them for the experience they are likely to gain during the class observations. Then, students should observe several CLIL lessons at a local school, using observation schemes to structure their observations and experiences. Also, the students should be encouraged to observe lessons in different content subjects and in different school grades as this raises their awareness for the characteristics of the different subject disciplines and how these need to be considered in the development of a CLIL programme. Ideally, the students could also observe a lesson in a CLIL preparatory phase in grade five or six in order to also gain experiences in this specific form of CLIL teaching.

After the class observation, the second session of the accompanying seminar would follow, which connects the gained experiences to the theoretical foundation of CLIL teaching. This could be achieved through workshops, in which participants come together in small groups and discuss their observations with regard to the contents of the first two modules. Moreover, students should be encouraged to draw conclusions from these observations for teaching their own CLIL lessons in a next step. In workshops covering the previously identified observation topics, the students are first asked to collect their experiences with the help of the observation schemes and then discuss these with regard to the theoretical perspective and also consider the characteristics of the different content subjects. Also, the participants are encouraged to draw conclusions for the second phase of the internship in which they teach their own CLIL lessons.

After the second session of the accompanying seminar, the participants should then teach their own CLIL lessons. In order to offer participants an easier introduction to teaching their first own lessons, team teaching could be implemented, which especially fosters the participants' competences in the field of cooperation.

Finally, the last session of the accompanying seminar must function as a room for critically reflecting the participants' newly gained experiences as CLIL teachers and again, the participants' impressions need to be discussed with regard to their theoretical knowledge from the previous modules. This should guide the participants in arriving at explicit, theoretically grounded conclusions concerning their own lesson planning and teaching as well as to identify those areas they still need to work on.

ePortfolio

As "Reflection" is one of the main categories of the German Framework for CLIL Teacher Education, the developed CLIL certificate must also include an element which targets the participants' reflective processes. For this certificate programme, the only remaining competence of that main category is R4 ("manage the roles of the CLIL teachers"). Notwithstanding, reflecting upon CLIL as such as well as the various topics that are discussed in the three modules is another possibility of developing all the other competences that are implemented in the certificate programme[71]. An ePortfolio is one way of covering this reflective element of the certificate. As a basis for developing such a reflective component, a model of reflection needs to be identified and applied. For CLIL, this could be the model by Bräuer in which reflection is understood as considering a specific action with regard to the actions' efficiency (Bräuer 2016). Accordingly, Bräuer suggests a holistic model for the analysis of reflective processes which consists of four levels.

Levels of reflection			
	4	**Plan**	… possible alternatives and options
	3	**Evaluate**	… on the basis of accepted criteria
		Assess	… in comparison to expectations or other performances
	2	**Interpret**	… regarding the consequences of one's own action
		Analyse	… with regard to one's own performance
	1	**Document**	… with regard to the entire action
		Describe	… the performed action

Figure 10.7 Levels of reflection (Bräuer 2016: 28, translated by the author)

As is visualised in Figure 10.7, the first level asks to document and describe an action in its entirety. Afterwards, the action is analysed regarding the own performance or interpreted with regard to the consequences of the action on the second level. On the third level, the action is

[71] For reasons of readability, these competences are not listed here again, but the overview in Table 10.4 (page 212f.) shows all competences that are addressed through the ePortfolio.

then assessed and evaluated in comparison to the expectations and based on accepted criteria. Finally, the fourth level asks to plan possible alternatives and options to the performed action. For the purpose of this certificate, in which the participants are first confronted with the theoretical basics of CLIL and are then required to teach and reflect upon their own CLIL lessons, these levels of reflection seem particularly appropriate as this structure allows to systematically connect theoretical knowledge to its practical application.

Taking this understanding of reflection and reflective processes as a basis, the ePortfolio of the CLIL certificate programme could be developed with the help of an online platform, such as Mahara[72] and might consist of three parts. During the first part of such an ePortfolio, a glossary could guide the students in reflecting the above-mentioned terms and concepts of the CLIL concepts. These could, for example, be the different teaching approaches, such as *CLIL* or *Bilingualer (Sachfach-)Unterricht*, as well as the concepts of scaffolding, code-switching or BICS and CALP. The glossary entries for these concepts should consist of definitions, explanations and examples and, as opposed to a classical dictionary, the portfolio entries should show the development and change of the students' understanding of these concepts. Therefore, the first entries of the glossary from the beginning of the certificate programme should be taken as a basis to further improve and develop the glossary entries over the course of the certificate programme. As a result, a possible change of perspective or understanding with regard to the concepts of the glossary could be documented and reflected here.

As a second part, the ePortfolio could, for instance, include explicit reflection tasks, which might be derived from the CLIL teachers' reports of their everyday lives in the CLIL classroom. For example, these real-life scenarios ask the participants to consider how to plan an info session for parents whose children are interested in applying for a CLIL programme at their school or, alternatively, participants could be asked to develop criteria for selecting students for the CLIL programme in case that more students applied for the programme than free spots are available. In addition to that, specific reflection tasks should also refer to the practical phase and ask the students to reflect their experiences from class observation as well as from their own teaching phases. Accordingly, they are again asked to discuss the most important insights they gained during the entire practical phase and develop the respective competences.

Finally, a third part should be included in the ePortfolio which is not structured a-priori but which provides the participants with the opportunity to reflect upon all thoughts and experiences which are not already covered in the other two parts of the ePortfolio. If the

[72] https://mahara.org

participants of the programme had, for example, the chance to talk to the CLIL students or their parents during the practical phase, their thoughts and experiences of the CLIL programme could be included in this open part of the ePortfolio.

Accordingly, the ePortfolio focuses both on the learning process as well as the learning outcomes. Hence, the first part, i.e. the glossary, is concerned with the students' development over the course of the certificate but as the ePortfolio also serves as a basis for the oral portfolio exam, the finalised portfolio is also of importance.

Oral Portfolio exam

As indicated in the checklist for developing CLIL teaching programmes (see Figure 10.2), which is based on the state of the art of CLIL teacher education in Germany, a CLIL certificate programme should include a final degree, in which all necessary competences are brought together and need to be displayed. As all required CLIL teacher competences are closely connected, the final exam should provide the participants with the opportunity to show their ability to master the respective competences not only individually but also in an integrative way. Inter alia, this could be achieved through an oral portfolio exam. In such an oral portfolio exam, the participants could be allowed to bring their individual ePortfolios and could be given a preparatory time in which they can work on their exam tasks. Through that, the exam would not only ask them to recite any definitions but to properly apply them to an exemplary context. In order to examine the participants' ability to apply their knowledge and display all their competences, the exam must consist of task(s) that are complex enough to touch upon all the competences. As an example, the task for the exam could ask the examinee to sketch a lesson plan of a CLIL lesson to a provided topic and consider the students' learning prerequisites on the language as well as the content level and anticipate possible difficulties of the designed lessons. Also, the students might be asked to consider a form of assessment which is suitable for the topic and the grade. In order to also test the participants' subject-specific competences, the tasks would also need to be subject-specific and hence ask the examinees to include the subject-specific perspective.

Interdisciplinary Master thesis with CLIL-Focus

As recommended by Gnutzmann (2015), another element of this final exam of the certificate programme could be an interdisciplinary master thesis as this provides another possibility for discussing CLIL-related aspects in a complex way and through that displaying numerous competences which were targeted throughout the certificate. This master thesis would need to have a CLIL focus but would also need to refer to the general guidelines for master theses of

the M.Ed. programme, in which the CLIL certificate is implemented. Hence, the master thesis should show that the student is able to solve a specific task in a given time with the help of academic methods (Universität Koblenz-Landau 2010, §15). In order to include the perspective of the content discipline as well as the foreign language, the two supervisors of the thesis should represent the two different perspectives and through that also support the student in integrating the content and the language perspective.

As the participants of the certificate are free to choose a topic for their master thesis and most likely specialise on a specific concept of the CLIL concepts, the list of competences of the German Framework for CLIL Teacher Education which are trained and developed through writing the master thesis can neither be anticipated nor presupposed to the fullest extent. Notwithstanding, all theses need to refer to the explicit context for which CLIL is contextualised (CLIL-F2) and the appropriate use of subject-specific language needs to be given (LP2). Apart from that, the students could possibly decide to move their focus on the successful development of CLIL learning environments which would clearly target the competences of "Course Development" (CD) and "Methodology" (M). Another alternative would be a focus on the role of (the) language(s) in the CLIL classroom which, accordingly, refers to the competences of the "Integration of Content and Language" (ICL). A focus on "Assessment and Evaluation" (AE) or the development of cultural awareness (I) in the CLIL classroom would also be possible. As no explicit assignment of all competences which are developed over the course of the master thesis is possible, only the first two competences which are definitely trained are also visualised in the respective overview.

In order to easily show which competences are targeted and trained during which parts of the certificate programme, Table 10.4 shows the assignment of the competences of the German Framework for CLIL Teacher Education to the individual elements of the certificate programme. The light grey symbols are meant to show that the respective competence is only indirectly or potentially trained in the corresponding element of the certificate programmes. As this overview shows, most of the competences are covered several times, hence in the theoretical seminars, during the practical phase, in the ePortfolio as well as the final exam(s). Through that, the competences can be trained in different contexts and their extensive development is supported. Through addressing all the competences numerous times and in different settings, the important connection of theoretical knowledge as well as its practical application can be ensured. It must not be neglected, though, that the process of being a CLIL teacher is a life-long learning task and all the above-mentioned competences need to be further trained and developed in the second and third phase of teacher education as well.

	Competence	M1.1	M1.2	M2.1	M2.2	M3	ePortfolio	oral exam	Master thesis
CLIL-F1	define CLIL and name its characteristics	✓				✓	✓	✓	
CLIL-F2	contextualise CLIL with regard to the specific context		✓			✓	✓	✓	✓
LP2	use the subject-specific language appropriately			✓	✓	✓	✓	✓	✓
LP3	work with content-specific texts			✓	✓	✓	✓	✓	
CD1	create/adapt (authentic) material	✓	✓			✓	✓	✓	
CD2	create a reassuring learning environment					✓	✓		
CD9	approach a topic from different perspectives		✓			✓	✓	✓	
CD10	analyse learners' needs and plan lessons accordingly		✓	✓		✓	✓	✓	
CD13	develop meta-cognitive awareness and higher-order thinking skills	✓				✓	✓	✓	
CD15	design student-centred tasks		✓			✓	✓	✓	
CD16	analyse/evaluate existing material	✓	✓	✓		✓	✓	✓	
CD17	select appropriate topics		✓	✓	✓	✓	✓	✓	

Table 10.4 Application of German Framework for CLIL Teacher Education to CLIL certificate programme

	Competence	M1.1	M1.2	M2.1	M2.2	M3	ePortfolio	oral exam	Master thesis
CD18	be aware of heterogeneity					✓	✓		
CD19	design preparatory phase for CLIL (in years 5/6)	✓				✓	✓	✓	
CD20	maintain a balance between L1 and L2 use	✓	✓			✓	✓	✓	
ICL2	foster the development of BICS and CALP	✓	✓	✓		✓	✓	✓	
ICL5	analyse the content in terms of language needs		✓	✓	✓	✓	✓	✓	
ICL6	avoid overtaxation through the additional language		✓	✓		✓	✓	✓	
ICL7	include perspective of language and subject teaching		✓	✓	✓	✓	✓	✓	
ICL8	use the language as opportunity and not hurdle			✓		✓	✓	✓	
ICL9	focus on content teaching		✓		✓	✓	✓	✓	
ICL10	integrate phases of (subject-specific) language teaching		✓	✓		✓	✓	✓	
M1	use code-switching	✓	✓			✓	✓	✓	
M2	use appropriate media techniques	✓	✓			✓	✓	✓	

Table 10.4 Application of German Framework for CLIL Teacher Education to CLIL certificate programme (cont.)

	Competence	M1.1	M1.2	M2.1	M2.2	M3	ePortfolio	oral exam	Master thesis
M3	use scaffolding techniques	✓	✓	✓		✓	✓	✓	
AE1	decide if errors are language- or content-driven	✓				✓	✓		
AE3	be aware of CLIL-specific assessment needs and problems	✓	✓			✓	✓	✓	
AE7	create tests that are adapted to the CLIL context		✓			✓	✓	✓	
AE8	grade subject-specific language	✓	✓			✓	✓	✓	
AE9	focus grading on content achievements	✓	✓			✓	✓	✓	
I1	develop cultural awareness and ICC	✓	✓		✓	✓		✓	
C1	… with school authorities					✓	✓		
C4	… with the English teacher					✓	✓		
C5	… with other CLIL colleagues					✓	✓		
R4	manage the roles of a CLIL teacher				✓	✓	✓	✓	

Table 10.4 Application of German Framework for CLIL Teacher Education to CLIL certificate programme (cont.)

Structure of the programme

Next to the German Framework for CLIL Teacher Education, which was the basis for developing the contents of the CLIL certificate programme above, the state of the art of CLIL teacher education in Germany provided the basis for developing the structure of the programme. As already mentioned above, this state of the art, for example, demanded for a practical phase, an element focusing on subject-specific language as well as a final exam. All these components were already discussed in the detailed description of the elements of the programme. Next to these, the developed checklist and the respective guiding question, for example regarding the target group or the offered content subjects, were taken as the basis to develop the structure of the programme (see Figure 10.2, page 188). Table 10.5 shows the result of these considerations with the sections in light orange indicating the categories the certificate programme at the university in Koblenz is sorted into.

The majority of certificate programmes addresses (future) CLIL teachers in the first phase of teacher training. As Rhineland-Palatinate offers CLIL qualification programmes in the second phase of teacher education (cf. MBWWK 2014), the certificate programme was not intended to compete with existing programmes but rather complement them, and also serve as a profound basis for CLIL programmes in the second or third phase of teacher education. Therefore, this certificate programme also only addresses the first phase of teacher education.

Concerning the represented school types, the programme addresses all secondary schools, including *Realschulen plus*[73], *Gymnasium, Berufsbildende Schule* as well as *Gesamtschule*[74]. As already shortly mentioned above, the certificate is not addressed at future primary school teachers as, on the one hand, English is already taught in an integrated way – that is English is not a subject but integrated in different content subjects – at primary schools in Rhineland-Palatinate (MBFJ 2004). On the other hand, teacher education programmes are adapted to that and the study programme for (future) primary school teachers differs significantly to the one for (future) secondary school teachers and thus, the certificate programme cannot be implemented into the regular study programme as easily as this is possible for the secondary school study programmes. Therefore, a second CLIL certificate programme would need to be developed in order to address (future) primary school teachers. With regard to the CLIL languages, the university in Koblenz only offers English as a subject in schools, which is why no other CLIL languages can be included (Universität Koblenz-Landau 2010).

[73] In Rhineland-Palatinate, *Haupt-* and *Realschulen* are combined to *Realschulen plus*. The teacher training programmes are therefore targeted at this combined school form (MBWWK 2009; KMK 2017).

[74] In Rhineland-Palatinate, no special teacher training programmes for *Gesamtschulen* exist, but (future) secondary school teachers are eligible to work at these comprehensive schools as well (KMK 2017).

	1st phase						2nd phase							3rd phase					
School types	**GS**	**Sek I**	**Sek II**	**BBS**	**Gesamt**	**other**	**GS**	**Sek I**	**Sek II**	**BBS**	**Gesamt**	**other**	**GS**	**Sek I**	**Sek II**	**BBS**	**Gesamt**	**other**
	PHL UniBr TUBr SUH TUDo	PHL TUBr SUH TUDo MLU	UniB TUBr GAU (SUH)	TUDo JGU MLU CAU	UniBr TUDo	GAU SUH TUDo MLU		MLU	MLU		MLU		PHK GUF TUBr	PHK GUF TUBr MLU	PHK GUF TUBr MLU	GUF		PHK GUF MLU
CLIL languages	**English**		**French**		**Spanish**		**English**		**French**		**Spanish**		**English**		**French**		**Spanish**	
	PHL UniBr TUBr GAU SUH	TUDo JGU MLU CAU	JGU MLU CAU		MLU		MLU		MLU		MLU		PHK GUF TUBr MLU		MLU		MLU	
Prerequisites	**language competence**	**language as subject**	**study degree**	**stay abroad**	**job experience**	**intro to *Didaktik***	**language competence**	**language as subject**	**study degree**	**stay abroad**	**job experience**	**intro to *Didaktik***	**language competence**	**language as subject**	**study degree**	**stay abroad**	**job experience**	**intro to *Didaktik***
	SUH JGU	PHL (JGU) UniBr MLU TUBr CAU TUDo	TUDo	CAU		TUBr MLU		MLU				MLU	PHK (GUF)	GUF TUBr MLU	PHK GUF			(TUBr) MLU
Cooperation with *Didaktik* of subject disciplines	**Yes**				**No**		**Yes**				**No**		**Yes**				**No**	
	PHL UniBr GAU		SUH JGU MLU		TUBr TUDo CAU		MLU						PHK MLU				GUF TUBr	
Integration of subject-specific language	**Yes**				**No**		**Yes**				**No**		**Yes**				**No**	
	TUBr GAU SUH TUDo		JGU MLU CAU		PHL UniBr		MLU						PHK TUBr MLU				GUF	
Integration of practical phase	**Yes**				**No**		**Yes**				**No**		**Yes**				**No**	
	PHL UniBr TUBr		SUH TUDo CAU		JGU MLU						MLU		TUBr				PHK GUF MLU	
Degree	**Yes**				**No**		**Yes**				**No**		**Yes**				**No**	
	UniBr SUH TUDo MLU		PHL TUBr GAU		JGU CAU		MLU						PHK MLU				GUF TUBr	

Table 10.5 Systematisation of CLIL certificates – including certificate at Koblenz University

As was already explained above, the certificate programme at the university in Koblenz is only addressed at students who study English as a subject and who have successfully completed the B.Ed. programme so that the participants should already possess at least the basic language teaching competences. Also, the cooperation with the didactic perspective of the content subject disciplines, the integration of subject-specific language and the practical phase as well as the online portfolio exam and the CLIL master thesis in order to successfully pass the CLIL certificate programme have already been discussed above and are visualised accordingly in Table 10.5.

Moreover, the designed programme is open to all content subjects which are offered at the university in Koblenz (Universität Koblenz-Landau 2009; Universität Koblenz-Landau 2010). Hence, Table 10.6 visualises the possible content subjects which can be found in the field of the MINT subjects, the humanities as well as the practical subjects[75]. In comparison to the other German universities with CLIL teacher education programmes, the programme at the university in Koblenz offers a large number of different content subjects, representing all three different fields, i.e. MINT, humanities and the practical subjects.

		PHK	PHL	UniBr	GUF	TUBr	GAU	SUH	TUDo	JGU	MLU	CAU	UniKo
MINT	Biology	X	X	X	X	X	X	X	X		X	X	X
	Chemistry	X	X	X	X	X	X	X	X		X	X	X
	Physics		X	X	X	X	X	X	X		X	X	X
	Mathematics		X	X	X	X		X	X		X	X	X
	Computer Science					X		X			X	X	
Humanities	History	X	X	X	X	X	X	X	X	X	X	X	X
	Geography	X	X	X	X	X	X	X		X	X	X	X
	Social Sciences					X			X	X	X		
	Politics	X	X	X	X	X	X	X				X	
	Economics					X		X	X				
	Religion (cath.)		X	X		X		X	X		X		X
	Religion (prot.)		X		X	X		X	X		X	X	X
	Ethics/Philosophy					X					X	X	X
Practical subjects	Music		X	X	X	X		X	X		X		X
	Arts		X	X		X		X	X		X	X	X
	Sports/Physical Education		X		X	X		X	X		X	X	X
	Theatre					X							X

Table 10.6 Content subjects offered in CLIL certificates – including certificate at Koblenz University

Another finding of the analysis of the state of the art of CLIL teacher education was the importance of the credit points that are achieved through attending a CLIL programme. As mentioned above, this is a clear, universal indicator of the required workload and also functions as an important criterion for accrediting such programmes. For the CLIL certificate at the university in Koblenz, the credit points for the different modules and the degree of the certificate

[75] *Darstellendes Spiel* (Theatre) can only be studied as a third, additional subject but is still possible to integrate in the CLIL certificate programme (Universität Koblenz-Landau 2012)

programme are visualised in Table 10.7. Overall, a total number of 40 CPs are included in the CLIL certificate programme, 20 of which belong to the master thesis. Considering the fact that the master thesis requires the participants to display all the competences of the certificate programme and to apply them to a specific topic, the large amount of 20 CP, equalling 500 to 600 working hours, is comprehensible and justifiable.

	Credit Points (CPs)
Module 1: CLIL: Basic Principles and Advanced Studies 1.1 Introduction to CLIL (4 CP) 1.2 Selected Topics of CLIL (4 CP)	8
Module 2: Subject-specific CLIL Work 2.1 Subject-specific Language (3 CP) 2.2 Didactic Perspectives of Content Subject (4 CP)	7
Module 3: Practical Phase 3.1 Accompanying Seminar (2 CP) 3.2 Obligatory Internship (3 CP)	5
Degree Interdisciplinary Master Thesis	20
Overall	40

Table 10.7 Credit points (CPs) of CLIL certificate at Koblenz University

In comparison to the other certificate programmes (Figure 10.8), the programme itself, not counting the master thesis, is only slightly above the arithmetic mean of 19 CPs.

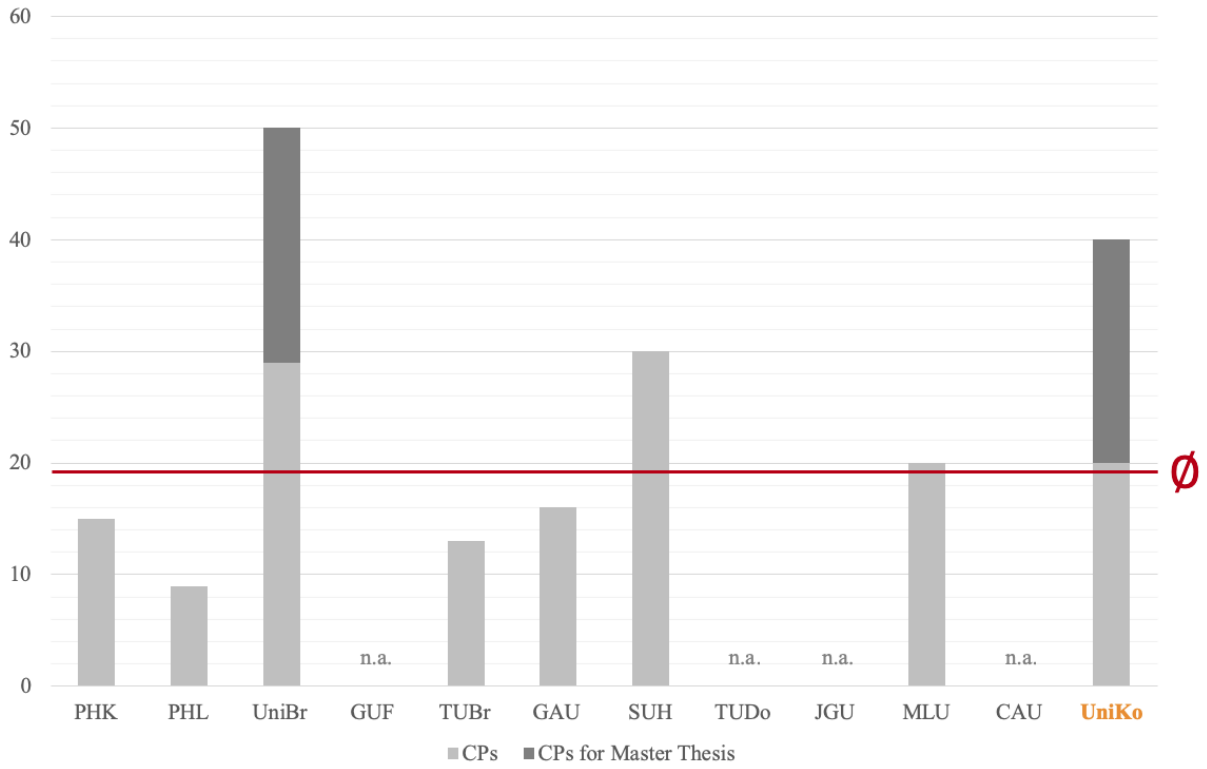


Figure 10.8 Credit points (CPs) of CLIL certificates – including certificate at Koblenz University

10.2. First Cohort

Based on the considerations from the previous chapter, the developed certificate programme was first introduced as a pilot project at the University of Koblenz-Landau (Campus Koblenz) in the winter term 2017/2018. The transfer of the planned programme into practice is described in the following in order to evaluate the implementation and to draw conclusions for further adaptations of the programme. The first cohort consisted of 15 students, who were all enrolled in the M.Ed. programme and studied English as one of their two subjects. In order to participate in the programme, the students had to hand in an application. This application comprised a letter of motivation through which the students should show their motivation and enthusiasm for participating in the programme. Also, a transcript of records had to be included in order to make sure that all students fulfil the prerequisites of studying English and the successful completion of the B.Ed. programme. Through the application process, 15 students were selected, who all decided to teach at *Gymnasien* and who – in the end – represented actually seven different content subjects. As is visualised in Figure 10.9, the students represented the classical CLIL subjects such as Geography, History or Biology but also less common subjects like Mathematics, catholic Religion, Ethics/Philosophy or Sports.

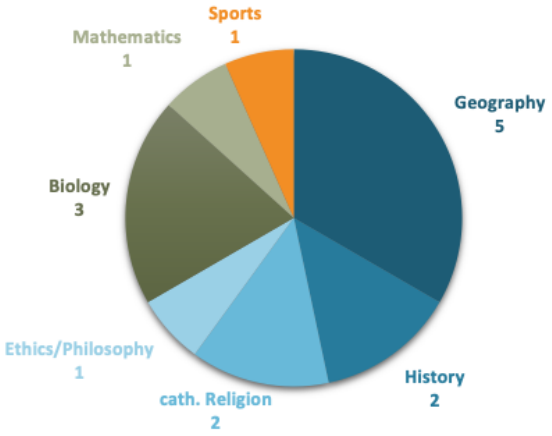


Figure 10.9 Content subjects of first cohort of CLIL certificate

As already mentioned above, the first cohort started the CLIL certificate programme in the winter term 2017/2018 with attending the first seminar "Introduction to CLIL" (see Figure 10.10). Afterwards and in the semester break, the second seminar of the first module "Selected Topics of CLIL" was offered as a block seminar, stretching over two weekends in spring 2018. In the following summer term 2018, the seminar "Subject-specific language" of the second module was offered as an online course with two attendance-based seminars, which formed the framework for the online course. In the same semester, the practical phase, hence the third module, was also offered. The actual internship was organised in June 2018, consisting of two phases, namely the class observation and the teaching phase. The corresponding, accompanying seminar was offered before, in between and after the internship. As the "Didactic Perspectives of Content Subjects" are offered in close cooperation with the departments of the different

content subjects and hence some students already attended the seminar in the summer term 2018 while others did so at a later point in time, module 2.2 is localised in the overview in Figure 10.10 with fading boundaries and a colour gradient. Also, as the oral portfolio exams as well as the master theses were individually scheduled and organised, no fixed time period can be added in the overview but they are also visualised with fading boundaries. The colour gradients for the oral portfolio exams as well as the master theses also represent the peaks of these parts of the degree. As the majority of oral exams was in the winter term 2018/2019, the respective bar has the strongest colour in the middle while most master theses were written and handed in in the summer term 2019 (or even later) which is why the strongest colour is towards the end of the respective bar.

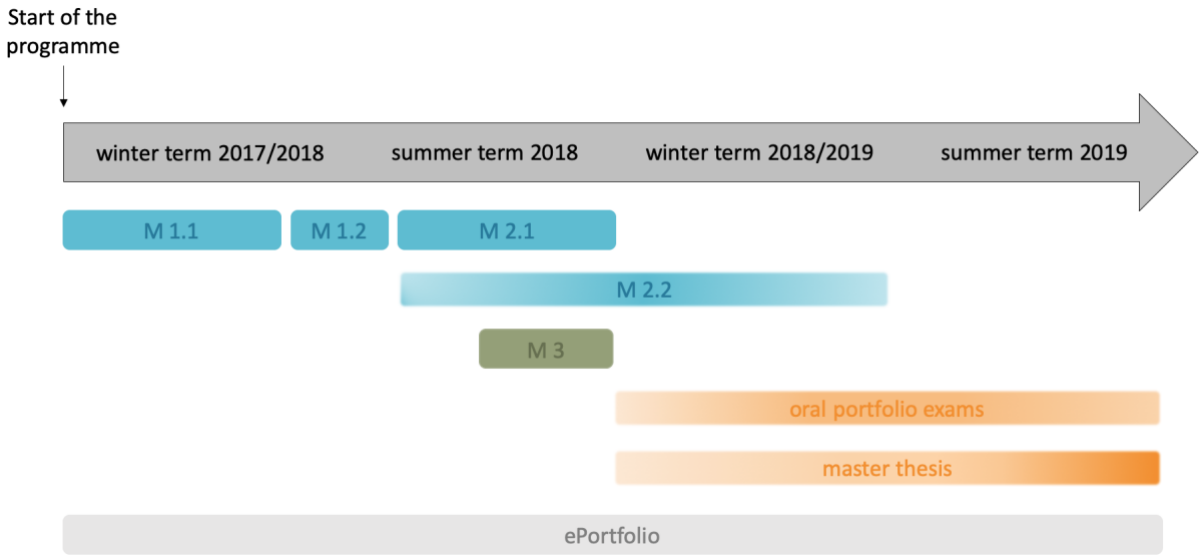


Figure 10.10 Timetable of first cohort of CLIL certificate

As this first implementation of the programme was a pilot project, the programme was ongoingly evaluated and all the experiences, which were gained throughout the programme, helped to further develop the programme. Yet, a systematic evaluation of the programme, however, still needs to be implemented and conducted in a next step. Notwithstanding, these first, rather low-level evaluations of the elements of the certificate already show promising results. Through quantitative as well as qualitative feedback, for example, the positive influence of the seminar "Subject-specific Language" on the students' self-confidence in using subject-specific language could be deduced. Moreover, the students confirmed a large growth of knowledge and provided helpful suggestions for improving the seminars' time management. Next to this subjective feedback, the analyses could also show a greater language awareness for subject-specific language among the participating students (for a more detailed overview, refer to Fein & Juchem-Grundmann 2018). Regarding the practical phase in the second module, the

evaluation showed a positive development of the students' self-confidence in the field of applying their theoretical knowledge to their practical experiences. Moreover, the students reported that they did not only improve in CLIL-specific aspects but also referred to general aspects of teaching. Though raising the students' general teaching competence was not the main goal of the programme, it can still be considered as a positive side effect (for a more detailed overview, refer to Fein & Juchem-Grundmann – submitted). The use of the ePortfolio was also positively evaluated by the participants of the programme and the self-evaluation showed an increase of the students' reflective processes (for a more detailed overview, refer to Fein, Rosenberg & Schürmann – submitted). Finally, some student voices also support the overall positive evaluation of this pilot implementation. For example, one student "very much liked the subject-specific language course since the topics we worked on were very relevant to our future profession" while another student said that it "was great to work with students from other subjects". Also, the large number of "practical examples" was valued and students "enjoyed the certificate although it was a lot of work" as well as appreciated "the opportunity to deal with CLIL already at university". Hence, the developed CLIL certificate programme can be considered as successful with regard to developing the intended CLIL competences. Therefore, implementing the programme into the regular study programme needs to be the next step.

11. Final Evaluation and Summary

As a final evaluation and summary of this thesis, the following subchapters first provide a general summary of the different elements of the thesis. Afterwards, the limitations of the approaches are discussed as well as implications for future research presented. Lastly, this is followed by the final conclusion.

11.1. General Summary

Following the structure of the three research questions (see chapter 5.1), the thesis at hand provided the following results and insights:

Research Question I: Which specific competences are crucial for CLIL teaching?

In order to develop the German Framework for CLIL Teacher Education (see chapter 8), a qualitative approach was chosen which includes, on the one hand, the theoretical perspective of experts in the field of CLIL teacher education (see chapter 6) as well as, on the other hand, the practical perspective of experienced CLIL teachers (see chapter 7). The qualitative in-depth analysis of both theory-based standards, the "European Framework for CLIL Teacher Education" (Marsh et al. 2011) as well as the "CLIL Teacher's Competences Grid" (Bertaux et al. 2010) on the one hand (in this thesis always referred to as *theory*) and the 13 expert interviews on the other hand (in this thesis always referred to as *practice*) delivered a total number of nine main categories for the competences of the German Framework for CLIL Teacher Education: CLIL Fundamentals, Language Proficiency, Course Development, Integration of Content and Language, Assessment and Evaluation, Interculturality, Cooperation and Reflection. For these nine main categories, 61 subcategories were identified and hence form the competences of the German Framework for CLIL Teacher Education. These CLIL teacher competences touch upon different competence areas, ranging, for example, from the pure language competence to the general teaching competence or the language teaching competence. The comparison of the identified CLIL teacher competences, though, revealed that only slightly more than half of the competences are either specific to CLIL or are at least of particular importance for CLIL programmes. In contrast, the remaining competences can be classified as teaching competences which are already included in regular teacher education programmes. Following Coyle, Hood and Marsh's introductory demand to develop "relevant and appropriate" (Coyle, Hood & Marsh 2010: 163) CLIL teacher education programmes, the 61 CLIL teaching competences of the German Framework for CLIL Teacher Education are classified to their respective competence areas (see Figure 8.14, page 165). Hence, developers

of CLIL teacher education programmes can take this German Framework for CLIL Teacher Education as a basis for developing their programmes, consider their participants' educational backgrounds, first and then develop a training programme which only includes the remaining CLIL teaching competences in a next step.

Research Question II: How is CLIL teacher education currently realised in Germany?

Due to the lack of obligatory CLIL teacher education programmes in Germany, those few programmes which exist at German universities follow varying structures and are implemented differently. Therefore, the existing programmes at German universities were systematised in chapter 9. Accordingly, a total number of twelve universities offer CLIL teacher education programmes, ranging from entire study programmes to less formalised certificate programmes. Most of these programmes are addressed at teachers in the first phase of their training, while only a few programmes are open to teachers in the second or third phase of teacher education. Also, most programmes focus on English as the CLIL language, which is, though, not further surprising as the majority of CLIL programmes in Germany use English as the target language. The number of content subjects offered in the teacher education programmes varies significantly. However, it needs to be valued that several programmes offer a vast range of content subjects, including both humanities as well as MINT subjects, only the practical subjects are represented less often. In order to participate in the different programmes, (future) CLIL teachers need to fulfil certain prerequisites, mostly asking for a certain level of language proficiency. While some universities require their participants to study the foreign language, others only require the proof of obtaining the level B2 or C1 of the CEFR. According to the German Framework for CLIL Teacher Education, which was developed as a result of the first research question and which also includes language teaching competences, these programmes would hence need to include these general elements of foreign language teaching which are not specific to CLIL. What most programmes seem to agree on is the implementation of a practical phase as well as subject-specific language, though, these components are implemented in varying forms. Also, most programmes have established a cooperation with colleagues from the content subjects in order to implement both the language as well as the content perspective. While the German Framework for CLIL Teacher Education (RQ I) provides the basis for contents of CLIL teacher education programmes, this state of the art for CLIL teacher education delivers important guidelines for developing the structure of the respective programme. The combined checklist (see Figure 10.2, page 188) of the German Framework for CLIL Teacher Education as well as the state of the art of CLIL teacher education in Germany is hence the basis for developing new CLIL teacher education programmes.

Research Question III: How can the competences of the German Framework for CLIL Teacher Education be integrated in a study programme at a German university?

The third research question merged the previous two research questions as it investigated how to design a CLIL teacher education programme which, on the one hand, includes the competences of the in RQ I developed German Framework for CLIL Teacher Education and, on the other hand, considers the in RQ II developed state of the art of CLIL teacher education in Germany. Hence, chapter 10 presents the certificate programme, which was developed at the University of Koblenz-Landau (Campus Koblenz). As this programme is addressed at students, who are enrolled in the M.Ed. study programme and who study English as one of their two subjects, the participants have already developed some competence areas of the competence model and thus not all the competences of the German Framework for CLIL Teacher Education needed to be implemented in the respective programme. Considering these prerequisites as well as the state of the art of CLIL teacher education in Germany, the designed programme consists of a number of seminars addressing different aspects of CLIL as well as subject-specific language. Apart from that, a seminar which is offered in cooperation with colleagues from the content subjects' perspective is another element of the programme. Also, an internship together with an accompanying seminar requires the participants to connect their theoretical knowledge to practical experiences. This is also encouraged through an ePortfolio which accompanies the entire certificate programme and which functions as the basis for the final oral portfolio exam. Next to the oral exam, an interdisciplinary Master thesis with a CLIL related topic needs to be written in order to successfully pass the certificate.

This certificate programme was first implemented at the University of Koblenz-Landau (Campus Koblenz) in the winter term 2017/2018. The first cohort consisted of 15 students, representing seven different content subjects. First evaluations of the programme delivered positive results with regard to the students' CLIL-specific competences, their self-evaluation as well as their self-confidence. Moreover, the participants of the programme enjoyed the programme and were thankful for the opportunity to deal with CLIL during their studies.

In summary, this thesis developed the German Framework for CLIL Teacher Education and established the state of the art of CLIL teacher education in Germany. Through combining these two elements, new CLIL teacher education programmes can be designed which, on the one hand, consider the participants' educational backgrounds as well as, on the other hand, the educational settings in which the programmes shall be installed. Also, as a result of this thesis and following the aforementioned guidelines, such a CLIL certificate programme was designed

and established at the University of Koblenz-Landau (Campus Koblenz) and a first pilot project was successfully completed.

11.2. Limitations and Implications for Future Research

Next to the outcomes of this thesis, such a PhD can also only focus on a part of the complex research field of CLIL teacher education and hence, limitations to this research are inevitable. As was already discussed for the analysis and interpretation of the expert interviews (see chapter 7), especially the comparison of different groups of teachers needs to be carefully evaluated. As the groups of MINT or humanities teachers sometimes showed differences in the frequencies of codings, one could attribute these to different requirements specific to the subject groups. Due to the small sample, though, the group of the MINT teachers overlaps with the group of those teachers who are not specifically trained as foreign language teachers and hence, it is not possible to fully attribute these differences either to the specifics of the subject groups or to the teachers' different educational backgrounds.

Generally, the small sample itself is a limitation of this study. Due to the design of this study, which focused on a qualitative approach with in-depth analyses of the conducted interviews, though, a larger sample would not have been manageable.

Moreover, the only possibility of classifying the identified CLIL teacher competences to the different competence areas was on the basis of official guidelines and requirements of German teacher education programmes. On the one hand, this reliance on official guidelines and requirements only could be criticised but, on the other hand, this thesis conceptually developed a new model for CLIL teacher education in Germany and had to refer to these idealised prerequisites. It was, hence, assumed that (future) teachers running through specific training programmes successfully develop these competences in the different phases of teacher education. This, however, is only an assumption and in order to develop a CLIL teacher education programme on the basis of the German Framework for CLIL Teacher Education, one would first need to make sure that the participants really fulfil the requirements which they are expected to have accomplished.

Regarding the state of the art of CLIL teacher education at German universities (see chapter 9), this systematisation only considers an excerpt of the available teacher education programmes, namely those programmes which are offered at universities. As this was also the focus of this thesis, possible offers at the *Studienseminaren*[76] or by other teacher education

[76] The *Studienseminare* are responsible for the second phase of teacher training (*Vorbereitungsdienst/ Referendariat*) which follows the B.Ed. and the M.Ed.

institutions, which often provide further education for teachers in the third phase of teacher education, need to be investigated in a further analysis. Also, the systematisation only includes those programmes which are advertised on the universities' webpages. Programmes which cannot be found online are, hence, not included.

A further limitation regarding the development of CLIL teacher education touches upon their possible structural implementation. The programme which was developed as part of this thesis relies on the state of the art of CLIL teacher education programmes at German universities and regards them as best practice examples. As the success of these existing programmes, though, was not considered, it can only be assumed that this state of the art provides an appropriate way of implementing a CLIL teacher education programme in existing educational structures.

These limitations to the thesis at hand also function as first implications for future research. In order to identify if CLIL teacher competences vary among different subject groups, for example, the sample of interviewed teachers would need to be extended in order to reliably identify possible differences. As a follow-up study, a quantitative survey study could use the competences of the German Framework for CLIL Teacher Education as items and interrogate a larger number of CLIL teachers to rank these according to their importance. Through that, one might further develop the German Framework for CLIL Teacher Education so that it is not only adaptable to the teachers' different educational backgrounds but also to the different content subjects.

Taking the German Framework for CLIL Teacher Education as a basis, this thesis provided one possibility of developing a CLIL certificate programme. This programme, however, is only addressed at teachers in the first phase of teacher education and due to the prerequisites of being enrolled in the M.Ed. as well as studying the foreign language, the participants already fulfil certain requirements. Hence, the designed programme is a specific example programme and it would need to be considered how to develop a programme for the second or third phase of teacher education or for different educational prerequisites.

As a systematic evaluation of the certificate programme would have gone beyond the scope of this thesis, a next step should certainly be to evaluate the success of the programme. Following Kirkpatrick's (1959) 4-stage model of evaluating training programmes, which is made up of the stages *reaction*, *learning*, *behaviour* and *results*, this thesis only covered the first phase of *reaction* through considering the participants' (positive) reactions to the programme. The second stage, i.e. the *learning* and development of the participants CLIL-related competences needs to be measured and evaluated in a next step. For the third stage of

behaviour, it would need to be evaluated if the participants of the certificate are also able to apply the acquired competences in their future career as a teacher. Finally and in the long run, the *results* of the certificate programme would need to be shown via the greater success of CLIL students whose teachers ran through the certificate programme. Hence, only if the CLIL students who are taught by teachers who ran through the programme, also perform better in the CLIL courses than CLIL students who are taught by teachers without this training, the success of the developed CLIL certificate programme can be shown. Such a large-scale and long-term evaluation would hence, on the one hand, evaluate if the designed programme actually fulfils its purpose and, on the other hand, if the effects of this CLIL teacher education programme also trickle down to the CLIL students' performance.

11.3. Conclusion

This thesis can be seen as a contribution to the development of "relevant and adequate" (Coyle, Hood & Marsh 2010: 163) CLIL teacher education programmes – a process which has been neglected for too long, resulting in CLIL students falling short of the high expectations which are connected to CLIL. CLIL as such is not a guarantee for successful education and the often-cited idea of 'two for the price of one' (Bonnet 2016) does not automatically materialise through establishing CLIL programmes in bottom-up processes. As Rumlich also states, "there is more to the idea of content and language integrated learning than merely changing the language of teaching" (Rumlich 2016: 452) and CLIL teachers have to be prepared for that. Simply being trained as a language and a subject teacher must not be considered as adequate.

Therefore, the development of CLIL teacher education programmes for different CLIL contexts, different educational backgrounds and content subject areas needs to become the priority which Coyle, Hood and Marsh already demanded in 2010 (Coyle, Hood & Marsh 2010: 163). Only through that, the quality of CLIL programmes can be ensured and the intended benefits of CLIL can be reached.

Referring back to Rumlich's quote which was already cited in the introduction and which states that it is "now high time to focus on the quality of CLIL provision" (Rumlich 2016: 452), this thesis terminates with a slight adaptation of this quote and demands that it is now high time to focus on the quality of CLIL teacher education.

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13. Appendix

13.1. Codebook “Theory”

This part of the appendix is digitalised (see attached CD-ROM) and it includes the entire codebook for the analysis in chapter 6, i.e. the analysis of the theory-based standards for developing the German Framework for CLIL Teacher Education. This code book includes all main categories and their respective subcategories, a definition, an explanation as well as an example for every subcategory.

13.2. Codebook “Practice”

This part of the appendix is digitalised (see attached CD-ROM) and it includes the entire codebook for the analysis in chapter 7, i.e. the analysis of the expert interviews with CLIL teachers for developing the German Framework for CLIL Teacher Education. This code book includes all main categories and their respective subcategories, a definition, an explanation as well as an example for every subcategory.

13.3. Adapted Titles for Subcategories

This part of the appendix is digitalised (see attached CD-ROM) and it includes the comparison of the inductively developed subcategories from the theory-based standards as well as the CLIL interviews. Based on this comparison, similar titles were slightly adapted to increase the comparability and through that, support the development of the German Framework for CLIL Teacher Education (see chapter 8).

13.4. Curriculum Vitae

Persönliche Daten

Name	Felicitas Fein
Geburtsdatum, -ort	01.09.1993 in Dernbach
Staatsangehörigkeit	deutsch
Familienstand	ledig

Schulbildung

2003 – 2012	Mons-Tabor-Gymnasium, Montabaur Abschluss: Allgemeine Hochschulreife (03/2012)
1999 – 2003	Ahrbach-Grundschule, Niederahr

Studium

10/2014 – 03/2016	**Master of Education** an der Universität Koblenz-Landau (Campus Koblenz) Studienfächer: Englisch, Mathematik Bildungswissenschaften Thema der Abschlussarbeit: *CLIL Mathematics – Word Problems as Valid Assessment*
09/2013 – 01/2014	**Auslandssemester** an der University of Sunderland, UK mit ERASMUS - Förderung
04/2012 – 02/2015	**Bachelor of Education** an der Universität Koblenz-Landau (Campus Koblenz) Studienfächer: Englisch, Mathematik, Bildungswissenschaften Thema der Abschlussarbeit: *Chancengleichheit im Spannungsfeld zwischen Bildungsforschung, Bildungspolitik und Schulentwicklung*

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seit 04/2020	**wissenschaftliche Mitarbeiterin** (in Teilzeit) am Institut für Anglistik und Amerikanistik, Universität Koblenz-Landau, Campus Koblenz
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03/2014 – 03/2016	**wissenschaftliche/studentische Hilfskraft** am Institut für Anglistik und Amerikanistik, Universität Koblenz-Landau, Campus Koblenz
11/2014 – 03/2015 und 11/2015 – 02/2016	**wissenschaftliche/studentische Hilfskraft** am Mathematischen Institut, Universität Koblenz-Landau, Campus Koblenz

13.5. Honour Pledge

Hiermit versichere ich, dass ich die als Dissertation vorgelegte Abhandlung in keinen anderen Verfahren zur Erlangung des Doktorgrades oder als Prüfungsarbeit für eine akademische oder staatliche Prüfung eingereicht habe. Darüber hinaus versichere ich, dass ich die Arbeit selbständig verfasst, keine anderen als die von mit angegebenen Quellen und Hilfsmittel benutzt und die den benutzten Werken wörtlich oder inhaltlich entnommenen Stellen kenntlich gemacht habe.

Koblenz, im Dezember 2020 _____

Felicitas Fein