THE REM-STUDY – Rethinking Receptive Multilingualism

Intercomprehension Phenomena in Adolescent Language Learners – An Empirical Study

Dominik Unterthiner
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Disclaimer

I hereby declare that this dissertation is my own original work and has not been submitted before to any institution for assessment purposes. Further, I have acknowledged all sources used and have cited these in the reference section.
Throughout this thesis, the personal pronouns he/she, his/her, one, one’s etc. are used alternately when referring to adults, children, learners, or people in general. These pronouns are meant to be gender neutral, e.g. they include the other sex unless otherwise specified.

_____________________________  ______________________________
Dominik Unterthiner                        Date
Abstract

English Version

Over the past two decades, researchers in the field of multilingualism have investigated various modes of receptive multilingualism (e.g. Möller 2011, Berthele and Wittlin 2013, Mieszkowska and Otwinowska-Kasztelenic 2015 or Vanhove 2016, Morkötter 2016, to name a few). Their results show that multilingual language users have advantages over monolinguals or even bilinguals concerning lexis, metalinguistic awareness or the transfer of grammatical structures. The testing procedures used in these studies may, however, not have been reliable; furthermore, the participants in these studies were university students or other specific (adult) target groups, meaning that the applicability of their results to a school context or, for that matter, to the proverbial ‘man on the street’ may be limited.

The author of this thesis looks at a different target group, namely middle schoolers. In the present study, Rethinking Receptive Multilingualism: Intercomprehension Phenomena in Young Adolescent Language Learners (based on Marx 2011 and Mokhtari and Sheorey 2002), he uses qualitative (think-aloud protocols) and quantitative methods (e.g. global and detailed reading tasks, translation tasks, grammatical deduction tasks or the Survey of Reading Strategies) to test the hypotheses and results of previous research using another target group.

This dissertation will first elaborate the term receptive multilingualism and its accompanying research methods. This is followed by the presentation of the research project, including qualitative and quantitative results concerning lexis and attitudes towards foreign languages and multilingualism as a factor for success in receptive multilingualism tasks. The last part will discuss these results as well as in how far they may or may not support current multilingualism models.

Key words
Receptive multilingualism, reading strategies, Germanic intercomprehension, multilingual language learning, quantitative and qualitative research
Deutsche Version


**Schlagwörter**
Rezeptive Mehrsprachigkeit, Lesestrategien, germanische Interkomprehension, Mehrsprachigkeitsdidaktik, quantitative und qualitative Forschung
Dear Dissertation,

We have been together for some time of my earthly life. We have experienced joy. We have experienced suffering. We did not expect the unexpected, however, it happened nonetheless. We have travelled throughout Europe: we have seen Ireland’s sunny (yes, sunny!) green hills, Bremen’s stormy weather, Heidelberg’s kitschy Christmas Market and so many more places. Thank you, Dissertation, for taking me there because it is your fault, actually! We have seen my flat – quite a lot. During vacations, while others were outside in the swimming pool or enjoying coffee. However, you have never stopped me from going on detours. Truly, these detours have given me new motivation to finish writing you! I have been on theatre stages, turned into a theatre director twice, started managing my own radio show, finished an about-to-be-published entwicklungsroman, become a lecturer at university, transformed into a school teacher again and lived through so many more adventures. Obviously, most of the time we were alone, just the two of us. Even so, it has never been lonely work. Now, our time has come to say thank you.

First, we want to begin with Prof. Barbara Hinger, our main supervisor. You are the reason why I started this journey with Dissertation. On 30th June 2015 at about 15:30 you told me: “Sie gehören in die Forschung” ["You belong in research."] . This was the moment when you, Prof. Hinger, started believing in me and rekindled my interest in researching languages. It was a life-changing moment and I cannot thank you enough for that. This sentence began our journey. Back then, I wasn’t aware of this sentence’s scope, but see how far is has brought us! Of course, there have been setbacks, but your words of advice and constructive criticism made Dissertation possible. Furthermore, we need to thank Prof. Nicole Marx, our second supervisor. Your feedback on Dissertation was enriching and so important. With diligence and commitment, you have showed us what still needed to be reconsidered and taken care of while writing Dissertation. Additionally, we want to thank you and Prof. Hufeisen for the invitation to Darmstadt. It was the first time that I presented Dissertation to a wider audience. Your feedback was important and showed me what I needed to work on further.

Second, we want to thank our work colleagues at IMoF. Together, we had fruitful conversations and I (usually) was able to rethink and refine of what I had written into
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Coming closer to the end, I want to thank my **dearly beloved friends** who do not fit into any of the above categories (still, some of you up there, read this part as well!!). You stood by me/us in bad times and in good: Carolyn Atzl, Nadin Bierbauer, Sabrina Eisele, Miriam Gutwenger, Edith Hamberger, Mikel Klieber, Lisa Michelle Koller, Jean-Christophe Noël, Andrea Schneider, Almut Sparer and Philipp Tobias Walser. Yes, you were the ones who heard me moan about Dissertation most, yet you were also the ones who heard the most cries of joy concerning Dissertation! Thank you for being these wonderful creatures I can call friends.

Almost at the end, I want to thank **my family**, especially my mom. You were supportive the most. You believed in me without a single doubt. You will never read Dissertation, simply because you have never really learned English. Hence, I will translate every single word to you or be your private English tutor. Thank you! I love you!

Last but not least, Dissertation, you me to write it. Yes, I will. I want to thank **myself**. I was able to endure, to work hard and to blossom academically. You, Dissertation, are the printed proof that I have some reason to be proud of myself.

Thank you all de novo!
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List of Abbreviations

In alphabetical order:

**CEFR** = Common European Framework of Reference
**DBR** = design-based research
**DMM** = the Dynamic Model of Multilingualism
**EMM** = Enhanced Multilingual Monitor
**FLAM** = Foreign Language Acquisition Model
**ITA** = intercomprehensive teaching approach
**M-Factor** = Multilingualism-Factor
**MARSI** = Metacognitive-Awareness-of-Reading-Strategies Inventory
**MPM** = Multilingual Processing Model
**REM-SORS** = modified version of the SORS
**SORTS** = Survey of Reading Strategies
**TAP** = think aloud-protocol
1 Introduction and Overview

One walk through Tyrol’s capital city Innsbruck is enough to see and listen to multiple languages (Jessner et al. 2018, 113ff.). In short, European societies have become more multilingual due to facilitated traveling and exchange. Not only that, even daily objects such as smart phones open multiple doors to digitally experienced languages (see Unterthiner, Baur and Topf 2016): the presence of multiple language in our society is inevitable.

Thus, over the past two decades the interest in multilingual education research has risen noticeably. Researchers such as Hufeisen (2004), Jessner (2006), Henning (2015) or Mörkötter (2016b) were able to discover positive effects of multilingualism, for example facilitated future language learning, positively influenced attitudes towards new languages and/or heightened metacognitive skills. In this spirit, recent language curricula promote multilingual teaching approaches in place of an isolated language learning teaching approach (EU 2001, 5). Foreign language teaching should of course aim at establishing skills in individual languages but should promote crosslinguistic competences as well (Allgäuer-Hackl and Jessner 2013, 139f.). The training of receptive multilingual competences seems promising. Additionally, many researchers have reported through their studies that the knowledge of more languages has positive effects on the comprehension of unknown languages (see for example, Möller 2011, Berthele and Wittlin 2013, Mieszkowska and Otwinowska-Kasztelanic 2015, or Vanhove 2016). In a nutshell, multilinguals seems to be linguistically advantaged when learning a new language. Although most of the studies in question were carried out with adults, researchers and politics are calling for the integration of multilingual language learning into educational contexts. One question that has not yet been satisfactorily addressed or answered, however, is whether young adolescent language learners are even able to profit from this teaching approach or perform receptive skills in the same way that adult multilinguals apparently do. Hence, there is a research desideratum to analyse young adolescent language learners’ performances in receptive multilingual challenges. Motivated by this train of thought, the present dissertation will address this research desideratum.
The REM-study, short for Rethinking Receptive Multilingualism, Intercomprehension Phenomena in Young Adolescent Language Learners, aims at discovering whether young adolescent language learners, aged 12-14, are able to comprehend an unknown Germanic language. Furthermore, it will analyse whether participants with more than two languages are advantaged in multilingual receptive performances. On top of that, the topic of reading strategies will be addressed: Does the application of advanced reading strategies guarantee success in receptive multilingualism tasks? Researchers have outlined that strategies play an important role in multilingual language learning (for example, Herdina and Jessner 2002 or Hufeisen 2005). However, this dissertation will look at this issue in more statistical detail.

The following introduction will briefly describe the contents and structure of this dissertation. Overall, this work is divided into two parts: Part I, Theoretical Basis, and Part II, The REM-Study. Part I is composed as follows: After this introductory chapter, Chapter 2 discusses the term “multilingualism”. It is necessary to elaborate the term because it will give an understanding how the author of this thesis outlines the term as well as the field of research. Second, present multilingual models that resemble theoretical assumptions the REM-Study addresses will be presented (section 2.2). Chapter 3 discusses the term “receptive multilingualism”, which is a sub-genre of multilingualism as a field of research. Only by narrowing down the greater framework will it become clear what research desiderata this dissertation fulfils (section 3.3). Section 3.4 will then present a literature review of 42 receptive multilingualism studies which can be related to the REM-study and its results. Chapter 4 will discuss reading or, to be more precise, reading strategies. Starting from an L1 point of view, this chapter will move on to L2 reading strategies (Section 4.1.1). Afterwards, a quantitative research instrument, the Survey of Reading Strategies, will be presented (Section 4.2). This survey was used as a basis to find out which reading strategies young adolescent language learners use when they are confronted with an unknown Germanic language. Changes to the original survey were necessary so that it could be used in a receptive multilingualism research context; a description of the modifications can be found in Section 4.3.

Part II begins with the presentation of the REM-Study design (Chapter 5). Afterwards in Section 5.2, the research questions and hypothesis will be presented. Section 5.3 will briefly present the MeVoL-Project within which the REM-Study was carried out. The last section of Chapter 5 will describe the participants and the REM-study testers. Chapter 6
will describe the tasks and methods used in this study. Chapter 7 is devoted to the presentation of the results. First, the results of the pencil-paper test will be presented (Section 7.1 and 7.2). Section 7.3 and 7.4 will present overall analyses of the participants’ performance in connection with reading strategy employment as well as motivation and multilingualism. Section 7.5 will examine the think-aloud protocols of three participants. Their performances were analysed on the basis of reading strategy employment and metalinguistic performances. Finally, Chapter 8 will conclude this dissertation. First, in Section 8.1, the findings on the main research questions will be discussed and put into a receptive multilingualism context. Section 8.2 will discuss the REM-Study testing design: the aim is to show readers the reliability of the testing format on the one hand, and to provide them with a description of what needs to be considered when using this test format in future on the other. The discussion of the REM-Study’s implications for future language learning and teaching can be found in Section 8.3. Finally, this dissertation will end with the discussion of its limitations, and future research desiderata will be outlined.
PART I – Theoretical Basis
2 Multilingualism – Definition Attempts

Multilingualism is a widely used term in media, politics and education. When consulting Google Trends – a web-facility that calculates a search-term according to the total search-volume worldwide and over time – one is able to see that the search interest in the English term multilingualism has grown fairly constantly during this decade (Figure 1, data accessed 25th February 2019, trends.google.com).

![Figure 1. Research interest of the term “multilingualism” over the past 10 years](image)

Nota: Visualised time frame: 1st January 2010 - 25th February 2019. Range scale 0-100 (0 = low web research interest, 100 high web research interest). 100 marks maximum search of interest, visualisation taken from Google Trends. Values calculated in relation to a countries population. For detailed information visit https://support.google.com/trends/answer/4365533?hl=en

Additionally, Google Trends offers the possibility to determine which geographical areas generate the greatest number of web-search requests for a particular term: the countries with the greatest interest are African (e.g. Nigeria, Zambia and Zimbabwe in the first three slots). Reviewing the data from 2007 up to 2017, the only two European countries in the top twenty are Belgium in 17th and Austria in 18th place (Table 1). Moreover, none of the major predominantly English-speaking (i.e. United States, United Kingdom or New Zealand) countries made the list.¹

¹ Nota bene: By 2019 Trends indicates different rankings, i.e., leaving Austria in 21st place.
This cross-sectional data presentation should show readers that multilingualism has become a central topic worldwide. Nevertheless, Google Trends does not make a search-term’s absolute numbers or concrete search contexts of Google search users accessible.²

The main aim of this brief introduction was to show readers the growing interest in multilingualism and, furthermore, present where people are most likely to have the greatest web-based interest in the English term multilingualism. However, one needs to professionally contextualise the term multilingualism in order to thoroughly understand academic discourses on the subject. Thus, the following chapter aims to introduce readers to the term multilingualism from an academic point of view. First, general definition approaches will be presented and critically reflected on. This discussion will be extended to cover the term multilingual language user which is closely connected to the term multilingualism. Before moving to a visual definition continuum summary created by the author of this thesis, multilingualism will be looked at from a political point of view through the example of South Tyrol. The second part of this chapter will present the most prominent models of multilingualism, three of which (the Dynamic Model of Multilingualism, the Factor Model and the Multilingual Processing Model; see Section 2.2) are of great importance for this dissertation. This section aims to

² Nota bene: Google Trends does not include data of other search engines. Moreover, one needs to mention that Google Trends-data analyses do not include translations of a specific term (e.g. Mehrsprachigkeit [German] or purilinguismo [Italian]). The author of this thesis assumes that this might be the reason for the absence of European countries in the Top 10. Hence, the data presented is biased and needs to be interpreted with caution.
show readers how it is theoretically modelled, framed and discussed. The chapter ends with a brief summary of the presented models and, finally, will show the need to quantitatively and qualitatively analyse certain hypotheses of the three mentioned models.

2.1 Defining Multilingualism

This section will begin with an etymological approach to the term *multilingualism* and will then move on to its discussions as a field of research. Afterwards, definitions that stress number of languages, competence levels and the individual as a social agent will be presented. Furthermore, politics needs to be mentioned as an institution that has an influence on (multilingual) language users and one’s linguistic surroundings. Next, this section will offer several definitions which give readers the possibility to understand the term’s definition continuum as created by the author of this thesis (see Figure 3 and 4). Finally, section 2.1 will conclude with a summary and argumentation of how the term *multilingualism* is perceived by the author of this thesis using the proposed definition continuum models (see Section 2.1.3).

**Etymology**

As a starting point, one may begin with the etymological analysis of the term itself. *Multilingualism* consists of two Latin compounds: ‘multus, -a, -um,’ (English translations: ‘many’, ‘several’, ‘various’ and/or ‘consisting of many things’) and ‘lingua’ (English translation: ‘tongue’ or ‘language’). Combining the original meaning of the term leads to the following translations, which can be seen as the broadest and most general definitions of the term: many tongues, consisting of many languages or several languages (Marchant and Charles 1953, 320, 354). Nevertheless, the term’s etymology does not offer exact information on a language user’s number of languages or competence levels. Hence, one should consult a more extensive definition that provides further insights regarding the mentioned issues:

an, kann jeder Mensch als mehrsprachig bezeichnet werden (vgl. Wandruszka 1979). [...] Die Frage der dynamischen Entwicklung von Mehrsprachigkeit in verschiedenen Phasen des Lebens sowie Formen der funktionalen Mehrsprachigkeit [...] spielen eine zunehmende Rolle. [...] Mehrsprachigkeit ist nicht nur erklärtes Ziel schulischer sprachlicher Bildung, sondern oft auch Voraussetzung sprachlichen Lernens und Lehrens. [...] Voraussetzung ist Mehrsprachigkeit für institutionelles Sprachenlernen insofern, als bei der zweiten, dritten oder vierten Fremdsprache bereits durch die vorgelernten Sprachen ein großer Erfahrungsschatz an sprachlichem Wissen, an Lernstrategien und Kompetenzen aufgebaut wurde, auf dem das Lernen weiterer Sprachen basiert (Vorwissen). [...] In der Forschung wird es zukünftig darum gehen, die verschiedenen und zum Teil deutlich getrennten Forschungsstränge stärker als bisher aufeinander zu beziehen und in einen interdisziplinären Dialog zu treten. Auch gilt es nach wie vor, eingefahrene didaktische Traditionen angesichts der gesellschaftlichen Umbrüche kritisch in Frage zu stellen, um zu innovativen Kompetenzen zu gelangen. (Hu 2017, 246-7) (italics added by DU)

This quote points out that a concrete and universally accepted definition is not at hand because diverse disciplines interpret the term differently. Nevertheless, Hu (ibid.) touches upon many aspects of multilingualism: first, she outlines that multilingualism is a field of research which overlaps with several neighbouring disciplines (psycholinguistics, bilingualism, [multilingual] language education, sociolinguistics, etc.). As can be seen in Figure 2, multilingualism seems to be a hybrid discipline consisting of several fields of research. Hence, due to possible interdisciplinary approaches to multilingualism as a research object, defining multilingualism becomes more challenging. Second, Hu (ibid.) describes difficulties in determining when an individual really is multilingual. Consequently, several questions arise immediately: Is it necessary to be highly competent in more than two languages, or does bilingualism count as a form of multilingualism? Are variants/varieties to be counted as “proper” languages as well? Third, Hu outlines the term with a focus on (future) language learning and an individual’s language learning potentials (multilingual strategies and/or competences, e.g., use of prior linguistic knowledge). Phrased as a question, how can one include multilingual language learning in educational contexts? Finally, she concludes that, due to the different definitions and approaches, fields of research drift apart regarding their views of the term. Hence, she proposes heightened collaborations to holistically approach the research subject.
Multilingualism as a Field of Study

Due to the broad and inclusive nature of Hu’s definition, one needs to consider other definitions. Focussing on multilingualism as a field of research, Busch (2013, 9-10) states that a definition is “nicht ganz unproblematisch” (not completely unproblematic, translation by DU). Busch (ibid.) comments that multilingual research is not only critically discussed by applied linguistics but other disciplines as well. For example, a researcher’s disciplinary focus might have an impact on how he or she researches, perceives or defines multilingualism. Additionally, Busch (ibid.) underlines that multilingual research has evolved out of bilingual research and used to be perceived as – sloppily worded – a step-child of bilingual research. This view has changed because multilingualism has become an independent field of research over time. Gradually, multilingualism researchers have made the scientific community aware that L3 learning processes follow similar patterns as L2 learning processes; however, there are crucial differences between these processes and the processes by which an individual learns and/or acquires a third language. In short, multilingual research can be understood as an interdisciplinary hybrid discipline which over time has emerged as an independent research field (Kramsch, Lévy, and Zarate 2011, 6-7). Finally, Busch (2013, 10)

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3 Jessner (2006, 15) comments on this issue saying that due to the imprecise definition of the terms bilingualism and multilingualism, both are used synonymously in academic discourses, however; Jessner et al. (2017) commented in their symposium talk that by 2017 the division between the disciplines bilingualism and multilingualism has become more evident. Nowadays, researchers tend to be more precise in their choice of words and terminology.
comments that languages are not separate entities but are rather interwoven, as will be illustrated, e.g., through the *Dynamic Model of Multilingualism* (see Section 2.2.2).

**Multilingualism and Proficiency Levels**

As briefly exemplified over the last paragraphs, to date no clear-cut definition of *multilingualism* as a term or a field of research exists, but at the same time the use of the term is becoming more and more distinct from research into bilingualism and/or L2 learning/acquisition. Furthermore, researchers do not have a unified view of how many languages an individual needs to know, or how proficient one needs to be in order to be called a bi-/multilingual language user (see Hu above). Roche (2013) addresses this issue as well. Yet before commenting on competence levels, Roche (ibid., 117-8) starts off by defining multilingualism as the ability to fluently and effortlessly communicate in multiple languages. Still, Roche (ibid.) does not specify the exact number of languages, and thus does not supply a clear answer on whether a multilingual language user needs to know more than one language besides his L1.

However, Roche suggests to discuss *multilingualism* on the basis of the threshold hypothesis\(^4\) (based Toukomaa and Skutnabb-Kangas 1977 and elaborated by Cummins 1979 and 1981): this hypothesis claims

> that bilingual children must achieve threshold levels of bilingual proficiency to avoid detrimental effects on cognition and potentially to allow positive effects. In this hypothesis it is stated that bilinguals must attain these thresholds in both of their languages. (Appel and Muysken 2005, 112)

Cummins (1981, 39ff.) describes that there are two thresholds concerning language competence levels of bilinguals: the “lower threshold level of bilingual proficiency” and the “higher threshold level of bilingual proficiency”. To be more precise, Cummins (ibid., 51-52) explains that

> [t]he attainment of a lower threshold level of bilingual proficiency would be sufficient to avoid any negative cognitive effects; but the attainment of a second, higher level of bilingual proficiency might be necessary to lead to accelerated cognitive growth.

Put in a nutshell, below the lower threshold a bilingual user experiences negative cognitive effects of his/her languages (“limited bilingualism”). Below the higher threshold a bilingual language user experiences “neither positive nor negative cognitive effects” (“partial bilingualism”), whereas above the higher threshold, a bilingual

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\(^4\) The threshold hypothesis is originally based on bilingual language users.
experiences “positive cognitive effects” (“proficient bilingualism”) (ibid., 51-53). Roche (2015, 117-8) transfers this concept and explains that this hypothesis could be used to explain (positive) effects of multilingual language users. Nevertheless, Roche (ibid.) does not specify whether one needs to overcome at least one threshold to be called a bi-/multilingual language user. In other words, Roche does not state which language level a multilingual language user should achieve in order to cognitively profit from multiple languages. To summarize, Roche (ibid.) stresses the ability to interact with multiple languages – a pragmatic understanding of the term on the one hand – and the benefits of knowing multiple languages on high levels – a psycholinguistic and metacognitive understanding of the term on the other hand. Nevertheless, Roche offers a theoretical frame, namely the threshold hypothesis, which could be used as a framework to determine multilingual competences.

Social Dimensions of Multilingualism

The definitions presented so far do not mention a crucial aspect of multilingualism, namely its social dimension: language users as social agents. Franceschini (2009, 33-4), for example, offers the following definition which makes this issue a topic:

The term/concept of multilingualism is to be understood as the capacity of societies, institutions, groups and individuals to engage on a regular basis in space and time with more than one language in everyday life. Multilingualism is a product of the fundamental human ability to communicate in a number of languages. Operational distinctions may then be drawn between social, institutional, discursive and individual multilingualism. The term multilingualism is used to designate a phenomenon embedded in the cultural habits of a specific group, which are characterised by significant inter- and intra-cultural sensitivity. (italics added by DU)

In this definition, Franceschini underlines the capacity, in other words, the ability of individuals and groups to engage with multiple languages. This aspect highlights the issue that an individual actually uses language(s) as a means of communication. More precisely, according to this definition, multilingualism is at hand when one engages with (at least) two languages (see above: “more than one language”) on a regular basis. However, the term “engage” does not give information on a language user's L1-/L2-/L3-/Ln-competence levels and, therefore, this definition seems rather vague concerning competence levels. Franceschini does mention the time factor (“on a regular basis”), but even here she remains unspecific on how frequently one needs to “engage” with more

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5 Grabe (2009, in reference to, for example, Verhoeven 1990 and 2000) comments that so far no statistical proof for the threshold hypothesis in L2 reading research has been found, hence, the model’s assumptions need to be viewed with caution.
than one language. Thus, it still remains unclear when exactly a language user is bi-/ or multilingual. Still, Franceschini’s definition underlines a crucial area of multilingualism, namely multilingualism as a sociological and sociolinguistic phenomenon. These two aspects seem to influence multilingual realities because language(s) are deeply interwoven with society (Rampton 2010, 274).

Hence, not only is *multilingualism* a term to describe multiple language use, but turns into a word to describe an individual or even societies. Thus, including the multilingual language user in a definition seems to be necessary for academic discourses. To begin with a frequently quoted early definition, Bertrand and Christ (1990, 208) define the multilingual language user as follows:

> Als mehrsprachig darf schon der bezeichnet werden, der auf der Basis der Kenntnis der Muttersprache eingeschränkte Kenntnisse in wenigstens zwei weiteren Sprachen entweder in gleichen oder verschiedenen Diskursbereichen hat. [...] Unter Mehrsprachigkeit nicht zu verstehen ist, man müsse mehrere Sprachen gleichermaßen beherrschen. (italics added by DU)

This definition underlines that a language user needs to have (limited) domain-specific competences in at least two other languages besides his/her L1 in order to be called a multilingual language user. To be more precise, the definition mentions “eingeschränkte” (limited) language competences in at least three languages. The authors explicitly stress that a language user does not have to be fully fluent in each of the three languages (L1 + L2 + L3) to be considered a multilingual language user. Mörkötter (2016a, 15) comments on this definition that it was ahead of time: Bertrand and Christ state that a language user does not need to be fully competent in all of the three languages.\(^6\) Notably, Bertrand and Christ’s definition rules bilingualism as a form of multilingualism out, although being bilingual is the gateway for multilingualism (Wilton 2009, 53). From a contemporary perspective, their exclusive approach might be too strict (ibid.) because certain receptive multilingual competences already develop when one is in touch with two languages. These competences, however, become more efficient when one has (advanced) language competences in three or more languages (i.e., monitoring competences and/or strategy use, see Dynamic Model of Multilingualism in Section 2.2.2 or Factor Model in Section 2.2.3). The strict (or perhaps even restrictive) natures of Bertrand and Christ’s (1990) view of multilingualism can most likely be justified and attributed to the status of multilingual research at the time, but due to the advance of multilingual research – especially when considering research

\(^6\) Mörkötter (ibid.) additionally comments that the Common European Framework of Reference mirrors the same view.
results over the past two decades, see Chapter 3 – nowadays this definition seems partially out-dated. Still, the author of this thesis suggests that this definition should be understood as a milestone in the general understanding and historical development of *multilingualism* as a term and field of research, and will now provide a look at other definitions in order to contextualise it further.

**Comparing Definitions**

The following paragraph will offer nine short definitions that will demonstrate the ongoing discussions of the term *multilingualism*, beginning with the broadest and proceeding step-by-step toward the narrowest definitions of the term. Two main aspects determine how “broad” or “narrow” a definition is: first, the number of languages and, second, the levels of language competence stipulated – the broadest definitions see multilingualism as having minimal competences in two languages, whereas the narrowest definitions define it as having (high) competences in at least three languages. After these nine bullet points, a brief discussion will be offered (n.b.: with the exception of definition one, where the italics are original, all italics were added by DU).

1. One major issue in connection relates to levels and breadth of proficiency in the languages in question. Should we reserve the label *bi- or multilingual for persons whose proficiency is native-like and balanced across both/all their languages and across the range of language skills [...] or should we be less demanding in our application of these terms? [...] Some definitions suggest that in order to count as a bi-/multilingual a person has to make frequent use of both/all languages at his/her disposal. [...] R]esearchers may define frequency and indeed use in different ways. Much the same kind of difficulty attaches to the evocation in some definitions of fluency [...]. (Aronin and Singleton 2012, 1-2)

2. Multilingualism is understood as the ability of societies, institutions, groups and individuals to engage, on a regular basis, with *more than one language* in their day-to-day lives. In this context, a language is defined neutrally as a *variant* which a group ascribes to itself for use as its habitual code of communication. *This includes regional languages, dialects, and sign languages*. In addition, the term multilingualism is used for referring to the co-existence of different language communities in one geographical or geo-political area or political entity. (European Commission 2007, 5)

3. A multilingual individual is anyone who can communicate in *more than one language*, be it *active* (through speaking and writing) or *passive* (through listening and reading). (Wei 2008, 4)

4. The *command and/or use of two or more languages* by the respective speaker. (Herdina and Jessner 2002, 52)

5. A multilingual language user is able to *speak more than two languages very well*. (Sinclair 2006, 940)

6. *Native-like control of two or more languages* (Bloomfield 1933, 56)


8. A multilingual is a person who has “the ability to use *three or more languages*, either *separately or in various degrees of code-mixing*. Different languages are used for different purposes, competence
in each varying according to such factors as register, occupation, and education” (McArthur 1992: 673 [...]). *Multilinguals may not have equal proficiency in or control over all the languages they know.* (Kemp 2009, 15)

9. Recent emerging research from scientists following educational or psycholinguistic traditions tends to agree that multilingualism is the ability to *use three or more languages to some extent*, whether these are in the same or different domains. (ibid., 16)

These definitions describe the term from various angles and offer further interpretations. What they all have in common is that they make the number of languages and competence levels a topic. Definition 1 presents aspects that need to be defined when one tries to define the term (e.g. frequency of multiple language use, language competences or language skills). Definitions 2 and 3 share the notion that they define *multilingualism* with communicative competences in more than one language. Paraphrased, bilingualism is accepted as a form of multilingualism. Notably, definition 2 seems to be a very broad definition due to the inclusion of dialects as languages. Here, the issue of how to define the term *language* arises: Is a dialect a language with its own right? Are language competences of a specific variant, e.g. South Tyrolean dialect (Southern Bavarian dialect + High German) enough to be called a bi- or multilingual language user? If so – provocatively formulated – every European dialect speaker may be multilingual from early ages on (see Wandruszka 1979). Hence, it might be too broad for general definition approaches. Definition 3 offers a further aspect: a multilingual language user has receptive (“passive”) and productive (“active”) competences in at least two languages. Wei’s (2008) definition therefore also includes bilingualism as a form of multilingualism.

The definitions 4, 5, 6 and 7 differ from 1, 2 and 3 because they explicitly refer to competences in two or more languages; it should, however, be highlighted that 5 and 6 are stricter than 5 and 7 in describing the language competence levels (“native-like control” and “very well”). In other words, definitions 5 and 6 assume that a multilingual language user needs to be highly competent in two languages besides one’s L1. Definition 4 is less precise concerning language competences as “command and/or use” might refer to rudimentary or even highly developed language competences. Definition 7 stands out as a definition because a) it includes variants and varieties of a language and b) mentions language competences in two or more languages and/or varieties.

Definitions 8 and 9 represent the narrowest approach concerning the number of languages a user needs to know: three or more languages. These definitions, nevertheless, point to the issue that multilingual language users might have varying or even high language competences in different domains (“Multilinguals may not have
equal proficiency in or control over all the languages” and “the ability to use three or more languages to some extent”, Kemp 2009, 15-16). Explained with an example, a language user’s L2 might cover certain lexical domains very well, yet she might not be able to do that in her L3.

**Territorial Multilingualism**

Though they address societal and linguistic approaches to multilingualism, the definitions so far make no mention of one institution that influences the term’s definition: political understandings, to be more precise, territorial multilingualism. Certain areas, for example Switzerland, Wales (United Kingdom) and South Tyrol (Italy), are officially defined as bilingual or multilingual territories. In other words, a political institution or some similar overarching social organisation determines the linguistic surroundings and lives of language users. The following paragraph will describe one area in more detail.

In South Tyrol, the *Autonomiestatut*\(^7\) (Landesregierung 2005) phrases the issue of territorial bilingualism as follows:


100. Die deutschsprachigen Bürger der Provinz Bozen haben das Recht, im Verkehr mit den Gerichtsämtern und mit den Organen und Ämtern der öffentlichen Verwaltung, die ihren Sitz in der Provinz haben oder regionale Zuständigkeit besitzen, sowie mit den Konzessionsunternehmen, die in der Provinz öffentliche Dienste versehen, ihre Sprache zu gebrauchen. (ibid., 109-110)

Briefly summarised in English, the Statue of Autonomy describes the equality of the German and Italian language in South Tyrol. At the same time, certain declarations of commitments were introduced to guarantee the equal treatment of both languages in certain social domains: for individuals working in the public sector, it is compulsory that they be able to communicate in Italian and German. Furthermore, mentioned later in the Statue of Autonomy, Ladin speaking areas are obligated to organise the public sector in three languages (Ladin, German and Italian) (ibid., 110 ff.). This political decision was introduced to preserve the existing German and Ladin culture, and to guarantee that no one is linguistically discriminated against. Concerning public sectors, for example, street signs are required to be bilingual (or trilingual in Ladin-speaking areas) (ibid., 70), or

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\(^7\) First introduced in 1948, yet majorly reworked from 1969 until 1971; last minor changes, e.g., were introduced in 2005 (see Landesregierung 2005).
judges are obliged to be bilingual speakers of German and Italian (ibid., 108). Furthermore, the Statute of Autonomy determines South Tyrol’s language education policies:


Rephrased in English, politics determined the linguistic education of South Tyrol's pupils: children are obliged to learn German (for Italian L1 speakers) or Italian (for German L1 speakers) as a “zweite Sprache” (second language) from primary school onwards. Last but not least concerning linguistic decisions, the Statue of Autonomy had a crucial influence on the development of South Tyrol’s linguistic landscape as well (e.g. street signs, administration forms, etc.).\(^8\) Hence, on paper, South Tyrol's inhabitants are bilingual. However, political decisions do not automatically turn inhabitants into bi- or trilingual lingual language users. In other words, territorial multilingualism might influence an individual’s surroundings, yet one’s individual language competences need not reflect that.\(^9\)

2.1.1 Definition Continuum of the Term Multilingualism as a Linguistic Phenomenon

In order to sum the previous sections up, the author of this thesis wants to quote Aronin and Singleton (2012, 2-3):

> Some researchers take a narrow stand [...] [n.b. they talk about defining multilingualism]. Others take a broader view. Narrow definitions, more limiting and demanding, tended to prevail in research of some decades ago and still probably represent the “person-in-the-street” perspective. [...] It is to be noted that such [stricter] definitions constantly refer to the monolingual norm,

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\(^8\) For examples, see Unterrhiner, Topf and Baur (2016).

\(^9\) According to ASTAT (2016, 15), South Tyrol’s statistic department, 25.85% of South Tyrol’s inhabitants are Italian native speakers, 69.64% German native speakers and 4.52% Ladin native speakers (total inhabitants: 445647). These numbers are based on the “Sprachgruppenzugehörigkeitsangabe” (official form used for L1 language community definition [language choices: German, Italian or Ladin]). Furthermore, ASTAT (ibid., 26) presents data on the “Zweisprachigkeitsprüfung” (bilingualism exam): In 2015, 9030 people took the exam (Carriera A to D = differing language levels, Carriera A determining the highest level which is similar to the C-levels of the Common European Framework of Reference), yet only 40.10% (~3621; no absolute numbers given) were successful. This leads to the imprecise conclusion that about 3600 individuals of South Tyrol are bilingual to some sort or degree.
requiring from the bilingual a level of proficiency in both languages comparable to that of a monolingual native speakers of the languages question. At the other end of the scale we find a very liberal interpretation of bilingualism and multilingualism. [...] tongue-in-cheek [meaning just being able to phrase simple utterance in another language besides one’s L1] [...] Both of the above extremes can be helpful theoretically in setting out definitional possibilities but are less useful at a practical level. With regard to the narrow approach, it is generally acknowledged that very few people have really mastered two or more languages to an equal level of across-the-board native-likeness. As for the very wide definition of bi-/multilingualism, it is difficult to see what this contributes, given that in many countries of the world it would encompass virtually the entire population.

The two linguists outline major points when defining the term multilingualism: it seems that the context and research background of every researcher have an impact on how the term is defined. Reflecting upon the mentioned definitions, the author of this thesis observed that there is a form of definition continuum, ranging from broad understandings which include bilingualism, to be more precise, minimal competences in another language (or variety) besides one’s L1, up to a narrow understandings of the term which focus on high competences in three (or more) languages. Bridging these features on a meta-level, one may use the Definition Square proposed by Mosenthal and Kamil (1991, 1015ff.) to create an overarching definition umbrella:

There are four elements to any definition: (1) the phenomenon, (2) the observers, (3) the phenomenon’s label, and (4) clarifying features. The phenomenon is the thing being defined. Observers are the people who experience this phenomenon firsthand [sic]. The label is the name that the observers give to the phenomenon that they observed. Finally, clarifying features are notable characteristics that epitomize the relationship between the phenomenon and its label. [...] [T]hese four elements make up the Definition Square [...].

These four elements are the most influential factors that shape a definition. The author of this thesis wants to comment that concerning the term multilingualism, the elements of ‘observer’ and ‘label’ are clear, but, as presented in this chapter, the aspect of clarifying features greatly differs from greatly researcher to researcher, and there is still no clear-cut definition of what is understood and meant by multilingualism. However, the author of this thesis realised that exactly this space of uncertainty could be used to create an encompassing definition continuum for the term multilingualism. Combining this definition gap plus simple Definition Square theory, Figure 3 (definition continuum (1)) is the author’s attempt to visually summarise this continuum in form of a two-dimensional Cartesian coordinate system. This system uses two definition
features of multilingualism: number of languages and competence levels\textsuperscript{10,11}. Here, the x-axis symbolises the number of languages and the y-axis the competence level(s) mentioned in definitions. The use of a coordinate system allows users to pinpoint definition tendencies in more detail (Kemnitz 2010, 241-2); hence, a categorisation of definitions becomes more visible. Thus for example, narrow definitions cited beforehand might be pinpointed in the first quadrant of the coordinate system (e.g. Bernhard and Christ 1990, Bloomfield 1933 or Kemp 2009) and broader definitions in the third quadrant (e.g. Commission 2007, Franceschini 2009, or Wei 2008).

\begin{figure}[h]
\centering
\includegraphics[width=0.7\textwidth]{definition_continuum.png}
\caption{Definition continuum (1) of the term “multilingualism” as a linguistic phenomenon.}
\end{figure}

Nota: x-axis = number of languages; y-axis = competence level.
Numbers indicate preliminary attempt to position the definitions mentioned in section “Comparing definitions” (visualisation and categorisation by DU).

This continuum should be understood as a possible framework to cluster definitions according to language competence levels and number of languages. Additionally, it might offer fellow researchers higher precision when defining the term \textit{multilingualism}. Moreover, one might be able to illustrate researchers’ changes of definition approaches

\textsuperscript{10} The author of this thesis wants to add that including variants and varieties could further expand the continuum at both ends.

\textsuperscript{11} The Cartesian coordinate system is named after René Decartes (see Kemnitz 2010, 242).
over time through using arrows to connect two positions in the coordinate system (Kemnitz 2010, 242).

In this context, Cenoz and Gorter (2011, 401-2) summarise the academic discussions of the term multilingualism as follows: “The different ways ‘multilingualism’ is used are linked at least to three sources of variability: the individual versus social dimension, the number of languages involved and the level of proficiency in the different languages.” These linguists point out a further dimension which a) Franceschini (2009) or Aronin and Singleton (2012) already commented on and b) becomes visible through territorial multilingualism: individual and social dimension of multilingualism. In other words, multilingualism is not purely an individual phenomenon, but a sociological one as well. More precisely, this aspect asks for an expansion of the proposed two-dimensional definition continuum. The addition of the third feature, individual and social approaches to multilingualism, in form of the z-axis could offer a more comprehensive model to categorise definitions of the term (Figure 4, definition continuum (2)).

Figure 4. Definition continuum (2) of the term “multilingualism” as a linguistic phenomenon.

Nota: x-axis = number of languages; y-axis = competence level; z-axis = social dimension (visualisation by DU).
In brief, each octant has different foci (see Fueter 1945, 55-6):

I = three or more languages, high competence dimension, social dimension (+,+,+)
II = two languages, high competence dimension, social dimension (-,+,+)
III = two languages, low competence dimension, social dimension (-,-,+)
IV = three or more languages, low competence dimension, social dimension (+,-,+)
V = three or more languages, high competence dimension, individual dimension (+,+,-)
VI = two languages, high competence dimension, individual dimension (-,+,-)
VII = two languages, low competence dimension, individual dimension (-,-,-)
VIII = three or more languages, low competence dimension, individual dimension (+,-,-)

The advantage of the three-dimensional coordinate system is twofold (see Fueter 1945, 55ff.):

a) higher precision for definition approaches
b) overarching system to approach multilingualism from a structural perspective.

Theoretically speaking, definitions in octant I emphasise the factors two or more languages, high competences in two or more languages and the social dimension. Moreover, the further away a definition in octant I is positioned from position 0, the more emphasis these factors receive. Obviously, this procedure is replicable for each octant. As an example, Franceschini’s definition (2009) would be set in the third octant (-,-,+). Contrastively, the definition by the European Commission (2007) is set between the third (-,-,+) and seventh (-,-,-) octant as this definition includes one’s individual multilingualism as well as the social component of it. As exemplified through the last definition, the definition continuum (2) even offers possibilities to determine trans-definition and, therefore, can be understood as a more comprehensive model to visualise definitions of the term multilingualism.

To sum up the definition continuum (1) and (2), the author of this thesis wants to comment that the absence of individual/social dimension in many definitions prevents the users of the three-dimensional continuum from positioning such definitions in the coordinate system. In other words, the use of continuum (1) or continuum (2) depends on the aspects a definition includes. Finally, the author of this thesis suggests that an epistemological research project which focuses on determining researchers’ definition tendencies using the presented definition continuum models seems to be a research desideratum and, furthermore, could shed light on current understandings of the term multilingualism from a meta-level.
2.1.2 Summary and Terminological Use for this Dissertation

As the previous section has shown, the discussion of the term *multilingualism* is still ongoing. The term’s definition receives slight changes depending on a researcher’s context or interests. Beyond research, even politics has an influence on how the term is perceived. Although *multilingualism* seems to have diverse facets in meaning, two main traits stand out: multilingualism as a field of research and multilingualism as a linguistic phenomenon of knowing two, three or more languages (to a certain degree) (see Figure 5). Expanding the discussion in a summative manner, the questions “how does one define ‘language’?”, “how many ‘languages’ does one need to know to be called a multilingual language user?”, “how competent does a speaker need to be in his L2/L3/Ln?” or “how frequently does someone need to speak a certain language in order to be called multilingual?” accompany these discussions and may not lead to practical solutions, as stated earlier by Aronin and Singleton and illustrated through the definition continuum (see previous section).

![Figure 5: Multilingualism and definition domains (visualisation by DU)](image)

In short, multilingualism is ...

a) ... a field of research and ...

b) ... the ability of an individual and/or group to use in multiple languages, yet the exact extent of language abilities and number of languages is widely disputed.

For this dissertation it is still necessary to clarify the term *multilingualism*. The definition will be demonstrated on the basis of the definition continuum and the dissertation’s participants.
The author of this thesis here uses the term bilingualism to mean native competences in one’s L1 (in case of the participants: German) plus basic competences in another language (in case of the REM-participants: English as a foreign language). Nevertheless, he sees bilingualism as a preliminary form of multilingualism. Illustrated via the figures in Section 2.1.1, his understanding of multilingualism is broad and set in the third quadrant of the definition continuum (1) (Figure 3) or between the third and seventh octant (Figure 4, definition continuum (2), similar to the European Commission’s approach). Concerning the dissertation’s participants, individuals who are only familiar with two languages (first language German, L1, and English as a first foreign language, L2) will specifically be referred to as bilingual language learners. Participants with three or more languages will be called multilingual language learners (e.g. first language German L1, French first foreign language, L2, and English second foreign language, L3). Furthermore one needs to add that most of the dissertation’s participants speak an Alemannic dialect of German, e.g., in their personal environment\(^\text{12}\). Psychotypologically, there exists a relatively great distance between the dialect and High German (see Stoeckle 2014). Nevertheless, in the context of this dissertation project, variants/ variations of a language are not considered to be independent languages.

2.2 Models of Multilingualism

Linguists have tried to conceptualise multilingualism from diverse academic perspectives. Thus, the second part of this chapter is dedicated to models of multilingualism. The main aim of this chapter is a) to give readers a brief summary of five multilingual models and b) explain which of these models are of special interest for this dissertation. Hence, this section will begin with an overview of the most prominent models in multilingual research\(^\text{13}\): Aronin and Ó Laoire’s Ecological Model, Herdina and Jessner’s Dynamic Model of Multilingualism, Hufeisen’s Factor Model, Groseva’s Foreign Language Acquisition Model, Meißner’s Mehrsprachenverarbeitungsmodell (Multilingual Processing Model) and Williams and Hammarberg’s Role-Function Model. These models are of importance because they initiated and established the development of multilingualism as a field of research. Each model stresses different aspects of how multilingualism and multilingual language learning can be described and/or

\(^{12}\) The author observed this during MeVoL-classroom observations that pupils and teachers talk in High German to one another. For details on MeVoL see section 5.3.

\(^{13}\) The models are presented in alphabetical order according to the model’s names.
conceptualised. Section 2.2.7 will briefly summarise and compare these models. The final section explains which of these models will be of interest for this dissertation project and, furthermore, present which theories the author of this thesis wants to shed light on through the REM-study.

### 2.2.1 Aronin and Ó Laoire’s Ecological Model

Aronin and Ó Laoire (2004) use an interdisciplinary view to analyse multilingualism by introducing the notion of biotic systems. The linguists state that “[i]n our view, it is necessary to base the study of multilingualism on the notion of identity, given the fact that language constitutes one of the most defining attributes of the individual” (ibid., 11). Hence, their model strongly focuses on the individual as a subject who (possibly) uses and is exposed to (multiple) language(s). First, before biotic systems are explained further, it is necessary to comment that the researchers clarify that the term “multilingualism, like bilingualism, refers itself to the situation, multilinguality refers more to inner constructs of a single speaker” (ibid., 16). In other words, to stress one’s individual experiences and/or use of language(s), the researchers suggest using multilinguality as a suitable term instead of multilingualism. They explain, in reference to Cenoz and Jessner (2000), that multilingualism should be seen as a process which leads to one’s individual tri-/quadri-/ or multilinguality. This approach stresses the complex interplay between an individual and her linguistic surroundings (Aronin and Ó Laoire 2004, 16-17). Due to the model’s openness, it offers the opportunity to more precisely describe an individual’s (multilingual) language use explanatory:

[M]ultilinguality is the inherent, intrinsic characteristic of the multilingual. We define it as an individual’s store of languages at any level of proficiency, including partial competence and incomplete fluency, as well as metalinguistic awareness, learning strategies and opinions, preferences and passive or active knowledge on languages, language use and language learning/acquisition. (ibid., 17-8)

Therefore, the researchers suggest seeing language(s) as biotic systems because such systems describe

the ecological phenomenon intrinsic to the nature cycle, thus emphasizing the essential dynamics of growth, change, fluctuation, input, absorption and decay, while stressing the complexity of multilingualism. Language learning and use in a multilingual person implicates a wide range of modifications occurring and interacting simultaneously through the mix of languages L1, L2, L3 etc: [sic] acquired in various stages, which constitute a kind of ecosystem or biosystem. (ibid., 19-20)

In a nutshell, an individual reacts to her immediate linguistic surroundings. Thus, one’s language choice is highly influenced, e.g., by one’s (multilingual) competence levels,
social context, communication partners and (multilingual) material culture. Hence, an individual reacts to every single (linguistic) element/item that surrounds him/her. On this basis, an individual chooses the appropriate language(s).\textsuperscript{14} Nevertheless, as Roche (2013, 178) points out, issues such as fossilisation and language maintenance cannot fully be explained through this model. For example, a language user might have the willpower to improve a certain language and even invests a lot of time into foreign language learning; however, due to complex or chaotic factors an individual might not experience language development. Thus in reference to Roche (ibid.), the author of this thesis wants to comment that the Ecological Model is less suited to describe gradual language development which the Dynamic Model of Multilingualism is able to do. However, the former may be suitable to describe a language user’s immanent language use.

\textbf{2.2.2 Herdina and Jessner’s Dynamic Model of Multilingualism}

The Dynamic Model of Multilingualism (henceforth DMM) is a quite prominent interdisciplinary psycholinguistic model by Herdina and Jessner (2002). In brief, the linguists understand languages as dynamic systems. More precisely, dynamic system theory is able to explain, e.g., development, growth, attrition or fossilisation of objects. The authors base multilingual language development on dynamic systems theory and are thus able to explain language development in more detail.

The DMM proposes two major factors to describe language development. First, dynamic system theory assumes that every element/object/variable of this world is connected with other variables in some way and/or to some degree. In other words, each variable is influenced by other variables and vice versa. More precisely, languages are seen as complex systems which are influenced by many other variables, for example, other languages, one’s personal attitudes towards target languages and/or cultures, learner types, etc. (ibid., 35-36). Second, this psycholinguistic model focuses on language development, language attrition, language maintenance, fossilisation and crosslinguistic influences over time (ibid., 76). To be more precise, the DMM underlines the temporal and gradual development of language systems. A language user needs to put effort into developing or maintaining language systems; otherwise, a language system may experience attrition. This is of crucial importance because, due to the emphasis on time,

\textsuperscript{14} For details on material culture and multilingualism see Aronin, Hornsby, and Kiliańska-Przybyło (2018).
the DMM is able to describe complex growth, disorders, mixtures, randomness, transitional phases and/or disorder (ibid., 81): “Order, chaos, complexity and wholeness are all tied together” (ibid., 84). The linguists underline that seeing languages as dynamic systems give factors such as social surroundings, aptitude, attitude or biological issues explanatory power for the description of language development (ibid., 83). Jessner (2006, 19, 33) further elaborates that metalinguistic skills, language acquisition processes, motivation, perceived language competence, self-confidence and language anxiety have an influence on the developmental process of language systems. Moreover, dynamic language systems give researchers the possibility to explain why language attrition might only affect a specific language system of even just one aspect (e.g. pronunciation, time-tense use etc.) and not each language system of an individual (ibid., 96). Phrased as an example, on the one hand, certain variables might have an inhibiting effect on one language system, yet on the other, may have a boosting effect on another language system.

In this context, de Bot, Wander, and Verspoor (2007, 8) take up a very similar view concerning dynamic systems theory – they even offer a formula to calculate the time factor in language development processes: “The major property of a DS [dynamic system] is its change over time, which is expressed in the fundamental equation \( x(t + 1) = f(x(t)) \), for any function describing how a state \( x \) at \( t \) is transformed into a new state \( x \) at time \( t + 1 \).” This calculation further supports dynamic systems theory in multilingualism and offers a hypothetical calculation for temporal developments.

Summarising, Herdina and Jessner (2002, 23) state that with the application of dynamic systems theory to language development one receives the explanatory power to look at language learning and/or attrition processes holistically. This theoretical context enables its user to include every single variable to describe language development processes. Figure 5 exemplifies dynamic language development visually (figure created by Herdina and Jessner 2002): The y-coordinate axis indicates the language competence level whereas the x-axis visualises the time factor. The primary language system (\( LS_P \)), the secondary language system (\( LS_S \)) and the tertiary language system (\( LS_T \)) are visualised as curves on the axes. As one is able to see, two language systems experience growth from the RSP (rudimentary speaker proficiency) up to the ISP (ideal native speaker proficiency) at the beginning of the timeline. Yet due to unknown factors, \( LS_S \) experiences language attrition. Still, \( LS_T \) is introduced later and surpasses the language...
competences of LSs. Figure 6 exemplifies how language development should be seen from the perspective of dynamic systems theory.

Moreover, the linguists introduce another aspect to the DMM which further distinguishes this model from other models, namely the M(ultilingualism)-factor (ibid., 34). In a nutshell, the M-factor is an entity which consists of a diverse set of multilingual language skills that “develop in a multilingual speaker/learner due to the increase in language contact(s)” (Jessner 2008, 275). To be more precise, the M-factor results out of the complex interplay between cognitive factors, (efficient) metalinguistic awareness and language awareness, language management skills, language monitoring skills and language learning strategies. The positive influences of these factors enable multilingual language users to more rapidly learn a new language and create more successful springboards for language development. However, at the same time multilinguals are in comparison with bilinguals particularly vulnerable to attrition because a multilingual user needs more time and effort to maintain languages on a certain competence level (Herdina and Jessner 2002, 129). In short, the more languages an individual is in touch with, the more elaborated and functional one’s M-factor and multilingual competences to approach foreign or unknown languages should be. Thus, a multilingual language user should be more successful in decoding unknown language patterns due to her/his experiences with three of more languages (ibid.). Moreover, Herdina and Jessner (ibid.) introduce a specific property in the context of the M-Factor, namely the Enhanced Multilingual Monitor (henceforth EMM). Briefly explained, the EMM is a form of
“scanning control centre” which aims at managing, watching and correcting an individual’s language(s) in multilingual contexts; thus it is an apparatus which develops simultaneously to “[...] the number of competing language systems available to the speaker and the frequency of (alternate) use of the systems” (Herdina and Jessner 2002, 129). Jessner (2006, 61) adds that it “[...] functions according to the level of metalinguistic awareness developed in the multilingual speaker.” With heightened exposure to multiple languages, these language management tasks become more efficient. In other words, the EMM’s accuracy develops concurrently to a language user’s multilingual proficiency and allows a language user to be more efficient in

a) decoding language patterns,

b) creating transfer bases between one’s existing language systems and

c) keeping language systems apart and from negatively influencing one another (Jessner 2006, 59).

Thus, as suggested by Unterthiner (2015, 63ff.), the EMM can be visualised like a UFO constantly orbiting the language user while scanning three major areas: a language user’s linguistic output (e.g. spoken or written texts), the language user him-/herself and the language user’s surroundings (ibid.). The scanned information provides a language user with information on how to use, repair or perceive a given input. Still, the EMM and its functions can only be activated when an individual is not cognitively inhibited (Herdina and Jessner 2002, 59)\(^\text{15}\). One last note concerning the EMM: the author of this thesis wants to add that these monitoring processes might also be positively or negatively influenced by other factors such as text linguistic features (Meißner 2004), reading strategies (see Hufeisen 2005) or feelings (see the concept of the uncanny in Cameron 2010, blocage de l’activation des connaissances in Ollivier 2007, or anxiety in Jessner 2006, 19, 33). These do not necessarily need to be in immediate connection with multilingual language competences. However, these monitoring processes might be learned and/or acquired through one’s L1 or L2 and, at the same time, have an influence on a language user’s multilingual language learning. One needs to add that there already exists some neurological evidence that such monitoring processes might be active in a bilingual’s brain (see, for example, Wattendorf et al. 2014; Rossi et al. 2006; Higby, Kim,

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\(^{15}\) The two linguists base the EMM’s existence on the findings of Smith and Tsimli (1995).
and Obler 2013; van den Noort et al. 2014; Andrews et al. 2013): certain areas of a bilingual’s brain are activated when confronted with certain linguistic inputs.\(^\text{16}\)

Summing the last two paragraphs up, multilingual language users should be linguistically advantaged in comparison to mono- or bilingual language users, e.g., language maintenance strategies, language learning strategies, language decoding strategies, or metalinguistic awareness (ibid., ff.). Additionally, the M-factor is considered to be one of the key elements for multilingual proficiency; Herdina and Jessner (ibid., 130) created a formula to calculate multilingual proficiency:

\[
\text{MP= Multilingual Proficiency, CLIN = Crosslinguistic Influence, LS = Language System}
\]

\[
\text{LS}_1, \text{ LS}_2, \text{ LS}_3, \text{ LS}_n + \text{CLIN} + \text{M-factor} = \text{MP}
\]

In plain English, the complex interplay and the positive transfer bases between the language systems as well as the M-factor result in multilingual proficiency. This calculation is obviously hypothetical, yet makes the DMM’s systematicity and complex approach more visible. In this context Jessner (2008, 276) adds that one should not forget about the complex and chaotic interplay between those factors: Jessner (ibid.) mentions that the butterfly effect should be taken into consideration when one describes (multilingual) language development processes. In other words, the slightest change in (planned) language development processes might result in a completely different outcome because, as outlined above, each and every variable is interconnected, sensitive to initial conditions and may unexpectedly react to a certain input.

On a final note, Herdina and Jessner (2002, 19, 79) mention several features/factors (e.g. the M-factor) that have an “important” or “significant” influence on an individual’s multilingual language use/multilingual experience; nevertheless, the author of this dissertation wants to point out that the M-Factor has never been statistically proven. However, qualitative results offer evidence to support the DMM (see section 3.3.4).

\(^\text{16}\) These studies mainly used bilingual participants with high competences in both languages. Notably, these brain activations were traced through neurological methods (EEG and/or fNIRS, see references above) and are considerably less prominent in monolingual language users. This could lead to the conclusion that bilinguals activate certain areas in their brain that could be in charge of monitoring processes for inhibition and activation of language(s). In brief, bilinguals (and most likely multilinguals) might have more advanced language control and/or monitoring abilities (as suggested by Jessner 2002 and 2006). However, these neurological results are far from clear to be indicators for monitoring instances in a language user’s brain. Thus, further neurological research with combined language awareness examinations is needed to strengthen these assumptions.
2.2.3 Hufeisen’s Factor Model

The Factor Model, roughly summarised, should be seen as a model to describe systematic and successive multilingual learning processes. In other words, prior language learning experiences have an influence on current or future language learning processes. Thus, a crucial aspect of this model is that multilingual language learning processes become more evident and efficient when a language learner learns/acquires an L3. Hufeisen (2005, 37) describes that “[d]uring the acquisition of the first language(s), the fundamentally decisive influences are the general language acquisition capability we are born with as well as input from the environment.” To expand the argument, Hufeisen (ibid.) explains the Factor Model as follows: one’s L1 language learning processes are influenced by two major factors, namely neurophysiological factors (e.g. learner-internal factors such as general language acquisition capability, age, etc.) and learner-external factors (e.g. learning environment[s], input, etc.). The learning process of an L2 is then accompanied by additional influential factors: besides the two mentioned L1 factors, affective factors (e.g. motivation, anxiety, attitudes, etc.), cognitive factors (e.g. language awareness, metalinguistic awareness, learner type, learning strategies, etc.) and one’s L1 have an influence on the L2 learning processes. Hence, “[t]he foundation for multilingualism is therefore laid during the learning of this first foreign language [ergo, one’s L2, note by DU].” (ibid.) As demonstrated, there is a notable difference in the learning processes of one’s L1 and one’s L2. Yet, Hufeisen (ibid., 37-8) explains that the learning processes of an L3 differ again from both of these. Additionally to the mentioned factors, foreign language specific factors (e.g. individual foreign language learning experiences and strategies, previous interlanguages, interlanguage of target language, etc.) as well as L1 and L2 linguistic factors influence the language learning processes for an L3. In brief, these factors “simply” add up for future language learning scenarios (L4, L5, Ln) and each Ln learning process is subject to a certain systematicity. Figure 7 visually condenses L3 language learning processes based on the Factor Model.
On the basis of the Factor Model, Marx (2007, 113) proposes a further to-be-included factor, namely “experience in interlingual inferencing”: “This expansion indicates that not only a learner’s previous learning experience and knowledge of other languages effect how he or she learns an L3, but also whether or not he or she has had experience in building on that previously obtained linguistic experience and knowledge.” Marx (ibid.) comments that learners with such experiences might benefit when they approach a foreign language. Rephrased, teaching these interlingual strategies in educational contexts might be profitable for future language learning (ibid.). Based on her study results where she compared two groups while one of these took part of an L3 German interlingual sensitization course, Marx (ibid., 112) adds “that multilingual learners do not automatically use their other language systems to their full extent. Although multilingual learners will construct upon their knowledge of other systems to some degree […], if previously learned languages are to be fully exploited, learners might need to receive a sensitization in this process.” In other words, the positive effects described by the Factor Model might be accelerated through an individual’s heightened multilingual awareness and knowledge of transfer bases between languages. Thus, Marx (ibid.) proposes to actively include, for example, comparisons between languages and reflective tasks on languages in course work to generate positive effects of multilingual language learning. Thus, the addition of “experience in interlingual inferencing” seems to be a plausible influential factor for the activation of the Factor Model's effects.
To summarize the Factor Model with a metaphor, the more languages an individual learns/acquires, the bigger his “language learning inventory-rucksack” becomes because with the confrontation with a further L4, L5, Ln, etc. more factors are added and/or modified which facilitate (future) language learning processes.

2.2.4 Groseva’s Foreign Language Acquisition Model

The Foreign Language Acquisition Model (henceforth FLAM) (Groseva 1998) is a contrastive-linguistic model which assumes that the learning processes of one’s L2 are based on the creation and verification of hypothesis – leaving a communicative partner with a great responsibility to offer support and/or additional proof for the observed assumptions (Rohs 2014, 34). The FLAM proposes that over time one’s L1 loses the function as a basis for comparisons and generalisations. Instead, other foreign languages – especially one’s L2 – are more likely to be accessed when approaching new languages: “Die L2 wird daher zu einem Modell des Lerners für das System und den Erwerb einer weiteren Fremdsprache, von dem der Lerner Gebrauch macht, wobei der bewusste Einsatz des L2-Sprachwissens und der Lernstrategien zu schnelleren und besseren Resultaten führen” (ibid., 35). Yet, the L2’s influence on a new language depends on the level of symmetry or asymmetry between the existing language(s) and the new language. In other words, a language user contrastively analyses similarities/differences between the new language and the languages in his repertoire to create a preliminary system of the new language.17 This allows a language user to work with a flexible system that is dynamic and open to change and modification. Furthermore, heightened language awareness and language learning strategies seem to have an influence on the FLAM’s procedures and lead to more successful decoding processes. The FLAM is, therefore, based on the verified hypotheses by a learner between the L2 and the new Ln. These pieces of realisation turn into metacognitive knowledge and can be reused for future language encounters (Groseva 1998, 24).

2.2.5 Meißner’s Mehrsprachenverarbeitungsmodell (Multilingual Processing Model)

The constructivist Mehrsprachenverarbeitungsmodell (Multilingual Processing Model, henceforth MPM) 18 which is sometimes referred to as the Gießener

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17 Similar to Meißner’s Hypothesised Grammar (see Section 2.2.5).
18 Translation taken from Hufeisen and Marx (2014, 145)
Interkomprehensionsmodell (Siebel 2017, 50), is a model to describe the receptive processes of a language learner when he is confronted with an unknown linguistically-related language (see Hufeisen and Marx 2004, 145). Meißner assumes that when an individual learns a new language he uses his prior (linguistic) knowledge to create preliminary comprehension bridges and hypotheses of the given target language (Meißner 2004, 40ff). Illustrated through an example, when confronted with a new or unknown language, a language learner tries to make lexical assumptions about a term using his prior lexical knowledge. Furthermore, Meißner (ibid.) assumes that a learner puts effort into decoding not just lexis, but even grammatical structures, to comprehend a text in an unknown or foreign language. Meißner describes this intercomprehensive phenomenon with the term Hypothesengrammatik (hypothesised grammar, translation by DU) or Spontangrammatik (Meißner 1998, 47; spontaneous grammar, translation by Hufeisen and Marx 2004, 145). Meißner (2004, 29) elaborates the term hypothesised grammar as a phenomenon

[...] die in dem Maße Modifizierungen erfährt, wie sich das deklarative und prozedurale Wissen auf den systemischen Charakter der Sprache einstellt und seinen Umfang erweitert. Da dieser Vorgang als Ausdruck natürlicher Sprachverarbeitung nicht ‘abstellbar’ ist und das geordnete zielssprachliche Wissen noch minimal ist, muss die Hypothesengrammatik als hochgradig ephem mer begriffen werden.

Concerning linguistic aspects, Morkötter (2016a, 29) adds that

[Insofern es einem Lerner gelingt, Lexeme, morpho-syntaktische Strukturen usw. zu identifizieren, indem er sie zu seinem sprachlichen Vorwissen in Beziehung setzt, konstruiert er seine persönliche ‘Hypothesengrammatik’.

Paraphrased, on the basis of (prior) linguistic knowledge a language learner is able to make “informed guesses” about a certain (lexical) item, construction and/or text in question. Yet in order to activate hypothesised grammar processes, Meißner (2004, 43) mentions that the unknown target language should have a certain degree of relatedness. Only then will a language learner be able to activate strategic behaviours to create an approximate understanding of a given text. Additionally, Bär (2011a, 141, referring to, e.g., Meißner 1998 and 2004) defines the term from an educational perspective:

Die Lernenden werden dazu angeregt, aus einem Text in einer unbekannten, aber nahverwandten Zielsprache ‘neue’ Grammatikphänomene zu sammeln, im Anschluss mithilfe ihres grammatischen Vorwissens aus den bereits gelernten Sprachen zu ordnen und schließlich aus dieser Ordnung heraus ein System zu formen. [...] Sie [hypothesised grammar] ist das Kernelement der Interkomprehensionsmethode. (Bär 2011a, 141)

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19 In an English publication Meißner 2011 uses the term “grammar of hypothesis”, yet the author of this thesis suggests hypothesised grammar as a more suitable term.

20 Meißner tends to use the term Hypothesengrammatik more frequently in later publications. Both terms, though, are used synonymously in Meißner’s publications.
Rephrased, Bär understands hypothesised grammar as a metalinguistic learning goal for language learners. Furthermore, Bär sees intercomprehension as a teaching technique that may be applied to reach specific multilingual learning goals. In short, hypothesised grammar methods systematically approach unknown grammatical structures and through trial and error, language learners become more proficient in guessing and finding clues about certain language structures. Bär (ibid., 140-142) describes that language learners follow the SOS-principles (Sammeln, Ordnen, Systematisieren – Collect, [Re-]Arrange, Systematise). Rephrased, learners should be instructed to look at a language from a meta-level that allows them to “crack the code” more efficiently and to more rapidly develop receptive skills. Put in a nutshell, hypothesised grammar may serve to train meta-strategies for future language learning.

In the light of systematicity, Meißner’s (2004, 43) MPM describes three phases a language learner experiences while encountering unknown languages (see Table 2). Each phase will now be described in more detail. In the first phase, Meißner (ibid.) argues that hypothesised grammar is activated when a learner is confronted with an unknown (related) language. In this first stage, a learner uses her metacognitive and/or lexical knowledge to systematically approach an unknown language. Furthermore, lexical transfer between languages is initiated. These processes create a first preliminary comprehension of a text. Furthermore, an individual will be more successful if she has prior strategic experiences with other foreign languages (see interlingual inferencing, Factor Model, section 2.2.3). Still, Meißner (ibid.) mentions that a certain etymological closeness needs to be at hand – otherwise this first encounter remains more likely to be decoded with lower success. Morkötter (2016a, 38) further identified there are three major transfer bases that a language learner may access:

- intra-lingual transfer (inferences which are made through a target language’s morphological and syntactical systematicity),
- inter-lingual transfer (inferences made from a known language to an unknown or other language) and
- extra-lingual transfer (inferences initiated through a given context).

In brief, hypothesised grammar and a language user’s observations and modification to this preliminary phase of comprehension are highly flexible due to its unproven nature of grammatical or lexical sureness (Meißner 1998, 47).

In the second phase, Meißner explains that, as a result of hypothesised grammar processes, a specific kind of metacognitive knowledge pool will be developed: The
Mehrsprachenspeicher (Multilingual Storage, translation by DU; in Siebel 2017, 51). These pieces of information contain positive and negative transfer bases created in phase 1. These feed into how an individual approaches a language and have an influence on the preliminary understanding of a text.

In the third phase, Meißner (2004, 44) presents the didaktischer Monitor (didactic monitor, translation by DU). Besides her linguistically decoded knowledge, a language learner makes use of (sensitised) learning strategies which develop during the confrontation with unknown or foreign languages. Meißner (ibid.) mentions that these learning strategies do not have to be of a linguistic nature. To be more precise, the following six interlingual transfer possibilities are the result of the interplay between phase one and two and can be used for future language encounters: communicative strategies, interlingual language processing procedures, cognitive principles, pro- and retroactive overlaps, learner strategies and language learning experiences (ibid., 2017, 52). These factors lead to the development and growth of language awareness and multilingual awareness.21 Additionally, Morkötter (2016a, 64 ff.) proposes that language teaching in educational context should not follow the monolingual habitus in educational context, but should instead include learners’ full language repertoire to evoke life-long language learning processes. Table 2 tries to visually summarise the most important aspects of these stages.

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21 The author of this thesis wants to comment that so far no study carried out by Meißner has statistically proven that these factors have a significant impact on unknown language encounters.
On a final note, Hufeisen and Marx (2004, 146) underline that “this model concentrates solely on receptive competences in a foreign language, and must thus be utilised accordingly.”

2.2.6 Williams and Hammarberg’s Role-Function Model

Williams and Hammarberg’s (1998) Role-Function Model is similar to the FLAM (see section 2.2.4) in the sense that both models assume that the learning of the first foreign language provides the basis concerning future language learning. The two linguists argue that each language is assigned to a certain function/role during the language learning process and, furthermore, the distance between languages and/or the level of relation between languages are considered to be influential factors concerning multiple language learning processes (see hypothesis of psychotypology, Dahm 2015 in Section 3.4). Additionally, the factors recency and proficiency play a role in multiple language learning. The authors determined these factors based on their longitudinal case study, the participant of which was Sarah Williams herself (L1 English, L2 French, L3 Italian, L4 German and new L5 Swedish). The linguists recorded picture stories and conversations (Bjorn Hammarberg functioned as research conductor) during the first two years of Williams’ stay in Sweden. With this study they were able to find out in which circumstances Williams switched to other language resources and which factors motivated the language switches. Their model, though, focuses on speech productions and, although certain factors were qualitatively determined, it seems to be less holistic and/or comprehensive in comparison to the DMM or the Factor Model. Furthermore, this model is built upon the analysis of a linguist’s speech production, which might not represent the perspective of the man on the street as already pointed out by Hufeisen and Marx (2004, 114) because Williams herself is a highly educated and linguistically experienced individual.

2.2.7 Brief summary of models and resulting research interest

The models summarized above represent only a fraction of the conceptualisations of multilingual theory; these particular models were chosen, however, due to a) the frequent discussion in academic research and b) hypotheses they include which will be of interest for the course of this dissertation project. These models provide more systematicity to clearly distinguish (multilingual) language development from other
models on first or second language learning development. As already discussed, with the appearance of these models, multilingualism researchers have been able to separate themselves from bilingualism research and to establish research on multilingualism as a distinct field in its own right. Especially the biotic system and the DMM are of interest for research because they have an interdisciplinary approach and base themselves on scientific models originating in physics and/or biology. Both models take a holistic approach to language(s) and the individual. Moreover, these two models describe an individual’s languages as complex variables which are interwoven with – literally uncountable – other surrounding and not surrounding or present and not present variables.

Thus, it is of interest to statistical proving these models. In other words, is there quantitative statistical evidence that these multilingual theories are actually true? In brief, the M-factor’s theoretical aspects propose that multilingual language users (L3+) should be able to outperform L2 language users in several aspects (i.e., lexis and application of strategies) when being confronted with tasks focusing on unknown language. Multilinguals should be advantaged due to their heightened monitoring competences as well as their heightened levels of metalinguistic awareness (see 2.2.2 the DMM with its M-Factor, and 2.1.5 MPM). In short, the more languages one knows, the better should one be in metacognitive and lexical task performances while being confronted with an unknown language.

In this respect, it is of interest to find out whether multilingual language users are really more effective, efficient or successful in intercomprehensive and metacognitive tasks than mono- or bilingual language users when approaching new (foreign) languages. The author of this thesis carried out a quantitative and qualitative study to verify these theoretical assumptions in order to gain insights into young adolescent multilingual language learners. Furthermore of interest is the following: Meißner assumes the existence of the hypothesised grammar. Language learners with more foreign language learning experience should be able to outperform those learners with less such experiences when they are confronted with grammatical patterns in an unknown (related) language. These two hypotheses will be analysed in more detail in Part II of this dissertation.
3 Zooming further in: What is Receptive Multilingualism actually?

After having provided an overview of how multilingualism should be seen in the forthcoming dissertation, it is necessary to specify terminology regarding receptive multilingualism. The up-coming chapter will offer definitions of receptive forms of multilingualism. It will begin with multilingual communication because this term is considered to be the umbrella term for receptive forms. Then, the focus shifts towards specific forms of receptive multilingualism. As many researchers and research approaches discuss receptive multilingualism, it will become clear that there exists a terminological hotchpotch in German, Romance-language and English literature. Nevertheless, in Section 3.3 the author of this thesis will give suggestions on how to categorise receptive phenomena for this thesis and, potentially, for future research. Hence, the main aim of 3.1, 3.2 and 3.3 is a) to offer a literature review and critical reflections on the term receptive multilingualism and b) to contextualise the term for this dissertation. The final part of this chapter (3.4) will present a literature review of receptive multilingualism studies in order to provide a basis for comparison with the REM-Study.

3.1 Definition of Multilingual Communication

Before moving into discussions of the term receptive forms of multilingualism, one needs an introduction to the general context of the research matter. Hence, the following section will familiarise readers with the term multilingual communication before moving on to specific receptive types of multilingualism, namely receptive multilingualism, lingua receptiva, polyglot dialogue, semicommunication and intercomprehension. House and Rehbein (2004, 1) comment that, for various reasons, “[m]ultilingual communication has [...] become an ubiquitous phenomenon and there can be no denying the fact that the omnipresence of multilingual communication must be reflected in intensified research activities.” Rephrased, their statement underlines the inescapability of multilingualism in the European society of the 21st century: receptively speaking, every European inhabitant is exposed to multiple languages to a certain extent
and/or degree; in other words, a European individual has the chance to perceive patterns of (unknown) languages or language varieties on a daily basis (see Wandruszkzka 1979). Whilst this may have been more difficult in 1979, nowadays new media, e.g. smart phones, smart TVs, social media or applications using augmented realities majorly influence human beings’ linguistic environment and, thus, offer countless possibilities to encounter other languages other than one’s L1 (see, for example, Unterthiner, Topf, and Baur 2016). Put in a nutshell, individuals might easily be confronted with more than one language every day.

Yet before moving into historical documentations of receptive multilingualism, a greater context definition of receptive multilingualism will be provided in order to clarify the term’s meaning. House and Rehbein (2004, 2) comment on multilingual communication as follows:

From the perspective of multilingual communication, a language serves not only as a means and a medium of communication, it is also a highly complex system which enters into a relationship with other languages and imprints its own dynamics upon those human beings involved in interaction by structuring their ‘action spaces’. Participants in multilingual interactions can be said to activate links between language and actions, mental activities, perception, thought patterns, knowledge systems etc. – in short, all mental and cognitive processes involved in communication – which are active both universally and in each individual language. Due to the situation of contact between different languages as different communication systems, languages mutually influence one another and give rise to changes that may result in the creation of differentiated, multilingual communication systems. Numerous communication structures are likely to be themselves fundamentally multilingual and their implementation is the basis of individual speakers’ multilingual capabilities. Multilingual communication is therefore not simply an interesting but isolated phenomenon, but rather a multivariate social expression of the human constitution. One main reason for making such a sweeping statement is that multilingualism fulfils complex communicative functions, in which general linguistic qualities manifest themselves in specific forms, and in which individual and collective, static and dynamic, systematic and cultural aspects of different languages are united.

The main reason to include this quote is to show readers that multilingual communication is deeply interwoven with many factors. In short, this contextualisation shows that multilingual communication is connected with a situation where two language users interact and communicate in some form or another; however, they do not use a common language. Furthermore, it underlines that multilingual communication is connected to cultural aspects because these are linked with how people use language and communicative routines to convey meaning. Wilton (2009, 63, in reference to House and Rehbein 2004) adds and describes the main features of multilingual communication: use of several languages to achieve the communication partners’ shared purpose, multilingual language users who use one or more languages to realise a communicative purpose, different language systems that interact with one
another to achieve a certain purpose and communicative situations where language users use several languages. Wilton (ibid.) comments on these features that

[...] it is possible that some of the languages involved in a conversation play a latent role rather than actually being used on the surface of the conversation. An example of such communication would be lingua franca communication, arising when interactants with different mother tongues choose to converse in a common language that is not the mother tongue for any of them.

Here, Wilton exemplifies the features of multilingual communication with a specific type of multilingual communication, namely the use of a lingua franca in communication. Still, lingua franca should not be equated with multilingual communication: the use of a lingua franca is the decision of two (or more) language users to communicate in a common foreign language. Contrastively, multilingual communication suggests the use of two (or more) different languages in a communicative setting (ibid.). Nonetheless, this quote shows that even not actively used languages seem to have an influence on one’s active language choice to some sort or degree. Already this broad contextualisation of multilingual communication brings several terms into discussion. This thesis, however, focuses on a specific part of multilingual communication, namely receptive forms of multilingual education. Thus, the following part will discuss the most frequently used terms in multilingualism research.

3.2 Types of Receptive Multilingualism

After having established the general context of multilingual communication, the following part will focus on specific types of receptive multilingualism. Hence, the aim of Section 3.2 is

✓ to offer an overview of the most prominent terms concerning receptive multilingualism and
✓ to show how researchers understand certain terms.

Especially the discussion of the term *intercomprehension* in Section 3.2.5 is of importance: this term is – from the author’s point of view – widely discussed and needs to be defined with care for this dissertation. In Section 3.3 the author of this thesis will present a condensed view of the presented literature. This will clarify this dissertation’s terminology.
3.2.1 Receptive Multilingualism (RM)

RM is not a phenomenon of the current European society but has developed over time: Braunmüller (2013, 214-5) outlines that functional diglossia – briefly defined, the use of multiple variations/dialects of a certain language – was already preparing the path for RM. Especially the necessity to trade internationally reinforced the development of RM in the Late Middle Ages and Early Modern Times:

These facts prepared the ground for receptive multilingualism (RM), at least between speakers of genetically related languages. We define RM as a form of mutual, unmediated communication between different dialects and languages. 'Unmediated' means that no lingua franca is used. In addition, no active command of the addressee's variety is needed, only some insight into the grammar and lexicon of his/her dialect or language, based on either genetic similarities or on previous (imperfect) learning.

Therefore, functional multilingualism (also called 'diglossia') and linguistic flexibility in communication have to be considered the two key terms for understanding the linguistic situation before nationalism and monolingualism became default in Europe. (ibid., 215)

Braunmüller (ibid., 217) introduces functional multilingualism as a synonym to describe RM and its linguistic features. Later Braunmüller (ibid.) portrays why RM was an important source of communication throughout history. RM turned into a common form of communication up to the 17th century due to the lack of standardised languages and predominance of oral communication22. For example, Scandinavian salesmen used to communicate in their native language with one another (e.g. Dutch and Swedish).

Braunmüller (ibid., 218) specifies the term RM as follows:

Face-to-face situations facilitated this kind of direct communication considerably, because understanding was not exclusively based on the decoding of the addressee's variety but could also be based on demonstration, such as pointing out or gesticulate. The only thing that really counted in face-to-face situations was the immediate success in communication: all oral communication was aimed at a specific purpose and not subjected to grammatical norms to the same extent, as this would have been the case when writing texts. Repetitions, rephrasing utterances, (instant) repairs, changes in wording and extending one’s L1 competence by speaking related varieties were therefore nothing out of the ordinary and by no means face-threatening, as this would have been the case in written communication.

Paraphrased, RM is a form of direct communication where a speaker talks to another in his mother tongue or language variety and, additionally, uses extra-linguistic measures (e.g. body language) to communicate with one ore more individuals that share a common language; still, grammatical correctness is not in focus because RM's main aim is to successfully communicate.

Similarly from a historical science point of view, Grüne (2017) held a talk on this issue focussing on higher societies: In the Early Modern Times it was common to speak

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22 Latin and pidginised versions of Latin were used as a lingua franca up to the 17th century – yet predominantly in written form and in specific social domains (see Braunmüller 2013).
multiple languages in royal houses. Though without giving a specific context, Grüne described that this exclusive kind of language user used *Sequenzielle Einsprachigkeit* (sequential monolingualism, translation by DU) to talk to one another. Briefly explained, in a full conversation each language user spoke in another language. For example, a lord talked in French whilst his communication partner replied in German. Thus, Grüne gave insights into a specific socio-historical domain which used more than one language in face-to-face communication. Although Grüne’s definition and use of the term *sequential monolingualism* is almost identical to Braunmüller’s understanding of RM, the author of this thesis did not find the term *sequential monolingualism* in other historical or linguistic publications. Nevertheless, the term is worthy of mention because it stresses the temporal and/or alternating use of certain (prestige) languages.

Vanhove and Berthele (2015a, position 2853) define RM comparably from a written perspective, yet specify that multilingual language users more frequently experience in comparison with mono- or bilinguals cross-linguistic influences when there are cognate relationships at hand. To be more precise, multilingual language users are able to more efficiently rely on their linguistic and metalinguistic knowledge. When such similarities are given, a language user is able “to guess the meaning of the Lx stimuli” (ibid., position 2884). Vanhove and Berthele (ibid., position 2922-3011) describe general explanatory variables which may make comprehension between languages more likely: overall formal distance, importance of consonants, word beginnings and cognate frequency (amount of similar words in the unknown text). As a comment by the author of this thesis, Vanhove and Berthele (ibid.) tend to refer to lexis and word recognition between languages without including possible transfer of grammatical contexts. However, it is not clear whether they refer to listening, reading, writing and/or speaking because their definition is broadly held, and they do not specify whether cognate word recognition refers to a specific language skill. In other words, their understanding does not focus on a communicative approach as described by Braunmüller (2013).

Finally and similar to the previous paragraphs, a recent definition will be offered: Gooskens et al. (2017, 2) define RM as a principle which is “based on the fact that some language pairs are so closely related that the speakers are able to communicate each using their language without prior language instruction.” Rephrased, two languages share many (lexical) similarities which allow the respective language user to comprehend the communication partner’s communicative intentions – without having in-/ or formally learnt the other language. Later, the researchers (ibid.) add that this
form of communication is widespread in Scandinavian countries, though finds little application in the rest of Europe (Braunmüller 2013 describes this issue as well). Notably, Gooskens et al.’s (ibid.) definition lies explicitly the speaker as a main agent. Thus, the focus of their definition lies explicitly on the skills listening and speaking than on the more general language user mentioned beforehand. Nevertheless, in a following paragraph Gooskens et al. (ibid.) add: “A listener (or reader) may understand a related language for two different reasons.” Here, although in parenthesis, the reader is mentioned as a receptive communication partner. Although the linguists mostly refer to the skills listening and speaking, which is reflected in Gooskens’ research as well (see Section 3.4), this reference to the reader opens the definition in terms of the skills reading and writing.

To conclude, RM should be understood as a form of communication where each individual uses a different language, which the interlocutor(s) can understand (at least to some degree) but are not able to produce and in which they have had not formal or informal education. Concerning RM, factors such as closeness between languages or extra-linguistic resources lead to more efficient decoding processes of (unknown) language patterns. Finally, RM’s skill domains remain somewhat unclear. Most of the definitions stress speaking and listening, though implicitly, reading and writing are mentioned as well.

3.2.2 Lingua Receptiva (LaRa)

First, an early and frequent definition of LaRa will be offered before discussing the term further:

By definition, lingua receptiva is the ensemble of those linguistic, mental, interactional as well as intercultural competencies which are creatively activated when interlocutors listen to linguistic actions in their ‘passive’ language or variety. The essential point is that speakers apply additional competencies in order to monitor the way hearers activate their ‘passive knowledge’ and thus attempt to control the ongoing process of understanding. (Rehbein et al. 2011, 249)

This definition outlines the core-concept of LaRa: it is a form of multilingual communication that focuses on decoding skills, or, in other words, a communicative situation that requires a speaker to code and convey information, on the one hand, and a listener to decode the incoming information, on the other. For example, the individuals involved communicate in their own language and do not share or employ a common lingua franca. Thus, in order to create a common ground of comprehension they use their linguistic competences. Furthermore, the communication partner’s understanding
does not purely result out of linguistic resources; instead, one makes use of (inter-)cultural competencies (for example cultural knowledge, para-verbal and non-verbal behaviour) to decode a spoken unknown language. In addition, Rehbein et al. (ibid.) mention creativity: the term is not further explained and leaves their definition incomplete.\textsuperscript{23} Phrased as a question, is creativity a significant predictor for successful comprehension? If so, how can it be measured? How, if at all, can it be trained? As illustrated, this first definition leaves open questions, thus, further discussions of the term LaRa are needed.

Later, ten Thije (2013, 137ff.) elaborates the definition further:

[T]he application of LaRa is not restricted to typologically closely related languages. [...] The application of LaRa is not restricted to speakers using their mother tongue. [...] The concept of LaRa orientates the focus of attention to specific receptive skills and the hearer's minimum level of receptive competence as well as to the discourse strategies interlocutors realise in order to reach mutual understanding.

Here, LaRa is more clearly defined because this definition points out that even a minimal amount of comprehension can lead to the activation of LaRa processes. Furthermore, a hearer may also use meta-knowledge or discourse strategies to understand what is said.\textsuperscript{24} LaRa is, therefore, not restricted to typologically related languages, but is seen as a phenomenon that goes beyond related languages. Additionally, it becomes clear that LaRa is used in spoken word contexts. More precisely, this definition differs from RM definitions because LaRa does not cover written domains. To be more precise, this quote describes that one may use other (linguistic) resources to activate LaRa processes. Ten Thije (ibid., 137ff.) additionally notes that there is an inconsistent terminological use in the context of LaRa: semicommunication, receptive multilingualism, intercomprehension and (mutual) intelligibility are used almost synonymously, which complicates LaRa’s conceptualisation as a linguistic phenomenon.

Another definition can be found in Backus et al. (2013, 198, in reference to ten Thije and Zeevaert 2007). They define the term synonymously to intercomprehension (see Section 3.2.5), yet add that LaRa

\[\text{widen}[s] \text{ the concept [of multilingual communication] to include situations in which the basis of the mutual understanding is bilingualism rather than mutual intelligibility of the languages. For it to work, it is important that speakers develop communication skills that ease understanding, such as tailoring one’s language use to non-native speakers and employing frequent comprehension checks, more than one would do in most monolingual conversation.}\]

\textsuperscript{23} The author of this thesis assumes this might be the case because it is unclear to what extent creativity influences comprehension.

\textsuperscript{24} For example, Herdina and Jessner (2002) describe these extra-linguistic factors with their M-factor (see part 2.2.2).
This definition seems to be less precise because no explicit skill is mentioned: it rather stresses the development of communication skills, which leaves an incomplete clarification. Communication skills may refer to speaking and writing yet no specifications regarding language skills are given. However, one thing of interest is that Backus et al. (ibid.) mention “frequent comprehension checks”, which leads to the conclusion that monitoring language(s) in LaRa situations is of crucial importance to successfully communicate with one another. Still, these skills are not explained in detail. Later, Backus et al. (ibid., 204) conclude that LaRa can be understood as follows: “LaRa is itself a kind of CS [code-switching], as it represents constant language switching at turn level.” (ibid.) Here, they introduce CS\textsuperscript{25} as an accompanying feature of LaRa.

As outlined in the previous paragraphs, the inconsistent definitions complicate a unified understanding of LaRa. Hence, Bahtina, ten Thije and Wijnen (2013, 162-3) suggest a model to support LaRa’s communicative and receptive approach in order to clearly set LaRa apart from other receptive multilingual phenomena. With their elaborated Speaker-Hearer Model, based on models of alignment in communication, “[t]he speaker uses linguistic elements in order to reach a goal and therefore accomplish understanding on the part of the hearer, which in fact can be interpreted as modelling the interlocutor” (ibid., 162). Furthermore, they comment that models of alignment focus on one language, and when considering two or more languages, the model becomes more complex: Not only might a listener have to access and/or recognise unfamiliar phonetic, lexical, phonological, syntactic and semantic representations, but he may also have to take the communicative situation and a speaker’s uttered speech into account as well: “The interaction space and the presupposed social knowledge is shared” (ibid.). Thus, the communicative setting influences an interlocutor’s communicative plan which – in turn – influences the hearer. Put in a nutshell, due to communicative routines and familiarity with certain text types, communication may be successful. Hence, what influences a speaker’s decoding processes and a hearer’s comprehension? Bahtina, ten Thije and Wijnen (ibid., 165) give answers to this question:

a) **Speaker’s experience** with multilingual communication.

One’s experiences with handling multiple languages in such a situation might have an influence, for example, on the language choice for certain pieces of

\begin{footnotesize}
\textsuperscript{25} In brief, CS describes the phenomenon that an individual changes between languages in one and the same communicative setting. CS can, therefore, occur in speaking and in writing. Notably, pictographic changes in written domains are considered as CS as well (e.g. I enjoy listening to \textit{Harry Potter}) (for details see García and Wei 2014).
\end{footnotesize}
information, or on how to use body language as an additional resource for communication.

b) **Speaker's estimation** what the hearer will understand.

This meta-level of communication looks at the speaker and what he is sure he will be able to transfer and which pieces of meaning will be decoded successfully. This awareness can have an impact on follow-up information or may be used as a scaffold for new incoming information.

c) **Hearer's anticipation** of what the speaker is aiming for.

A hearer's expectations have a crucial influence on his comprehension. In other words, the incoming information can be decoded with greater facility if the context and/or text type have been clearly established by the communication partners.

Summing up, the exact meaning is still under discussion. Nevertheless, two aspects are salient: First, LaRa seems to focus on listening and speaking in a concrete communicative situation. Second, language distance seems to play an important role in order to create mutual understanding. Rephrased, if the language distance is too big, an individual's (LaRa) comprehension processes might be inhibited to some sort or degree, or even blocked.

3.2.3 Polyglot dialogue (PD)

This politically motivated term and approach to define PD is reflected in the cited article with the title “Towards inter-cultural communication in Europe without linguistic homogenization” (Clyne 2003). Based on Posner (1991) who coined the German term, Clyne (2003, 41-2) takes up the term Polyglotter Dialog and translates it with *polyglot dialogue* into English. Clyne (ibid.) describes PD as an alternative socio-political (communication) model to maintain and secure Europe’s linguistic and cultural heritage and diversity. Here, Clyne (ibid.) states that PD should be implemented into educational programs to secure the mentioned aims. Clyne (ibid., 45) concludes that European language policies should cover all “aspects of language and languages” – including heritage languages – to “guarantee [for example] the opportunity for all to acquire the national language, [...] to maintain and develop through the education system any minority language [and] [...] to learn at least two other languages [...] from early primary school [on]”. Finally, Clyne closes with the request to carry out research which should
prove that PD principles are successful (e.g. research in related language and its acquisition in educational or professional contexts) (ibid., 46).

On other accounts in literature published in German language, Ammon (2015, 423) defines PD with the following: "Polyglotter Dialog heißt ein Gespräch zwischen Personen verschiedener Muttersprachen, die jeweils die eigene Muttersprache sprechen und die andere(n) und die andere(n) Sprachen verstehen." What immediately catches attention is that the speakers use their Muttersprache (mother tongue or L1). This does not necessarily imply that speakers may change to another Lx for (multilingual) communication. Furthermore to successfully communicate, rudimentary and receptive language competences are necessary (ibid.); otherwise the conveyance of meaning might be inhibited or unsuccessful (ibid.; Born and Schütte 1995, 43).

Although Ammon’s definition centres on the skill speaking, the context of written communication in more than one language is mentioned in another German publication as a form of PD (see Gellert-Novak 1993, 98). Hence, reading is indirectly implied through Gellert-Novak’s explanations; this leads to the preliminary conclusion that PD may cover all four language skills. As a final remark, the term and its concepts rarely find application in academic discourses (Hufeisen 2016, 270).

3.2.4 Semicommunication (SC)

Another term used in the context of RM research is SC. Gooskens (2007, 445) defines the term as follows:

[S]ome genetically related languages are so similar to each other in terms of grammar, vocabulary and pronunciation that speakers of one language can understand the other language without prior instructions. Speakers of such languages are able to communicate with each other without a lingua franca or without one speaker using the language of the other.

Later in her article, Gooskens (ibid., 446) pinpoints three factors that have an influence on the intelligibility of closely related languages: “(1) the listener’s attitude towards the language, (2) the listener’s contact with the language and other language experience, and (3) linguistic distance to the listener’s language.” To support these factors, she quotes several Scandinavian studies which prove that attitudes, language distance and intelligibility significantly correlate with one another (e.g. Gooskens 2006; Van Bezooijen and van der Berg 2000).26 Though Gooskens’ definition is brief, one aspect

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26 Nevertheless, Gooskens’ later studies do not support these hypotheses (see section 3.4).
becomes clear: it focuses on listening and stresses oral language skills – which is in line with Gooskens’ RM research approach\(^{27}\) (e.g. 2007, see details in Section 3.4).

Zeevaert (2007, 105) describes SC as situations where “speakers are able to understand the language of their interlocutor due to the genetic proximity of the two languages and the resulting large typological similarity” (in reference to Haugen 1966). In other words, Zeevaert points at the issue that similarities between the typology of two languages have a significant impact for SC to succeed. Additionally, Zeevaert (2007, 106) clearly differentiates between RM and SC via saying that

\[
\text{the common characteristic of both cases is that different languages are used in one discourse. However, the underlying theoretical conception of the term language does not seem to be identical. [... Kloss (1967) distinguishes between abstand languages and ausbau languages. Abstand languages are languages that do not exhibit mutual intelligibility. [...] In contrast to this an ausbau language may be intelligible for the members of neighbouring speech communities but at the same time can not [sic] be regarded as a dialect of the language of the neighbouring community because of its highly developed literacy. [...] The term receptive multilingualism can be used to describe the communication between speakers of abstand languages, but also between speakers of ausbau languages that exhibit little distance between them. The term semicommunication, however, is only appropriate in describing contact between closely related ausbau languages which has to be distinguished from cases of dialect contact such as the linguistic exchange over political borders between speakers of closely related dialects belonging to a dialect continuum, as for example in the German–Dutch borderland, or the linguistic exchange between speakers of different, less closely related varieties of minority languages in which an immediate mutual understanding is not possible (e.g. Rhaeto-Romance in Switzerland and Northern Italy or Saami in Norway and Sweden).}
\]

According to Zeevaert’s explanations, historically closely related and therefore mutually inter-intelligible languages (e.g. German and Dutch) are considered as ausbau languages and SC is therefore the acceptable term for describing communication where speakers each speak/use one such language. In contrast, when a language is considered to be an abstand language (= no close relation, for example German and Italian), RM is the acceptable term. This leads to the conclusion that a universal understanding for every language concerning SC and RM is not possible because it always needs to be defined out of the perspective of each language.

On final remarks, Sağın-S.ims Ek and König (2011, 316, in reference to Zeevaert 2004) point out that SC should not be perceived negatively because of the prefix semi:- “rather, being able to take part in semi-communication is perceived as a positive feature of a monolingual person.” They comment that “the active role of the hearer [...] explains how information is created with the contribution of the hearer” (ibid.).

Summarising, this last statement illustrates that there are incongruities in the understanding of the terms mentioned so far. SC seems to stress oral communicative

\(^{27}\) N.b.: In more recent publications Gooskens tends to use the term mutual understanding.
settings. To be more precise, Gooskens’ (2007, 445) definition concretely points at the listener and the speaker as entities that constitute SC. Nevertheless, these definitions could be used for LaRa (3.2.2), for PD (3.2.3) and partially for RM (3.2.1) as well.

### 3.2.5 Intercomprehension (IC)

The term IC has experienced changes in facets of meaning over time. The following section will therefore first offer the term's etymology and will then move on to present a general definition. Afterwards, further discussions and elaborations of IC will be presented. The third and final part of this section tries to categorise the given definitions according to Ollivier and Strasser (2013).

**Etymology**

In the etymological sense, the term can be divided into two parts: *inter-* and *comprehension*. *Inter-* is a Latin preposition or prefix with the primary meaning of between and/or among. *Comprehension* derives from the Latin word *comprehensio* with the following meanings: grasping, classifying and, more importantly for this context, understanding and comprehension (Marchant and Charles 1953, 290, 662) Joining the two parts together, the author of this thesis interprets the term as follows: IC can be understood as a phenomenon which consists of cognitive processes that lead to a form of (at least partial) comprehension between/among two or more parties/groups/people/entities. What separates it from other forms of communication (where IC is a sine qua non) is that the focus is on the comprehension aspect: (partial) communication takes place even when a party involved is not fully conversant in the medium (e.g. language) used by the other party and/or would not be capable of using this to produce/express meaning themselves. It therefore also applies to situations where a language user is confronted with a written or aural text in an unknown language but is still able to create a (unfinished) bridge of comprehension, a preliminary or approximated understanding, which does not necessarily meet a text's original intentions. This argument is supported by Meißner’s elaboration of hypothesised grammar (see 2.2.5) and IC (see later in this section).
Scientific definitions

Generally, IC is defined as follows: IC describes a language user's skills to communicate with another language user who does not share the same L1 or Ln (i.e. there is no use of a lingua franca by both/all parties). Nonetheless, the language chosen needs to be related to a language the communication partner is familiar with (Reissner 2007, 1). Here, Reissner (ibid.) stresses that Europe's language families have high potentials concerning IC and serve as comprehension bridges (e.g. Italian and Spanish). Furthermore, the researcher comments that there exist processes which accelerate and facilitate IC. The activation of these processes is possible due to the following:

The procedures of lexical inferencing involve making informed guesses as to the meaning of a word in the light of all available linguistic cues in combination with the learner's general knowledge of the world, her awareness of the co-text and her relevant linguistic knowledge. (Haastrup 1991, 13 in Kordt 2015, 86. italics added by DU)

In other words, an individual uses his prior (extra-/linguistic) knowledge to approach and deduce (unknown) language patterns. Reissner (ibid., 2ff) comments that IC is not only a phenomenon but a field of study as well. IC is a hub of multiple fields that comprises (multilingual) education, historical linguistics, contrastive linguistics, cognitive science, cognitive linguistics and neuroscience (see Figure 8). In short, IC can be understood as a field of study with its own rights.

![Figure 8: IC as a hub according to Reissner (visualisation by DU)](image)

After having established a general understanding of IC, further specifications are needed to describe IC as a linguistic phenomenon. Meissner is considered to be the most important IC pioneer, and is especially well-known within German and Romance RM literature. Not only did conceptualise Meissner IC theoretically, he also connected the
presented theory to educational scenarios. From the perspective of multilingual education and multilingual research, Meißner analysed transfer possibilities between Romance languages. To be more precise, as early as 1989, Meißner points at the lexical potentials for language learners when one uses multilingual teaching approaches. Furthermore, Meißner (1998) was able to pave the way for the development of IC as a linguistic and educational phenomenon with his concept of hypothesised grammar (see Section 2.2.5). As reflected in Meißner’s early publication, Meißner’s initial understanding focuses on Mehrsprachigkeitsdidakik (multilingual education) (see e.g. Meißner and Reinfried 1998). In other words, Meißner’s conception of IC seems to be rooted in Interkomprehensionsdidaktik. Here, one should mention another definition of Meißner’s (2007, 90), which underlines the educational notion of IC:

So lehrt Interkomprehension zunächst grundsätzliche keine ‘neuen’ sprachlichen Strukturen wie der herkömmliche Englisch- oder Französischunterricht. [...] Statt dessen [sic] fördert sie die Fähigkeit der Lernenden, das interlingual transferierbare Repertoire der ihnen mental verfügbaren Sprachen zu nutzen. (italics added by DU)

This definition emphasises the notion that an individual does not receive new, language-specific skills, but rather learns to recognise potential transfer possibilities from one language to another.

Still, to receive a more comprehensive understanding of how Meißner understands IC, it is advisable to consult a definition from his later work, where Meißner (2011, 159) defines IC as follows: “IC is the competence to understand a foreign dialect or language without having acquired it in its natural contexts or without having learned it formally.”

Rephrased, this definition describes an individual’s comprehension processes of an unknown language without having prior language learning experience of the target language. One notion of this definition needs to be emphasised: Meißner includes dialects. In other words, Meißner (ibid., 134-5) includes a language’s Diasystem (language varieties: dialects, sociolects, regional and/or temporal differences, etc.). In German linguistic literature this phenomenon is called innere Mehrsprachigkeit28 (see, i.e., Commission 2001, 6 or Cathomas 2015, 149). Furthermore, Meißner’s definition (2011, 159) describes transfer potentials between (related) languages. The definition, however, does not include educational aspects. Prokopowicz’s additional comments on Meißner’s definition (2011, 159) are also of interest here, as Prokopowicz (2017, 2) underlines IC receptive reading and listening skills, thus putting the successful decoding

28 N.b.: The term innere Mehrsprachigkeit shows similarities to Braunmüller’s understanding of the terms functional multilingualism and diglossia (see part 3.2.1).
processes of written or audible inputs in the foreground. Moreover, Prokopowicz (ibid.) stresses linguistic factors of IC which accelerate comprehension:

a) inherent competences to understand a communication partner who does not share the same language and/or dialect and

b) no formal and/or systematic learning scenarios were offered to a language user in order to understand a communication partner (ibid.).

These additional notions clarify that IC consists of a complex set of internal and external factors which have an influence on mutual intelligibility. Over time, Meißner (2017, 146-7) further differentiated IC terminology:

- IC as a linguistic transfer phenomenon (identification of transfer basis in, e.g., lexis, grammatical knowledge, metacognitive strategies, etc.) and
- interkomprehensive Verfahren or Interkomprehensdidaktik (the intercomprehensive teaching approach, henceforth ITA, translation by DU). ITA focuses on teaching learners tools to initiate transfer processes. These are of importance because they can be reused for future language learning (see MPM in section 2.2.5).

Moreover, Meißner (ibid.) underpins IC and its processes with Selinker's (1972) concept of interlanguage. Selinker (ibid.) describes interlanguage with a language user's second language (e.g. English L2) that resembles an incomplete and/or approximated version of a target language. This interlanguage will show traces of a language user's L1. Here, Meißner (2017, 146) takes up this concept and comments that IC processes should be seen as the first steps into an unknown language. The Interkomprehensionsereignis (intercomprehensive experience, translation by DU) should be understood as the "in statu nascendi" (ibid.) incident of a new (inter-)language. Rephrased, Meißner expands

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29 Bahtina & ten Thije (2013) describe these processes with the term inherited intelligibility in more detail.

30 Meißner (2017) should be seen as a comprehensive overview of several of his prior publications (e.g. Meißner 2005 or 2007). Later in the discussion, other researchers will refer to the same or similar older resources.

31 Bär (2009, 28ff.) describes the goals of ITA more precisely: ITA should make learners aware of learning processes in order to more successfully fall back on previously learned and/or acquired knowledge. Learners will thereby become aware not only of the “Lernprodukt” (learning product) but also of the “Lernprozess” (learning process) (ibid., 33). Thus, ITA focuses on cognitive and metacognitive procedures to initiate reflexions which allow learners a more systematic approach to learning contents (ibid., 34). Thus Bär (ibid., 35) proposes, in reference to Marx (2007), that (language) teaching should stress ITA in order to initiate and foster positive (future) language learning effects by including active awareness raising for prior knowledge (ibid., 36ff). Bär (ibid., 40-1) mentions general, cultural, situational, behavioural and linguistic knowledge (in reference to Doyé 2004 and 2005), one’s L1 (ibid., 42ff.), transfer bases (ibid., 44ff.), intra- and interlingual comparisons (ibid., 51ff.) and language monitoring and its reflexion (ibid., 65ff.). Hence, via ITA learners receive declarative and procedural knowledge and skills (ibid., 96).
Selinker’s interlanguage concept to languages other than an L2 to also apply to new, unknown and unfamiliar languages. Meißner (ibid.) further elaborates that such an *in statu nascendi* language is constantly under revision and experiences change due to the lack of linguistic confirmations. In other words, these processes are consciously and subconsciously activated to accelerate and/or support decoding and comprehension processes of the unknown language patterns (see Bär 2011b, or Meißner 1998). Such processes may a) be learned in formal settings or b) inherently acquired by an individual (Prokopowicz 2017, 2). Nevertheless, a language user’s (linguistic) attitudes and experiences (e.g., the uncanny, see later in this section), estimated knowledge of a text (see Bahtina, ten Thije, and Wijnen 2013, 165), time and space, and surroundings (Aronin and Ó Laoire 2004, 16ff.) have a crucial influence on how she perceives and/or approaches a text.

In a nutshell, IC processes and one’s individual knowledge of the world lead to a language user’s intercomprehensive experience which turn into his *in statu nascendi* interlanguage. Thus, so far two main aspects have emerged in the understanding of the term *intercomprehension*, namely a) IC as linguistic processes and b) IC as a form of ITA.

Other researchers add still further aspects to Meißner’s definition approach. Morkötter (2016b, 201) elaborates that IC refers to the development of language awareness as well as multilingual awareness. Rephased, IC and ITA should give learners the possibility to become aware of their inter- and intralingual competences. Moreover, through ITA, learners should be able to draw upon their inherent linguistic knowledge and knowledge of the world in order to more successfully approach new languages. This, in turn, should heighten language awareness and facilitate (future) language learning (ibid., 202-3). Notably, Morkötter (ibid.) seems to be in line with Doyé’s (2010, in Morkötter 2016, 7) definition of IC because Morkötter uses the term *Interaktionspartner* in further explanations. The term *Interaktionspartner* may stress listening and speaking skills, and while reading and writing are arguably not wholly

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32 Hufeisen (2004) describes these factors with internal and external factors for multiple language learning, e.g. interlanguage, supplier languages, proficiency, recency, perceived language competences, complexity, variability, self-esteem, anxiety, metalinguistic awareness, language learning strategies, a language user’s surroundings etc. Similar to Hufeisen’s approach is Herdina and Jessner’s M-Factor in their Dynamic Model of Multilingualism (ibid. 2002, 129; Jessner 2008, 275).

33 Text mediality might have a scaffold function (Beerkens 2010, 28, in reference to other researchers points out the importance of cultural competences and cultural knowledge of the target language. In other words, these factors might facilitate understanding and the higher one’s prior experiences with languages are, the likelihood rises that a language user comprehends a text with greater success (see section 3.3).

34 Similarly, Bär (2011b, 22) describes synergetic effects which will “kick in” when learners become aware of functions and structures of languages – and this again should lead to facilitated language learning.
excluded by this term (since communication with a partner can take place in written form e.g. in chat rooms, via posts and comments in social media, etc.), it is nowhere explicitly stated that the use of the term IC here does in fact include skills other than listening and speaking. In reference to Castagne (2007), Morkötter summarises dimensions of IC (ibid., 8-13):

a) IC in symmetrical and asymmetrical communicative situations: symmetrical refers to, for example, specific terms and domains of one language (linguistic, technical, etc. terminology vs. everyday language); asymmetrical refers to functions of foreign language learning and the development of (foreign) language competences.

b) IC between related and unrelated languages: this dimension refers to transfer typologies which IC opens, e.g., vocabulary (which is more likely between related languages), non-linguistic resources, strategies, etc. Furthermore, this dimension assumes IC to be a multimodal communicative phenomenon because non-linguistic resources are part of the transfer typologies, as well. Additionally, a language user’s perceived distance between languages has an influence on her willingness to approach a foreign language. This argument is psychologically supported when one includes Freud’s phenomenon of the uncanny. It describes an object or situation which appears “homely and familiar, [but] is frightening precisely because it is not known and unfamiliar” (Cameron 2010, 44). Here, one could exchange object with a language and – from a psycholinguistic perspective – explain why an individual experiences a perceived distance and/or uncanny feelings towards an unknown language: A language user hears or perceives a language that sounds familiar because it has similarities with a language that is known, but is unable to understand it with ease because it is not, in fact, known. This incongruity between the feeling of ‘I should be able to understand this, it sounds familiar’ and ‘I cannot, in fact, understand this’ can trigger a sense of uncanniness, which in turn can produce feelings of confusion, frustration, unease, fear, distrust, aversion or rejection that can inhibit or even block IC (see, for example, Jessner et al. 2018). From a linguistic point of view, Ollivier (2008, in Morkötter 2016a, 11) describes a very similar phenomenon with the term blocage de l’activation des connaissances. Here, Ollivier (ibid.) explains the term with the access of world knowledge and possible transfer and understanding between languages. Additionally, Ollivier (ibid.) adds that a language user’s
perceived distance towards another language might inhibit IC processes. Finally the author wants to comment that a language user’s fear of making negative interferences might hinder them to access and transfer linguistic information.\(^{35}\)

c) Written and oral domains of IC: IC processes can be initiated through audible or written texts. Still, Morkötter (2016a, 12) states that concerning listening more identifiable items need to be present, otherwise IC processes will not succeed. This is because a language user can go over a written text in an unknown language again whilst spoken language is fleeting.

d) IC of a language user who does not speak the language of another user but has relevant comprehension skills: this domain refers to strategic skills a language user may have acquired and/or learned to approach a language in a foreign language. In other words, these might be metalinguistic skills which, for example, Hufeisen (2005, 31ff.) describes in her Factor Model (see Section 2.2.3) or Herdina and Jessner (2002, 34ff.) in their Dynamic Model of Multilingualism (M-Factor, see Section 2.2.2). Furthermore, another term that was introduced to describe such strategic skills is hypothesised grammar (Meißner 1998) (see Section 2.2.5).

e) IC as a medium to understand foreign language and language productions in one’s L1: this domain refers to one’s L1, which may aid in understanding a new/unfamiliar foreign language in the context of translation (with all its imprecisions and possible failure of transfer).

Summarising, Meißner and his fellow researchers the term understand IC as twofold:

1) Processes which activate mutual understanding of unknown or foreign languages and

2) a multilingual educational approach to initiate these processes.

To gain a more complete picture, it is of interest to examine if other researchers with different research traditions perceive IC differently. Backus et al. (2013, 198) define IC as follows: “partners each use a different language or variety when conversing, but nevertheless mutual understanding is achieved, as each has sufficient receptive skills in the partner’s language” (italics added by DU). Here, they add that this mutual

\(^{35}\) The author wants to comment that based on Baran-Lucarz’s (2015) data on foreign language use similar sensations of fear might be evoked when being confronted with an unknown language. However, this assumption still needs to be researched in detail.
understanding is, in comparison to LaRa or RM, not formally acquired, but an inherent phenomenon of speakers with closely related languages or different dialects of the same language (ibid.). This explanation rules out possible understanding between language users that do not share related languages. Moreover, it leaves out other sources of information, for example, body language, cultural information or text linguistic knowledge. Notably, this definition stresses the communicative approach of IC: the term conversing points at situations where at least two language users communicate with one another – be it in form of writing or speaking. Backus et al. (ibid., 200-1) conclude that the advantage of “this communicative mode”36 is that there is an “inherent fairness” and a “cooperative behaviour” as both language users are aware of possible misunderstandings and/or restricted conveyance of meaning. This additional explanation stresses the issue that language users communicate face-to-face in the same moment and space. Nevertheless, these two aspects have similarities to the LaRa’s model of alignment by Bahtina, ten Thije, and Wijnen (2013) presented in 3.2.2. In a nutshell, this definition puts aural domains in the foreground. Vetter (2011b, 109) in reference to Grin (2008) defines the term IC with another focus. Vetter (ibid.) underlines that IC is a) a form of multilingual communication and b) a language education goal that should be achieved by European citizens. In other words, she stresses the socio-political conception of the term and, additionally, emphasises the potentials for European society to profit from ITA. Later, Vetter describes “Interkomprehension als Ziel des Unterrichts” (ibid., 109) which again stresses her educational understanding of IC (see, e.g. Vetter 2011a, 2011b).

Similarly, from the educational perspective Meier (2014, 132-3) describes IC as an approach to multilingual education because “learners and teachers use more than one language to access learning of languages and/or content in formal educational contexts. Thus models of multilingual education can include bilingual, trilingual or multilingual education, but they normally do not include traditional successive and separate language education.” Later, Meier (ibid., 134-5) elaborates the term IC further:

This is based on the idea that learners use knowledge of closely related other languages to receptively engage with a new language that has previously been unknown. Concepts such as savoir or declarative knowledge (vocabulary, grammar, etc., or knowing what) and savoir-faire or procedural knowledge (skills and strategies, or knowing how) are seen as central (Meißner & Reinfried, 1998). [...] In order to make learners become conscious of their intercomprehension strategies, Meißner (2003) suggests think-aloud protocols (Lautdenkprotokolle), where learners

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36 N.b.: The authors inconsistently refer to the same concept with two different terms: LaRa and intercomprehension.
Meier's definition emphasises that IC is an educational approach and its techniques and/or strategies can be systematically learned in educational contexts. As visible in Meier's quote, Meier refers to Meißner's approach to IC, yet rather leans towards the educational potential of ITA. As becomes clear through the given quote, her definition is rooted in Meißner's understanding of IC (see above).

Summarising, this section has shown that the investigations over the past 30 years have revealed IC's potentials for (multilingual) language learning. In the early years, the main focus was on the potential of lexical transfer, whereas nowadays, the focus has shifted toward a broader inclusion of metalinguistic and extralinguistic phenomena.

Categorising IC definitions according to Ollivier and Strasser (2013)

As illustrated so far, there is an inconsistent understanding of the term intercomprehension. Ollivier and Strasser (2013, 198) comment on these difficulties: IC may be understood as a) a form of receptive communication of two speakers with different language backgrounds, b) the competence to understand an unknown (related) language or c) a teaching approach. To begin with, Ollivier and Strasser, in reference to Rojat (1913), point to the original definition of IC, which focuses only on the ability of speakers using two different language varieties of the same language to understand each other (see Diasystem mentioned above) (ibid., 11). As shown in the previous section, researchers have added to the term's initial conceptualisation (e.g. intercomprehensive teaching approach37).

In order to shed light on the term and to determine a possible consensus concerning IC, the two researchers carried out an epistemological study on IC's definition. Through content analysis they were able to determine three major domains out of which the term was defined: praxeological, educational/didactic (=ITA) and cognitive. The praxeological domain defines IC as a form of interaction between language users. However, the researchers comment that the definitions of this domain differed concerning receptive and interactive skills (ibid., 31-32). The educational/didactic domain defines the term as a form of interaction which can be trained via specific multilingual training programmes.

37 Ollivier and Strasser's (ibid., 12) call the teaching and learning of these competence "IK[Interkomprehensions]-Didaktik" (=ITA). Thus, the researchers use another term to distinguish between IC as a linguistic phenomenon.
(e.g. EuroCom) (ibid., 32-33). Nevertheless, Ollivier and Strasser (ibid.) comment that the definitions in this domain are not clear-cut: in reference to Meißner and Schröder-Sura (2009), formal and informal IC learning scenarios were included by Ollivier and Strasser in this domain. Finally, the cognitive domain focussed on the modes of IC: written vs. spoken language.

Additionally, the researchers’ analysis shows that there is no clear-cut understanding on whether IC refers only to listening, only to reading or to both (Ollivier and Strasser 2013, 35-37). Ollivier and Strasser (ibid., 43-44) therefore suggest two possible terms:

- **receptive intercomprehension**: this term stresses reading and listening comprehension of foreign languages, which results out of “interlinguistischem Wissenstransfer” (the interlinguistic transfer of knowledge). In short, these transfer processes are trainable through ITA and create a “springboard” to receptively understand other languages. Thus, receptive intercomprehension focuses on the inner processes when one is confronted with an unknown language that is related to one’s L1 or any other language that a language user has decent knowledge of.

- **interactional intercomprehension**: this term underlines a form of communication where language users do not use the same language in interaction with each other. Central to this approach is the successful conveyance of meaning in a communicative setting using all means available.

In order to give a brief overview of the literature presented so far in this thesis, Table 3 will chronologically group the presented definitions according to the categories determined by Ollivier and Strasser (2013).

<table>
<thead>
<tr>
<th>praxeological</th>
<th>educational/didactic</th>
<th>cognitive</th>
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<tr>
<td></td>
<td>Meier (2014)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Morkötter (2016b)</td>
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<td></td>
<td>Meißner (2017)</td>
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</tbody>
</table>

**Table 4. Definitions categorised according to Ollivier and Strasser (2013).**

Nota: Researchers presented in chronological order. Furthermore, Castagne (2007) and Meißner (2017) offered a more holistic definition approach. Thus, these two definitions were categorised thrice.
This provisional categorisation shows tendencies of certain researchers: one is able to see that IC pioneer Meißner clearly influenced each domain. Additionally, several definitions mentioned in Figure 3 majorly focus on ITA. Interestingly, this observation is not in line with the results of Ollivier and Strasser (2013, 29-30): Their results show that IC is mainly defined from the praxeological perspective \((n=47\) definitions), followed by the didactic/educational \((n=40)\) and the cognitive approach \((n=34)\). However, the carefully indicated shift towards the educational/didactic domain could be rooted in the growing interest in the practical and deliberate applications of IC, especially in FL teaching and learning (see, e.g., Meißner 2017).\(^{38}\) Thus, one may preliminarily conclude that the current main focus of IC research might lie on educational purposes to initiate intercomprehensive experiences.\(^{39}\)

In sum, it becomes clear that researchers do not have a common understanding of the term. Still, for this dissertation the term IC still needs to be contextualised in more detail.

### 3.3 Condensing the terminology

As outlined in section 3.2 and especially 3.2.5, the terminology in RM research is not clear-cut. This might be rooted in the overarching categories that are used to find an appropriate definition of the terminology. Hence, the author of this thesis suggests another categorisation system that might shed a different light on the presented terminology.

Each definition presented in Section 3.2 mentions language skills (reading, writing, speaking and listening) when defining these RM-related terms. Nevertheless, RM terminology has never been defined or categorised from the language skills perspective. Hence, the author of this thesis analysed the presented terminology. The resulting categorisation\(^{40}\) aims to illustrate whether certain terms in RM research are more frequently mentioned in connection with a specific language skill. Here, the author reviewed the various terms presented in Section 3.2 and categorised them according to the particular language skill in connection with which the term is most clearly used; statements where the reference to a specific language skill is only \emph{implicit} were not

\(^{38}\) This is, i.e., exemplified through the heightened interest in the academic creation of multilingual teaching designs, see Section 8.2.3.

\(^{39}\) Table 3 could be expanded to include further researchers, e.g. Allgäuer-Hackl and Jessner (2013), Busch (2013), Hufeisen (2016) or Hilbe et al. (2017), to name a few.

\(^{40}\) The author of this thesis followed content analysis procedures according to Mayring (2007).
taken into consideration (e.g. ten Thije 2013 describes LaRa with the term *receptive skills*. Hence, he implicitly includes reading, yet his definition mainly refers to “a hearer”. Thus, his definition of LaRa was not included for this categorisation.). Figure 9 presents the attempt to condense the terminology according to the given perspective.

The following paragraph will describe Figure 9 in more detail. Whilst only one term (IC) seems to be used in connection with an explicit mention of reading, the number of terms rises the more communicative a skill becomes. Moreover, Figure 9 illustrates that there is a certain indecisiveness among researchers when using RM terminology in connection with certain skills. For example, the term IC is used for each language skill, whereas LaRa, RM and SC are used for the aural/oral skills listening and speaking but not for the written skills reading and writing. In short, due to the inconsistent and synonymous use of terms in RM research, there is a terminological hotchpotch.

Still, the terminology for this dissertation needs to be specified further. The receptive skills of reading and listening are of greater concern for this dissertation and, therefore, need further explanation concerning distinguishable terminology. As Figure 9 shows, only the term is ever used in connection with reading. Concerning listening, four terms can be found: IC, LaRa, RM and SC. The following section will categorise these terms in detail.

### 3.3.1 Condensing the terminology further: focussing receptive skills

As the research project at hand focuses on reading, the following part will have a look at IC from the context of receptive skills. This part will be an extension of what has already been presented in the previous section.
Listening and reading follow similar principles concerning comprehension processes (for details see Buchweitz et al. 2009). Thus, to clearly determine the specific RM terminology, the skills listening and reading will be discussed. In Section 3.3, Figure 9 presented which terms are used in scientific discourses. Now, a more detailed figure that focuses on the absence of a communication partner will present readers with a) a possible umbrella term for RM research and b) more specified terminology that is of importance in the course of this thesis. In other words, the terms will be discussed as they apply to situations where there is no (direct) interaction between language users present. Concerning b), the issue of text mediality will be of concern, as it seems to be a blind spot in RM definition attempts and its accompanying terminological diversity.

As is visible in Figure 10, the author suggests using RM as an umbrella term, the reason being that the term RM consists of two parts that carry a specific meaning in itself:

- **receptive** actually stresses both of the receptive skills, that is listening and reading, equally. This RM definition approach does not necessarily include a communicative context with a face-to-face communication partner.
- **multilingualism** underlines the concept of the unknown, foreign, related or additional language which a language user might be confronted with. Hence, it seems to be an acceptable term for RM listening and reading research.

Stemming from the suggested umbrella term, the next branches are the skills listening and reading. In the context of the given literature and illustrated in Figure 9 in part 3.3, there seems to be a tendency to use the term LaRa for oral domains. Yet, can this

<table>
<thead>
<tr>
<th>Umbrella Term</th>
<th>RM</th>
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<td>Skill</td>
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<td>Term</td>
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<td>LaRa</td>
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<td>IC</td>
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<tr>
<td>Mediality</td>
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<td>mono-dimensional</td>
<td>bi-/multi-dimensional</td>
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<tr>
<td>mono-dimensional</td>
<td>bi-/multi-dimensional</td>
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**Figure 10: Suggested use of terminology for this thesis. Focus: absence of communication partner (visualisation by DU)**

As is visible in Figure 10, the author suggests using RM as an umbrella term, the reason being that the term RM consists of two parts that carry a specific meaning in itself:

- **receptive** actually stresses both of the receptive skills, that is listening and reading, equally. This RM definition approach does not necessarily include a communicative context with a face-to-face communication partner.
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tendency be further proven? The author of this thesis wants to comment that none of
the researchers, as seen in Section 3.2.2, use an etymological approach to defining LaRa.
Thus analysing LaRa etymologically might shed light on the terminological use of LaRa.
LaRa consists of two parts: lingua, Latin with the English translation tongue (so spoken
utterances, note by DU), and receptio, Latin with the English translation receiving or
reception (Marchant and Charles 1953, 320, 469, 470.) Combining the two etymological
roots, LaRa holds the notion of spoken texts that an individual perceives. Hence, this
suggests that the term could be more appropriate for listening domains. Additionally, in
RM research LaRa is not used in the context of reading (see section 3.2.2). Due to this
this emphasises, LaRa should be assigned to listening solely. In contrast, the term IC is
used more generically. Thus, it could be used for both skills, listening and reading.
Nevertheless, as it is the only term used for reading when a communication partner is
absent, IC will here be used to designate only this situation. Summarising, the author of
this thesis suggests that one should lean towards the following terminology:

- IC for RM reading research and
- LaRa for RM listening research.41

However, one notion still needs to be addressed in order to complete the terminological
gaps: researchers so far have neglected the mediality (or also called modality) of a text
(Bublitz 2008, 260).42 Before elaborating this issue further, one needs to start with
the term text. A text is spoken or written (closed) language user’s unit which is shaped
by the respective language’s grammar (Coseriu 1981, 5). Rephrased, this basic definition
solely underlines the presence of a text which is coded in (written or spoken) symbols.
Nevertheless, further (informational) resources can accompany a text. To be more
precise, a text can be modified by adding visual elements (e.g. written text + picture;
spoken text + visual/film input). Such elements change an individual’s text perception:
visual signs carry specific meanings which target an individual’s prior knowledge
(Gripsrud 2006, 12-15). More exactly, visuals target (cultural) knowledge to create, e.g.
an immediate (established) connotation with a text to influence and/or sensitise a
recipient (ibid.). In short, a text has the possibility to consist of one, two or several layers
(Bublitz 2008, 260ff.). Following Bublitz (ibid.), a written text can be

41 The author suggests that SC should be used for RM face-to-face communicative contexts. In other words,
SC could be more suitable to describe multilingual communication between two individuals that are
present in the same moment.
43 See section 3.4 for an overview of studies. Section 3.4 shows that there exists an incongruent use of text
mediality in research methods.
• monodimensional (consisting of typographical elements only),
• bidimensional (consisting of typographical elements plus one other resource, e.g. a picture) or
• multidimensional (consisting of typographical elements plus two or more resources, e.g. motion pictures plus sound, hyperlinks, additional references, etc. up to a conversation partner who may offer supportive explanations).

So far, RM research has not specifically paid attention to this issue. In studies, test takers were confronted with mono-, bi- or even multidimensional texts – a difference which could have an influence on a text’s perception. In other words, bi- and multidimensional text approaches in RM research may prime results because an individual might activate additional cultural knowledge as well as linguistic resources (see Gripsrud 2006). For example, additional dimensions (e.g. a picture) might be used as a scaffold or springboard to facilitated understanding because a language user may access additional general knowledge with the help of this dimension that she would not have without it.

For this purpose this dissertation, the author decided to confront his participants with a monodimensional text, where the participants did not have further pieces of information or other media that might facilitate understanding or prime results. The thought process behind this decision is that the participants are more likely to mainly draw on their linguistic knowledge and not their cultural knowledge to complete the tasks (see Part II). The author assumes that, subsequently, the results might be more solid to examine the imposed hypotheses (see Part II). Finally, the author of this thesis wants to comment that text mediality should be taken into account in other studies as well. Additional resources might have an influence on the participants’ task performance and results and. Thus, bi- and multidimensionality might even lead to inaccurate data.

In conclusion, this section aimed to give readers a clearer view of how the terms IC and LaRa should be understood in the context of this thesis. Furthermore, it showed that the issue of text mediality seems to be an aspect worth considering in RM research. The offered categorisation should be seen as a first attempt to include mediality in RM research because it could be a crucial factor concerning text comprehension.

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44 See section 3.4.
45 Nevertheless, this issue still needs to be determined as predictors through regression calculations and, therefore, text medialities represent a RM research desideratum.
3.4 Literature Review of Intercomprehension Studies

The following literature review will give an overview of studies focusing on IC and LaRa46. The main focus here is to show differences of mono-/bi- versus multilingual participants’ performances on metalinguistic and RM test formats. This focus was chosen to compare the studies with this dissertation’s results. Thus, the purpose of this literature review is to

a) identify previous studies and research approaches to IC and LaRa,

b) place each study into the context of multilingual theory, especially focusing on the concepts of hypothesised grammar (see section 2.2.5) and the M-Factor (see section 2.2.2),

c) illustrate the relationship between the presented studies and this dissertation and, finally,

d) point at further RM research desiderata.

The scope of this literature review will include studies that centre on the listening and reading of unknown languages, foreign languages or language varieties. The reason to include RM listening and even language variety studies for this literature review is that these studies use similar research approaches and research questions to RM reading studies, meaning that both RM listening and reading studies are of interest for this dissertation. To undertake this review, journal articles, books, book chapters and theses that made IC and LaRa research a topic were included.

Each review will summarise the study, including aspects such as research hypotheses, participants, research methodology, text mediality and results. The last section on each study will contextualise the study within multilingual research and in the context of the hypotheses for this dissertation – if it has not already been clearly stated by the researchers. The author of this thesis decided to use the participants’ age as the overarching categories: Hence, the following studies are divided into pre- and primary school (3.4.1), secondary school (3.4.2) and higher education and other context (3.4.3). Within these categories the studies will be presented in alphabetical order, except where studies that are very similar to one another and were clustered together. Finally, Section 3.4.4 will offer a comprehensive summary and, furthermore, a qualitative meta-

46 Terms used like in original studies. However, comments to relate the studies with the REM-Study will be offered.
analysis of the presented studies. This chapter concludes with the aim to show readers
the research gap this dissertation project will fill.

3.4.1 Pre- and Primary School
Gooskens, van Bezooijen, and Van Heuven (2015) carried out a study to gain insights
regarding phonetic-phonological factors which are of importance in Dutch-German
intelligibility. Their study aimed at finding out why Dutch speakers understand German
more easily than vice versa. The researchers analysed data of 28 Dutch and 34 German
speakers (9-12 years, \(M=10.3\)): the participants did not speak any other second
language at home and did not have contact with any foreign language besides English in
educational contexts. Furthermore, the participants had no negative attitudes towards
the respective unknown language in the study. First, the participants filled in a written
language background questionnaire. Second, the participants completed the auditory
intelligibility test, which consisted of two parts, the items in both of which were
monodimensional. In the first part, participants listened to a recording containing 40
monodimensional isolated/de-contextualised words \(^{47}\) (in Dutch for the German-
speaking participants and vice versa), and were asked to write down their translation of
each item. To be more precise, a test taker listened to a word, e.g. \textit{Haus} (house) and was
asked to write down the translations \textit{huis}. The presented words were highly frequent
Dutch and German cognates which were recorded by a bilingual speaker. In the second
part, the participants heard the same series of isolated stimuli again, but this time in
their L1 and had to write down the word. The purpose of part two was to find out if the
children were familiar with the presented words. Furthermore, if an item seemed to
evoke the wrong response, the item was taken out of the analysis. The results show that
the Dutch participants performed significantly better than the German participants:
“there are more cognate pairs where the Dutch subjects performed better than the other
way around and the size of the asymmetry is generally larger for the Dutch subjects than
for the German subjects” (ibid., 274). Put differently, the Dutch participants were able
to give more accurate translations than the German participants. One of the reasons may
be that the Dutch children are more regularly confronted with English in their daily
surroundings (e.g. TV subtitles). In regards to the M-Factor, the Dutch participants could

\(^{47}\) The researchers chose these 40 cognates from the CELEX databases for Dutch and German.
Furthermore, the chosen cognates were high frequency words.
be more proficient in translating German-Dutch cognates due to the likelihood of heightened English language exposure in their daily surroundings. To be more precise, the Dutch participants are more likely to have more successful monitoring and decoding competences (see DMM and the EMM, Section 2.2.2). Rephrased, their heightened second language repertoire might positively influence unknown German language encounters. Nevertheless, the researchers do not include the theoretical discussion of multilingual theories in their article. At the end, Gooskens, van Bezooijen, and Van Heuven summarise that phonetic details seem to play a crucial role in intelligibility of cognate words. Nevertheless, their study does not allow them to create concrete predictors “because each word pair seems to have its own constellation of factors affecting intelligibility, where one factor may overrule another factor” (ibid., 279).

Schüppert and Gooskens (2011a, 2011b) conducted a study with 19 monolingual Danish-speaking and 26 monolingual Swedish-speaking three to six-years-old preschoolers. The two groups were tested in their comprehension abilities of the other respective Germanic language. Furthermore, 21 monolingual Danish adults (17-20, M=18.6) and 19 monolingual Swedish adults (18-19, M=18.1) were tested with the same procedure to determine whether age had a significant effect on the performance. The researchers were interested in the participants’ a) intelligibility and b) reaction time.

Test procedure: The participants sat in front of a computer and carried out a stimulus-response experiment: they heard a stimulus in the unknown language and were asked to touch the picture (choice of four) that fitted the presented words (= picture pointing tasks). Therefore, the test stimulus was monodimensional. Each participant was presented with 50 words out of a corpus of 200 words which all had a medium to high frequency. These 50 words were then presented in random order. The results show that the young adults identified more words correctly and had shorter reaction times than the children, which indicates that older participants are more likely to identify linguistic cues with greater success (e.g. foreign language or dialect knowledge). Hence, linguistic experience gained by age can be interpreted as a factor for heightened success (see Factor Model). Interestingly, while the adult Danish participants significantly outperformed their Swedish counterparts in terms of reaction time, no significant difference was found in terms of correctly identified items between the two groups of children. Furthermore, the researchers were able to determine that participants’

Nota bene: The adult participants did have foreign language experiences (e.g. occasional visits to neighbouring country); however, were not competent language users in the other language.
language attitude towards the target language (Danish or Swedish) did not have a predictive influence on word recognition performances of closely related languages. This slightly contradicts with the M-Factor assumptions, as attitude is seen as a crucial factor in multilingual language learning, and, by extension, in the confrontation with unknown languages. Furthermore, according to biotic system theory negative attitudes should have an influence on the language users’ performance (see section 2.2.1, Aronin and Ó Laoire 2004), but it should be pointed out that the researchers do not discuss these theoretical approaches in their article. Hence, they do not base their assumptions on multilingual theory. Summarising concerning the presented target group, age and (linguistic) experience can be described as predictors for higher success in such testing procedures.

3.4.2 Secondary School

Dahm (2015) carried out a quasi-experimental study collecting qualitative and quantitative data from 136 pupils (only the 88 monolinguals were included for the study) aged 12 to 13 (Limousin and Aquitaine, France) who were native speakers of French and had had English as a school subject (first foreign language) for four years. Dahm was interest in finding out a) which strategies the participants use to decode a text in an unknown language and b) which strategies are transferable under which conditions. Dahm confronted her participants with three monodimensional texts in three different languages (A1 level texts according to the CEFR): Dutch (due to the similarities with English), Italian (due to the similarities with French) and Finnish (due to its having no immediate similarities with either). She asked her participants to work on the following questions: “What do you understand?” and “Explain how you proceed to understand this piece of information” (ibid., position 1534). The time frame for each text was 50 minutes including single work, group work and a final discussion led by the class teacher49. In other words, Dahm did no collect the individual’s thoughts but group sheet results. Here one needs to comment that the group work turns the participants’ performances into multidimensional medialities: in other words, further resources besides the given texts were potentially available for the participants. The qualitative data consists of the group sheets’ analyses and teacher’s discussions, and the quantitative data consists of the quantified qualitative data concerning the use of

49 Nota: Dahm follows the stages of the Lesesozialisationsmodell, see Section 4.1.1.
strategies (content analysis procedures). Dahm’s results show that the participants mainly relied on comparison and translation strategies, whereas inferencing and deduction seem to be more difficult to access for this target group. Concerning bridge languages used for the texts, the pupils mainly used French for the Finnish text, which supports the L1 factor according to Rothman, Iverson, and Judy (2010) (= an individual’s preferential L1 use when confronted with an unknown language). Dahm’s results on the Italian and Dutch text reveal that the pupils followed the hypothesis of psychotypology (Kellerman 1979), meaning they tended to use French as a bridge language in Italian and English for Dutch. Rephrased, they used (linguistic) knowledge of related languages to approach the text in the unknown language. Finally, Dahm underlines that the participants were able to compare their existing linguistic resources with the unknown. Thus, the participants were able to perform metacognitive strategies to fulfil the tasks. Proof for the existing multilingual models is therefore given (e.g., DMM, Factor Model, Role-Function model or MPM).

Gooskens, Kürschner, and van Bezooijen (2011) investigated the intelligibility of spoken Low and Standard German for Dutch native speakers. In their computer-based experiment Dutch subjects listened to a monodimensional block of standard German or Low German isolated nouns and were asked to translate these words into Dutch. The full corpus consisted of 2575 highly frequent Dutch words which were translated into German. In order to make the experiment not too arduous, participants only listened to a quarter of a smaller corpus comprising 384 Standard German and 369 Low German (cognate and not cognate) words. Rephrased, these blocks consisted of approximately 92-96 words that were randomly selected for each participant from two corpora about four times that size; these corpora were the translations of frequent Dutch words into the two German varieties that included cognate and non-cognate words. Overall, 144 Dutch high school pupils participated in the study (age: 15-18); 20 of them (M=16.5) performed the task in Standard German and 124 (M=16.3) in Low German. Both groups had formal education in German (Standard German group 3.4 years; Low German group 3.7 years). The researchers assume that pupils had informal contact with German to some sort or degree due to the geographical closeness to the German border. Their results show that the pupils had fewer problems in understanding Standard German than Low German words, even though Low German actually has a smaller linguistic and typological distance to Dutch. The researchers point at the exposure to Standard German (through lessons at school and informal exposure via media) as a main reason
for these results. Regarding multilingual theory, their study contributes that receptive competences of a standard version of a language does not guarantee an (equally good) understanding of a variety of that language. Hence, varieties might be interpreted as language systems within their own rights. Still, these assumptions are far from being confirmed. The authors further analysed whether Dutch pupils who lived in the areas bordering Germany outperformed those from non-bordering areas in their translation of Low German words.\footnote{The paper does not explicitly state whether these were the same participants as above or different ones.} For this study they used the same testing procedures as mentioned above. 124 pupils aged 15-19 (97 from border-areas, $M=16.5$, 27 from non-border areas, $M=16.1$) participated in the study, though only those 65 of the 97 from the border region who said they knew the local dialect were included in the analysis. The researchers found out that the correlation between the lexical distance between Low German and the Dutch border dialect and the intelligibility scores of the border group was higher ($r=.54$, $p<.01$) than the correlation between the lexical distance between Low German and Standard Dutch and the intelligibility of the non-border group ($r=-.50$, $p<.01$). (ibid., 23)

Their results show that the border group was able to translate the presented words with higher success. This might lead to the conclusion that the knowledge of standard Dutch plus a Dutch variety heightens the likelihood of comprehending Low German with greater success. To be more precise, further reasons might be the linguistic similarities, higher language awareness and/or more frequent exposure to German. Hence, aspects of the M-Factor can be determined, although the participants were not confronted with a standardised language system.

Gooskens and Kürschner (2009) carried out an internet-based experiment where they confronted 92 Dutch and 73 Danish high school pupils (age 16-19) with 369 Low German words. The groups were divided into border- and non-border-Germany groups. First, the researchers hypothesised that subjects from border areas should have higher results in understanding Low German than those from non-border areas due to the higher linguistic closeness of Low German to their own respective language variety. Second, the researchers hypothesised that due to the linguistic closeness factor the Dutch border participants would outperform the Danish border participants. From a theoretical point of view, the border participants should have higher language awareness and multilingual awareness skills due to the diverse linguistic exposure (M-Factor, Factor Model, Biotic System). The testing procedure was identical to the study presented above (see Gooskens, Kürschner, and van Bezooijen 2011), though for this
experiment only Low German word blocks were used. Gooskens and Kürschner's results show that the Dutch border group significantly outperformed the Dutch non-border group, but that this was not the case between the Danish border and non-border groups. Since no border-effect was observed from the Danish border group, the second hypothesis was also proven acceptable. Their results show that there still exists a positive tendency of the intelligible relationship between North-Eastern Dutch and Low German and, although a political border is at hand, the dialect continuum overcomes this border. Nevertheless, these results have to be taken with a grain of salt concerning multilingual theory: The exposure to varieties does not guarantee the development of multilingual competences in the first place as mentioned, for example, in another study by Gooskens and Heeringa (2014).

Lambelet and Mauron (2017) performed a quantitative study in Switzerland on receptive multilingualism with the focus on how well participants understand a text in an unfamiliar, related language (Italian). They collected data via self-reported questionnaires on personality traits, based on the NEO (see Costa and McCrae 1985), linguistic factors (self-reported skills in all of the languages, self-reported skills in Romance languages, attitudes towards foreign language learning) and other general factors (e.g. school level, general interest in history, interest in the task's theme) in order to find correlations between such factors and the success on the receptive reading test. The 181 participants aged 13-15 participated in the study (language background: German first language, French first foreign language followed by English). All the participants attended the same school, though in different streams:

1. 74 pupils visited prégymnasial school level (attended by pupils who want to continue to university)
2. 61 pupils visited general school level (attended by pupils who want to enter vocational school or complete an apprenticeship)
3. 45 pupils visited exigencies de base school level (attended by pupils who want to enter the working world)

The pupils were confronted with an article from an Italian Swiss newspaper which presented information on the Gotthard tunnel. No specification on the use of additional pictures or length of the text is given, so this author assumes that the text is monodimensional. The pupils were asked to complete four reading comprehension exercises (24 items) including open, true or false, multiple-choice and global comprehension tasks. The students had 25 minutes to fill in the language background
test and 40-45 minutes for the task on receptive multilingualism. The data collection was carried out during history lessons. The results show that proficiency in related languages predicted neither success in the task nor task appreciation. This difference possible [sic] lies in the tasks themselves. In fact, in previous studies, the focus was principally on guessing cognates (i.e. transparent or semitransparent isolated words). In our study, by contrast, participants were asked to perform a complex text-decoding task that required the activation of linguistic, academic, and historical knowledge in addition to reading-related strategies. (ibid., 864)

Rephrased, the self-reported linguistic as well as the personality factors did not contribute to the study’s results. Still, the linguistic factor attitude towards language learning in terms of appreciation had a significant predictive value: “the more a participant likes to learn foreign languages, the more they enjoy reading a text in an unfamiliar language” (ibid., 862). Additionally, two exogenous variables had a significant predictive value on the task score: first, school level, and, second, the interest in the theme. More precisely, participants visiting prégymnasial school level were more likely to be successful in the completion of the tasks. Additionally, if a participant had an interest in the theme, success on the tasks was more likely. Finally, the researchers point to the issue that high self-reported linguistic factors do not have a predictive outcome on the results. The author of this thesis wants to comment that their data might be primed due to the fact that the topic “Gotthard tunnel” was dealt in the history class before. In other words, since the pupils were all already familiar with the topic, any positive effects of multilingualism may not have become visible, which may have been different with a text on an unfamiliar topic. Summarising, it is of interest that the factor self-reported attitudes towards language learning and the participants’ educational background had a significant predictive value on the results.

Rauch, Naumann, and Jude (2012) examined 299 ninth-graders from 14 schools in Hamburg on their metalinguistic competences. 158 students were German monolingual and 141 were speakers of Turkish and German (no age means given, the author assumes that the participants are between 14 and 15, according to standard age of schooling in Germany). All students had 4.5 years of English language instruction at school. The aim of the study was to find out whether bilingual students have an advantage in metalinguistic tasks or not. Here, the researchers directly refer to multilingual models (DMM, Factor Model, Role-Function Model, see Chapter 2). In order to approach the research question, the researchers carried out German and English reading proficiency tests as well as Turkish proficiency tests for the bilingual students. Furthermore, the Turkish-German bilingual pupils were classified in more detail (fully/partially biliterate)
to make clearer distinctions in their calculations. To measure metalinguistic awareness the researchers used the Language Awareness Test (LAT) by Fehling (2008), which asked the participants to complete word-building tasks in Swedish and Dutch. Only 129 completed the LAT (67 bilingual and 62 monolingual participants)\(^{51}\). Overall, monodimensional text approaches were used. The results show that there was significant evidence that proficient bilingual readers had an advantage in L3 (English) reading. The fully biliterate pupils even outperformed the partially biliterate pupils as well as monolingual pupils. The monolingual peers, however, outperformed partial biliterates. On the metalinguistic task, fully biliterates outperformed the partial biliterates and monolingual pupils. Nonetheless, but there was no difference found when comparing the partial biliterates to the monolingual pupils. All in all, the research team found support that full biliteracy has a positive impact on metalinguistic awareness and L3 English reading; however, these effects are not visible for partial biliterates. Finally, the researchers calculated through stepwise regressions “that positive effects of full biliteracy on L3 reading proficiency emerge in part because biliteracy positively impacts metalinguistic awareness, which in turn is positively associated with L3 reading.” (ibid., 141) However, positive impacts are weakened when including the factor metalinguistic awareness to the regression model. The researchers conclude that the migrational background should be utilised and encouraged. In other words, bilingualism can only positively contribute to English L3 reading and metalinguistic awareness if it is on a high level.

Schüppert, Haug, and Gooskens (2015) investigated whether language attitudes have an influence on Germanic listening IC. 86 Danish-speaking pupils (mean age 12.0) and 68 Swedish speaker pupils (mean age 11.9) from first to ninth grade participated in this study. The participants carried out a digital picture-pointing task while listening to the respective unknown language (Swedish or Danish). During the task the participants were asked to simultaneously fill out a rating questionnaire. It was introduced to describe their feelings towards the audible input (Likert scale was used, e.g., strange/normal, poor/rich). The presented stimuli were isolated words without specific contexts (monodimensional approach). The researchers discovered that negative attitudes towards the unknown language grow with age, though no statistically significant correlation between comprehension and attitudes was found. Overall, the

\(^{51}\)Thus, the results on the LAT only refer to these 129 participants. The data on reading comprehension includes 299 participants.
Danish pupils’ attitudes were more positive towards Swedish than vice versa. Thus, the results do not indicate that attitudes had a predictive value in regards to multilingualism and/or unknown language encounters as, i.e., assumed by the M-Factor, Biotic System and Factor Model.

Spellerberg (2016) focussed in her quantitative study on whether Danish bilingual pupils aged 14-16 (n=113, 8th and 9th form) outperform their monolingual peers (n=219) in metalinguistic test procedure (both groups had had four to five years formal education in English). The participants were confronted with the Metalinguistic Awareness Test by Pinto, Titone, and Russo (1999). This test uses, for example, comprehension, grammatical function or acceptability tasks in order to collect data on metalinguistic awareness. Of interest for this dissertation is the following result: Spellerberg’s results show no significant advantages concerning the metalinguistic awareness between the two groups. In a nutshell, bilinguals did not show higher levels of metalinguistic awareness as expected by multilingual theory.

3.4.3 Higher Education and Other Contexts

Berthele (2011) carried out two studies with A) 183 students of the German department of Zurich, Marburg and Fribourg and B) 150 students of psychology department at Fribourg University (no age means are given in the article). Both groups were confronted with a previously unknown language (monodimensional approach): Group A translated 17 Dutch words (with context), carried out seven reading comprehension tasks on a Dutch text, and translated 29 Danish/Swedish verbs (without context). Group B carried out the same procedure with the slight change that for the first two tasks Romontsch Sursilvan (a dialect of Romansh, a Romance minority language spoken in parts of Switzerland) and for task 3 Romanian was used. The studies main aim was to find out if individuals with multilingual profiles have a more rapid lexical recognition of unknown languages and what other aspects may influence these recognition processes. Before the participants carried out the study, they completed a language background questionnaire and a self-assessment of their language proficiencies. The students had a total of 30 minutes to carry out the tasks. Berthele’s results indicate that the more

Nota: “Bilingual pupils in the Danish school system are defined as children who have a mother tongue other than Danish and who do not learn Danish until they come into contact with the surrounding community or through the teaching in school.” (ibid., 37).
“lingual” a subject was, the higher was the possibility of successful inferring. To be
more precise, the results show that participants with high self-reported language
proficiencies in at least two foreign languages performed better than participants with
low self-reported level proficiencies. Moreover, “multilinguals with high proficiency in
two languages that are close to the target languages perform better than all other
groups” (ibid., 199). Berthele (ibid.) discusses these results in the context of the M-
Factor. The discussion points at more successful inferencing competences of
multilinguals, thus, the study offers results to support the M-Factor’s theoretical
background. Still, in a follow-up study Berthele (ibid.) focuses on Germanic verb targets
without context in 163 participants (aged 13-35) who speak a Swiss dialect of German
as their first language. Some of the participants were bilingual (e.g. heritage languages
and/or Romansh; nevertheless, no details are given in the article). First, the participants
were asked to complete a language background questionnaire and “3 modules of
Meara’s (2005) language aptitude tests (called Llama B, D and E: word learning, sound
recognition, sound-symbol correspondence).” The items were 28 high frequency and
cognate Danish and Swedish verbs and, thus, comprehensible through German and
English. Half of the stimuli were presented in written and the other half in aural form.
The stepwise regression calculations show that age, a language user’s vocabulary
learning ability, English language proficiency and the number of learned/acquired
languages significantly contribute to the outcome of the results. In other words, these
factors are significant predictors regarding this target group and IC performances. In
short, the older one becomes, the better one’s competences to decode a text in an
unknown language become. Hence, not only does multilingualism positively contribute
to word recognition processes, age and language competences of English in the context
of Germanic IC/LaRa as well. Concluding, Berthele (ibid., 198) states

that the ability to draw inferences increases with age, that there is at least one component of
language aptitude that seems to interact with this ability, and that the multilingual repertoire, and
most prominently the proficiency in English, contributes significantly to successful inferencing.

Golubovic and Gooskens (2017) carried out an experimental study where they tested
listening comprehension between three West Slavic (Czech, Slovak and Polish) and
three South Slavic (Croatian, Slovene and Bulgarian) languages. The study’s main aim
was to find out which Slavic languages can be comprehended best by which Slavic
speakers. Furthermore, the researchers analysed the reliability and suitability of the
research methods. Golubovic and Gooskens used computer-based written or audio
The researchers' study focussed on young adults (age span 18-30 years, $M=23$) who spoke one of the Slavic languages mentioned above. In total, 5975 subjects took part in the study. Of relevance for this dissertation is that their results indicate the following: aspects such as relatedness between languages positively contribute to mutual understanding.\textsuperscript{53} Nevertheless, the researchers do not discuss their results using multilingual theory. Furthermore, the researchers evaluated the test formats and came to the conclusion that “the word translation task and the cloze test give very similar results, while the results of the picture task are somewhat unreliable” (ibid.).

Gooskens et al. (2017) carried out a large-scale web-based investigation with a focus on the mutual intelligibility of 16 related spoken languages within the Germanic, Slavic and Romance languages in Europe: 1833 subjects participated in the study (426 Germanic, 581 Romance and 826 Slavic language speakers, age 18-33 years, no means given). The researchers wanted to shed light on RM of closely related languages within Germanic, Slavic and Romance languages. Furthermore, they wanted to find out if a certain language family shows higher potential in RM. First, the subjects carried out a language background questionnaire and then a listening cloze-test in an unknown related language (e.g. German native speakers listened to Dutch). Overall, 64 tests were used (4 texts in 16 different languages). The researchers calculated that a listener needs to be able to understand 40\% of a listening text in an unknown language in order to comprehend the text. Furthermore, Gooskens et al. analysed whether there were high correlations between language distances and test results. Positive correlations were observed in Germanic languages; still, no significant correlations were determined for the Romance languages. Concerning the Slavic languages,

\begin{quote}
no difference whether the tree distances are correlated with the first or the second data set since very few listeners were excluded from the second data set. Both correlations are very high, which shows that the present communicative situation in the Slavic area is well reflected in the Slavic language family tree. (ibid., 19-20)
\end{quote}

This study does not include models of multilingualism. However connecting the presented results to the theoretical part of this dissertation, the results show that LaRa is possible due to the relatedness factor. In other words, successful decoding RM processes might be facilitated if languages are closely related. Furthermore, a language

\textsuperscript{53} Zybatow (2003) promotes such Slavic RM studies because these are relatively rare. Hence, further research especially focusing on multilingual theory is needed.
user needs to have at least a 40% basis of comprehension in a related language in order to understand a text.

Jessner (online) and her team carried out a longitudinal study called LAILA, short for Language Awareness in Language Attriters. The main aim was to find out what “happens to multilingual people’s skills in their languages after they stop learning them, and maybe stop using one or the other altogether [sic]” (ibid.). Furthermore, the research team was interested which skills were retrained and which “qualities multilinguals acquire and do not change even if their language skills do.” Their participants were multilingual young adults from Tyrol, Austria, who were tested before their school-leaving exam. All of them had had learned two foreign languages (English plus a second foreign language, usually Italian or French) at school. These participants were then re-tested 12 to 24 months later. The testing procedure included language-based tests, language background questionnaires, computer-based puzzles and speaking tasks (ibid.). No further specifications concerning the methodology, data resources and participants are available, and, so far, no official results of the longitudinal study have been published. However, Pargger (2013), a former LAILA-member, wrote her thesis based on LAILA-data’s test time 1. The aim was to find out if pupils who had learned Latin show greater metalinguistic awareness in comparison with pupils who had not learned Latin. This assumption is based on the DMM/M-Factor and should prove that even a dead language like Latin positively contributes to a language user’s multilingual competences. Pargger (ibid.) compared 30 pupils between aged 17 and 19 with English and Italian as their foreign languages with 20 pupils who additionally learned Latin at school. Of interest for this dissertation, Pargger retrieved her data from a LAILA-task which was not described online: the LAILA-participants were confronted with a bidimensional text (text plus picture) about a hotel in an unknown language (Romanian). The participants were asked to read through the text and answer global and detailed reading tasks while carrying out a think-aloud protocol. Pargger’s qualitative analysis indicates that learners of Latin show higher frequencies in the number crosslinguistic switches. In other words, the Latin participants were able to access lexical meaning with greater success through using German, English, Italian and Latin. Additionally, the Latin learners showed more elaborative approaches in their text

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54 For a short interview on the attrition results please read https://wwwuibkacat/newsroom/verbindende-sprachen.html.de
55 Pargger’s results reflect Müller-Lancé’s (2006), see below.
analysis than the participants without Latin. Thus, Pargger’s results present that the more competences a multilingual has in diverse languages, the higher is her linguistic repertoire for lexical inferencing. Hence, these results offer proof of the positive effects of multilingual language learning as proposed with the DMM or even the MPM. As a final statement on the LAILA-project, the author of this thesis wants to point out that the longitudinal results on metalinguistic awareness changes over time are still unpublished. Still, these would be of considerable interest for RM research.

Marx (2011) carried out a quantitative study on Germanic IC with 73 German native university students (mean age = 23.9). The participants had learned English as a foreign language at school. The second most common foreign language was French (n=56). Some participants had learned up to six languages. Marx was interested to find out which unknown Germanic language (Danish, Icelandic, Dutch, Norwegian and Swedish) her participants would generally comprehend best. Furthermore, she was interested in whether multilinguals (users with competences in three or more languages) had an advantage in comparison with participants who had learned German (L1) and English (L2). The texts used were monodimensional. Each subject was presented with one of five parallel written texts in an unknown Germanic language (‘Pippi Longstocking’). The texts were distributed randomly. More specifically, “[e]ach language text was thus distributed to 15 subjects” (ibid., 473). However, 13 participants completed the Swedish text. The participants were asked to read the text and to work on diverse tasks (e.g. global reading, translation tasks German to target language and vice versa, or identifying grammatical structures). The participants had 30 minutes to complete the tasks. Marx’s results show that overall (global reading, lexis, syntax and lexo-syntax), Dutch was decoded with the greatest success in comparison with the other Germanic languages. One possible explanation for this result is that German and English are both West Germanic languages like Dutch is.\(^{56}\) Hence, the languages are related to one another and, thus, the typological closeness might facilitate comprehension processes. Furthermore of interest for this dissertation, concerning Marx’s research question if multilinguals had an advantage in comparison due to their heightened language awareness (M-Factor), Marx (ibid.) determined that the number of languages and the self-determined language

\(^{56}\) Concerning global understanding, participants understood Dutch, Swedish and Norwegian equally. However, Danish and Icelandic had significantly lower comprehension results. Concerning lexis, syntax and lexo-syntax, Dutch was significantly understood best in comparison with the other languages. For the full results of the other Germanic languages, see Marx’s (ibid.) discussion part.
level competences (determined through a 5-pointed Likert Scale) did not correlate with the success of inferencing. Thus, Marx's results could not find evidence for the M-Factor. Mieszkowska and Otwinowska-Kasztelanic (2015) carried out an empirical study with the aim to discover which processes are involved when multilingual language users were confronted with a text in an unknown Germanic language that was related to a foreign language the participants had learned in their past. The researchers assume that participants who had learned two Germanic languages would outperform those students who had learned German plus another Romance language due to the relatedness factor. The participants were 40 L1 Polish-speaking students (aged 21 to 30, M=23) of the Department of English Studies at Warsaw University, all of whom were proficient (C1 or higher) in their L2 English and had various L3-Ln combinations. The researchers divided them into three groups based on their L3-Ln: the Germanic group (n=11) had L3 German and/or L3/L4 Norwegian; the Romance group (n=12) had L3 French (10) and L4-Ln Spanish, Portuguese or Italian; the Mixed group had both Germanic and Romance languages in their L3-Ln. The participants were asked to fill in a semi-structured language learning experience questionnaire in English and to work on a monodimensional text in Danish. The main task was to translate the text to the best of their knowledge while performing a think aloud protocol. Furthermore, the researchers carried out a stimulated recall task: the participants were asked to judge upon their translation. Against the researchers’ hypothesis and of interest for this dissertation, the results show that the students in the Mixed group (with Germanic L3 and Romance languages) significantly outperformed those multilinguals that were in touch with solely Germanic languages. The researchers comment, however, that the Germanic language learners had lower competences in German L3 in comparison with the Mixed group. Thus, the lack in German L3 competences might inhibit higher task performance even though the typological closeness of two languages was given. Hence, it seems that language proficiencies do have an effect on IC even if a language is not closely related. Summarising, although typological distance plays a crucial role in the comprehension processes between languages, as suggested by Vanhove (2016) or Marx (2011), it did not came true for these participants. Furthermore, the Germanic group mainly retrieved information from English, their L2. This is of interest because it reflects Williams and Hammarberg’s (1998) assumptions of a language user's L2 status, namely being the first linguistic resource to approach unknown or foreign languages.
Möller (2011) conducted a study using qualitative and quantitative methods. Most of the participants (73 university students from two German departments in Bonn and Münster, age mean not given) had English as their L2 and some participants stated that they have receptive competences in other Germanic languages (e.g. Dutch) (ibid., 87). The participants were tested on whether they were able to understand cognate words of unknown Germanic language, namely Dutch. Here, Möller differentiates between words that were recognisable through phonology and/or graphology. Möller used free response and multiple-choice tasks. Concerning mediality, only monodimensional text-based media were used. For each of the 38 items the participants had 30 seconds. Additionally, the participants were asked to complete a language background questionnaire which covered self-reported competence levels in Germanic dialects, as well. Möller’s results show that the identification of a word is easy “when the correspondence between the differing segments is familiar from variation and alternation in the L1” (ibid., 1). In a nutshell, the more phonetic and/or graphic similarities with the German language were given, the participants were able to understand an item. Furthermore, Möller was able to indicate that similarities in phonology and articulation play a role concerning intuitive cognate recognition. Thus regarding multilingual theory, the phonetic closeness to one’s L1 seems to be a factor which positively influences IC. Still, Möller points out that the participants were not laypersons because they were university students of German language. Most of the participants already visited courses on Middle German and/or diachronic linguistics. Thus, the results might be influenced by specific linguistic knowledge (e.g. diphthongisation and/or High German consonant shift).

Müller-Lancé (2006, 58-9) reports on observations of a EUROCOMRom-course he attended at the Department for Romance Languages and Literatures at Frankfurt University. The EUROCOM-concept follows seven systematic “sieves” to approach and successfully understand a text in an unknown European language\textsuperscript{57}, and the study participants took part in a course which focussed on ITA (Romance Languages), though, Müller-Lancé does not describe whether mono- or multidimensional text approaches were used, nor the exact number and age of the participants. Müller-Lancé observed approximately 80 university students (ibid., 58, no details on language backgrounds and

\textsuperscript{57} See, for example, Hufeisen and Marx (2014) for a detailed EUROCOM-concept description.
Müller-Lancé comments that students in general were able to apply their multilingual knowledge to unknown language patterns. However, Müller-Lancé underlines that the older students (to be more precise, those attending the “Seniorenstudium”) would profit due to their wider vocabulary range and language learning duration. Finally, the author of this thesis wants to conclude that systematic applications of EUROCOM Rom and detailed data analysis would be research desiderata. Müller-Lancé (2006, 204ff.) carried out two studies for his Habilitation. In his first study, he analysed RM performances of 174 German participants from Freiburg University \((n=128, \text{overall mean age not clearly given})^59\), Volkshochschulen-courses \((n=29, \text{mean age 47.52}^60\) ) and 11th school form \((n=17, \text{mean age 17})\) with diverse linguistic backgrounds and language histories. Each group besides the pupil group consisted of subgroups (e.g. university students were part of different university courses, i.e. “Italienisch-Grundkurs” or “EUROCOM-Seminar”). All of them were German native speakers and had English, French or Latin as their L2. Müller-Lancé’s main aim was to find out what kind of strategies the participants use to bridge lexical gaps of a) interlingual terms (words that are likely to be recognised as cognates) and b) words that are etymologically close but are not recognisable as cognates immediately. In order to shed light on these research goals, first the participants were asked to fill in a language questionnaire. The second part of the study consisted of a monodimensional text (news paper articles) in a) Italian or b) Spanish, depending on which language the students had no previous knowledge of. The participants were asked to fulfil tasks on certain terms of the text that Müller-Lancé determined. The third part was a vocabulary test that asked the participants to translate isolated unknown words from either Italian or Spanish. Müller-Lancé describes that the terms used in this task might have transfer bases in other languages besides German (e.g. Italian la faccia; English the face). Hence, the interest was in finding out which languages are activated to access meaning. The study was carried out in 30 minutes. The qualitative interpretations show that especially participants with language skills in Latin performed better in inferencing the meanings

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58 The author of this thesis assumes that the participants were L1 German, L2 English and, due to the department the observations were held, a L3 Romance language.

59 Müller-Lancé (ibid. 206-8) gives mean age values of certain student sub-groups, e.g., “Grundkurs Spanisch” participants 21.7 years (ibid.-, 207). However, other details are vague formulated, e.g., “Grundkurs-Italiensch” participants “ca. 24 Jahre” (ibid., 206) or EUROCOM-Seminar participants “Die Angaben reichen von 19 bis 70 Jahren. Es ware unsinnig, hier einen Durchschnitt auszurechnen, da zwei völlig verschiedene Altersgruppen in diesem Seminar zusammentrafen” (ibid., 207).

60 Nota: Mean age not given by Müller-Lancé, however, calculated by the author through using the mean age data of the sub-groups.
of unknown words. The Latin participants were more successful in the vocabulary test as well. Furthermore, Romance natives used their L1 as a main resource to deduce meaning (see L1 factor theory, Rothman, Iverson, and Judy 2010). German L1 language users tended to use other (Romance) languages to decipher meaning. Müller-Lancé points out that the German L1 users rarely used their L1 as a resource (ibid., 266-267). Again here, these results can be seen in connection with Pargger (2013). Furthermore, Müller-Lancé's observations are in favour of the hypothesis of psychotypology (see Dahm 2015) and even lean towards the assumptions proposed with the Role Function Model (see Williams and Hammarberg 1998).

Müller-Lancé's second study (ibid., 270ff) confronted 21 university students, aged between 20-32, with the following tasks:

1. language background questionnaire
   (the questionnaire revealed that all of the participants are German native speakers and had learned different foreign languages to some sort or degree)

2. learner type questionnaire

3. translation task of a monodimensional Italian, Spanish or Catalan text (same texts Italian and Spanish texts as in the first study, the Catalan was added) while carrying out a think-aloud protocol.

4. listening comprehension task of a text in an unknown Romance language (Italian, Spanish and Catalan radio news broadcast)

5. an associative oral vocabulary test.

The test results show that 53% of the participants used lexical strategies to decipher the meaning of unknown words. Other strategies such as using the context or the knowledge of the world were rarely used (ibid., 436). Furthermore, language users that were familiar with further Romance languages used these as a main transfer basis. The mentioned results were observable in the translation task as well as in the listening comprehension task. These results show that a) multilingual language users seem to have a greater linguistic repertoire to fill gaps of (lexical) knowledge and b) there is a preference to focus on lexical elements when one is confronted with a text in an unknown language. Summing up in the light of multilingual theory, Müller-Lancé's results offer insights for the existence of the M-factor: linguistically experienced language users were able to outperform those with fewer experiences. Hence, their monitoring and deductive competences were heightened and they were therefore more successful in the task performance.
Muilwijk (2014) researched with her master thesis whether Italian native speakers are able to understand a Dutch text and what kind of languages are activated when L1 Italian language users is confronted with a Dutch text. Muilwijk's case study observed 10 subjects (L1 speakers of Italian aged 20 to 61 years), all of whom were either currently studying or possessed a university degree. All subjects had learned English as a foreign language at school and had further language learning experience in between one and five languages, including French, Spanish or Russian (no further details are given on language learning duration or exact languages number per participant). Muilwijk analysed two groups: Group A \((n=5)\) attended an IC course focussing on Romance languages and group B \((n=5)\) did not attend such a course.\(^{61}\) The study consisted of a questionnaire, a reading comprehension (Dutch newspaper article) and translation tasks. After the participants completed the reading tasks, the same Dutch text was read aloud to the participants by the researcher and the participants were asked to comment on their translation. The intention behind the read-aloud was to gain comments on the participants’ task fulfilment. Each task was to be fulfilled in Italian. After the study, the participants were interviewed on language decoding strategies. Muilwijk’s results show that group A was more successful in the translation task. Moreover, group A showed a richer repertoire of receptive reading skills to decipher meaning of unknown words. Interestingly, Muilwijk comments that group A was able to make more hypotheses concerning unknown grammatical structures. As a final observation, group A took less time to fulfil the tasks. Nevertheless, as mentioned in Muilwijk's thesis, this case study cannot be representative because very few people participated in the study; yet, tendencies concerning greater success of the intervention group are visible. Thus, the application of ITA does have an impact in task performance. Subsequently one may conclude that – as also shown, for example, by Morkötter (2016a and 2016b) or Marx (2007) – the systematic inclusion of ITA facilitates decoding of unknown languages. Hence, language users might have a head start and profit of these competences.

Vanhove and Berthele (2013) performed a study with 98 participants focussing on word recognition, specifically cognate guessing. The participants (age 16 to 72 median 30) were native speakers of a Swiss-German dialect and were not allowed to be linguists or to have any further language competences in other Germanic languages besides English. 70 participants had language learning experiences in other foreign languages besides

\(^{61}\)Nota: It is not mentioned whether the participants’ language repertoires were equally split over the two groups or not.
Germanic languages, for example, Italian, Spanish, Russian or Portuguese. The participants were confronted with a paper-and-pencil task which asked them to find a German translation for words from other Germanic languages (Danish, Frisian, Dutch and Swedish). These translation items were given in four lists, each consisting of 50 nouns from each language (total of 200 words). The participants had 15 minutes to translate each list. Hence, the researchers used a monodimensional approach to their research design. Overall, the majority of the given words were German cognates, followed by English and French. Each list included profile words, to be more precise, words that are not translatable without prior knowledge of the target language. Interestingly for this dissertation, the researchers’ results show that German and English were the main language resources used to decipher meaning of the Germanic unknown words. They specify their results through discussing that the orthographic distance did play an important role when guessing the meaning of cognates in a related language. Rephrased, the greater the orthographic overlap was calculated, the more often recognition was successful. Furthermore, words that were computed as high frequency cognates in German and English had greater success in recognition by the participants in comparison with German cognates alone.

In another study Vanhove and Berthele (2015b) carried out a similar study, yet the focus was on Swedish words. For this study the researchers focussed on identifying cognitive and linguistic factors which positively contribute to IC. 159 Swiss-German dialect speakers, aged 10 to 86 (mean age 40.3), were confronted with 45 written and 45 spoken isolated words (monodimensional text approach). The results show that the L1 vocabulary was the greatest predictor for word recognition. Furthermore, trends concerning age were discovered: Vanhove and Berthele were able to determine "an increase in the ability to correctly translate both written and spoken cognates from an unknown related language throughout childhood and adolescence" (ibid., 24). Thus, age seems to play a role because it often goes hand in hand with more elaborated linguistic experiences. In a follow-up publication, Vanhove and Berthele (2017) further analysed their 2015 data with a focus on Swedish intelligibility. Their results show that (multilingual) language experience and fluid intelligence have a predictive value on the outcome of the results. Furthermore they state that formal distance between the cognates is considered less important. This is of interest, as multilingual models state that (multilingual) language experiences positively influence (unknown) language encounters.
3.4.4 Summary of Studies

The following part should briefly summarise the presented 21 studies. In order to give a comprehensive overview, first, the author of this thesis will categorise the presented studies according to the research methodologies. Through this categorisation the author will show which RM research methods are most frequently used and, additionally, present how the dissertation project at hand is able to contribute to RM research. Second, the studies will be categorised according to the results in terms of whether multilingualism seemed to positively contribute to the results or not.

Summary: Research Methods

Overall, 8 studies focus on IC and listening (6 studies centre Germanic languages, 1 on Slavic languages and 1 on Germanic, Romance and Slavic languages), and 13 studies focus on IC and reading (9 studies centre on Germanic languages, 3 on Romance languages, 1 on Germanic and Romance languages and 1 on Germanic and Romance languages plus Finnish). Table 4 gives an overview of the research methods used in the studies mentioned above.

<table>
<thead>
<tr>
<th>Method</th>
<th>Pre-/Primary</th>
<th>Secondary</th>
<th>Academic and other</th>
<th>Total</th>
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<td>Translation</td>
<td>1</td>
<td>2</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>Metalinguistic Tests</td>
<td>-</td>
<td>2</td>
<td>-</td>
<td>2</td>
</tr>
<tr>
<td>Global and Detailed Comprehension</td>
<td>-</td>
<td>2</td>
<td>-</td>
<td>2</td>
</tr>
<tr>
<td>Picture Pointing</td>
<td>2</td>
<td>1</td>
<td>-</td>
<td>3</td>
</tr>
<tr>
<td>Global and Detailed Comprehension &amp; Translation</td>
<td>-</td>
<td>-</td>
<td>6</td>
<td>6</td>
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<tr>
<td>Total</td>
<td>3</td>
<td>7</td>
<td>11</td>
<td>21</td>
</tr>
</tbody>
</table>

Table 5. Overview of Research Methods.

Nota: Most frequently used methods are highlighted.

Table 4 shows that the most frequent methodology in researching RM is global and detailed comprehension tasks including translations (6), followed by pure translation tasks (8). Concerning research methods, Gooskens and Schneider (2016) state that the combination of translation and picture pointing tasks seem to be reliable for mutual intelligibility research contexts. However, other researchers did not use these research methods. This might be due to the fact that their article was published relatively
recently and other researchers might therefore not have been aware of this RM research approach. Furthermore, (modern) picture pointing tasks require digital media; in other words, financial issues might hinder researchers in carrying out such research for themselves. Furthermore, picture pointing procedures have so far not been used for reading skills and were mainly carried out with listening, whereas translation and global and detailed comprehension tasks were used for both skills. However, the reliability of picture pointing procedures was called into question by Golubovic and Gooskens (2017). Put differently, this research method requires further application with listening and reading in order to determine whether it is reliable or not.

As the table reveals, in secondary school context studies do not focus on reading comprehension and translations. The combined use of reading comprehension and translation of a text in an unknown language was considered for this dissertation project at hand, so it may offer a more holistic perspective on multilingualism research. In other words, this study is the first that fills this specific research gap. Furthermore, Müller-Lancé (2006) was the only one to include both a) think-aloud protocols and b) a language learner profile in the quantitative research procedure. Both methods were taken into consideration for the dissertation project at hand, but instead of learner types, the author of this thesis decided to focus on reading strategies: this specific data set was quantitatively collected through the use of a reading strategy questionnaire (see Section 4 and Part II).

Summary: Effects of Multilingualism

Overall, 12 studies offer results that support multilingual models and theories. Rephrased in more detail, these studies offer proof for partial aspects of multilingual theories. However, these results differ concerning target language (e.g. Germanic Dahm 2015 vs. Romance language Müller-Lancé 2006) or testing procedures (e.g. picture pointing Schüppert and Gooskens 2011 vs. translation Möller 2011).

Re-examining these studies one may jump to conclusions about positive effect of multilingualism on decoding foreign and unknown languages. A closer look reveals that 9 studies do not report of non-beneficial effects of multilingualism. Therefore, these will be of interest for this dissertation project because results will show that multilingualism might not be the only crucial factor concerning comprehension. Table 5 visually summarises the studies.
<table>
<thead>
<tr>
<th></th>
<th>Supportive results</th>
<th>Non-supportive results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre- and primary context</td>
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<td>2</td>
</tr>
<tr>
<td>Secondary contexts</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Academic and other contexts</td>
<td>8</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>12</strong></td>
<td><strong>9</strong></td>
</tr>
</tbody>
</table>

Table 5. Overview of Study Results on supportive and non-supportive Effects of Multilingualism in the context of unknown language encounters.

Summarising this paragraph, the reason to review these studies in connection with this dissertation is twofold:

a) **Multilingualism and its positive effects on (unknown) languages.** 12 studies offer supporting results concerning positive effects of multilingualism on success in unknown language encounters. Several studies share similar research questions and testing procedures as chosen by the author of this thesis. Thus, it is of interest to analyse whether these positive results are reflected in the REM-Study results or not.

b) **Intercomprehension of unknown languages – research methods.** Studies focussing on receptive comprehension of unknown languages are still quite uncommon. Thus, the author wants to comment that RM research methods are still in development. Furthermore he wants to add that IC methods might still need to fully meet testing principles (validity, objectivity and reliability). This is of concern for this dissertation because this dissertation’s results on test reliability which will be of concern for future research.

**Concluding remarks**

This overview aimed to show readers the research gap which the author of this thesis is trying to fill: There are few studies looking at Germanic reading IC in secondary contexts using quantitative and qualitative research methods. Furthermore, there are no studies which include overarching quantitative research methods as this PhD-project does: global and detailed reading, translation of isolated and semi-contextualised words, grammatical judgement test procedures and reading strategies test. Furthermore, no study has used a combination of think-aloud protocols and stimulated recall interviews.
as well as open-answer formats in RM research. Additionally, so far, no study has included a quantitative approach to reading strategies (see Chapter 4) in combination with Germanic IC. These research gaps are addressed in this dissertation, and its results will offer insights to multilingual theory and the proposed advantages of multilingual language users (see DMM and Factor Model in section 2.2). Chapter 7 will present the chosen research methods in more detail.
4 Reading Strategies – *The Key to Decoding Language(s)*?

“Because reading is what?”

“Fundamental!”

RuPaul and his Drag Racers in *RuPaul’s Drag Race*

This quote is of considerable importance not just for drag culture but for linguistics and (language) education research as well. To be more precise, many studies underline RuPaul’s statement: L1 reading competences correlate with many factors of learning in educational contexts, for example, math performances (Akbasli, Sahin, and Yaykiran 2016, or Imam, Abas-Mastura, and Jamil 2013), music skills (Cohrdes, Grolig, and Schroeder 2016, or Anvari, Trainor, and Levy 2002) and, more important for this dissertation, L2 reading competences (Hulstijn 2015, or Walter 2007). Already, studies mentioned in Section 3.4 illustrated that reading competences, more precisely reading strategies, influence how a language learner approaches a foreign or unknown language (see, for example, Pargger 2013 or Müller-Lancé 2006). Thus, reading really seems to be fundamental. For the REM-study includes a quantitative and qualitative approach to reading strategies. To be more precise, young adolescent language learners’ reading strategy employment will be looked at in more detail.

The this following chapter will thus focus on reading strategies in foreign languages. First, it will briefly define how reading is generally perceived by academics: Section 4.1 will show that reading is far from being a passive skill. Before moving on to L2 reading, basic assumptions concerning L1 reading need to be explained to successfully contextualise L2 reading and, accordingly, reading in foreign languages. On this basis, Section 4.2 will move on to reading strategies. After a brief definition of the term *strategy*, the focus will lie on how reading strategies are conceptualised and defined in the context of L2 research. Thereafter, these definitions will be brought into connection with multilingualism. Section 4.3 will present the SORS, short for Survey of Reading Strategies (Mokharti and Sheorey 2002; Sheorey and Mokharti 2001), a quantitative instrument to measure self-reported L2 reading strategies. The last section will explain how the SORS was modified and used to be applicable for this dissertation project. Hence, this chapter will end with the explanation why the modified SORS has the potential to be an innovative research tool in quantitative IC research.
4.1 Defining Reading and Reading Strategies

4.1.1 What is reading?

As already outlined by Goodman in 1967 and repeated by Romero and Romero (1985) or Grabe (2009), reading is far from being a passive language skill. Goodman (ibid., 126-7), a pioneer in the field of reading studies, points to the issue that reading is interwoven with many factors and that multiple processes are involved in making sense of graphemic input:

Reading is a selective process. It involves partial use of available minimal language cues selected from perceptual input on the basis of the reader’s expectation. As this partial information is processed, tentative decisions are made to be confirmed, rejected or refined as reading processes (ibid.).

Goodman (ibid., 127) describes reading as “a psycholinguistic guessing game”\(^{62}\): in short, the so-called Guessing Game Model states that decoding the meaning of written symbols requires far more than just the identification of single letters (ibid., ff.). A reader's experiences, prior lexical knowledge, sight vocabulary and expectations of a text have enhancing effects on how a certain text is (initially) perceived. For example, readers develop reading strategies to approach a text, and strategy application, in turn, should facilitate and/or accelerate reading and comprehension. At first, strategies might be used intentionally, but later, as they become more automatic, they can turn into more intuitive processes as one gets used to certain reading approaches (ibid., 130).

To roughly summarise the Guessing Game Model, reading processes of literate readers are structured as follows: First, based on Chomsky’s (1965) model of sentence production, Goodman (1967, 130ff.) describes that a reader receives visual input which is then paired with existing lexical representations. In this phase a reader creates an initial hypothesis of a written symbol’s meaning. Second, a reader initiates guesswork processes in combination with semantic analyses in order to create a first assumption of a word, sentence and/or text. Third, the final matching stage then confirms or rejects the initial hypothesis. If rejected, this procedure is repeated until a reader is satisfied with a text’s meaning.

Later, similar to Goodman (ibid.), Romero and Romero (1985, 1) underline that reading is “filled with complexity”\(^{63}\) and that definitions will vary slightly according to a

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\(^{62}\) Grabe (2009, 110, see later in this section) claims that such a pure “guessing” model “is partly true but also partly false” and questions the application of a guessing model.

\(^{63}\) Other researchers highlight the issue of complexity as well, e.g., Harris and Sipay (1980), Manzo and Manzo (1990) or Dechant (1991). Grabe (2009) explains these processes in more details (see later in this section).
researcher’s main interest. Still, Romero and Romero (ibid.) state that “reading involves the use of a code that has to be interpreted for meaning.” In other words, an individual needs to be confronted with (at least some sort of) pictographs, which he wants or needs to decipher. Additionally, in reference to Lapp and Flood (1978), Romero and Romero (1985, 1-2) offer two overarching processes which shape researchers’ definitions of the term reading: a) “a decoding process” or b) “reading for meaning.”

The researchers outline that, concerning education contexts, reading involves “decoding written symbols, [...] getting meaning from the printed page, [...] putting meaning into the printed page, [...] interpreting the written symbols” and [...] seeing reading as “a process of communication between author and reader.” Rephrased, reading can be interpreted as a process of deduction and creation of (literary) meaning. Similar to Goodman (see above), reading is defined as a multi-phased process. The first two mentioned characteristics (decoding written symbols and getting meaning from the printed page) describe the basic ability to put graphemes together and create an initial comprehension of a written text. The latter ones rather describe a dialogical process between the text and the reader (see Rosebrock later in this section).

As already visible so far, the scholars cited thus far define reading using the term processes, and modern definitions are still based on this view. For example, Grabe (2009, 14), a current leading researcher in the field of L1 and L2 reading theory and research, comments on the definition of reading that

[r]eading is often defined in simple statements [...]. However, when we think of the different purposes for reading and the varying processes that are called into play, it is evident that no single statement is going to capture the complexity of reading. [...] As a starting point, we can say that reading is understood as a complex combination of processes. (italics added by DU)

Processes involved in Reading according to Grabe (2009)

Grabe (ibid., 14ff.) describes L1 reading consists of 10 processes: rapid process, efficient process, comprehension process, interactive process, strategic process, flexible process, purposeful process, evaluative process, learning process and linguistic process. As already partly discussed in Chapter 2 and 3, some of these processes are mentioned in multilingual theory as well (e.g. DMM, Factor Model, MPM) and are, therefore, of concern for this dissertation. Hence, the following four processes will be looked at from a theoretical reading perspective:

64 Rosebrock (2009) includes both approaches with her model. See later in this section.
65 See Rosenblatt’s (1979) model of literary experience.
66 See Rosebrock (2009) later in this section for an educational perspective on these phases.
• **Comprehension process**: a main aim concerning reading is to understand what a writer wants to convey. Thus, cognitive processes need to be initiated to achieve this goal. Furthermore, comprehension should be seen as an “all-encompassing concept” (ibid., 15) which goes beyond the mentioned decoding processes of reading.  

• **Strategic process**: a reader uses several strategies to approach a particular text. In other words, one’s reading intention determines which reading strategies might be used best to achieve a reading need (e.g., reading for details, reading for global understanding, etc.).  

• **Evaluative process**: while reading, an individual evaluates and/or monitors how well he or she reads. This process is actually closely connected to Goodman’s definition of reading because a reader constantly seeks verifications or falsifications to prove that he or she comprehends a text appropriately. A reader thus uses morphological, syntactic and semantic knowledge in order to process a text and initiate text comprehension.  

• **Linguistic process**: One is not able to read “without making graphemic-phonemic connections, without recognizing the words to be read and the structural phrases organizing the words” (ibid., 16). In other words, a reader needs to have grammatical knowledge to deduce meaning; for example, certain sentence structures can give readers semantic information.  

The previous paragraphs have shown that reading consists of many processes which are simultaneously activated, ranging simple decoding mechanisms over to more elaborated semantic construction building. The following subsection will briefly present two prominent hierarchical models of reading. These models are of interest for RM research because

- reading in an unknown language will presumably follow similar patterns,
- the application of reading strategies to unknown languages is likely to be comparable to L2 reading strategies,

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67 For the context of multilingual research, see, e.g., MPM, section 2.2.5.
68 For the context of multilingual research, see, e.g., Factor Model, section 2.2.3.
69 For the context of multilingual research, see, e.g., DMM, especially EMM, section 2.2.2, or MPM.
70 For the context of multilingual research, see, e.g., Factor Model or DMM.
71 For a more expansive review of L1 and L2 reading models, see Grabe (2009).
72 Nota bene: Models of comprehension slightly differ from reading models. For a brief overview see Graesser (2007).
✓ reading strategies might share a similar core with metalinguistic strategies – to be more precise, monitoring and evaluative competences are relevant in both fields of research and, thus, might share a common core, and
✓ multilingual theories portray linguistic phenomena which are closely related to processes described in the up-coming reading model.

In short, there is a certain relation between multilingualism and reading theory. The connection between the two fields will be made clearer over the next paragraphs with the presentation of two current reading models.

Hierarchical Processing Models in Reading

According to Grabe’s model of fluent (L1) reading73 (ibid., 22), there are two overarching process levels: lower- and higher-level processes. Lower-level reading components include “word recognition, automaticity, syntactic parsing, semantic-proposition formation and working memory” (ibid., 36), in short, rather mechanical competences that a reader needs to have in order to successfully decode written elements, and which need to be fulfilled before any higher-level processes can be carried out (ibid., 50ff.). These higher-level (or higher-order) processing components include, for example, so-called “attentional processes” (ibid., 50) like inhibiting information, shifting attention and updating working-memory information as well as responding to reading purposes, engaging with metacognitive awareness and monitoring, using specific reading strategies, drawing on one’s background knowledge and supporting inferences for text processing. Beginning readers must first master the lower-level processes before they can move on to learning the higher-level ones; in competent readers, the former are carried out automatically and without conscious effort. Though the participants in the present study are competent readers in their L1 and their L2/L3, these lower-level functions are of interest for this dissertation as the participants might experience these processes differently when they are confronted with a foreign or unknown language.74

In the Situational Model, Grabe (ibid., 43ff.) also describes that contextual information and a reader’s setting have a considerable influence on comprehension success in reading (e.g. reader purpose, task expectation, genre activation). In other words,

73 The author wants to comment that Grabe’s model stresses fluent reading. Hence, the author assumes that even lower processes (e.g. character recognition or phonetic decoding) are seen as prerequisites.
74 Grabe (ibid., 129ff.) discusses this issue on the basis of L1 and L2 reading learning processes.
scaffolding procedures may facilitate reading purposes and, subsequently, comprehension. However, the author of this dissertation wants to mention that this model still needs to be statistically analysed in more detail (see Part II).

From an educational perspective, Rosebrock's (2009) (*unterrichtsspezifisches Lesesozialisationsmodell*) (L1 educational reading socialisation model, translation by DU) reflects Goodman's and Grabe's reading conceptualisation. This model suggests how reading should be taught and learned in L1 classes. Unlike Grabe, however, Rosebrock (ibid., 61ff.) assumes that there are three hierarchical stages for reading: 1) process stage, 2) subject stage and 3) social stage.

The process stage describes five basic competences a reader needs to achieve to be able to decode a text at a basic level. Each competence will now be listed with a brief description.

1) **Process stage.** In the first phase readers deal with the identification of words and sentences. In plain, readers puzzle letters and words together to recognize pictographs as words and sentences. Rosebrock mentions the following processes (presented in hierarchical order, from lowest to highest): word and sentence identification (being able to combine letters to words), local coherence (being able to combine words to a sentence), global coherence (being able to combine sentences), recognising superstructures (being able to recognise a text as a whole) and identifying text representations (being able to categorise a text into text types).

2) **Subject stage.** Rosebrock (ibid.) describes that in the subject stage a reader deals with the text itself. In short, a reader projects his or her (learning) background on a text and creates a first comprehension attempt (ibid., 63-64). In other words, a reader is in a dialogue with a (literary) text and creates an interpretative space between it and her living environment. Concerning literary text, Rosebrock (ibid.) mentions that readers create a literary experience with a given text. Rephrased, a reader negotiates meaning and projects individual perspectives on a text's contents.

3) **Social stage.** Finally, the social stage describes processes which go beyond reading: an individual reads and comprehends pieces of information in order to

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75 See Rosenblatt's (1979) model of literary experience.
76 Briefly explained, a reader is in dialogue with a text. The space created in between the two is called literary experience. This experiences I majorly shaped by a reader’s prior knowledge of the world, reading experiences and current state of mind (see Rosenblatt 1979).
connect with other individuals. Rosebrock (ibid., 64) calls this stage *Anschlusskommunikation* (follow-up conversation, translation by DU). In other words, a reader is able to socially engage with another individual about a text in a face-to-face situation. According to Rosebrock (ibid.), this stage is crucial because in follow-up conversations one is able to see a reader's level of text comprehension. In other words, these productions show a language user's level of text comprehension. Furthermore, through additional discussions a learner may foster literary competences and shape his literary experience (ibid.; see Rosenblatt 1979).

This section presented two hierarchical L1 reading models. These are of interest for this dissertation because language users

a) are likely to experience similar processes when they are confronted with a unknown language (lower- and higher level processes, see Grabe mentioned above) and

b) might go through similar stages in unknown language encounters (hierarchical stages, see Rosebrock mentioned above).

Put simply, when a reader is confronted with a text in an unknown or foreign languages, he might need to go through lower-level reading processes first before reaching higher level processes.

Summarising, there is a considerable overlap between the models above and multilingualism theory; the treatment of linguistic features of reading, word recognition and the use of existing linguistic resources, are related to aspects described in models such as the Factor Model or the DMM. For instance, Rosebrock's process or subject stage can be closely linked to metalinguistic competences described by the M-Factor or the Factor Model. Hence, there is a certain legitimacy in combining these fields of research to more holistically approach and describe IC phenomena. However, the models described in this section focussed on an individual's L1. Thus, one needs to contextualise L2 reading processes further.

**Reading in the L2**

Summing the last sections up, reading is generally understood as a collection of linguistic, cognitive, evaluative, strategic and social processes which allow an individual to deduce and extract meaning from a text and create a literary experience for her own;
as a follow-up action, an individual is able to share contents with the outside world. Nevertheless, L2 differs from L1 reading in several aspects and therefore needs to be examined and explained in more detail.

While L2 reading generally follows similar processes as L1 reading, further aspects influence L2 reading processes: Grabe (ibid., 112ff.) mentions that factors such as orthography, morphology, phonology and syntax differ from language to language. Thus, these linguistic features already influence perception in L2 reading because a reader is biased by his L1. For example, a L2 reader needs to accommodate the orthographic differences between the L1 and L2 (ibid., 119ff.). In brief, an L2 reader first needs to master these new linguistic features as well as lower-level reading processes in order to achieve higher-level L2 reading processes. Similar to the L1, L2 reading word-recognition processes develop steadily.\textsuperscript{77}

Additionally, Grabe (ibid., 123-4) discusses “universals of reading abilities” which are of interest for multilingual research: Grabe (ibid.) mentions five important aspects for L2 reading: First, L2 readers need to develop a consistent “cognitive architecture” for texts in an L2 which allows them to decipher meaning successfully and to infer prior knowledge with ease. Second, a reader needs to be aware of print-speech relations\textsuperscript{78}. Third, transfer from the L1 to the L2 can facilitate comprehension. Fourth, heightened metalinguistic awareness (e.g. orthography, phonology, syntax and discourse patterns) accelerates comprehension processes. Finally fifth, text-interpretations principles, in other words, a reader’s expectation towards a text, positively influence understanding.\textsuperscript{79}

\textsuperscript{77} Nota bene: The author of this thesis wants to comment on this description that similar aspects are, for example, described in the Factor Model and DMM. However, these multilingualism models rather highlight advantages in comparison to Grabe’s neutral presentation of L2 reading.

\textsuperscript{78} Briefly explain with an example: a language user needs to be aware that the English digraph “th-“ needs to be pronounced with /ð/ or /θ/.

\textsuperscript{79} The author of this thesis wants to comment on the issue that Grabe loosely argues for these L2 specific reading competences with multilingual theory. As outlined in section 2.2 and 3.2, multilingual models and conceptualisations of RM describe similar phenomena of bi- and multilingual language users. However, Grabe (see ibid., 125) sheds light on these issues by referring to L2 reading studies that offer proof for the mentioned five factors. Nonetheless, Grabe’s assumptions can be supported by multilingual research studies which he does not discuss (see section 3.4). Additionally, Grabe (ibid., 125-6) stresses facilitated reading comprehension if two languages share linguistic similarities. However, he does not mention RM study results which could further support Grabe’s assumptions on L2 reading (see section 3.4). Still, Grabe (ibid., 132, in reference to Bialystok 2001) mentions that L2 readers have “a greater level of abstraction and a heightened sense of how language systems work [...]. These processes would include metalinguistic analysis processes [...], metalinguistic-control processes [...], and metalinguistic awareness [...].” Bridging these assumptions with multilingualism theory, one may find models that propose similar hypotheses, for example, the Factor Model, MPM or DMM (see section 2.2). In other words, multilingual theory and studies may add explanatory power to Grabe’s view on L2 reading.
Later, Grabe (ibid., 134) outlines that when an individual learns to read in the L2, she had already exposure to many L1 reading experiences. Rephrased, this previous linguistic experience can positively be used for L2 reading development. Grabe Thus indirectly refers to aspects of the Factor Model.

Moreover, Grabe (ibid., 135ff.) discusses that the purposes of L1 and L2 reading usually differ from one another. L2 reading is usually practised in educational settings and follows a specific learning goal. L1 reading has a greater likelihood of taking place outside of these contexts and may serve additional reading needs (e.g. reading for pleasure). In other words concerning the man-on-the-street, L2 reading rarely finds application outside of educational contexts.

Interestingly, Grabe (ibid., 144) argues against positive effects of L1 on L2 reading competences via referring to several studies. Grabe (ibid.) summarises as follows: “transfer of skills from L1 to the L2 does not seem to occur for vocabulary knowledge, morphosyntactic knowledge, listening comprehension, and orthographic script-processing differences.” This statement contradicts what multilingualism researchers propose. Still, Grabe specifies this assumption with the Threshold Hypothesis (see section 2.1.1), meaning that L2 learners need to achieve a certain language level in both languages before they may be able to linguistically profit in L2 reading. Thus, Grabe (2009, 150ff.; 265ff.) argues that effective L1 to L2 reading competence-transfer needs to be implemented in teaching routines (see ITA examples in Section 8.3). Following this train of thought, L2 and multilingual researchers, as representatively suggested by Rubin et al. (2007), Marx (2007) or Morkötter (2016a), highlight a similar view: individuals need to learn how to apply their metalinguistic awareness in order to profit from similarities and/or differences between languages.

As a summary, the author of this dissertation agrees with the general assumptions on reading: it is characterised by diverse linguistic, individual, social and psychological processes which influence the creation of meaning. Additionally, through the introduction of another language, further layers are added, which, for example, the Factor Model is able to discuss and elaborate from a from a multilingual research perspective. As a final remark, one may mention that L2 reading researchers and multilingualism researchers look at very similar learning processes, but, as shown over the past paragraphs, seldom refer to each other. However, one factor for successful reading comprehension still needs to be looked at in more detail: reading strategies.
4.1.2 What are reading strategies?

So far, the previous section has dealt with reading as a collection of processes. The next section will focus on reading strategies, which inter alia consist of an individual’s reading competence. First, readers will be offered a general understanding of the term strategies in the context of language learning before moving into the field of L2 reading strategies.

Generally, linguists differentiate between skills and strategies. In a nutshell, strategies are an individual’s conscious action patterns to reach a certain learning goal (see, for example, Artelt, Naumann, and Schneider 2010, 78; Chamot 2004, 15). Skills, in contrast, are automatized and unconscious actions to reach a learning goal (Vandergrift and Goh 2012, 91). Language learning strategies can be seen as domain-specific learning strategies because such strategies have similarities to general learning strategies (Lingel et al. 2014, 52). Here, Lingel et al. (ibid.) comment that two types of strategies exist: cognitive strategies (strategies activated to achieve a certain goal) and metacognitive strategies (strategies to plan, monitor and evaluate cognitive strategy use). According to these researchers (ibid., 53), especially metacognitive strategies are likely to be transferred or quickly adapted to new (language) learning scenarios.

Nevertheless, one needs to specify L2 language learning strategies. From an L1 perspective, a reading strategy can be defined as a “cognitive or behavioral action that is enacted under particular contextual conditions, with the goal of improving some aspect of comprehension” (Graesser 2007, 6). Similar definitions are used in L2 and multilingualism theory. Nonetheless, there are differences: for example, as outlined in the Factor Model by Hufeisen (see section 3.2), novice L2 learners are not blank slates, so to speak, and do not blankly approach an unknown language. During her L1 language acquisition and learning processes an individual has already learned and/or acquired strategies and skills to approach her L1. Such strategies may be cognitive or metacognitive (see previous paragraph).

Concerning language learning theory, Cummins (1979), Herdina and Jessner (2002), Hufeisen (2004) and Edele and Stanat (2016) assume that cognitive and metacognitive strategies can – at least partially – be transferred and applied from one language to another. This is also supported by the Guessing Game Model proposed by Goodman (1967) and elaborated by Grabe and Stoller (2013, 30-1). Additionally, Grabe and Stoller (ibid., 39) state that metalinguistic strategies are likely to be transferred from one language to another. However, Grabe and Stoller (ibid., 45) state that an L2 user needs
to surpass the lower threshold as suggested by the Threshold Hypothesis; a language user might experience negative strategy transfer phenomena from the L1 to the L2 if his L2 competences have not achieved an independent (ibid., 45ff.; Cummins 1981). Chamot (2004, 20) partially disagrees with the mentioned assumptions, arguing that learners need at least some form of guidance or learning opportunities to make a transfer and successful application of strategies possible (see, e.g., Morkötter 2016a).

However, each reading context might require different strategies to adequately approach a text. Besides linguistic aspects, Sheorey and Mokhtari (2001, 433) state that a reader’s metacognitive knowledge about reading may be influenced by a number of factors, including previous experiences, beliefs, culture-specific instructional practices, and, in the case of non-native readers, proficiency in L2, and it may be triggered, consciously or unconsciously, when the reader encounters a specific reading task. We suggest that the reader's metacognitive knowledge about reading includes an awareness of a variety of reading strategies and that the cognitive enterprise of reading is influenced by this metacognitive awareness of reading strategies.

In a nutshell, metacognitive strategy awareness and an individual’s psychological behaviour as well as surroundings are of crucial importance to adapt and rethink strategy use (Yang 2006, 315; Sheorey and Mokhtari 2001, 432). This assumption is well-known to multilingual theory (see section 2.2: Biotic System, DMM and Factor Model).

### 4.2 Quantitatively Researching Reading Strategies – The SORS

In order to shed light on a reader's self-reported L1 reading strategy use, Mokhrati (1998-2000, in Sheorey and Mokhtari 2001) developed the Metacognitive-Awareness-of-Reading-Strategies Inventory (henceforth MARSI), a survey which quantitatively measures L1 metacognitive reading strategies. The first part of this section is therefore devoted to presenting this research tool. The next part will introduce the SORS (Survey of Reading Strategies), an instrument created to measure self-reported L2 metacognitive reading strategies. This is followed by a brief overview of research projects and studies that used the SORS, whose results will later be of interested for the data discussion of this dissertation project. Section 4.3 will then explain how the SORS was modified and used for this dissertation project.

As already presented, the MARSI is an instrument that measures self-reported (English) native speaker’s awareness and use of reading strategies (Sheorey and Mokhtari 2001,
435). It originally consists of 30 items with five-point Likert scales, and its main aim is to “measure the perceived use of the type and frequency of strategies” (ibid., 436, highlights by DU). The MARSI is considered to be a reliable instrument to measure the three reading strategy subscales: metacognitive, cognitive and support strategies (ibid.). In short, these sub-scales can be described as follows\(^8\) (ibid.):

- **Metacognitive strategies** are those intentional, carefully planned techniques by which learners monitor or manage their reading. Such strategies include having a purpose in mind, previewing the text as to its length and organization, or using typographical aids and tables and figures (tested with 10 items).

- **Cognitive strategies** are the actions and procedures readers use while working directly with the text. These are localized, focused techniques used when problems develop in understanding textual information. Examples of cognitive strategies include adjusting one’s speed of reading when the material becomes difficult or easy, guessing the meaning of unknown words, and re-reading the text for improved comprehension (tested with 12 items).

- **Support strategies** are basically support mechanisms intended to aid the reader in comprehending the text such as using a dictionary, taking notes, or underlining or highlighting the text to better comprehend it (tested with 6 items).

However, for the use with ESL participants, Sheorey and Mokhtari (ibid.) reworked the original MARSI from 30 items to 28 and rephrased some items to ensure comprehensibility. Two years later, the 30-itemed SORS was released: It included two new items which covered L2 specific strategies (translation and thinking in one’s L1) (Mokhtari and Sheorey 2002, 4).

Mokhtari and Sheorey (ibid., 3-4) highly recommend the MARSI and the SORS for researchers and practitioners to receive an overview of which strategies language leaners use. Additionally, these instruments offer learning potential to become aware of one’s own strategy use, and guided reflections on the instrument’s results may turn learners into more proficient L1 and/or L2 readers. Nonetheless, Mokhtari and Sheorey (ibid., 4) stress that the MARSI and the SORS cannot be used as an intervention in itself. The results need to be analysed with language learners so that they become aware of their strategy use. Furthermore, the SORS and the MARSI are self-report measures: “one cannot tell with absolute certainty from the instrument alone whether students actually engage in the strategies they report using” (ibid.).

Originally, the SORS and the MARSI were used to determine differences in strategy use between English native speakers and ESL. Mokhtari and Sheory’s results (2001, 444) were able to show that, for example, ESL participants show a higher support strategy

\(^8\) Nota: Descriptions follow the SORS with 28 items, Sheorey and Mokhtari (2001).
use in comparison with English native speakers. This result is of interest for multilingual theory because it, for example, reflects assumptions of the DMM and the Factor Model (see section 2.2).

**The SORS: Brief Literature Review**

The SORS has already found application in foreign language research beyond that carried out by the original authors, though only in a handful of L2 studies to date. The following overview – presented in chronological order – will show in which research contexts the SORS has been used.

Alsheikh (2011) carried out a SORS case study testing three proficient multilinguals who had the same language constellation (L1 Hausa, L2 English, L3 French), but who differed in terms of age and level of education (23 with Bachelor’s degree, 39 with Master’s degree, 45 in process of completing PhD; no details on language proficiency levels given). The participants were asked to read texts in the mentioned languages while carrying out a think-aloud protocol. Beforehand, the participants completed the SORS in all of the three languages. Alsheikh was able to show that the multilingual participants had a high level of reading strategy awareness. More precisely, the participants show a higher deployment of reading strategies in the L2 and L3: the sub-scale “problem-solving strategies” was the most frequently reported sub-scale to be used in order to understand a text in the L2 or L3. The author of this dissertation interprets these results as follows: multilinguals may have a more elaborated repertoire of reading strategies and, furthermore, be able to transfer (meta-)cognitive strategies from one language to another (see Factor Model and M-Factor in section 2.2). However, Alsheikh’s results stem from a very specific target group with a high level of education. Thus, these results need to be proven further.

Alsheikh and Mokhtari (2011) carried out a study with 90 Arabic native speakers (mean age = 31 years) with high levels of English according to TOEFL to find out whether there are significant differences in reading strategy use in the comprehension of academic texts in Arabic and English. The 90 participants were undergraduate students of five Midwestern universities in the US. The study consisted of two phases: first, the 90

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81 Alsheikh (ibid.) carried out a language background questionnaire with, inter alia, TOEFL scores and self-reported items on language proficiency. However, no details are given.
82 Nota bene: The SORS was translated from English into Hausa and French. Moreover, each SORS was completed in the respective language in question.
participants completed the SORS in Arabic and English and, second, 10 participants were qualitatively questioned on their reading strategy use after having read a text in Arabic (topic: scientific cooling systems) and then in English (topic: inhaled steroids and its side effects). Of interest for this dissertation is that the participants showed a significantly higher value of problem-solving and support strategies in the L2. Similar to Alsheikh (2011), theoretical proof for the Factor Model and the M-Factor can be found in this study.

Aziz et al. (2011) came to comparable results. The 60 Malaysian participants (aged between 19 and 21, no age means given, all of them university students) were part of advanced English classes. The researchers’ main aim was to shed light on what kind of reading strategies these students (L1 Malaysian and L2 English) use when confronted with an academic text in English. As in the abovementioned studies, problem-solving strategies were the most frequently reported strategies for the L2. Thus, these strategies had the greatest prominence in the test results.

In short, other studies, such as Rajoo and Selvaraj (2010) (100 participants, ESL learners visiting university, first language and information on age not given), Yüksel and Yüksel (2012) (16 L1 Turkish students on the English language teacher training programme, no information on age given) or Li and Kaur (2014) (290 L1 Chinese EFL undergraduates, no information on age given) come to the same conclusion that problem-solving strategies are most frequently reported by L2 English users. To a lesser degree, support strategies are prominent strategies of second language learners. Yüksel and Yüksel (2012), however, report that global reading strategies are used frequently by L2 learners.

Interestingly, the SORS and the MARSİ are beginning to be adapted to new reading contexts. Anderson (2003) created an online version of the SORS (OSORS), which Jusoh and Abdullah (2015) then revised. For example, Taki (2016) carried out research in Canada using the OSORS, coming to almost the same results concerning self-reported strategy frequency.

Most recently, Mokhtari, Dimitrov, and Reichard (2018) used factor analysis to rework the MARSİ (30 items) into the shortened MARSİ-R(evised) (15 items). Through factor analysis they were able to shorten the MARSİ from 30 to 15 items. The researchers outline that these results will have an impact on the SORS’ future design. However, the SORS’s redesign still needs to be finalised.
In short, the studies report that problem-solving strategies are the most frequently reported ones (6 Studies). 4 studies report of a similar prominence concerning support strategies. Finally, 1 study reports of global reading strategies to be of prominence (see Table 6).

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Studies (n)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problem solving</td>
<td>6</td>
</tr>
<tr>
<td>Support</td>
<td>4</td>
</tr>
<tr>
<td>Global reading</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>11</td>
</tr>
</tbody>
</table>

Table 6. Overview of the presented SORS sub-scale results.

Summarising, this section presented to readers the MARSI and the SORS. These research instruments measure a test taker’s self-reported reading strategies and reading strategy awareness. The SORS has been used in several second language contexts, however, mostly focusing on the English language. Only one case-study used the SORS for multilingual participants measuring reading strategies and reading strategy awareness in three languages. Although the SORS has proven itself to be a reliable instrument, it has so far never been used with unknown languages. Thus, this dissertation project pioneers this instrument for RM research.

4.3 Adapting the SORS for Multilingual Research: the REM-SORS

After this introduction to the SORS, it is time to explain how this instrument was adapted and used in the REM-study. The following section will describe and explain how items from the SORS (based on Mokhtari and Sheory 2001) were selected as well as eventually adapted and translated into German83 by the author of this thesis to fit the purposes of research project into a version that will henceforth be called the REM-SORS. Table 6 gives an overview of the items used; please note that they are grouped according to their subscale, which is not the order in which they were presented to participants (see Appendix for the REM-study item order). The overview will be followed by a more detailed discussion and explanation of the items and their modifications.

83 Changes are explained later in this section in more detail.
Table 6. Summary of the SORS items used in the dissertation according to subscales.

Nota: Translations can be found below.

Before starting the discussion, the author of this thesis needs to point out that he was offered a 30-minute window in which to carry out his research project within the larger MeVoL project (for details on methods, time frame and procedure see Part II, Section 5.3 and 5.4), meaning that participants had to complete RM tasks plus the SORS within these 30 minutes (they were reminded to complete the SORS five minutes before the end). For this practical reason, administration of the full SORS was not feasible, and the questionnaire needed to be shortened.

Overall, items pertaining to two global reading strategies, five problem-solving strategies and two support strategies were chosen from the original SORS (Mokhtari and Sheory 2001). The choice to target five problem-solving strategies was motivated by RM theory; the author of this thesis assumes that these are more likely to be used when a person is confronted with an unknown language than support- or global reading strategies. The assumptions for this thought process is that a language user might need to overcome more comprehension problems comparatively to support or global problems. Additionally, these problem-solving strategies are suggested by reading strategy theory to be most prominent in L2 reading, as well (see section 4.2).

Before moving into the item discussion, three specific translation changes need to be mentioned. First, the original wording of the English SORS used the simple present. However, the author of this thesis translated the items with the German past tense form “Perfekt”. This tense choice was intentional; it was meant to help participants to think about the specific strategies they had just used during the testing situation. In other words, the tense form “Perfekt” should provoke the participants’ immanent reflection on
their reading strategy use. Furthermore, each sentence was introduced with the term “Ich habe versucht, ...” (I tried to). This introductory phrase should lead the participants to think about what they tried to do rather than just to state what they did – in other words, to encourage them to name strategies they had applied, even if these had not necessarily worked or had the desired outcome. Third, this introductory phrase was also a change to simplify the wording and ensure comprehension. The original SORS was used in academic contexts and was, therefore, not suitable for adolescent language learners. Hence, terms were simplified to create secure comprehension (see Part II for details on the piloting).

The following part will explain the changes of each item step-by-step 84.

**Global Reading Strategies**

- Ich habe versucht, im Kopf Voraussagen zu machen und habe diese dann geprüft. (Item 27 in SORS, item D in REM-SORS. Original wording: I check to see if my guesses about the text are right or wrong.)

Besides the mentioned changes, the wording was simplified. The avoidance of the terms “right” and “wrong” was intentional because these terms do not imply predictions that might be partly acceptable.

- Ich habe versucht, mich auf den Text als Ganzes zu konzentrieren. (Item 4 in SORS, item G in REM-SORS. Original wording: I take an overall view of the text to see what it is about before reading.)

Besides the mentioned changes, the wording was simplified. The author of this thesis assumes that this item targets perceiving the text as a whole. Thus, the wording in German focussed on this aspect. Furthermore, the author of this thesis intentionally decided to leave out the word “before” in the German translation. The reason was to shift the focus towards the strategy use happening in that specific moment of confrontation with an unknown language.

**Problem-Solving Strategies**

- Ich habe versucht, meine Konzentration die ganze Zeit auf das Lesen zu richten. (Item 9 in SORS, item A in REM-SORS. Original wording: I try to get back on track when I lose concentration.)

Besides the mentioned changes, the wording was simplified. Furthermore, the main issue in the original item is to identify if an individual focuses on reading. Thus, the

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84 Nota bene: SORS based on Mokharti and Ravi’s 2002 SORS version (see publication).
wording in German was phrased positively in order to encourage the participants to answer honestly.

• Ich habe versucht, unbekannte Wörter zu erraten. (Item 28 in SORS, item E in REM-SORS. Original wording: When I read, I guess the meaning of unknown words or phrases.)

Besides the mentioned changes, the wording was simplified. The term “phrases” (“Phrasen” in German) was avoided because the author of this thesis assumed that some of the participants might not comprehend this term.

• Ich habe versucht, Textteile öfters zu lesen, um den Text zu verstehen. (Item 25 in SORS, item F in REM-SORS. Original wording: When text becomes difficult, I re-read it to increase my understanding.)

Besides the mentioned changes, the wording was simplified. Furthermore, the author of this thesis decided to include “Textteile” (text segments) to stress the issue that one might not need to re-read the full text.

• Ich habe versucht, mir die Situation bildlich vorzustellen. (Item 19 in SORS, item H in REM-SORS. Original wording: I try to picture or visualize information to help remember what I read.)

Besides the mentioned changes, the wording was simplified. Moreover, the term “information” was replaced with situation in order to secure clearer comprehension.

• Ich habe versucht, meine Konzentration bewusst auf Einzelheiten des Textes zu richten. (Item 14 in SORS, item I in REM-SORS. Original wording: When text become difficult, I pay closer attention to what I am reading.)

Besides the mentioned changes, the wording was simplified. According to the author of this thesis, the main aim of this item stresses focussed attention on details. Thus, the wording in German was simplified and to stress the aspect of reading for details.

Support Strategies

• Ich habe versucht, Buchstaben und Wörter mit ähnlichen mir bekannten Wörtern zu vergleichen. (Item 30 in SORS, item C in REM-SORS. Original wording: When reading, I think about information in both English and my mother tongue.)

Besides the mentioned changes, the wording was simplified. This item should stress that they may use their multilingual background to deduce meaning of words. Rephrased, RM theory suggests that multilingual language users may use their complete language repertoire to deduce meaning. Hence, this item was changed from targeting only a
bilingual to including a possible multilingual approach to deduce meaning while reading an unknown language.

- Ich habe versucht, Passagen Wort für Wort im Kopf zu übersetzen. (Item 29 in SORS, item B in REM-SORS. Original wording: When reading, I translate from English into my native language.)

Besides the mentioned changes, the wording was simplified (e.g. instead of the term “translation” the phrase “word-for-word” was used). The rephrased version for the dissertation does not stress the unknown language due to the reason that the knowledge of the unknown language might create priming effects. Thus, it was avoided. Furthermore, the author of this thesis avoided the term “native language” to avoid confusion. Some described themselves as bi- or multilingual, thus, this might create a form of irritation.

Summarising, three major changes were made in the adaptation of the SORS in to the REM-SORS:

1. The number of items was reduced (due to practical time constraints)
2. It was translated into German
3. Wording was changed to shed light on reading strategies as applied to a specific instance of trying to comprehend an unknown language

These changes did have an effect on the REM-SORS’ reliability score, $\alpha=0.66$. Although the value is questionable (see George and Mallery 2002, 240), the data discussion will show interesting outcomes (see Part II). Finally, readers should interpret the use of the REM-SORS as a first attempt to analyse reading strategies while being confronted with an unknown language. So far, no study has used this instrument in RM research. This first application should motivate other researchers to conduct their research on the basis of the REM-SORS. New modifications or additions to it might make this instrument a powerful tool for researching self-reported reading strategies while being confronted with an unknown language.
PART II – The REM-Study
5 Study Design

The following Chapter 5 is structured as follows: First, the original idea as well as the main aims of the REM-Study will be presented. The projects research questions and hypotheses follow in the second part. Afterwards, the third part will describe how the participants were recruited within the MeVoL project. The chapter ends with a description of the participants.

5.1 Introduction and Main Aims of the REM-Study

The original idea of this dissertation was to find out if adolescent language learners with German as their first language and English as a first foreign language have learned and/or acquired additional multilingual competences in order to understand a third, unknown Germanic language. One may question why there is an interest for IC research: some of the issues have already been mentioned before (see Section 3.4.4), yet, starting point of this project was the following:

Interest in intercomprehension stems from current issues in language politics and language demographics, especially within the European Union. The EU now has 23 official languages, and a situation in which English does not dominate is difficult to visualize, despite the fact that non-English speakers may be disadvantaged through their lack of ‘native’ competences in this lingua franca. From a European community perspective, then, both language policies and pedagogical concepts are necessary to prevent the dominance of one language, and to guarantee the continued support for the smaller language groups such as Polish, Dutch or Danish. (Bär 2011b)

The quote underlines that there is the certain need for investigations concerning RM and both politics and language education should be interested in investigating this phenomenon to save minority languages. These kind of studies are not new to the field of multilingualism; especially IC and ITA between Romance languages are well-established and have even found their way into schools (e.g. Holzinger et al., Rückl et al. 2013). Furthermore, projects such as EuroComRom, EuroComGerm and EuroComSlav promote life-long learning of related languages. Still, in the field of Germanic IC reading comprehension studies are comparatively rare (see Section 3.4.4). So far, linguists have investigated (Germanic/Romance/Slavic) receptive multilingualism; yet, their participants were mainly university students or a specific group outside school contexts (see Chapter 3). Hence, investigating adolescent language learners seems to be

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85 For a hands-on experience, visit http://eurocomprehension.eu/
the next step to approach answers for Germanic IC phenomena. Furthermore, as pointed out by Marx (2011), several questions remained open: What kind of strategies does a language user apply when he or she is confronted with an unknown language? Which factors influence successful comprehension of unknown languages?

Thus, the main aims of the REM-study are

1) to test Germanic IC with a new target group: young adolescent language learners.
2) to discover if tri- or quadrilingual language learners are advantaged in comparison to bilingual learners in the fields of lexis and hypothesised grammar tasks.
3) to shed light on reading strategy use when a young adolescent language learner is confronted with an unknown Germanic language that is related to his L1 (German) and L2 (English).
4) to apply test methods which have already been used before – and including new test designs – that might have the potential to be used in future RM research.
5) to create RM test procedures for adolescent language users.

In order to find answers for the described research interest, the REM-study includes quantitative and qualitative approaches to holistically shed light on Germanic IC phenomena.

5.2 Research Questions and Hypothesis

The linguists mentioned in Chapter 3 claim that ITA need to be implemented in school contexts because of resulting positive learning effects for future language learning. However, these studies frequently used university students as participants, meaning their results might be somewhat slanted or limited: university students participating in such research projects a) already have a somewhat privileged educational background and are thus removed from the proverbial man on the street, b) might have a higher-than-average interest in languages a priori, and c) might have to participate causing that they might want to prove themselves in the testing situation. Thus, investigating pupils in compulsory secondary school – comparatively a more heterogeneous group – is of high research interest.

First, the dissertation’s research questions will be described before moving to the hypothesis of this study.
Similarly to Marx (2011), this study examines the following research questions:

1) Can adolescent native speakers of German (all of whom have learned English on a basic level [A2]) understand written texts in Dutch without training?

2) Do adolescent language learners with two or more foreign languages outperform learners with one foreign language in Dutch lexis and hypothesised grammar tasks?

3) Which reading strategies are most likely associated with successful comprehension of a text in an unknown Germanic language (i.e. a language related to the L1)?

Hence, the author wants to address and analyse the following hypotheses – using a new target audience, namely adolescent language learners aged 12 to 14:

1) Adolescent German-speaking pupils with English as their first foreign language learned at school from Germany, Austria and Switzerland are expected to globally understand a text in a previously unlearned Germanic language, namely Dutch.86

   a. Here, the language groups will be separated. It will be of interest whether multilingual participants might be advantaged in reading comprehension. Nevertheless, it is assumed that the participants will perform equally.

2) The tri- and quartilingual participants87 are expected to outperform the bilingual participants88 in lexis and hypothesised grammar items due to their more highly developed M-Factor.

   a. This hypothesis leads back to the Dynamic Model of Multilingualism, introduced by Herdina and Jessner (2002). The linguists claim that “well-developed multilingual language systems will lead to a number of factors distinguishing them from monolingual systems, that is, the multilingual learner develops new skills, such as language learning skills, language management skills and language maintenance skills which are linked to a change in quality to be expected in the language

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86 Nota bene: All participants speak a standard variation (Alemannic dialect).

87 Nota bene: The author uses the term “trilingual participants” or “quadrilingual participants” for participants with L1 heritage language, L2 German and L3 English (first foreign language learned at school), L1 heritage language, L2 German, L3 French (first foreign language learned at school) and L4 English (second foreign language learned at school) or L1 German, L2 French (first foreign language learned at school) and L3 English (second foreign language learned at school).

88 Nota bene: The author uses the term “bilingual participants” for participants with L1 German and L2 English (first foreign language learned at school).
learning process.” (ibid., 129) Concerning the DMM, the multilingual participants differ from the bilingual participants due to their higher exposure to languages in personal or school contexts. Herdina and Jessner lead this back to a heightened M-Factor (ibid., 129ff.), which should have a positive effect on the multilingual participants of the study because they were in touch with more languages in comparison with the bilingual participants. To be more precise, the multilinguals should have higher test outcomes concerning the construct of lexis and hypothesised grammar. Furthermore, participants growing up with a heritage language (here: a non-German L1 or two L1s) should have more highly developed M-Factor as well.

b. Furthermore, this claim can be underlined with the Factor Model, introduced by Hufeisen (2005) (see, for example, Jessner 2006; Marx 2011; Möller 2011; Bahtina, ten Thije, and Wijnen 2013; Berthele and Wittlin 2013; Vanhove 2016; Morkötter 2016a). This model describes that learning further languages leads to a “fuller strategy-rucksack”. Therefore, the tri- and quadrilingual participants should outperform the bilingual participants in global reading, lexis and hypothesized grammar tasks. This should be reflected in the survey of reading strategies: the tri- and quadrilingual participants are expected to have higher results in comparison with the bilingual group.

c. Additionally, each participant completed a language background questionnaire, which revealed that some participants had been in touch with an additional language besides English and/or French at school. On the basis of the theory mentioned in a and b, these participants are expected to outperform those participants, who were only familiar with German (L1) and English (L2) or German (L1), French (L2) and English (L3) at school.

3) Advanced employment of certain strategies will enhance participants’ performance.

a. This hypothesis leads back to Hufeisen (2005) as well. The tri- and quadrilingual participants were in touch with a heritage language, German, French and/or English as foreign language subjects at school. Due to this, one can assume that were in touch with more language
learning strategies in comparison to the bilingual participants, so, they should use more successful reading strategies, which should be visible in the 9 items of the REM-SORS.

b. Furthermore it is hypothesised that the participants’ age and sex will have a predictive influence on their performance. The author assumes that older participants will predictively perform better. Moreover, there is an interest to find out whether sex has an influence on IC Germanic comprehension or not.

One aspect needs to be mentioned before diving further into the REM-Study: Before the participants carried out the REM-Study, they did receive ITA (focussing on English listening strategies). Further details will be presented in the up-coming section.

5.3 Recruiting Participants via MeVoL

As already mentioned in the previous section, the participants for this study were recruited through a design based-research project, namely the “MeVoL”-project (short for Mehrsprachiges Vorlesen durch die Lehrperson, Multilingual Read Alouds by the Teacher, translation by DU). This project was initiated by the Internationale Bodenseehochschule. The execcuting insitutions were the Pädagogische Hochschule Vorarlberg (Austria), the Pädagogische Hochschule Weingarten (Germany) and the Pädagogische Hochschule St. Gallen (Switzerland).

Excursion: The MeVoL-Project

MeVoL’s initiatives respond to some key problems in the field of school, foreign language and multilingual teaching practice. First, the results of reading performance studies have shown notable deficits in the reading skills of primary and middle school pupils; especially pupils with migration backgrounds lack basic reading skills. Second, the school curricula of the participating countries demand that teachers should not teach languages in an isolated manner (Massler 2017, 11-12); instead, rather an interconnected and multilingual teaching approach should be used to create synergies between a pupil’s languages and dynamic language repertoire (Hufeisen 2005, 31-8).

Multilingual read-alouds by the teacher were chosen as a teaching design to approach these two issues systematically: Reading aloud is a technique to initiate reading
motivation, and especially in primary schools read-alouds find application and seem to have an effect on pupils (for an overview of studies read Massler 2017, 12-13). In a nutshell, reading motivation might trigger reading frequency which in turn positively influences reading competences. The MeVoL read-alouds are read out in two languages. Thus, reading motivation for two languages (German and English or French) should be triggered. These bilingual read-alouds followed multilingual teaching principles which were optimized during the course of the research project (Massler 2017, 11-2). Furthermore, MeVoL’s innovative character is that pupils listen to a text in two languages. Pupils work on these texts in more than one language and by engaging in diverse activities with a text’s contents, literary learning and text comprehension are triggered as well (ibid. in reference to Allgäuer-Hackl and Jessner 2013; Herdina and Jessner 2002).

To summarise, MeVoL’s main aim was to create...

a) a multilingual teaching design that finds acceptance for teachers and learners and triggers listening strategy training and language awareness.

b) a training curriculum for teachers to guarantee that multilingual language learning lands in schools and classrooms.

c) research methodologies to appropriately observe and assess multilingual teaching approaches.

d) theoretically founded contributions in the field of multilingual language learning.

e) teaching materials for language teachers (subjects: German, English and/or French) (ibid., 15-6).

These goals were reached via a specific research approach, which will briefly be explained over the next paragraph. As stated above, MeVoL was a design-based research (henceforth: DBR) project89. DBR a) tries to find innovative solutions for problems in educational contexts and b) is interwoven with theory and its constant revision due to the practical application in the educational contexts, which accompanies the research process (Massler 2017, 13-4). In other words, DBR has an interventionist, iterative, process-oriented, utility-oriented and theory-oriented cyclical approach to finding the most suitable solution for a specific educational problem (ibid., 5). Figure 11 will exemplify the structure of a stereotypical design-based research project:

89 For details on how DBR was implemented in MeVoL read Kutzelmann and Hilbe 2017.
At the beginning of a DBR project is an educational issue. Researchers then create a prototype on the basis of theory to approach this issue. A first trial is held, which is then formatively evaluated. Afterwards a redesign of the first version is done to create a more suitable design for the initial problem. This process can be repeated several times until researchers and practitioners are satisfied with the outcome (Euler 2014, 1). In case of MeVoL, the outcome contributes to language learning research and the creation of multilingual learning materials.

The MeVoL-teaching design consisted of four core elements which were elaborated in the course of the research project: multilingual read-alouds by the teacher, (pre-/while-/post-) scaffoldings, directed follow-up conversations ("Anschlusskommunikation") and listening strategy training (Kutzelmann and Hilbe 2017, 33-44). Overall, 14 classes\(^{90}\) participated in the project with a total of 309 pupils\(^{91}\) (Peter, Unterthiner, and Zerlauth 2016, 132). Last but not least, MeVoL developed a teaching design which was academically evaluated and fine-tuned in cooperation with the participating language teachers. A wishful future step for MeVoL will be to prove the positive tendencies of the teaching design and implement MeVoL in a wider scale to discover its effectiveness and innovation (for more details read Hilbe et al. 2017, 73-146).

\(^{90}\) Nota: A "class" should be understood as "form groups". Each MeVoL-class consisted of 20 to 25 pupils.

\(^{91}\) Out of these, 180 were recruited for the REM-Study.
5.4 Participants

5.4.1 Data protection through ID-codes
All of the participants received a student's code through the MeVoL-project, which consisted of a certain combination of letters and numbers. It was necessary to keep these codes and, especially for the author of this dissertation, to match the information accumulated in the MeVoL project with the REM-study's data.

5.4.2 Participating Classes
The participants attended different secondary school form types. 22 participants were pupils at the Praxisschule in Feldkirch (A), 18 participants at VMS Grüt (A), 18 participants at VMS Rheindorf (A), 22 at Oberstufe in Bazenheid (CH), 20 participants at Schulhaus Risi in Wattwil (CH) and 80 at Realschule in Ravensburg (G). The Swiss classes carried the MeVoL-Project out with French, whereas the Austrian and German classes carried it out with English.

Concerning language learning at school, at the moment of the dissertation's data collection, the Austrian participants from the Praxisschule Feldkirch and VMS Rheindorf had 6.5 years of German language education and 6.5 years of English language education. The participants of the VMS Grüt have 7.5 years of German and English language education. No further foreign languages were taught in the participating schools.\(^{92}\)

5.4.3 Testers
Four testers carried out the pencil-paper tests. The author of this dissertation administered them in the Austrian classes in collaboration with a MeVoL-assistant (the study was carried out simultaneously with the think aloud-protocols). Due to the distance and travel difficulties, in the German and Swiss classes the tests were administered by two MeVoL-assistants who received the tests and test scripts a week before the REM-Study was carried out. The testers were not allowed to give the pupils additional information (e.g. information on the unknown language).

\(^{92}\) For details of the Austrian primary and lower secondary school education, read Government 2012 and 2016.
5.4.4 Language of Testing
The study’s rubrics were in German language. The participants were asked to answer in German. However, two of the tasks required using Dutch.

5.4.5 Description of Participants
Subjects were 180 (secondary) school pupils (87 male, 92 female, 1 not given) between 12-14 years old ($M=13.19$, $SD=0.83$). Of the 180, 58 were from 58 Austria (34 male / 24 female, age $M=12.92$, $SD=0.75$), 80 from Germany (40 male / 40 female, age $M=13.05$, $SD=0.82$) and 42 from Switzerland (13 male / 28 female, 1 not given, age $M=13.78$, $SD=0.82$). All of the participants were part of the research project MeVoL and were in touch with two or three languages at school: German as a first and English as a foreign language subjects in Austria and Germany, and additionally French as a foreign language in Switzerland. This means that of the 180 participants, 138 participants attended a school system with German as their school language plus English as a foreign language subject and 42 participants attended a school system with German as their school language plus English and French as foreign language subjects. A (language background) questionnaire carried out as part of MeVoL provide data on any additional (foreign) language competences: 125 of the 180 participants claimed to have further language competences beyond German and English (and French for the Swiss participants): French ($n=27$), Albanian ($n=11$), Italian ($n=11$) and Turkish ($n=10$) being the most prominent languages besides further language (in alphabetical order: Arab ($n=3$), Bosnian ($n=2$), Croatian ($n=4$), Czech ($n=1$), Danish ($n=2$), Dutch ($n=1$), Greek ($n=1$), Hebrew ($n=1$), Hungarian ($n=2$), Japanese ($n=3$), Polish ($n=4$), Portuguese ($n=1$), Rhaeto-Romantic ($n=1$), Romanian ($n=1$), Russian ($n=7$), Serbian ($n=3$), Spanish ($n=8$), Tamil ($n=1$), Tibetan ($n=2$), or Vietnamese ($n=2$)).

Summarising, 61 participants claim to know two languages (German and English), 87 participants claim to know three languages and 25 participants claim to know more than three languages (for details see Table 7). The author wants to comment that he was not able to test the participants’ individual language competences. Hence, these competences might reach from basic to proficient language use. Out of this reason, the author did not differentiate between fully and partially bilingual participants and coded these participants as two groups: German, English and Ln or German, English, French and Ln.

93 Summarising, 61 participants claim to know two languages (German and English), 87 participants claim to know three languages and 25 participants claim to know more than three languages (for details see Table 7). Subsequently, the participants were divided into four groups as presented in the following chart:
<table>
<thead>
<tr>
<th>Language Combinations</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td>German+English</td>
<td>61</td>
<td>33,9</td>
<td>35,3</td>
</tr>
<tr>
<td></td>
<td>German+English+French</td>
<td>15</td>
<td>8,3</td>
<td>8,7</td>
</tr>
<tr>
<td></td>
<td>German+English+Ln</td>
<td>72</td>
<td>40,0</td>
<td>41,6</td>
</tr>
<tr>
<td></td>
<td>German+English+French+Ln</td>
<td>25</td>
<td>13,9</td>
<td>14,5</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>173</td>
<td>96,1</td>
<td>100,0</td>
</tr>
<tr>
<td>Missing</td>
<td></td>
<td>7</td>
<td>3,9</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>180</td>
<td>100,0</td>
<td></td>
</tr>
</tbody>
</table>

Table 7. Overview of participants (language combinations).
6 Description of Study’s Tasks

The following chapter will describe the chosen research methods, variables, instruments of data analyses and time of data collection. Before presenting these pieces of information, a brief introduction to the REM-Study test design will be offered.

Subjects were presented with one biographical text about a Dutch pirate called Simon de Danser as suggested in EuroComGerm (Hufeisen and Marx 2007, 149). This Dutch text was chosen to limit feelings of uncanniness and to keep motivation for unknown Germanic languages up. The text was shortened in order to keep the execution time frame at 30 minutes. The participants were not told that the unknown language is Dutch, only that it was a real language. After the test was distributed, the participants were asked to write down their student’s code and to carefully read the instructions. The test consisted of 10 tasks (7 tasks working on the Dutch text, 3 on language background) which were inspired by Marx (2011) plus nine REM-SORS items. As already mentioned, instructions were given in German language (see Appendix). The following parts will describe the tasks in more detail. Overall, the participants were tested on global understanding, lexis (content and function words), lexo-syntax (in combination with translation tasks) and reading strategies. Out of the 309 MeVoL-pupils, 183 pupils carried out the REM-Study's pencil-paper test; 180 of these were used for data analyses\textsuperscript{94}. In short, the participants carried out the following tasks:

- Task 1 (1 item) asked the participants to give the text a title.
- Task 2 (1 item) asked the participants to find details in the text.
- Task 3 (7 items) asked the participants to translate content Dutch words into German, and, furthermore, explain what they did to find their solution.
- Task 4 (4 items) asked the participants to find the Dutch equivalent for German function words and, furthermore, to write down the line where they found the Dutch equivalent.
- Task 5 (5 items) asked the participants to find every definite article in the text. Additionally, the participants were asked to grammatically explain how the definite article is used.
- Task 6 (3 items) asked the participants to put two scrambled sentences that were not given in the original text into the right word order. Additionally, the

\textsuperscript{94} The remaining three participants did not appropriately fill in the pencil-paper test.
participants were asked to give an explanation on which word order this unknown language usually follows.

- Task 7 (2 items) asked the participants to translate language chunks from Dutch to German.
- Task 8 (1 item) asked the participants whether they thought of other languages while completing Task 1-7 or not.
- Task 9 (1 item) asked the participants to indicate their attitudes towards the English language on a Likert scale.
- Task 10 (1 item) asked the participants if they had learned other languages besides German and English (or German, English and French for the Swiss participants).
- Finally, the participants completed the REM-SORS (9 items).

6.1.1 General Reading Comprehension in an Unknown Germanic Language
The first two tasks focus on general text comprehension; one reason for this was to give test takers a relatively easy entry to the pencil-paper test because the follow-up exercises were more demanding. Task 1 asked the participants to give the text a title in German using a maximum of four words. Task 2 asked the participants to identify two activities which the main figure of this text was good at doing (reading for details).

6.1.2 Translation Tasks
Task 3 and 4 focussed on lexis and explicit one-word translation. Task 3 asked the test takers to find the right German translation for seven Dutch content words. These Dutch words have different degrees of cognate similarities (e.g., Dutch carrière, English career), oorlog being the most difficult one without cognate resemblances. Furthermore, the test takers were asked to write an explanation of how they came to their translation. These explanations offer further qualitative data on how language learners work on and with unknown foreign languages.

Task 4 asked the test takers to find the Dutch equivalent of certain German function words in the text. Additionally, the test takers had to write down the line where they found the translation.

Task 7 asked the test takers to translate chunks from Dutch into German, which requires them not only to translate but to apply grammatical knowledge, as well.
6.1.3 Hypothesised Grammar
Task 5 and 6 focussed on hypothesised grammar. Task 5 asked the participants to find all the definite articles in the Dutch text and to determine the words further in German language. Task 6 asked the participants to put two additional sentences that were not in the original text in the right word order. These sentences were jumbled at the segment level, for example sentence B (nota: | indicates end of segment): Kaapvaart | en | piraterij | was | al heel lang bekend | in de Middellandse Zee (translation: Cape shipping and piracy were known for a long time in the Mediterranean Sea). Thus, the pupils had to apply their meta-grammar knowledge in order to successfully put the puzzle pieces together. The exercise’s second part asked them to describe the word order of this language.

6.1.4 Further Language Competences and Attitude towards English as a Foreign Language
The last three tasks focussed on getting more data on language background. In Task 8 the participants were asked to write down additional languages of which they thought while completing the pencil-paper test. Task 9 asked to mark their attitudes towards English as a foreign language on a five-point Likert-scale (1 lowest value: awful, 5 highest value: brilliant). In Task 10, the participants were asked to list further languages which they had learned without any self-reported specifications on competence levels.

6.1.5 Metacognitive Reading Strategies Test
In order to find out which reading strategies adolescent language learners use to decode unknown Germanic language patterns, the REM-SORS was used. The original test includes 30 items to investigate the construct of reading strategies. For the REM-study 9 items were chosen, translated and slightly modified in order to be understandable for middle schoolers (see Section 4.3 for details). The 9 items covered global reading strategies (GLOB, 3 items), problem solving strategies (PROB, 5 items) and support strategies (SUP, 1 item).

95 This was considered to be the most difficult task. Looking at the TAPs, it becomes clear that the participants had major difficulties.
6.1.6 Variables and Procedure of the Study

Possible intervening variables were time of day, exhaustion and misleading testing formats. In order to overcome the latter, the project’s testing format was oriented on Marx’s 2011 study, yet was modified by the author to be fitting for middle schoolers. The pilot study gave the researcher an insight on how the pencil-paper test should be formatted (carried out in March 2016)\(^{96}\). Furthermore, the author of this thesis discussed his test design with his IMOF-colleagues at Innsbruck University. Concerning time management, the study's execution depended on the MeVoL-teachers. However, the pencil-paper test was carried out a day after the end of the MeVoL-teaching design, or at the latest, three days later. The exact time of the school day was determined by the classes’ timetable. The test takers had 30 minutes time to complete the pencil-paper test, yet after 25 minutes they were reminded to take the second part of the test, namely a metacognition test on reading strategies (REM-SORS).

6.1.8 Think aloud-protocols procedure

Simultaneously to the three pencil-paper tests in the Austrian classes, the author of this thesis carried out three think-aloud protocols. He selected the three students with high reading motivation values (unpublished MeVoL-data). The participants were allowed to decline the offer though they didn’t. As a thank you, they received chocolate after completing the think-aloud. The participants’ pencil-paper tests were normally included in the testing corpus after the TAP.

The TAP was split into two parts: the warm-up phase and the pencil-paper test. The warm-up exercise was to get the participant used to thinking aloud and reducing anxiety. The warm-up asked the participant to create a rhyme of a word (Lederhose) that was given to the candidate. After the warm-up the participant was asked to read the instructions aloud in order to get used to thinking aloud even more. As a reminder to think aloud whole the task completion, standardised prompt cards were used (e.g. “Bitte laut denken.”) (for a review of TAPs in language research see Bowles 2010). After the warm-up phase, the TAP-participants were asked to fulfil the same tasks in the same order as all the other participants, but just had to think aloud while completing the REM-Study. The time limit was 30 minutes. As a follow-up to the think aloud-protocols (henceforth TAP), the researcher asked the three pupils additional questions regarding

\(^{96}\) For details on the piloting procedure, see Section 6.1.11.
the elaboration of the text, which are retrospective debriefing measures, as well. This procedure was used to guarantee a more holistic approach to the individuals participating in the TAPs. Each TAP performance took about 45-50 Minutes. The advantage of TAPs is that it might give an insight "of the inner language of short-term memory." (Taylor and Dionne 2000, 414) Still, TAPs are never complete measures because "[...] only heeded traces of thinking will be verbalized, and consequently, automated or parallel processing cannot be reliably reported", "verbalizations are limited by the processing capacity of S[hort] T[erm] M[emory]“ which leads to losses of information and certain types of information, “[...] such as goals and steps taken towards these goals” are rather expressed with retrospective procedures (ibid. 414-5). In order to approach these issues, the follow-up questions were introduced. The TAPs were recorded on two devices and saved on two computers and in a cloud system to ensure data security. Instructions and rubrics were in German language.

6.1.9 Instruments for Data Analyses: SPSS and MAXQDA
Quantitative statistical analysis of the data from the pencil-paper-test was performed using the programme SPSS. Foremost the dissertation focussed on descriptive statistics and in a second step also on inferential statistics. Advanced ANOVA-calculations were used to evaluate the significance of different group performances. In order to analyse significant results, the post-hoc Bonferroni correction was used to determine differences between the language groups. Moreover, contrast analyses were used to compare the language groups further. Additionally, to determine successful predictors when reading an unknown Germanic language, linear hierarchical regressions were used. Furthermore, the TAPs were transcribed using the programme F4 and then integrated into MAXQDA11 and MAXQDA12 in order to qualitatively analyse these participants’ thoughts. The categories for the TAP-analyses were based on the SORS. Furthermore, an additional category was entered to categorise sentences and expressions on hypothesised grammar.

6.1.10 Scoring
The data was simultaneously coded to the Austrian grading system, where a lower score represents a better answer. In other words, the lower the score, the more correct the
answer was deemed. Task 1-7 will briefly be summarised (from highest to lowest value):

✓ Task 1, 2, 7: 1 (acceptable), 2 (semi-acceptable) and 3 (not acceptable)
✓ Task 3, 4, 5: 1 (acceptable) and 2 (not acceptable)
✓ Task 6: 1 (acceptable), 2 (4 items acceptable), 3 (3 items acceptable), 4 (2 items acceptable), 5 (1 item acceptable) and 6 (no acceptable item)

The REM-SORS was kept like its original version (the higher the result, the higher the score concerning the given item): 1 = never, 2 = almost never, 3 = sometimes, 4 = frequently, 5 = almost always and 6 = always.

6.1.11 Time of Data Collection

The dissertation project is defined as a semi-experimental study (Marx 2012, 62). Each teacher carried out the MeVoL-teaching design before the dissertation project was carried out (either by the author or by representative trained tester who followed a prepared script); so, the language learning conditions are more likely to be comparable between the participating classes.

The data collection took place between April 21st and May 25th, 2016. The time gap was due to the country's different school holidays. In order to pilot the pencil-paper test, a first trial was held on February 2nd, 2016 with family relatives (4 participants including a 13 year-old). After the trial the author modified the test on the basis of their feedback (e.g. omission of the picture of a pirate ship on the first page which was included as a means of scaffolding or more precise rubrics for task 4 and 5). The reworked version was piloted on March 15th, 2016 in a school in Innsbruck, Austria (n=14, age M=11.71, SD=1.38, 3 male, 7 female and 4 not given). Immediately after the pilot, two participants were interviewed concerning comprehensibility of the tasks and task descriptions. As a result, the author of this thesis clarified the rubrics of Task 1, 2 and 6. Finally, important rubrics were highlighted so that the participants would pay more attention to certain aspects of a task.
7 Results

The following part will be present the result of the study. First, the results of the pencil-paper tests will be presented. Second, the results of the TAPs will be presented. Third, the results of the metacognition test will be presented. The last part will give a summary of the results before moving on to the thesis’ discussion part. To heighten reader friendliness, the following abbreviations are used:

- participants with German and English = PGE
- participants with German, English and Ln = PGEL
- participants with German, English and French = PGEF
- participants with German, English, French and Ln = PGEFL

7.1 Pencil-Paper Tests

In the first part of the test, test takers were asked to fulfil exercises which focus on general reading comprehension, translation and tacit hypothesised grammar. The second part was the completion of a metacognition test, which focussed on reading strategies in foreign languages (SORS). The following part will present step-by-step descriptive statistical analyses of every single task (25 items). First, the overall performance will be described.

In total, 964 acceptable answers (21.42%) and 457 semi-acceptable (10.16%), 2175 unacceptable (48.33%) were given. 904 items (20.08%) were not answered. Results on each subcategory will be given at the beginning of each section.

Concerning the overall performance (task 1-7), there was no statistically significant difference between the four language groups as determined by one-way ANOVA (F(3,169)=0.98, p>.05). The reliability of the subscale scores was .70. On average, PGEFL performed best (M=2.27, SD=0.25), followed by PGEL (M=2.30, SD=0.34), PGEF (M=2.35, SD=0.30) and PGE (M=2.38, SD=0.34), see Graph 1.

97 N.b.: The data was simultaneously coded to the Austrian grading system, where a lower score represents a better answer.
7.1.1 Results on Global Reading

The first two tasks test reading comprehension in languages, namely short-answer test techniques (Alderson 2000, 227). Both had to be answered in German. Task 1 required test takers to give the text a title of no more than four words. Task 2 asked for two activities which the main actor of this text was good at (reading for details).

In total concerning global reading, there was no statistically significant difference between the four language groups as determined by one-way ANOVA \(F(2,171)=1.51, p>.05\), but a follow-up contrast analysis revealed that the PGEFL outperformed the other groups when the latter three were combined together, \(t(46.67)=-2.50, p<.05\). Overall, PGEFL performed best \((M=1.82, SD=0.38)\), followed by PGEL \((M=2.00, SD=0.52)\), PGE \((M=2.02, SD=0.55)\) and PGEF \((M=2.17, SD=0.59)\), see Graph 2. The reliability of the subscale scores was .27.

**Graph 1. Mean study results.**
Task 1 – Give the text a title

Due to the openness of the exercise, multiple answers for the text’s title were acceptable. 101 test takers (56.1%) were able to give an acceptable answer. 41 test takers (22.8%) gave a not acceptable answer. 35 test takers (19.4%) gave a semi-acceptable answer, meaning they did not fully meet the task’s requirements. Semi-acceptable answers were counted if the title included only parts of the text’s main information and if elements could easily be added to be more precise. 3 participants (1.7%) did not give an answer, see Graph 3.
First, the acceptable answers will be described further. The most frequent acceptable answer was “Simon der Pirat” (58 participants, 32.2%), followed by “Simon der Handelskapitän” (6 participants, 3.3%), “Der Pirat Simon” (5 participants, 2.8%), “Simon der Seefahrer” (4 participants, 2.2%), “Der holländische Pirat”, “Simon der Seemann” and “Simon der Schiffskapitän” (3 participants each, 1.7%), “Der Pirat von Holland”, “Simon der gefürchtete Pirat” and “Der holländische Kapitän” (2 participants each, 1.1%) and “Pirat Simon ’de Danser’, “Simon der holländische Pirat”, “Der mutige Pirat”, “Der Kapitän aus Holland”, “Simon der Schreckliche”, “Die Piratenkarriere”, “Der handelnde Pirat”, ”Simon der Seeräuber”, “Simon war ein Pirat”, “Der Pirat der plündert”, “Der Meisterpirat” and “Simon der erfahrene Seemann” (1 participant each, 0.6%).

The most frequent semi-acceptable answer was “Der Pirat” (10 participants, 5.6%), followed by “Simon der Tänzer” (7 participants, 3.9%), “Simons Leben” (4 participants, 2.2%), “Simons Karriere” (2 participants, 1.1%) and “Die Erfolgsgeschichte von Simon”, “Der Seemann und Handelskapitän”, “Simons Reise”, “Die Piraten”, “Simon der Held”, “Eine Piratengeschichte”, “Simon ist jetzt Bootsgeselle”, “Simon der ehemalige Pirat”, “Die Piraten auf Niederländisch”, “Der Holländer”, “Die Plünderpiraten” and “Der Plünderer Simon” (1 participant each, 0.6%).
The most frequent unacceptable answer were “Simon und das Boot” and “Der Seemann” (2 participants each, 1.1%), followed by “Simon Simonzoon”, “Türkisches Gesicht”, “Tag in der Schule”, “Simon”, “Fremdsprachentext”, “Simon und Zijn”, “Simon und die Sprachen”, “Simon der Bootbegleiter”, “Ein Text in Niederländisch”, “Simons Steckbrief” and “Simons Talente” (1 participant each, 0.6%). 24 participants (13.3%) did not fulfil the exercise in German and one participant (0.6%) used too many words. There were no statistically significant differences between group means as determined by one-way ANOVA ($F(3,169)=1.09, p>.05$). On average, PGEFL performed best ($M=1.48, SD=0.65$), followed by PGEL ($M=1.64, SD=0.83$), PGE ($M=1.73, SD=0.86$) and PGEF ($M=1.93, SD=0.86$), see Graph 4.

**Task 2 – Reading for details**

Due to the specific notion of this exercise to find two specific words in the text (solution: *vechten* and *plunderen*, fight and plunder), only one answer was possible. 2 participants (1.1%) gave an acceptable answer. 61 participants (34.3%) gave an unacceptable answer. 115 participants (63.9%) gave a semi-acceptable answer. Semi-acceptable answers consisted of one or at least one acceptable element (e.g. “plündern und fechten”). 2 participants (1.1%) did not give an answer.
2 participants (1.1%) wrote the acceptable answer “kämpfen und plündern”. The most frequent semi-acceptable answer was “fechten und plündern” (72 participants, 40%) followed by “segeln und plündern” (13 participants, 7.2%), “kochen und plündern” (12 participants, 6.7%), “plündern” (10 participants, 5.6%), “handeln und plündern” (5 participants, 2.8%) and “tanzen und plündern”, “kämpfen” and “plündern und aufpassen” (1 participant each, 0.6%). The most frequent unacceptable answer was “kochen und segeln” (8 participants, 4.4%), followed by “kochen” and answers with nouns as an answer (7 participants each, 3.9%), “segeln” (5 participants, 2.8%), “segeln und fechten” (4 participants, 2.2%), “plaudern und fechten”, “handeln und segeln” and “kochen und segeln” (3 participants, 1.7%), “segeln”, “kochen und tanzen”, “kochen und werken” and “kochen und fischen” (2 participants each, 1.1%) and “handeln”, “segeln und Boot bauen”, “tanzen”, “fechten und werken”, “erklären und sagen”, “tanzen und singen”, “kochen und knoten”, “kochen und lenken”, “tanzen und Kunst”, “tanzen und segeln”, “tanden und reden”, “tanzen und fechten” and “segeln und fischen” (1 participant each, 0.6%).

There were no statistically significant differences between group means as determined by one-way ANOVA ($F(3,170)=1.14; p>.05$). On average, PGEFL performed best ($M=2.16$, $SD=0.37$), followed by PG ($M=2.30$, $SD=0.50$), PGEL ($M=2.35$, $SD=0.48$) and PGEF ($M=2.40$, $SD=0.63$), see Graph 6. The reliability of the subscale scores was .50.
7.1.2 Results on Translation Tasks

Task 3 and task 4 focussed on translation. In task 3 the participants were required to translate content words from Dutch into German and explain what they did in order to come to the solution. Task 4 asked the participants to look for function words in the target language and, therefore, they were confronted with translations from German into Dutch. Only one answer was possible if participants used the text as a main resource.

In total, concerning lexis performance, there was a statistically significant difference between the language groups as determined by one-way ANOVA ($F(3,172)=3.12$, $p<.05$, $\eta^2=0.05$, $\beta-1=0.72$, small effect size), though the post-hoc Bonferroni correction did not confirm differences between the groups ($p>.05$). Nevertheless, a contrast analysis revealed that the PGE were outperformed when the other three groups are combined, $t(169)=2.61$, $p<.05$. Overall, PGEF performed best ($M=1.37$, $SD=0.23$), followed by PGEFL ($M=1.37$, $SD=0.16$), PGEL ($M=1.38$, $SD=0.20$) and PGE ($M=1.51$, $SD=0.23$), see Graph 7. Overall, the reliability of the subscale scores was .32.
Task 3 – Translation of content words

Task 3 asked the participants to find a German translation of the given Dutch content words. In total concerning Dutch to German performances, there was no statistically significant difference between the country groups as determined by one-way ANOVA ($F(3,172)=1.43$ $p>.05$). Still, after running a contrast analysis a significant difference could be revealed: PGE were outperformed by the other groups combined together, $t(169)=2.01$, $p<.05$.

Overall, PGEF performed best ($M=1.44$, $SD=0.17$), followed by PGELF ($M=1.50$, $SD=0.24$), PGEL ($M=1.52$, $SD=0.25$) and PGE ($M=1.57$, $SD=0.24$), see Graph 8. The reliability of the subscale scores was .51.
Item 1: "carriere" (German: "Karriere")

171 participants (95.0%) gave the acceptable answer, whereas 4 participants (2.2%) did not. 5 participants (2.8%) did not give an answer, see Graph 9.
171 participants (95.0%) found the acceptable translation (“Karriere”). 2 participants (1.1%) rewrote the term “carriere” and 2 participants (1.1%) gave “Auto” as an answer. Therefore, all answers were nouns (97.2%).

The most frequent self-reported strategy used to come to the translation was phonetic similarities with German (49 participants, 27.2%), followed by phonetic similarities (without specifications) (18 participants, 10.0%), similarities with German (without specifications) and grapheme similarities (without specifications) (13 participants each, 7.2%), grapheme similarities with German (11 participants, 6.1%), phonetic similarities with German and English (8 participants, 4.4%), grapheme similarities with English (7 participants, 3.9%), phonetic similarities with English (6 participants, 3.3%), French phonetic similarities (5 participants, 2.8%), similarities (without specification) (4 participants, 2.2%), similarities with French (without specifications), grapheme similarities with French, phonetic similarities with Turkish and giving a definition (3 participants each, 1.7%), similarities with Spanish, grapheme similarities with English and French, French and grapheme similarities with German, grapheme similarities with English and German and phonetic similarities with French and German (2 participants each, 1.1%) and phonetic and grapheme similarities with German, using the context, guessing, grapheme similarities with French and German, describing the term with a synonym, deducing, similarities with English (without specifications), grapheme and
phonetic similarities with English and phonetic similarities with French and Italian (1 participant each, 0.6%). 15 participants did not give an explanation (8.3%).

The following paragraph will split the multi-answers in more detail. The three most frequent self-reported strategies used among the acceptable answers (n=162) were phonological similarities with German (48 participants, 28.1%), followed by phonological similarities (without specifications) (17 participants, 9.9%), grapheme similarities (without specifications) and similarities with German (without specifications) (13 participants each, 7.6%) and grapheme similarities with German (11 participants, 6.4%).

There were no statistically significant differences between group means as determined by one-way ANOVA ($F(2,168)=0.99$, $p>.05$). Overall, PGE performed best ($M=0.95$, $SD=0.22$), followed by PGEL ($M=0.99$, $SD=0.12$) and PGEF as well as PGEFL (both groups $M=1.00$, $SD=0.00$).

**Item 2: “bootsgezel” (German: “Bootskamerad”)**

50 participants (27.8%) gave the acceptable translation, whereas 118 (65.6%) did not. 12 participants (6.7%) did not give an answer, see Graph 10.

![Graph 10. Descriptive results "bootsgezel".](image)

The most frequent self-reported strategy used to come to the translation was phonetic similarities with German (50 participants, 27.8%) followed by phonetic similarities
(without specifications) (19 participants, 10.6%), using the context (15 participants, 8.3%), similarities with German (12 participants, 6.7%), grapheme similarities with German and grapheme similarities (without specifications) (9 participants each, 5.0%), using syntax (6 participants, 3.3%), guessing (5 participants, 2.8%), giving a definition (4 participants, 1.7%), deducing, deducing using one’s dialect as a resource and phonetic similarities with English (3 participants each, 1.7%), similarities with Danish and grapheme similarities with English (2 participants each, 1.1%) and phonetic similarities with English and German, similarities (without specifications), grapheme similarities with French, using imagination and similarities with French and German (without specifications) (1 participant each, 0.6%). 33 participants (18.3%) did not give an explanation.

The following paragraph will split the multi-answers in more detail. The three most frequent self-reported strategies used among the acceptable answers (n=50) was phonetic similarities with German (13 participants, 26.0%), followed by phonetic similarities (without specifications) (12 participants, 24.0%) and using the context (7 participants, 14.0%).

There were statistically significant differences between group means as determined by one-way ANOVA ($F(3,162)=3.02, p<.05, \eta^2=0.05, \beta-1=0.70$, small effect size), yet the post-hoc Bonferroni correction and a contrast analysis did not confirm any significant differences. Overall, PGEL performed best ($M=1.60, SD=0.49$), followed by PGE ($M=1.68, SD=0.47$), PGEF ($M=1.87, SD=0.35$) and PGEFL ($M=1.88, SD=0.34$).

**Item 3: “Spaanse” (German: “Spanisch[e]”)**

50 participants (27.8%) gave the acceptable translation, whereas 90 participants (48.3%) did not. 40 participants (21.7%) did not give an answer, see Graph 11.
50 participants (27.8%) translated the term acceptably with “spanisch”. The most frequent unacceptable answer was “Spanien” (41 participants, 22.8%) followed by “Spanier” (18 participants, 10.0%), “Schansee” (4 participants, 2.2%), “See” and “Spannung” (3 participants each, 1.7%), “spannen”, “Spannsee” and “Spaß” (2 participants each, 1.1%) and “Essen”, “spontan”, “Spinne”, “Meer”, “Sommer”, “Seil spannen”, “Sprache”, “Masten”, “Anlegeplatz”, “Schwert”, “Schimpanse”, “Spange”, “Schwan” and “Falle” (1 participant each, 0.6%). 51 participants (28.3%) translated the term with an adjective, 86 participants (47.7%) with a noun and 2 participants (1.1%) with a verb.

The most frequent self-reported strategy used to come to the translation was phonetic similarities with German (20 participants, 11.1%) followed by phonetic similarities (without specifications) (19 participants, 10.6%), using the context (18 participants, 10.0%), grapheme similarities with German (10 participants, 5.6%), guessing (8 participants, 4.4%), grapheme similarities (without specifications) (6 participants, 3.3%), similarities with German (without specifications), grapheme similarities with English (4 participants each, 2.2%), phonetic similarities with English and syntax (3 participants each, 1.7%), similarities (without specifications), phonetic similarities with French and describing the term (2 participants each, 1.7%) and phonetic similarities with English and German, using imagination, deducing using one's dialect as a resource, similarities with French and German (without specifications), similarities with Danish
(without specifications) and phonetic similarities with Italian (1 participant each, 0.6%). 73 participants (40.6%) did not give an explanation.

The following paragraph will split the multi-answers in more detail. The three most frequent self-reported strategies used among the acceptable answers (n=54) were using the context (10 participants, 9.3%), followed by phonetic similarities with German (7 participants, 23.0%) and phonetic similarities (without specifications) (6 participants, 11.1%).

There were no statistically significant differences between group means as determined by one-way ANOVA ($F(2,135)=2.04, p>0.05$). Yet, a contrast analysis reveal that pupils with French outperformed pupils without French, $t(132)=-2.16, p<0.05$. Overall, PGEFL performed best ($M=1.62, SD=0.49$), followed by PGEF ($M=1.46, SD=0.52$), PGE ($M=1.62, SD=0.49$) and PGEL ($M=1.71, SD=0.46$).

**Item 4: “hem” (German: “ihm”)**

81 participants (45.0%) gave the acceptable answer, whereas 76 participants (42.2%) did not. 23 participants (12.8%) did not give an answer, see Graph 12.

![Graph 12. Descriptive results "hem".](image)

81 participants (45.0%) translated the term acceptably with “ihm”. The most frequent unacceptable answer was “Heim” (22 participants, 12.2%), followed by “er” (7 participants, 3.9%), “ihn”, “dem” and “haben” (6 participants each, 3.3%), “Helm” and
“sein” (5 participants each, 2.8%), “Zuhause” (3 participants, 1.7%), “zum”, “Hemd”, “her” and “seinem” (2 participants each, 1.1%) and “vorher”, “hat”, “helfen”, “seid”, “im”, “him”, “Neid”, “Daheim” and “Hamburger” (1 participants each, 0.6%). 101 participants (56.1%) translated the term with a pronoun, 35 participants (19.4%) with a noun, 9 participants (5.0%) with a verb, 6 participants (3.3%) with an article, 3 participants (1.7%) with an adverb, 3 participants (1.7%) with a preposition and 1 participant (0.6%) rewrote the term.

The most frequent self-reported strategy used was phonetic similarities with English (29 participants, 16.1%), followed by grapheme similarities with English (24 participants, 13.3%), using the context (18 participants, 10.0%), phonetic similarities with German (13 participants, 7.2%), deducing via one’s dialect (12 participants, 6.7%), phonetic similarities (without specifications) (8 participants, 4.4%), grapheme similarities with German (7 participants, 3.9%), grapheme similarities with English and German (6 participants, 3.3%), describing the term (4 participants, 2.2%), similarities with German (without specifications) (3 participants, 1.7%), phonetic similarities with English and German (2 participants 1.1%) and grapheme similarities (without specifications) and similarities with Danish (without specifications) (1 participant each, 0.6%). 47 participants (26.1%) did not give an explanation.

The following paragraph will split the multi-answers in more detail. The three most frequent self-reported strategies used among the acceptable answers (n=81) were phonetic similarities with English (23 participants, 28.4%), followed by grapheme similarities with English (16 participants, 19.8%) and using the context (14 participants, 17.3%).

There was a statistically significant difference between group means as determined by one-way ANOVA (F(3,150)=8.43, p<.001, η²=0.15, β-1=0.99, large effect size). PGE (M=1.68, SD=0.48) were outperformed by PGEF (M=1.07, SD=0.27, p<.001) and PGEFL (M=1.25, SD=0.50, p<.01). Furthermore, PGEL (M=1.51, SD=0.50) were outperformed by PGEF (p<.05). In addition, contrast analysis revealed further differences: PGE were outperformed by the other participants grouped together, t(95.33)=4.59, p<.001. Furthermore, the pupils with French outperformed the pupils without French, t(85.39)=-5.79, p<.001.

Summarizing, pupils with PGEF performed best (M=1.07, SD=0.27), followed by PGEFL (M=1.25, SD=0.44), PGEL (M=1.51, SD=0.50) and PGE (M=1.67, SD=0.48).
Item 5: “schepen” (German: “Schiff”)

13 participants (7.2%) gave the acceptable translation, whereas 92 participants (51.1%) did not. 75 participants (41.7%) did not give an answer, see Graph 13.

13 participants (7.2%) translated the term acceptably with “Schiffe”. The most frequent unacceptable answer was “schleppen” (37 participants, 20.6%), followed by “scheppern”, “schaffen” and “segeln” (6 participants each, 3.3%), “schippen” and “Schuppen” (4 participants, 4.4%), “schieben”, “schaufeln” and “fahren” (2 participants each, 1.1%) and “schnappen”, “Scherben”, “schlossen”, “Scherpen”, “Mensch”, “Flügel”, “verschliffen”, “schieben”, “Zeug”, “schicken”, “gehen”, “schippen”, “hinfahren”, “schenken”, “steppen”, “Schaf”, “humpeln”, “See”, “Schlacht”, “Schlepper”, “Seen”, “Senden” and “Fahnen fortbewegen” (1 participant each, 0.6%). 75 participants (41.7%) did not give an answer. 26 participants (14.4 %) translated the term with a noun and 79 participants (43.8 %) translated the term with a verb.

The most frequent self-reported strategy used to come to the translation was phonetic similarities with German (17 participants, 9.4%), followed by using the context (13 participants, 7.2%), grapheme similarities with German (12 participants, 6.7%), similarities with German (without specifications) (11 participants, 6.1%), phonetic similarities (without specifications) (11 participants, 6.1%), phonetic similarities with English and describing the term (4 participants each, 2.2%) and grapheme similarities
with English (2 participants each, 1.1%) and similarities with Danish (without specifications) (1 participant, 0.6%). 84 participants (46.7%) did not give an explanation.

The following paragraph will split the multi-answers in more detail. The four most frequently self-reported strategies used among the acceptable answers (n=13) were phonetic similarities with English (3 participants, 23.1%), followed by grapheme similarities with German, using the context and guessing (2 participants each, 15.4%).

There was a statistically significant difference between group means as determined by one-way ANOVA \( F(3,100)=3.21, p<.05, \eta^2=0.09, \beta=0.73, \text{ medium effect size} \). The post-hoc Bonferroni correction revealed that PGE (\( M=1.94, SD=0.24 \)) were outperformed by PGEF (\( M=1.60, SD=0.52, p<.05 \)). A contrast analysis revealed that PGE were outperformed by the other pupils grouped together, \( t(97)=2.36, p<0.05 \). Furthermore, the pupils with French outperformed pupils without French when grouped together, \( t(97)=-2.18, p<.01 \).

**Item 6: “verovern” (German: “erobern”)**

24 participants (13.3%) gave the acceptable translation, whereas 70 participants (38.9%) did not. 94 participants (52.2%) did not give an answer, see Graph 14.

24 participants (13.3%) translated the term acceptably with “erobern”. The most frequent unacceptable answer was “verloren” (24 participants, 13.3%), followed by
“verlaufen” (6 participants, 3.3%), “verfroren” and “verfolgen” (5 participants each, 2.8%), “fern” (3 participants, 1.7%), “voran” and “überqueren” (2 participants, 1.1%) and “gegenüber”, “verwerfen”, “überfallen”, “opfern”, “verewigen”, “opfern”, “verbieten”, “weit vorne”, “gerade vorne”, “vorwärts”, “verworfen”, “verboten”, “fordern”, “verbreiten”, “vertreiben”, “gefangen”, “veräppeln”, “rudern”, “verschiffen”, “Ufer”, “oben”, “verführen” and “eröffnen” (1 participant each, 0.6%). 84 participants (46.6%) translated the term with a verb, 4 participants (2.2%) with a preposition, 3 participants (1.7%) with an adjective, 2 participants (1.1%) with an adverb and 1 participant (0.6%) with a noun.

The most frequent self-reported strategy used to come to the translation was phonetic similarities with German (37 participants, 20.6 %), followed by guessing (10 participants, 5.6%), grapheme similarities with German (9 participants, 5.0%), using the context and phonetic similarities (without specifications) (7 participants each, 3.9%), grapheme similarities with English (3 participants, 1.7%), similarities with German (without specifications) and describing the term (2 participants each, 1.1%) and grapheme similarities (without specifications), deducing and grapheme and phonetic similarities with German and English (1 participant each, 0.6%). 80 participants (44.4%) did not give an explanation.

The following paragraph will split the multi-answers in more detail. The three most frequent self-reported strategies used among the acceptable answers (n=24) were phonetic similarities with German (14 participants, 58.3%), followed by grapheme similarities with German (3 participants, 12.5%) and using the context (2 participants, 8.3%).

There were no statistically significant differences between group means as determined by one-way ANOVA ($F(3,90)=0.17; p>.05$). On average, pupils with PGEL performed best ($M=1.71, SD=0.46$) followed by PGE ($M=1.76, SD=0.43$), PGEFL ($M=1.78, SD=0.43$) and PGEF ($M=1.80, SD=0.45$).

**Item 7: “oorlog” (German: “Krieg”)**

No participant gave an acceptable translation (0.0%), though 59 (32.08%) gave an unacceptable answer. 121 participants (67.2%) did not give an answer, see Graph 15.
The most frequent inacceptable answers were “da lag” and “Ohrloch” (4 participants each, 2.2%), followed by “erlag”, “Orolog”, “Dialog”, “Monolog”, “Orologe” and “Ohren” (3 participants each, 1.7%), “stark”, “lügen”, “Urologe”, “knallte”, “erlogen”, “Verlag”, “Erlag” and “Unglück” (2 participants each, 1.1%) and “offen”, “öffnen”, “verloren”, “aufmachen”, “analog”, “Ohrenarzt”, “entlang”, “aufmachen”, “liegen”, “endlich”, “lag”, “Urlaub”, “schließen”, “unten”, “Prolog”, “Krieger”, and “Uhr” (1 participant each, 0.6%). 32 participants (17.7%) translated the term with a noun, 18 participants (10.0%) with a verb, 4 participants (2.2%) with an adjective, 2 participants (1.1%) and 1 participant (0.6%) with an adverb.

The most frequent self-reported strategies used to come to the translation were grapheme similarities with German and guessing (9 participants each, 5.0%), followed by using the context (8 participants, 4.4%), phonetic similarities (without specifications) (7 participants, 3.9%), phonetic similarities with German (6 participants, 3.3%), similarities with German (without specifications), grapheme similarities with English and describing the term (3 participants each, 1.7%) and phonetic similarities with Italian (1 participant, 0.6%). 131 participants (72.8%) did not give an explanation.
**Task 4 – Translation of function words**

Task 4 asked the participants to find a Dutch translation of the given German function words. Due to this reason, only one translation was possible (with the exception of item 1). In total concerning German to Dutch performances, there was no statistically significant difference between the groups as determined by one-way ANOVA ($F(3,137)=1.58, p>.05$). Overall, PGEFL performed best ($M=1.25, SD=0.22$), followed by PGEF ($M=1.29, SD=0.35$), PGEL ($M=1.37, SD=0.33$) and PGE ($M=1.42, SD=0.35$), see Graph 16. The reliability of the subscale scores was 0.51.

![Graph 16. Mean lexis (German to Dutch).](image)

**Item 1: “von”**

106 participants (58.9%) gave the acceptable translation, whereas 31 participants (17.2%) did not. 43 participants (23.9%) did not give an answer, see Graph 17.
104 participants (57.8%) translated the term acceptably with “van” and 2 further (1.1%) translated the term with door. The most frequent unacceptable answer was “kon” (11 participants, 6.1%), followed by “voor” (7 participants, 3.9%), “de” and “op” (3 participants each, 1.7%) and “dafür”, “en”, “zich”, “hem”, “auf”, “kann”, “die”, “ein” and “Dodrecht” (1 participant each, 0.6%).

117 participants (64.9%) translated the term with a preposition, 11 participants (6.1%) with a verb, 1 participant (0.6%) with a conjunction and 3 participants (1.7%) with a pronoun and 5 participants (2.8%) with another German word.

There were no statistical differences between groups as determined by one-way ANOVA ($F(3,131)=1.19$, $p>.05$). Overall, PGEFL performed best ($M=1.08$, $SD=0.28$) followed by PGEL ($M=1.24$, $SD=0.43$), PGEF ($M=1.26$, $SD=0.46$) and PGE ($M=1.27$, $SD=0.45$).

**Item 2: “für”**

55 participants (30.6%) translated the term acceptably, whereas 43 participants (23.9%) did not. 82 participants (45.6%) did not give an answer, see Graph 18.
54 participants (30.0%) translated the term acceptably with “voor”. The most frequent unacceptable translation was “en” (7 participants, 3.9%), followed by “op” (6 participants 3.3%), “kon” (4 participants, 2.2%), “of” and “tot” (3 participants each, 1.7%), “door” and “die” (2 participants, 1.1%) and “wie”, “als”, “de”, “hij”, “van”, “dat”, “aus”, “de”, “een”, “zu”, “das”, “waar”, “er” and “zich” (1 participant each, 0.6%).

66 participants (36.6%) translated the term with a preposition, 7 participants (3.9%) translated the term with a pronoun, 4 participants (2.2%) with a verb, 3 participants (1.7%) translated it with an article, 1 participant (0.6%) translated it with a conjunction and another with an adverb and 5 participants (2.8%) translated the term with another German word.

There was statistically significant difference between group means as determined by one-way ANOVA ($F(3,92)=3.33$, $p<.05$, $\eta^2=0.10$, $\beta-1=0.74$, medium effect size). After running the post-hoc Bonferroni correction, the statistical significant difference was specified. PGE ($M=1.70$, $SD=0.47$) were outperformed by PGEFL ($M=1.28$, $SD=0.46$, $p<.05$). Additionally, contrast analyses revealed further significant differences. PGE were outperformed by the other participants grouped together, $t(39.70)=3.18$, $p<.01$, and participants without French were outperformed by participants with French, $t(42.53)=-2.58$, $p<.05$. Overall, PGEF performed best ($M=1.25$, $SD=0.48$), followed by PGEFL ($M=1.28$, $SD=0.46$), PGEL ($M=1.41$, $SD=0.50$) and PGE ($M=1.70$, $SD=0.47$).
Item 3: “zu”

13 participants (7.2%) translated the term acceptably, whereas 68 participants (37.8%) did not. 99 participants (55.0%) did not give an answer, see Graph 19.

Graph 19. Descriptive results “zu”.

13 participants (7.2%) translated the term acceptably with “te”. The most frequent incorrect answer was “op” (10 participants, 5.6%) followed by “zijn” (9 participants, 5.0%), “tot” (8 participants, 4.4%), “en” and “zich” (6 participants each, 3.3%), “om” and “de” (5 participants each, 2.8%), “in” (3 participants, 1.7%) “hij”, “kon”, “of” and “een” (2 participants each, 1.1%) and “warm”, “die”, “von”, “het”, “mit”, “ob”, “Zee” and “es” (1 participant each, 0.6%).

35 participants (19.4%) translated the term with a preposition, 18 participants (10.0%) with a pronoun, 8 participants (4.4%) with an article and another 8 with a conjunction and 1 participant each (0.6%) translated it with a verb or a noun. 5 participants (2.8%) translated the term with another German word.

There was a statistically significant difference between group means as determined by one-way ANOVA ($F(3,75)=4.07, p<.05, \eta^2=0.15, \beta-1=0.83$, large effect size). After running the post-hoc Bonferroni correction differences could be specified: PGEF ($M=1.50$, $SD=0.52$) outperformed PGEL ($M=1.92$, $SD=0.26$, $p<.05$) and PGEFL ($M=1.93$, $SD=0.26$, $p<.05$). Furthermore, a contrast analysis revealed that participants with an additional Ln were outperformed by participants without an additional Ln, $t(72)=-3.10, p<.01$. Overall,
PGEF performed best ($M=1.50$, $SD=0.52$), followed by PGE ($M=1.80$, $SD=0.41$), PGEL ($M=1.92$, $SD=0.26$) and PGEFL ($M=1.93$, $SD=0.26$).

**Item 4: “und”**

91 participants (50.6%) translated the term acceptably, whereas 18 participants (10.0%) did not. 71 participants (39.4%) did not give a translation, see Graph 20.

![Graph 20: Descriptive Results “und”](image)

91 participants (50.6%) translated the term acceptably with “en”. The most frequent incorrect answer was “om” (4 participants, 2.2%), followed by “een” (3 participants, 1.7%), “of” (2 participants, 1.1%) and “voor”, “was”, “werd”, “zich”, “tot”, “aber”, “hem”, “te”, “als”, “mit”, “kust” and “sie” (1 participant each, 0.6%).

93 participants (51.6%) translated the term with a conjunction, 8 participants (4.4%) with a preposition, and 2 participants each (1.1%) translated it with an article, a verb or pronoun and 1 participant (0.6%) translated it with a noun. 3 participants (1.7%) translated it with another German term.

There was a statistically significant difference between language group means as determined by one-way ANOVA ($F(3,103)=3.51$, $p<.05$). After running the post-hoc Bonferroni correction, the statistical significant difference was not specified. A contrast analysis revealed significant differences. PGE were outperformed by the other pupils combined together, $t(100)=2.04$, $p<.05$. Furthermore, participants with French
outperformed participants without French, $t(100)=-2.49$, $p<.05$. Overall, PGEFL performed best ($M=1.00$, $SD=0.00$), followed by PGEF ($M=1.08$, $SD=0.28$), PGEL ($M=1.21$, $SD=0.41$) and PGE ($M=1.26$, $SD=0.44$).

7.1.3 Results on Hypothesised Grammar

Task 5 and 6 focussed on two specific issues having to do with hypothesised grammar. Participants were confronted with two tasks:

Task 5: looking for all the definite articles in the text

Task 6: finding out pieces of information about the unknown language’s word order.

In total concerning hypothesised grammar performance on the two tasks, no statistically significant difference between the language groups as determined by one-way ANOVA ($F(2,141)=0.86$, $p>.05$) was found. Overall, PGEFL performed best ($M=5.43$, $SD=0.82$), followed by PGEF ($M=5.49$, $SD=0.98$), PGE ($M=5.55$, $SD=0.78$) and PGEL ($M=5.75$, $SD=1.01$), see Graph 21. The reliability of the subscale scores was .65.

Graph 21. Mean of Hypothesised Grammar tasks.
Task 5 – Grammar of hypothesis: Definite articles

Task 5 asked the participants to look for the five definite articles in the given text.98 Furthermore, they were asked to write a grammatical explanation of the item (e.g. male, female, plural, singular etc.). First, overall results of this task will be presented: There were no statistically significant differences between group means as determined by one-way ANOVA ($F(3,152)=0.58$). Overall, PGE performed best ($M=1.93$, $SD=0.13$), followed by PGEL ($M=1.94$, $SD=0.17$), PGEFL ($M=1.95$, $SD=0.17$) and PGEF ($M=1.98$, $SD=0.09$), see Graph 22. The reliability of the subscale scores was .57.

![Graph 22. Mean of Articles task.](image)

**Item 1: “de” (line 3)**

12 participants (6.7%) identified it with the acceptable definite article, whereas 145 (80.6%) did not. 23 participants (12.8%) did not give an answer, see Graph 23.

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98 The author wants to comment that one difficulty was that he did not know if the participants surely were familiar with the term “bestimmter Artikel” (definite article). However, Task 5’s example should ensure that the participants are able to comprehend the task fulfilment. Additionally, the slot “Zeile” (line) was an indicator for the author to still be able to categorise the participants’ answers even if they did not work in chronological order of the text. Still, in a rerun of the study one could number the definite articles to ensure that the participants work on these items. Nevertheless, the choice to not do that was to be comparable to Marx’s (2011) study.
12 participants (6.7%) identified it acceptably with “de”. The most frequent incorrect determination was “een” (59 participants, 32.8%), followed by “die” (47 participants, 26.1%), “en” (14 participants, 7.8%), “hem” (5 participants, 2.8%), “dat”, “zijn”, “was”, and “de” (relative pronoun) (3 participants each, 1.7%), “van”, “zich” and “deze” (2 participants each, 1.1%) and “hij” and “pirat” (1 participant each, 0.6%).

To check if students were able not only to find but also to transfer the grammatical structure into German, the next part will describe the translation of their given answers.

12 participants (5.6%) translated the term acceptably with “der”. The most frequent incorrect translation was “ein” (66 participants, 36.7%), followed by “die” (47 participants, 26.1%), “das” and “der” (relative pronoun) (5 participants each, 2.8%), “ihm” (4 participants, 2.2%), “war” (3 participants, 1.7%), “von”, “sich” and “er” (2 participants each, 1.1%) and “dieser”, “besten”, “seine”, “den”, “sie”, “seine”, “Pirat”, “und”, “dem” (each 1 participant, 0.6%). 23 participants (12.8%) did not give a translation.

Overall, 8 participants (4.4%) gave an acceptable explanation (male, noun + singular) and 95 participants (52.7%) did not. 77 participants (42.8%) did not give an answer. The most frequent unacceptable explanation was “singular” (18 participants, 10.0%).
“indefinite article” (12 participants, 6.7%), “female, noun + singular” and “similar to German” (10 participants each, 5.6%), “plural” (5 participants, 2.8%), “noun” and “female + noun” (4 participants each, 2.2%), “male + noun” (3 participants, 1.7%), “female, noun + singular”, “male”, “male + singular”, “neutral noun + singular”, “personal pronoun”, “female + singular” and “female + singular and plural” (2 participants each, 1.1%) and “male, noun + plural”, “noun + singular”, giving a number as an answer, “neutral, noun”, “accusative object”, “relative pronoun”, “neutral, noun + plural”, “article”, “female”, “suffix and indefinite article”, “reflexive pronoun”, “neutral + singular” and “similar to English” (1 participant each, 0.6%). One item (1 participant, 0.6%) was not readable.

There were no statistically significant differences between group means as determined by one-way ANOVA (F(3,97)=0.49, p>.05). On average, PGEF performed best (M=1.91, SD=0.31), followed by PGEL (M=1.95, SD=0.23), PGE (M=1.97, SD=0.16) and PGEFL (M=2.00, SD=0.00).

Item 2: “de” (line 6)
10 participants (5.6%) identified it with the acceptable definite article, whereas 119 (66.1%) did not. 50 participants (27.8%) did not give an answer, see Graph 24.

![Graph 24. Descriptive results "de" (line 6).]
10 participants (5.6%) identified it acceptably with “de”. The most frequent unacceptable determination was “die” (23 participants, 12.8%), followed by “een” (16 participants, 8.9%), “en” (11 participants, 6.1%), “van” and “hem” (each 10 participants, 6.1%), “dat” (9 participants, 5.0%), “als” (8 participants, 4.4%), “zijn” and “zich” (6 participants each, 3.3%), “deze” (4 participants, 2.2%), “was”, “in” and “op” (3 participants each, 1.7%), “te” (2 participants, 1.1%) and “vor”, “of”, “om”, “hij”, “de” and “bevonden” (1 participant each, 0.6%).

To check if students were able not only to find but also to transfer the grammatical structure into German, the next part will describe the translation of their given answers. 10 participants (5.6%) translated the term acceptably with “der”. The most frequent unacceptable translation was “die” (23 participants, 12.8%), followed by “ein” (18 participants, 10.0%), “das” (17 participants, 9.4%), “ihm” (8 participants, 4.4%), “von” (7 participants, 3.9%), “sich” (6 participants, 3.3%), “den” and “seine” (5 participants each, 2.8%), “ob” and “war” (3 participants each, 1.7%), “vor”, “dieser, “diese”, “sein” and “ihm” (2 participants each, 1.1%) and “ein”, “in”, “der” (relative pronoun), “dessen”, “hab”, “Heim”, “sie”, “einen” and “befanden” (1 participant each, 0.6%). 52 participants (28.9%) did not give a translation.

Overall, 5 participants (2.8%) gave an acceptable explanation (female, noun + singular) and 74 participants (41.1%) did not. 101 participants (56.1%) did not give an answer. The most frequent unacceptable explanation was “singular” (19 participants, 10.6%), followed by “male, noun + singular” (6 participants, 1.7), “female, noun”, “neutral + singular”, “indefinite article”, “neutral, noun”, “neutral, noun + singular” and “neutral” (3 participants each, 1.7%), “nour” (2 participants, 1.1%) and “female, noun + plural”, “female”, “noun + singular”, “female + singular”, “noun in accusative form”, “neutral + plural”, “relative pronoun”, “female, noun + singular and plural”, “plural”, “reflexive pronoun”, “verb in past form”, “using the context”, “definition”, “possessive pronoun”, “preposition”, “male preposition”, “similar to English”, “male indefinite article”, “verb”, “article” and “noun + plural” (1 participant each, 0.6%).

There were no statistically significant differences between group means as determined by one-way ANOVA ($F(3,124)=0.87, p>.05$). On average, PGE performed best ($M=1.86, SD=0.35$), followed by PGEFL ($M=1.92, SD=0.28$), PGEL ($M=1.93, SD=0.26$) and PGEF ($M=2.00, SD=0.00$).
Item 3: “de” (line 6)

2 participants (1.1%) identified it with the acceptable definite article, whereas 95 (52.8%) did not. 83 participants (46.1%) did not give an answer, see Graph 25.

![Graph 25](image)

2 participants (1.1%) identified it acceptably with “de”. The most frequent unacceptable determination was “een” (16 participants, 8.9%), followed by “en” (12 participants, 6.7%), “die” (11 participants, 6.1%), “hem” (8 participants, 4.4%), “zijn” (5 participants, 2.8%), “in”, “als”, “te”, “deze” and “hij” (4 participants each, 2.2%), “van”, “dat” and “was” (2 participants each, 1.1%) and “vor”, “zee”, “op”, “woar”, “kon”, “began”, “de”, “seen”, “gaven” and “handelskapitein” (1 participant each, 0.6%).

To check if students were able not only to find but also to transfer the grammatical structure into German, the next part will describe the translation of their given answers. 2 participants (1.1%) translated the term acceptably with “die”. The most frequent unacceptable translation was “die” (relative pronoun) and “ein” (14 participants each, 7.8%), followed by “und” (7 participants, 3.9%), “sich” and “sein” (5 participants each, 2.8%), “in” and “das” (4 participants each, 2.2%), “ihm”, “ihn” and “einer” (3 participants each, 1.7%), “See”, “diese”, “eine”, “den”, “von”, “sein” and “war” (2 participants each, 1.1%) and “des”, “als”, “am”, “dir”, “wann”, “und”, “zu”, “zig”, “kam”, “wie”, “der”, “vor dem”, “ihr”, “haben”, “Handelskapitän”, “er” and “oder” (1 participant each, 0.6%). 85 participants (47.2%) did not give a translation.
Overall, 4 participants (2.2%) gave an acceptable explanation (female, noun + singular) and 49 participants (27.2%) did not. 127 participants (70.6%) did not give an answer. The most frequent unacceptable explanation was “singular” (13 participants, 7.2%), followed by “male, noun + singular” and “similar to German” (5 participants each, 2.8%), “female”, “indefinite article” and “article” (3 participants each, 1.7%), “neutral, noun”, “male, noun” and “using the context” (2 participants each, 1.1%) and “female, noun + plural”, “female, noun”, “female + singular”, “genitive”, “female + plural”, “relative pronoun”, “male and female, noun”, “pronoun”, “conjunction”, “preposition” and “male indefinite article” (1 participant each, 0.6%).

There were no statistically significant differences between group means as determined by one-way ANOVA ($F(3,92)=0.89$, $p>.05$). On average, PGEL performed best ($M=1.95$, $SD=0.23$), followed by the other groups with each $M=2.00$, $SD=0.00$.

**Item 4: “het” (line 9)**

12 participants (6.7%) identified it with the acceptable definite article, whereas 66 (36.6%) did not. 102 participants (56.7%) did not give an answer, see Graph 26.

Graph 26. Descriptive results “hem” (line 9).

12 participants (6.7%) identified it acceptably with “het”. The most frequent unacceptable determination was “in” (9 participants, 5.0%), followed by “en” (8
participants, 4.4%), “die” and “hem” (6 participants each, 3.3%), “als” and “deze” (5 participants each, 2.8%), “dat” (4 participants, 2.2%), “te” and “was” (3 participants each, 1.7%), “van”, “vor”, “zich”, “zijn”, “hij” and “de” (2 participants each, 1.1%) and “een”, “den”, “op”, “of”, “om” and “began” (1 participant each, 0.6%).

To check if students were able not only to find but also to transfer the grammatical structure into German, the next part will describe the translation of their given answers. 12 participants (6.7%) translated the term acceptably with “das”. The most frequent unacceptable translation was “in” (9 participants, 5.0%), followed by “diese” (6 participants, 3.3%), “die” (relative pronoun), “die”, “ihm” and “eine” (4 participants each, 2.2%), “ein”, “von”, “war” and “hat” (3 participants each, 1.7%), “der”, “als”, “auf”, “dem”, “er”, “ihn”, “und” and “haben” (2 participants each, 1.1%) and “sein”, “sich”, “began”, “wie”, “zu”, “vor dem” and “einem” (1 participant each, 0.6%). 102 participants (56.7%) did not give a translation.

Overall, 3 participants (1.7%) gave an acceptable explanation (neutral, noun + singular) and 39 participants (21.7%) did not. 138 participants (76.7%) did not give an answer. The most frequent unacceptable answer was “singular” (9 participants, 5.0%), followed by “similar to German” (5 participants, 2.8%), “female, noun + singular” (4 participants, 2.2%), “neutral, noun” and “male personal pronoun” (3 participants each, 1.7%), “male, noun + singular” and “male, noun” (2 participants each, 1.1%) and “male and female, noun + singular”, “neutral”, “noun”, “definite article”, “relative pronoun”, “question word”, “description of verb”, “high frequency in text”, “using the context”, “female indefinite article” and “article” (1 participant each, 0.6%).

There were no statistically significant differences between group means as determined by one-way ANOVA ($F(3,73)=0.13$, $p>.05$). On average, PGE performed best ($M=1.78$, $SD=0.42$), followed by PGEFL ($M=1.89$, $SD=0.33$), PGEL ($M=1.91$, $SD=0.30$) and PGEF ($M=2.00$, $SD=0.00$).

**Item 5: “de” (line 10)**

10 participants (5.6%) identified it with the acceptable definite article, whereas 38 (21.1%) did not. 132 participants (73.3%) did not give an answer, see Graph 27.
10 participants (5.6%) identified it acceptably with “de”. The most frequent unacceptable determination was “een”, “en” and “dat” (5 participants, 2.8%), followed by “als” and “hem” (4 participants each, 2.2%), “zich” (3 participants, 1.7%), “deze” (2 participants, 1.1%) and “van”, “in”, “vor”, “se”, “zijn”, “op”, “brieven”, “kon”, “waren” and “werd” (1 participant each, 0.6%).

To check if students were able not only to find but also to transfer the grammatical structure into German, the next part will describe the translation of their given answers. 6 participants (3.3%) translated the term acceptably with “die”. The most frequent unacceptable translation was “das” (9 participants, 5.0%), followed by “der” (5 participants, 2.8%), “ein” (4 participants, 2.2%), “ihm” (2 participants, 1.1%) and “man”, “kreeg”, “den”, “einem”, “einer”, “sein”, “vor”, “diese”, “als”, “brauchen”, “waren”, “ob”, “wer”, “kann”, “und”, “zu”, “ihn”, “in”, “diesen”, “von” and “Herr” (1 participant each, 0.6%). 133 participants (73.9%) did not give a translation.

Overall, 2 participants (1.1%) gave an acceptable explanation (male, noun + plural) and 30 participants (16.7%) did not. 148 participants (82.2%) did not give an answer. The most frequent unacceptable answer was “plural” (7 participants, 3.9%), followed by “similar to German” (4 participants, 2.2%), “male, noun + singular” (3 participants, 1.7%), “male + plural” (2 participants, 1.1%) and “male”, “noung”, “definite article”, “pronoun”, “male + singular”, “neutral and female, noun”, “possessive pronoun”,

Graph 27. Descriptive results “de” (line 10).
“preposition”, “question word”, “description of verb”, “conjunction”, “used as an object”, “male personal pronoun” and “indefinite article” (1 participant each, 0.6%). There were no statistically significant differences between group means as determined by one-way ANOVA ($F(3,45)=0.60, p>.05$). On average, PGEL performed best ($M=1.75, SD=0.44$), followed by PGE ($M=1.75, SD=0.45$) and PGEF as well as PGEFL (each group $M=2.00, SD=0.00$).

**Task 6 – Grammar of hypothesis: Word order**

Task 6 required the participants to a) puzzle 2 scrambled sentences back together and b) write down a rule how one puts together the word order in this unknown language. In the overall performance on the word order task (puzzle task plus explanation) there were no statistical differences between groups as determined by one-way ANOVA ($F(3,158)=0.91, p>.05$). Overall, PGEF performed best ($M=3.48, SD=0.93$), followed by PGEFL ($M=3.62, SD=0.80$), PGE ($M=3.69, SD=0.80$) and PGEL ($M=3.84, SD=0.97$), see Graph 28. The reliability of the subscale scores was .15.

![Graph 28. Mean of word order tasks.](image)

Concerning performance on word order, there was no statistically significant difference between the country groups as determined by one-way ANOVA ($F(3,156)=0.28, p>.05$). Overall, PGEF performed best ($M=4.03, SD=0.84$), followed by PGEFL ($M=4.16, SD=0.66$), PGE ($M=4.13, SD=0.81$) and PGEL ($M=4.23, SD=0.84$).
Task 6: sentence A (six elements)

2 participants (1.1%) were able to put the sentence in the acceptable order. 14 participants (7.8%) were able to put four element in the acceptable order. 26 participants (14.4%) were able to put three element in the acceptable order. 41 participants (22.8%) were able to put two elements in the acceptable order. 57 participants (31.7%) were able to put one acceptably. 5 participants (2.8%) did not have one element in the acceptable order. 35 participants (19.4%) did not complete the exercise, see Graph 29.

![Graph 29. Descriptive results sentence A.]

2 participants (1.1%) completed the task acceptably\(^\text{99}\):

1 Simon – 2 wird geprezen – 3 omdat – 4 hij – 5 landgenoten – 6 vrij kocht.

The most frequent unacceptable answer was 6-1-4-5-3-2 (10 participants, 5.6%), followed by 4-1-3-6-5-2 (7 participants, 3.9%), 5-1-2-4-3-6 (6 participants, 3.3%), 4-1-2-3-5-6 and X-1-X-X-X (X standing for not filled out) (5 participants each, 2.8%), 4-1-2-5-3-6 (4 participants, 2.2%), 5-1-2-6-3-4, 6-1-3-5-4-2, 5-1-2-3-6-4, 3-1-2-5-4-6, 6-1-2-3-4-5, 6-1-4-2-3-5, 3-1-5-2-4-6, 3-1-6-5-2-4, 3-1-5-4-2-6 and 2-1-4-3-5-6 (each 3

\(^{99}\) The following part will only use the numbers as abbreviated forms of the parts of the sentence.
participants, 1.7%), 5-1-3-6-4-2, 4-1-2-3-6-5, 5-1-2-3-4-6, 2-1-5-6-3-4, 6-1-4-3-5-2, 4-1-3-5-6-2, 4-1-6-3-2-5, 3-1-2-5-6-4, 6-1-4-3-2-5, 3-1-5-6-2-4, 3-1-2-4-5-6, 3-1-5-4-6-2, 6-1-3-4-5-2, 6-1-3-5-2-4, 2-1-4-5-6-3 and 4-1-3-2-5-6 (2 participants each, 1.1%) and 6-1-4-2-5-3, X-1-2-3-X-X, 6-1-2-4-5-3, 2-1-4-3-6-5, 6-1-2-3-4-5, 4-1-3-2-6-5, 2-1-6-4-5-3, 2-1-6-5-6-3, 5-1-3-6-2-4, 6-1-4-3-2-5, 2-1-3-4-6-5, 5-1-4-2-3-6, 4-1-5-3-2-6, 6-1-5-2-3-4, 2-1-6-5-4-3, 5-1-4-3-2-6, 2-1-6-3-4-5, 3-1-6-X-5-2, 4-1-5-3-6-2, 2-6-5-1-3-4, 4-1-5-3-6-2, 4-1-3-6-5-X, 3-1-2-6-5-4, 3-1-6-5-2-4, 3-1-4-5-6-2, 6-1-2-5-4-3, 5-1-3-4-6-2, 2-1-5-3-6-4, 6-1-2-5-3-4, 2-1-6-5-4-3, 2-1-4-6-5-3, 4-1-2-6-3-5, 3-1-6-2-5-4, 2-5-4-1-3-6, 3-6-2-4-5-1, 5-1-4-6-2-3, 5-1-4-2-6-3, 6-1-5-3-4-2, 3-1-4-2-5-6, 6-1-5-4-2-3, 6-1-2-4-3-X and 3-2-1-6-4-5 (1 participant each, 0.6%). One participant (0.6%) completed did not fulfil the task appropriately.

There were no statistical differences between groups as determined by one-way ANOVA ($F(3,141)=.52$, $p>.05$). Overall, PGEF performed best ($M=3.71$, $SD=1.38$), followed by PGEL ($M=4.05$, $SD=1.11$), PGE ($M=4.06$, $SD=1.03$) and PGEFL ($M=4.16$, $SD=1.03$).

**Task 6: sentence B (6 elements)**

No participant (0.0%) was able to put the sentence in the acceptable order. 4 participants (2.2%) were able to put four element in the acceptable order. 31 participants (17.2%) were able to put three element in the acceptable order. 55 participants (30.6%) were able to put two elements in the acceptable order. 50 participants (27.8%) were able to put one element acceptably. 15 participants (8.3%) did not get one element acceptable. 25 participants (13.9%) did not fill in anything, see Graph 30.
The acceptable order of sentence B is the following:
1 Kaapvart – 2 en – 3 piraterij – 4 was – 5 al heel lang bekend – 6 in de Middellandse Zee.

The most frequent incorrect answer was 1-6-5-2-4-3 (22 participants, 12.2%), followed by 1-6-4-2-5-3 (13 participants, 7.2%), 1-5-6-2-4-3 (11 participants, 6.1%), 1-6-3-2-4-5 (7 participants, 3.9%), 5-1-6-2-4-3 (5 participants, 2.8%), 1-6-2-3-5-4, 1-6-3-2-5-4 and 1-4-5-2-6-3 (4 participants each, 2.2%), 1-3-5-2-6-4 and 1-3-6-2-5-4 (3 participants each, 1.7%), 4-1-6-2-5-3, 3-1-6-2-5-4, 1-2-6-3-5-4, 1-2-5-3-6-4, 1-2-4-3-6-5, 4-5-6-2-1-3, 3-6-1-4-2-5, 4-6-5-2-1-3, 5-6-2-3-1-4, 1-4-3-2-5-6 and 1-4-6-5-2-3 (2 participants each, 1.1%), 6-1-2-4-3-5, 2-6-4-3-5-1, 3-6-4-1-5-2, 5-4-6-2-1-3, 2-5-4-1-6-3, 2-1-6-3-5-4, 3-6-5-2-1-4, 1-3-6-2-4-5, 1-6-5-2-4-3, 1-4-6-2-3-5, 1-2-3-4-6-5, 5-2-6-3-1-4, 1-3-4-2-6-5, 1-3-5-4-2-6, 5-4-6-3-2-1, 1-5-6-4-3-2, 3-1-2-6-4-5, 1-5-3-4-6-2, 4-2-1-5-3-6, 6-1-5-2-4-3, 1-6-4-2-5-3, 1-4-3-2-6-5, 3-4-5-1-6-2, 5-1-3-2-6-4, 6-5-4-2-1-X, 1-4-6-2-5-3, 2-1-3-5-4-6, 4-1-5-2-3-6, 3-4-6-1-5-2, 5-2-1-3-4-6, 4-5-2-1-3-6, 1-2-6-5-4-3, 1-3-5-2-4-X, 6-4-5-2-3-1, 1-6-4-2-3-5, 1-4-5-2-3-6, 1-5-4-2-6-3, 1-2-3-4-5-6, 1-6-3-4-2-5, 1-3-5-6-4-2, 1-6-5-2-3-4, 1-X-X-2-X-X, 1-4-6-3-2-5, 4-6-1-2-5-3, 3-2-4-5-1-6, 2-1-4-5-3-6, 2-4-5-1-6-3, 1-6-3-4-5-2, 1-3-2-4-6-5, 1-2-6-3-4-5, 1-6-5-3-2-4, 1-6-4-2-5-3, 5-1-4-2-6-3 and 1-X-X-X-X-X-X (1 participant each, 0.6%). Two participants (1.1%) completed the task inappropriately.
There were no statistical differences between groups as determined by one-way ANOVA ($F(3,152)=.52, p>.05$). Overall, PGEFL performed best ($M=4.16, SD=0.75$), followed by PGE ($M=4.19, SD=1.09$), PGEF ($M=4.27, SD=0.88$) and PGEL ($M=4.34, SD=0.96$).

**Task 6: explanation**

This task required the participants to give a short explanation on how the word order of this language might be. 39 participants (21.7%) fulfilled the task acceptably, whereas 31 participants (17.2%) did not. 8 participants (4.4%) gave longer verbal answers which did not fit the requested task. 102 participants (56.7%) did not give an answer, see Graph 31.

39 participants (21.7%) gave the acceptable answer (subject-verb-object). The most frequent unacceptable answer was subject-object-verb (14 participants, 7.8%), followed by similarities with English and German (7 participants, 3.9%), object-subject-verb (6 participants, 3.3%), trusting one’s gut feeling (3 participants, 1.7%), listening what it sounds like and object-verb-subject (2 participants, 1.1%) and subject-verb-adjective, verb-object-subject, subject-verb, wh-questions as an answer and subject (1 participant each, 0.6%).

![Graph 31. Descriptive results on explanations.](image)

There were no statistical differences between groups as determined by one-way ANOVA ($F(3,75)=2.46, p>.05$). After running a contrast analysis a significant difference could be
determined: Participants with French outperformed participants without French, \( t(46.85) = -2.99, p < .01 \). Overall, PGEFL performed best (\( M = 1.27, SD = 0.46 \)), followed by PGEF (\( M = 1.33, SD = 0.50 \)), PGE (\( M = 1.72, SD = 0.70 \)) and PGEL (\( M = 1.74, SD = 0.75 \)).

7.1.4 Results on translation of phrases

Task 7 required the participants to translate phrases from a sentence of the unknown language taken the original text on the first page of the study. In total concerning the lexo-syntax performance, there was no statistically significant difference between the language groups as determined by one-way ANOVA (\( F(3,108) = 1.22, p > .05 \)). On average, PGEL performed best (\( M = 4.09, SD = 1.27 \)), followed by PGEFL (\( M = 4.32, SD = 1.17 \)), PGEF (\( M = 4.36, SD = 1.43 \)) and PGE (\( M = 4.59, SD = 1.07 \)). The reliability of the subscale scores was .72.

Task 7: phrase A

18 participants (10.0%) translated it acceptably. 61 participants (33.9%) did not. 44 participants (24.4%) translated phrase A semi-acceptably. 57 participants (31.7%) did not write a translation, see Graph 33.

There were no statistically significant differences between group means as determined by one-way ANOVA ($F(3,122)=0.99, p>.05$). On average, PGEL performed best ($M=2.22, SD=0.74$), followed by PGEF ($M=2.33, SD=0.89$), PGEFL ($M=2.34, SD=0.79$) and PGE ($M=2.48, SD=0.63$).

**Task 7: phrase B**

25 participants (13.9%) translated it acceptably. 25 participants (13.9%) did not. 89 participants (49.4%) translated parts of the sentence correctly. 41 participants (22.8%) did not write a translation, see Graph 34.
25 participants (13.9%) translated the phrase acceptably with “Diese Briefe gaben ihm das Recht”. Now follow all semi-acceptable and unacceptable phrases in descending order: “Die ...gaben ihm das Recht” (15 participants, 8.3%), “Die Briefe gaben ihm Recht” (14 participants, 7.8%), “Die Briten gaben ihm das Recht” (8 participants, 4.4%), “Diese Briefe gaben ihm Recht” (7 participants, 3.9%), “Sie geben ihm Recht” and “Deze gaben ihm Recht” (6 participants each, 3.3%), “Diese Menschen gaben ihm Recht” and “Die Briefe gab er dem Recht” (4 participants each, 2.2%), “Sie gaben ihm Recht” and “Die Leute gaben ihm Recht” (3 participants, 1.7%), “Diese gibt ihm Recht”, “Diese .... gab ihm das Recht”, “Diese briefe geben ihm kein Recht”, “Er hatte immer Recht”, “Er hatte einen Helm”, “Die Briefe waren ihm Recht” and “Diese Briefe zeigten, dass er Recht hat” (2 participants each, 1.1%) and “Die Primanten haben das Recht”, “Diese geben ihm Recht”, “Die Kapern gaben ihm Recht”, “Die Matrosen haben ihm Recht”, “Deze hatte Recht mit dem Helm”, “Diese briten gaben ihm kein Recht”, “Diese gab ihm kein Recht”, “Die kapitänsgrechte geben ihm mehr Recht”, “Diese Briefe gaben mir Recht”, “Sie hatten Recht”, “Er hat immer recht”, “Das brachte ihm Recht”, “Gaben ihm ein Heim”, “Diese Briefe haben echt Recht”, “Dieses Essen tat ihm gut”, “Er kriegte die Rechte”, “Die Griechen gaben ihm Recht”, “Die anderen gaben ihm immer Recht”, “Dieses Kraut war ihm recht”, “Alle haben ihm Recht gegeben”, “Diese Speise war nur für ihn”, “Simon mochte Semmelknödel”, “Das, was im Brief steht, stimmt”, “Diese gaben ihm nicht Recht”, “Er bekam Rechte”, “Diese ...gaben ihm das Recht”, “ihm Recht geben”, “Diese Briefe geben ihm Kraft” and “Die Braven gaben ihm heute Recht” (1 participant each, 0.6%).

There were no statistically significant differences between group means as determined by one-way ANOVA ($F(3,136)=0.86, p>.05$). On average, PGEFL performed best ($M=1.84, SD=0.37$), followed by PGEL ($M=1.96, SD=0.63$), PGE ($M=2.08, SD=0.64$) and PGEF ($M=2.08, SD=0.69$).

### 7.1.5 Results on multilingual language use

The participants were asked if they thought of another language besides German and English (Germany and Austria) or German, English and French (Switzerland) in order to complete the exercises. Here follows a description of the overall answers; more detailed answers will follow as there is a need to split the Swiss classes from the other classes.
Generally, 113 participants (62.8%) thought of an additional language. 60 participants (33.3%) did not. 7 participants (3.9%) did not give an answer, see Graph 35.

Austria (n=58): 31 participants (53.4%) claimed to have thought of other languages. 22 participants (37.9%) did not. 5 participants (8.6%) did not give an answer.

Germany (n=80): 53 participants (66.3%) claimed to have thought of other languages. 26 participants (32.5%) did not. 1 participant (1.3%) did not give an answer.

In the German and Austrian classes (n=138) 85 participants (61.2%) mentioned to have thought of other languages besides German and English. 48 participants (34.5%) did not. 6 participants (4.3%) did not give an answer.

Switzerland (n=42): 29 participants (69.0%) claimed to have thought of other languages. 12 participants (28.6%) did not. 1 participant (2.4%) did not give an answer.

The following paragraph will hierarchically list the languages the participants’ mentioned to have thought of while completing Task 1-7. The most frequent first mentioned language was German (38 participants, 21.1%), followed by English (35 participants, 19.4%), French and Dutch (7 participants each, 3.9%), Spanish and Turkish (5 participants each, 2.8%), East Frisian (3 participants, 1.7%) Danish, Swedish and Vorarlbergerisch (Alemannic variant of German language) (2 participants each, 1.1%) and Albanian, Italian, Portuguese and Saxon dialect (1 participant each, 0.6%). The most
frequent second mentioned language was English (32 participants, 17.8%), followed by German (17 participants, 9.4%), French (13 participants, 7.2%), Spanish (4 participants, 2.2%), Swiss German, Dutch and Finnish (2 participants each, 2.2%), and Italian, Kurdish, Danish, Swedish, Dutch, Saxon dialect, Vorarlbergerisch, Yugoslav [sic] and Finnish (1 participant each, 0.6%). The most frequent third mentioned language was French (9 participants, 5.0%), followed by English (7 participants, 3.9%), German, Italian and Dutch (2 participants each, 1.1%) and Norwegian, Danish and nonsense language (1 participant each, 0.6%). The most frequent fourth mentioned languages were German, Turkish, Dutch and Flemish (1 participant each, 0.6%). The most frequent fifth mentioned languages were Serbian and Vorarlbergerisch (each 1 participant, 0.6%). One participant mentions further languages: Greek (sixth), Hebrew (seventh) and French (eighth).

7.1.6 Results on attitudes towards the English language
In order to examine (self-reported) attitudes towards English as a foreign language, a self-evaluation attitude test was included\(^\text{101}\) (Task 9). The item was phrased as follows: “Die Sprache Englisch finde ich...” (“I think the English language is...”, translation by DU). The attitudes were measured via a 5-point Likert-scale with the following descriptions (from worst to best): awful, not very good, good, really good, brilliant. 4 participants (2.2%) marked it with “awful”. 19 participants (10.6%) marked it with “not very good, 54 participants (30.0%) with “good”. 54 participants (30.0%) marked it with “really good” and 35 participants (19.4%) marked it with brilliant. 14 participants (7.8%) did not give an answer or marked at least two points in the scale \((n=180; M=3.58, SD=1.02)\) The following graph illustrates the overall attitudes towards English as a foreign language.

\(^\text{100}\) N.b.: Term used by participant.
\(^\text{101}\) The Swiss participants did not have an additional scale for French.
There were statistically significant differences between group means as determined by one-way ANOVA (F(2,163)= p<.01, η²=0.08, β=1=0.88, medium effect size). The post-hoc Bonferroni correction revealed that PGEFL (M=4.20, SD=0.91) have significantly higher results than PGE (M=3.34, SD=1.04, p<.01). Contrast analyses revealed further significant differences: PGE have significantly lower results than the other language groups combined together (p<.05). PGEL and PGEFL together have also significantly higher results in comparison with participants without an additional Ln (p<.01). Finally, PGEFL have significantly the highest when comparing to the other language groups combined together (p<.01). Overall, PGEFL have the highest results (M=4.30, SD=0.91), followed by PGEL (M=3.63, SD=1.01), PGEF (M=3.40, SD=0.83) and PGE (M=3.34, SD=1.04), see Graph 37.
7.1.7 Brief Summary

In terms of overall performance, no statistical difference was found between the language groups. This was also true for certain subsections of the test, such as the tasks on hypothesized grammar (Tasks 5 and 6). On other subsections, however, there were group differences (Task 3). Participants with three or more languages outperformed the participants with two languages in the translation tasks. However, regarding the translation of function words, no statistical difference could be found. Finally, PGE show significantly lower results on self-reported attitudes towards English. Even more interesting, participants with an additional (heritage) language show the significantly highest motivational results.

7.2 SORS – Results

After 25 minutes of the 30-minute test time, the participants were told to turn to the blue sheet attached to the pencil-paper test, which was also at the same time the final part of the study. This blue sheet contained the REM-SORS and served to assess what kind of self-reported reading strategies participants were using while completing the study. Here, a six-point Likert-scale was used. The wording and categorization of the 9 items are described in detail in Section 4.3 and below. Participants indicated their answer for all items on six-point Likert scales (1-never, 2-almost never, 3-sometimes, 4-
frequently, 5-almost always, 6-always). The highest sum score for all 9 items was therefore 54 points, the lowest possible score (indicating no strategy use whatsoever) would have been 9 points.

There were statistically significant differences between group means and self-reported reading strategy use as determined by one-way ANOVA (\(F(3,168)=.84, p<.001, \eta^2=0.72, \beta-1=0.85\), medium effect size). The post-hoc Bonferroni correction specified these significant differences: PGE have higher a self-reported strategy-frequency in comparison to PGEF (\(p>.01\)). Overall, PG have the highest results (\(M=3.78, SD=1.34\)), followed by PGEFL (\(M=3.76, SD=1.37\)), PGEL (\(M=3.56, SD=1.38\)) and PGEF (\(M=3.53, SD=1.25\)). The reliability of the subscale scores was .66.

Summarising the subconstruct, support strategies (Item B+C) achieved the highest values (\(M=4.36, SD=1.02\)), followed by problem solving strategies (Items A, E, F, H and I; \(M=3.95, SD=0.78\)) and global reading strategies (Items D and G; \(M=3.32, SD=0.98\)).

**Item A: Focussing attention on reading**

The item was worded as follows: “Ich habe versucht, meine Konzentration die ganze Zeit auf das Lesen zu richten.” 3 participants (1.7%) ticked never, 4 participants (2.2%) ticked almost never, 31 participants (17.2%) ticked sometimes, 54 participants (30.0%) ticked frequently, 56 participants (31.1%) ticked almost always and 24 participants (13.3%) ticked always. 8 participants (4.4%) did not complete the item (\(M=4.32\)), see Graph 38.
There were no statistically significant differences between language group means as determined by one-way ANOVA ($F(2, 169)=3.10; p>.05$). Still, after running a contrast analysis a statistical significant difference was revealed: PGEFL have significantly higher results when the other participants are combined together ($p<.05$). Overall, PGEFL have the highest results ($M=4.81$, $SD=1.08$), followed by PGEL ($M=4.32$, $SD=1.05$), PGE ($M=4.28$, $SD=1.21$) and PGEF ($M=4.20$, $SD=1.15$).

**Item B: Recognition of similar letters or words**

The item was worded as follows: “Ich habe versucht, Buchstaben und Wörter mit ähnlichen mir bekannten Wörtern zu vergleichen.” ($M=4.99$). 3 participants (1.7%) ticked never, 6 participants (3.3%) ticked almost never, 12 participants (6.7%) ticked sometimes, 24 participants (13.3%) ticked frequently, 51 participants (28.3%) ticked almost always and 77 participants (42.8%) ticked always. 7 participants (3.9%) did not complete the item, see Graph 39.
There were statistically significant differences between language group means as determined by one-way ANOVA ($F(3,168)=.84, p<.001, \eta^2=0.11, \beta-1=0.98$, medium effect size). The post-hoc Bonferroni correction specified these significant differences. PGE ($M=4.92, SD=1.20$) have significantly lower results in comparison with PGEL ($M=5.86, SD=0.36, p<.05$). Furthermore, PGEL ($M=4.86, SD=1.34$) have significantly lower results than PGEFL ($p<.001$). Further contrast analyses revealed additional significant differences. PGE have significantly lower results in comparison with the other participants when combined together, $t(86.88)=-2.57, p<.05$. PGFL have significantly higher results than the other pupils when combined together, $t(76.70)=7.00, p<.001$. Finally participants with French have significantly higher results in comparison with participants without French, $t(123.60)=6.65, p<.001$. Overall, PGEL ($M=5.86, SD=0.36$) have the highest results, followed by PGEFL ($M=5.53, SD=0.52$), PGEL ($M=4.86, SD=1.34$) and PGE ($M=4.92, SD=1.20$).

**Item C: Translation**

The item was worded as follows: “Ich habe versucht, Passagen Wort für Wort im Kopf zu übersetzen.” ($M=3.72$) 8 participants (4.4%) ticked never, 23 participants (12.8%) ticked almost never, 47 participants (26.1%) ticked sometimes, 38 participants (21.1%)
ticked frequently, 43 participants (23.9%) ticked almost always and 14 participants (7.8%) ticked always. 7 participants (3.9%) did not complete the item, see Graph 40.

Graph 40. Descriptive results item C.

There were statistically significant differences between language group means as determined by one-way ANOVA (F(3,168)=3.59, p<.05, η²=0.06, β-1=0.77, medium effect size). The post-hoc Bonferroni correction specified a significant difference. PGE (M=3.49, SD=1.31) have significantly lower results than PGEFL (M=4.43, SD=1.08, p<.05). Contrast analyses revealed further significant differences. PGE have significantly lower results in comparison with the other participants when combined together, t(165)=-2.63, p<.01. PGEFL have significantly higher results in comparison with the other participants when combined together, t(165)=2.08, p<.05. Finally, participants with French have significantly higher results in comparison with participants without French, t(165)=3.04, p<.01. Overall, PGEFL (M=4.43, SD=1.08) have the highest results, followed by PGEF (M=3.64, SD=1.32), PGEL (M=3.64, SD=1.32) and PGE (M=3.49, SD=1.31).

Item D: Making predictions
The item was worded as follows: “Ich habe versucht, im Kopf Voraussagen zu machen und habe diese dann geprüft.” 37 participants (20.6%) ticked never, 47 participants
(26.1%) ticked almost never, 44 participants (24.4%) ticked sometimes, 27 participants (15.0%) ticked frequently, 12 participants (6.7%) ticked almost always and 5 participants (2.8%) ticked always. 7 participants (3.8%) did not complete the item ($M=2.68$), see Graph 41.

There were no statistically significant differences between language group means as determined by one-way ANOVA ($F(3,167)=0.86, p>.05$). Overall, PGEF have the highest results ($M=3.07, SD=1.71$), followed by PGEL ($M=2.77, SD=1.30$), PGEFL ($M=2.62, SD=1.43$) and PGE ($M=2.52, SD=1.16$).

**Item E: Guessing**

The item was worded as follows: “Ich habe versucht, unbekannte Wörter zu erraten.” ($M=4.17$). 3 participants (1.7%) ticked never, 11 participants (6.1%) ticked almost never, 37 participants (20.6%) ticked sometimes, 52 participants (28.9%) ticked frequently, 42 participants (23.3%) ticked almost always and 28 participants (15.6%) ticked always. 7 participants (3.9%) did not complete the item, see Graph 42.
There were no statistically significant differences between language group means as determined by one-way ANOVA ($F(3,168)=0.92, p>.05$). Overall, PGEFL have the highest results ($M=4.57, SD=1.12$), followed by PGEF ($M=4.27, SD=0.80$), PGE ($M=4.13, SD=1.12$) and PGEL ($M=4.10, SD=1.34$).

**Item F: Re-reading**

The item was worded as follows: “Ich habe versucht, Textteile öfters zu lesen, um den Text zu verstehen.” ($M=4.23$). 7 participants (3.9%) ticked never, 12 participants (6.7%) ticked almost never, 29 participants (16.1%) ticked sometimes, 50 participants (27.8%) ticked frequently, 36 participants (20.0%) ticked almost always and 39 participants (21.7%) ticked always. 7 participants (3.9%) did not complete the item, see Graph 43.
There were no statistically significant differences between group means as determined by one-way ANOVA ($F(3,168)=1.55$, $p>.05$). A contrast analysis revealed a significant difference: Participants with French have significantly higher results than participants without French, $t(165)=2.03$, $p<.05$. Overall, PGEFL have the highest results ($M=4.71$, $SD=1.38$), followed by PGEF ($M=4.53$, $SD=1.19$), PGEL ($M=4.12$, $SD=1.38$) and PGE ($M=4.07$, $SD=1.39$).

**Item G: Concentration**

The item was worded as follows: “Ich habe versucht, mich auf den Text als Ganzes zu konzentrieren.” ($M=3.96$). 4 participants (2.2%) ticked never, 16 participants (8.9%) ticked almost never, 46 participants (25.6%) ticked sometimes, 44 participants (24.4%) ticked frequently, 38 participants (21.1%) ticked almost always and 23 participants (12.8%) ticked always. 9 participants (5.0%) did not complete the item, see Graph 44.
There were no statistically significant differences between language group means as determined by one-way ANOVA ($F(3,167)=0.95, p>.05$). Overall, PGEFL have the highest results ($M=4.33, SD=0.97$), followed by PGE ($M=4.02, SD=1.35$), PGEF ($M=3.93, SD=1.10$) and PGEL ($M=3.82, SD=1.31$).

**Item H: Visualisations**

The item was worded as follows: “Ich habe versucht, mir die Situation bildlich vorzustellen.” ($M=3.35$). 31 participants (17.2%) ticked never, 34 participants (18.9%) ticked almost never, 24 participants (13.3%) ticked sometimes, 35 participants (19.4%) ticked frequently, 19 participants (10.6%) ticked almost always and 28 participants (15.6%) ticked always. 9 participants (5.0%) did not complete the item, see Graph 45.
There were no statistically significant differences between language group means as determined by one-way ANOVA ($F(3,167)=1.06, p>.05$). Overall, PGEF have the highest results ($M=3.80$, $SD=1.82$), followed by PGEFL ($M=3.57$, $SD=1.78$), PGEL ($M=3.39$, $SD=1.82$) and PGE ($M=3.10$, $SD=1.49$).

**Item I: Reading for Details**
The item was worded as follows: “Ich habe versucht, meine Konzentration bewusst auf Einzelheiten des textes zu richten.” ($M=3.66$). 12 participants (6.7%) ticked never, 17 participants (9.4%) ticked almost never, 54 participants (30.0%) ticked sometimes, 37 participants (20.6%) ticked frequently, 35 participants (19.4%) ticked almost always and 16 participants (8.9%) ticked always. 9 participants (5.0%) did not complete the item, see Graph 46.
There were no statistically significant differences between group means as determined by one-way ANOVA ($F(3,167)=0.39, p>.05$). Overall, PGE have the highest results ($M=3.78, SD=1.34$), followed by PGEFL ($M=3.76, SD=1.37$), PGEL ($M=3.56, SD=1.38$) and PGEF ($M=3.53, SD=1.25$).

### 7.2.1 Brief Summary

Concerning the overall REM-SORS results, participants with L1 German and L2 English have significantly lower self-reported strategy use frequency than the others. This might indicate that PGE less frequently use reading strategies in comparison with the other participants.

### 7.3 Analysis of Reading Strategies on Study Performance

The following part of will present results on which predictors might have a significant influence on the study performance. For this, the following predictors are going to be analysed: age, sex and reading strategies as proposed in the REM-SORS. First, general results on the pupils’ performance will be presented. In a second step, the strategies are going to be clustered to their construct and reanalysed. Via this procedure, individual
strategies that may have a predictive value on the study’s outcome will be revealed, as will overall strategic processes.

7.3.1 Results on Overall Study Performance

The following part will present predictive values on the use of reading strategies on the study performance. Each linear hierarchical regression calculation consisted of two blocks: block 1 included the participants’ age and sex and block 2 further included the participants’ SORS-results. In doing so, the incremental validity of strategies above and beyond sex and age can present changes in the task performance. The following results (Table 8) will present an overview of the complete study:

<table>
<thead>
<tr>
<th>Model</th>
<th>Predictor</th>
<th>$\beta$</th>
<th>$r$</th>
<th>$r_{pc}$</th>
<th>$R^2$</th>
<th>$R^2_{corr}$</th>
<th>$\Delta R^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Age</td>
<td>-.05</td>
<td>-.06</td>
<td>-.05</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Sex</td>
<td>-.09</td>
<td>-.09</td>
<td>-.09</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>A concentration on reading</td>
<td>-.13</td>
<td>-.06</td>
<td>-.13</td>
<td></td>
<td>.01</td>
<td>-.01</td>
</tr>
<tr>
<td>2</td>
<td>B comparison</td>
<td>-.11</td>
<td>-.18</td>
<td>-.11</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>C translation</td>
<td>-.33**</td>
<td>-.34</td>
<td>-.31</td>
<td>.31</td>
<td>.31</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>D prediction</td>
<td>.13</td>
<td>.02</td>
<td>.12</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>E guessing</td>
<td>.03</td>
<td>-.00</td>
<td>.03</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 8. Model Summary

The hierarchical multiple regression revealed that at stage one, age and sex did not contribute significantly in explaining variance ($F(2,89)=0.50, p>.05$) and accounted for only 1.1% of the variance in the study’s mean results (see results at the beginning of Section 7.1). Adding the strategy variables explained an additional 21.8% of variation in the study’s results and this $R^2$ was significant, $F(11,89)=1.97, p<.05$. Nevertheless, a follow-up cross validation establishes which strategy may significantly influence the pupils’ performance (see Table 9).
The coefficient analysis reveals that there are two strategies which significantly affect the studies’ results: translation \( (p<.01) \) and focusing on the whole text \( (p<.05) \). Still, one needs to specify these two results further:

a) Omitting translation strategies in such tasks will lead to better results (\( \beta \)-value=-32.8) and

b) focusing on the text as a whole-strategy will lead to better results (\( \beta \)-value=22.1).

In the next step, each REM-SORS-item used was grouped according to their underlying construct. Again by means of a linear hierarchical regression calculation, the incremental validity of strategies above and beyond sex and age can present changes in task performance. The following results (Table 10) will present an overview of the complete study:

<table>
<thead>
<tr>
<th>Model Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Modell</td>
</tr>
<tr>
<td>Modell</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
</tr>
</tbody>
</table>

Note. \( \beta = \) standardised coefficient, \( r = \) Correlation Zero Order, \( r_{pc} = \) Partial correlation, \( *p<.05, **p<.01, ***p<.001, R^2_{corr} = \) adjusted \( R^2 \), \( \Delta R^2 \) concerns not adjusted \( R^2 \), \( R^2 = \) explained variance.

The hierarchical multiple linear regression revealed again that at stage one, age and sex did not contribute significantly in explaining variance \( (F(2,89)=0.66, p>.05.) \) and accounted for only 1.4% of the variance in the mean study’s results. Adding the strategy variables as summarised constructs explained an additional 15.8% of variation in the study’s results and this \( R^2 \) was significant, \( F(11,89)=3.30, p<.05 \). Nevertheless, a follow-up cross validation establishes which strategy construct had the most significant impact on the
students’ performance (see Table 11).

<table>
<thead>
<tr>
<th>Model</th>
<th>Predictor</th>
<th>( \beta )</th>
<th>( r )</th>
<th>( r_{pc} )</th>
<th>( R^2 )</th>
<th>( R^2_{corr} )</th>
<th>( \Delta R^2 )</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Age</td>
<td>-.05</td>
<td>.06</td>
<td>.05</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Sex</td>
<td>-.11</td>
<td>-.11</td>
<td>-.11</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Mean Problem Solving Strategies</td>
<td>-.13</td>
<td>-.13</td>
<td>-.12</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Mean Problem Support Strategies</td>
<td>-.33**</td>
<td>-.33</td>
<td>-.32</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Mean Problem Global Strategies</td>
<td>.23</td>
<td>.09</td>
<td>.21</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 11. Multiple linear hierarchical regression – reading strategies

Note. \( \beta \) = standardised coefficient, \( r = \) Correlation Zero Order, \( r_{pc} = \) partial correlation, \( * p < .05, ** p < .01, *** p < .001 \), \( R^2_{corr} = \) adjusted \( R^2 \), \( \Delta R^2 \) concerns not adjusted \( R^2 \), \( R^2 = \) explained variance.

The coefficient analysis reveals that there is one construct which significantly affects the studies’ results: support strategies \((p < .01)\). Still, one needs to specify this two result further: omitting support strategies will lead to better results (\( \beta \)-value=-32.7).

**7.3.2 Brief Summary**

The results show that the participants’ age and sex did not have a predictive effect on their performance. However, other predictive factors in the task performance were found. On the one hand, the application of the reading strategy “focusing on the whole text” positively influences the performance. On the other, the application of single word translation negatively influences task performance. Additionally, sub-scales of the original construct were calculated, as well. Generally, support strategies negatively influenced the task performance.

**7.4 Analysis of Multilingualism and Attitudes**

The following part of will present results on which predictors might have a significant influence on the study performance. For this the following predictors are going to be analysed: age, sex and multilingualism as well as self-reported attitudes towards English. First, results on multilingualism will be presented. Second, results on attitudes will be presented.
7.4.1 Results on Overall Study Performance and Multilingualism

The following part will present values on if multilingualism had a predictive influence on the study performance. Each linear hierarchical regression calculation consisted of two blocks: block 1 included the participants’ age and sex and block 2 further included the participants’ data on multilingualism. In doing so, the incremental validity of strategies above and beyond sex and age can present changes in the task performance. The following results will present an overview of the complete study:

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R²</th>
<th>Adjusted R²</th>
<th>Std. Error of the Estimate</th>
<th>Change Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>R² Change</td>
</tr>
<tr>
<td>1</td>
<td>.120</td>
<td>.014</td>
<td>-.007</td>
<td>1.66379</td>
<td>.014</td>
</tr>
<tr>
<td>2</td>
<td>.158</td>
<td>.025</td>
<td>-.007</td>
<td>1.66966</td>
<td>.011</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Sex_numeric_1=m, AGE Z6
b. Predictors: (Constant), Sex_numeric_1=m, Age Z6, More than two languages

Table 12: Model summary (Multilingualism)

The hierarchical multiple regression revealed that at stage one, age and sex did not contribute significantly in explaining variance ($F(2,89)=0.50$, $p>.05$) and accounted for only 1.4% of the variance in the mean study’s results. Adding the multilingualism variable explained an additional 1.1% of variation in the study’s results and this $R^2$ was not significant, $F(2,93)=.67$, $p>.05$.

7.4.2 Results on Overall Study Performance and Self-Reported Attitudes towards English

The following part will present values on whether attitudes towards English had a predictive effect on the study performance. Each linear hierarchical regression calculation consisted of two blocks: block 1 included the participants’ age and sex and block 2 further included the participants’ data on attitudes towards English. In doing so, the incremental validity of strategies above and beyond sex and age can present changes in the task performance. The following results (Table 13) will present an overview of the complete study:
The hierarchical multiple regression revealed again that at stage one, age and sex did not contribute significantly in explaining variance \((F(2,94) = 0.50, p > .05)\) and accounted for only 1.1% of the variance in the mean study’s results. Adding the attitude variable explained an additional 8.4% of variation in the study’s results and this \(R^2\) was significant, \(F(3,94) = 3.17, p > .05\). Nevertheless, a follow-up cross validation establishes which strategy construct had the most significant impact on the participants’ performance. The follow-up cross validation establishes this significant difference in more detail (see Table 14).

The coefficient analysis reveals that attitudes towards English significantly affect the studies’ results \((p < .01)\). Still, one needs to specify these two results further: having positive attitudes towards English will lead to better results \((\beta\)-value = .29).
7.5 Analysis of Think Aloud Protocols

The following part will analyse the three think aloud protocols which were carried out in three Austrian participants (three different school locations). The participants were chosen due to their high reading motivation results (based on unpublished MeVoL-data on reading motivation). The three participants have German as their L1 and English as their first foreign language learned at school (no other languages were reported even after asking them).

As a basis of the qualitative analyses the author of this thesis follows the principles suggested by Mayring (2007). Furthermore, the SORS’s sub-scales were used to distinguish between reading strategies and hypothesised grammar actions.

First, an overview of support strategies will be presented before diving into the topic in more detail. Second, global reading strategies used will be explained and, third, problem-solving strategies will be analysed. These three parts use the SORS as a basis of categorisation and analysis. The final part of the analysis focuses on metacognitive knowledge, to be more precise, qualitative data on hypothesised grammar. The programme MAXQDA12 was used as a basis to categorise and analyse the data. Overall, 86 statements could be attributed to one of the SORS’s sub-scales (see Table 15).

<table>
<thead>
<tr>
<th>Categorisation of Reading Strategies following the SORS (n=86)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Support Strategies (n=43)</td>
</tr>
<tr>
<td>• Global Strategies (n=15)</td>
</tr>
<tr>
<td>• Problem Solving Strategies (n=28)</td>
</tr>
</tbody>
</table>

Table 15. Overview of subscales recorded in the TAPs.

Support strategies

Overall, while completing the pencil-paper test and simultaneously voicing their thought processes out loud, the participants made a total of 43 mentions of strategies that can be categorized as support-reading strategies. The participants used the following strategies:

• When reading, I translate into my native language. (3 mentions)
• When reading, I think about my (foreign) language resources. (39 mentions)
• I underline or circle information in the text to help remembering. (1 mention)
The most prominent strategy was “When reading, I think about my (foreign) language resources” \((n=39)\). This strategy was subcategorised further, in order to make clear which language resources were used: German was mentioned as a resource 26 times, English 4 times, and in 9 instances it was unclear to which language the participants was referring. None of the 3 participants explicitly mentioned any languages other than English or German.

The following one-code models will exemplify the categorisation and how the participants reacted in the pencil-paper test.\(^{102}\) First, the strategy “When reading, I think of my (foreign) language resources.” will be presented.

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\(^{102}\) Note bene: The full TAPs can be found in the appendix.
Second, a one-code model of “When reading, I translate into my native language.” will be presented.

![One-Code Model](image)

P3: Was heißt, wie man’s auf Deutsch nennt, so wo, so ein Mädchen für alles, Boots- () aber der Bootspage, ob man das sagen kann? () #00:05:23-3#  
I: Wie bist du da zu den Lösungen gekommen, wenn ich kurz nachfragen darf? #00:13:47-4#  
P3: Ähm weil manche Sätze versteht man gut, so halbwegs auf Deutsch. #00:13:51-9#  
I: Mhm. #00:13:52-1#  
P3: Und dann denkt man halt wenn das Beispiel, was ein halt, war ein und halt eigentlich so vom Zusammenhang #00:14:02-2#  

Figure 14. Examples: One-Code Model (When reading, I translate into my native language.)

Last, a one-case model of “I underline or circle information in the text to help remembering.” will be presented.

![One-Code Model](image)

P1: die (blättert) ich glaube halt. Simon was en man die, weißt du es ist eigentlich, darf ich das unterstreichen? #00:17:22-5#  
I: Sicher. #00:17:23-1#

Figure 15. Example: One-Code Model (I underline or circle information in the text to help remembering.)

**Global reading strategies**

Overall, while completing the pencil-paper test and simultaneously voicing their thought processes out loud, the participants made a total of 15 mentions of strategies that can be categorized as global strategies:

- I use the context to understand what I am reading. (12 mentions)
- I try to guess the context of the text when I read. (1 mention)
- I take an overall view of the text to see what it is about. (1 mention)
- I have a purpose in my mind when I read. (1 mention)
The following one-code models will exemplify the categorisation and how the participants reacted in the pencil-paper test. First, the strategy “I use the context to help me understand what I am reading.” will be presented.

Second, a one-code model of the strategy “I try to guess the content of the text is about when I read.” will be presented.

Third, a one-code model of the strategy “I take an overall view of the text to see what it is about.” will be presented.
Figure 19. Example: One-Code Model (I take an overall view of the text to see what it is about.)

Last a one-code model of the strategy “I have a purpose in my mind when I read.” will be presented.

Problem-solving strategies
Overall while completing the pencil-paper test and simultaneously voicing their thought processes out loud, the participants made a total of 28 mentions of strategies that can be categorized as problem-solving strategies:

- When the text becomes difficult, I re-read to increase understanding. (24 mentions)
- When I read, I guess the meaning of unknown words or phrases. (4 mentions)

The following one-code models will exemplify the categorisation and how the participants reacted in the pencil-paper test. First, the strategy “When the text becomes difficult, I re-read to increase understanding.” will be presented.
When text becomes difficult, I re-read to increase understanding.

Second, a one-code model of the strategy “When I read, I guess the meaning of unknown words or phrases.” will be presented. One needs to mention that these statements were collected in the interview after the TAP.

Hypothesised Grammar

This section deals with statements by the TAP-participants that did not fit into the SORS descriptors and will, therefore, be interpreted as expressions of meta-cognitive knowledge or applications of hypothesised grammar towards an unknown Germanic language. Following content analysis principles, the author of this thesis was able to
identify 22 statements that fell into this category and subdivided them as follows: (see overview in Figure 18):

1) hypothesised grammar and word order (11)
2) hypothesised grammar and article and grammatical gender (9)
3) hypothesised grammar and time/tense (2)

**Hypothesised Grammar and Word Order**

Overall, the 11 statements concerning word order were subdivided into two subcategories because the participants expressed their main language resource:

a) Hypothesised Grammar and Word Order: Using German as a resource and

b) Hypothesised Grammar and Word Order: Language resource unclear.

Both subcategories show that the participants tried to make a comparison between two languages and to give a plausible solution or answer for the given task via inductive reflection. First a) will be explain further before moving to b).

a) Hypothesised Grammar and Word Order: Using German as a resource ($n=8$)

During the TAPs the participants expressed their reflections on how to come to a solution. This section will present snippets of the TAPs which illustrate that German is used as a resource to make sense of an unknown Germanic language.

For example, participant P3_BELDBL08 (henceforth P3) (122-126) clearly shows her knowledge of German word order through her use of specific terminology and intuitive clarification of certain words:

P3: Und dann müsste das an **2. Stelle** und das an **letzter Stelle** stehen. #00:26:01-2#

I: Wieso? #00:26:03-0#
Due to her grammatical knowledge of the German language, P3 correctly puts a verb in the second position and the other verb – due to the sub-clause construction – at the final position of the sentence.

Later in the TAP P3 (127-133) actually mentions the sound of the word order as a resource to determine a rule of the Dutch word order:
Though it was difficult for P2 to articulate where the input of the solution comes from, the author's question ("Hast du es verglichen mit Englisch oder mit Deutsch?" Did you compare it to English or German? Translation by DU) clearly underlines that German was used as a resource and presumably German word order knowledge led to the participant's solution in this case.

b) Hypothesised Grammar and Word Order: Language resource unclear (n=3)
This section will present snippets of the TAPs which illustrate that a language, German and/or English, is used as a resource to encounter an unknown Germanic language, though it remains unclear which of the two it might be because there is no clear reference to a language.
As an example, participant P2 twice (64-66 and 82) expressed reflections on the word order; yet, it remains unclear which language the participant refers to approach the solution (82):

Ah Simon wird geprezen, nein, ah nein, wird geprezen la -hij land, 3 landgenoten vrij kocht omdat. Kaapvart in de Middelandse Kaapvart was en (nuschelt) oh jetzt habe ich nochmals eine 2 gemacht, (nuschelt) en (.) piraterij 5 habe ich gesagt. #00:35:30-1#
This snippet shows that P2 shifts parts of a sentence several times until the presumably acceptable answer was found. Nevertheless, it was not clear to which language P2 refers. P2 also comments in a similar situation that “Ich überlege, wo es vielleicht dazupassen könnte.” (54-64, #00:26:05-6#) where P2 similarly approaches the text in the unknown language.

**Hypothesised Grammar and Article and Grammatical Gender**

Overall, the 9 statements were divided into two subcategories again as the participants clearly expressed their main language resource to fulfil the task:
a) Hypothesised Grammar and Article and Grammatical Gender: Using German as a resource and
b) Hypothesised Grammar and Article and Grammatical Gender: Language resource weakly referring to German.

Both subcategories show that the participant tries to make a connection to the German language, but b) can only weakly be confirmed. First a) will be explain further before moving to b).

a) Hypothesised Grammar and Article and Grammatical Gender: Using German as a resource (n=5)
The following examples show that explicit German grammatical knowledge is used to find a solution for the given task. For example, P1_SULDFE01 (henceforth P1) is irritated by the clash between with German and Dutch gender forms and is irritated by this difference (44-46):

P1: Es ist irgendwie voll schwer, du musst irgendwie auch das Nomen dazu auch finden, denn sonst kann es auch irgendwas anderes bedeuten. #00:17:29-1#
I: Aha, mhm. #00:17:31-1#

P1: Weil Simon was en man die konnt, der die (. ) hä? Simon, das ist doch kein die? Simon was en man, die konnt fechten, schreibe ich mal, die, Zeile 3, die, 3 ähm ähm wird für, wie lange habe ich noch? #00:17:52-5# (n.b.: highlights made by the author)

This example shows that P1 is not aware of possible differences concerning gender and articles between Dutch and German. Nevertheless, P1 seems to be irritated by this solution.
When confronted with the determining articles exercise (task 5), P2 (70 and 80) and P3 (77-87 and 91-95) explicitly refer back to their German knowledge and give answers to the given task (here P2, 80):

P2: die die die die () 3. Zeile () wird für das weibliche () Hauptwort () in () der () Einzahl ein Einzahl, jetzt habe ich Zahl, Ein-zahl verwendet, verwendet () #00:35:07-9#

b) Hypothesised Grammar and Article and Grammatical Gender: Language resource weakly referring to German

The collected statements here deal with similar tasks, nevertheless, the grammatical explanation is missing and a flimsy connection trough other channels was made by the participants to argument their solution. P2 (72-74), for example, points out that P2 imagines how the sentence could sound like in German:

P2: was en man die kon () die (blättert) die Übersetzung, wo ist es, da Simon was en man, Simon war ein Mann, der kon, kann kann fechten () en () und () plündern als das ist der () de en nein de ist (blättert) als der besten, als den als der beste () als fechten, ma Mann, kon die Simon war ein Mann () der () nein, die () ein Mann, die kon, die kon die, was #00:32:39-1#

I: Was grübelst gerade nach genau? #00:32:42-1#

P2: Wie das auf Deutsch klingen könnte. #00:32:43-7# (n.b.: highlights made by the author)

P2 does refer to German, yet, for the reader it remains unclear if P2 systematically works on this sentence of if it is trial and error. P2 encounters a similar situation in 76-79. So does P1 in 54 and P3 in 96-97 as well.

**Hypothesised Grammar and Time and Tense**

Overall, the 2 statements that addressed time and tense could not be divided into subcategories. This category was not assumed at the beginning of the data analysis; nevertheless, due to P1 engagement with the text, this category was created. While completing task 7, P1 (74) elaborated the first sentence like this:

P1: Okay, ähm, aneinander gereiht werden ähm () das ähm schwierige Aufgabe aber, die mache ich nachher. Also versuche, die folgenden zwei Phrasen (A und B) zu übersetzen. Ein Beispiel soll dir helfen, die Aufgabe zu lösen. Simon was een pirat 1, Simon war ein Pirat. Als extra kreeg hij kaperbrieven kaperbrieven kaperbrieven, da war doch irgendwo kaperbrieven () kaperbrieven hört sich an wie kaperbrieven als Extra mal zuerst, bekam er () er kaperbrieven äh kaperbrieven (atmet) bekam er kaperbrieven () Ich habe keine Ahnung, was das heißt, also schreibe ich es einfach hin, es tut mir leid aber. Diese briefen gaven hem het recht. Hm. Diese briefen gaven AH! ich glaube, dass das wie heißen die Briefe, wo man kriegt ähm ähm einen Brief wie sagt man dazu, Kaperbrieven, bekam er Postkarten, Postkarten vielleicht, ähm ähm diese Briefe geben, geben ähm ähm viel Recht nein gaben ihm ähm gaben hem het recht geben ihm hem het recht, het recht () für Kinderschokolade () ähm geben ihm geben ihm viel nein, das hat keinen Sinn,
The participant changed the translation from present to past tense, still, at the very end P1 said “geben” although P1 wrote “gaben”. Maybe P1 wrote this change subconsciously. This is why the author of this thesis asked P1 about this scene after the completion of the exercises:

I: Okay, dann habe ich eine Frage ganz konkret, da, da hat du nämlich zuerst gehabt: Diese Briefe geben ihm das Recht und dann hast du es verbessert zu gaben ihm das Recht. Warum? #00:32:17-4#

P1: Ähm, weil Deutsch? (lacht verlegen) #00:32:18-9#

I: Mhm, ja, aber kannst du gerne nochmals anschauen? #00:32:22-5#

P1: **deze brieven gaven, gaben, weil da auch ein a ist.** #00:32:26-1#

I: Aha, okay. #00:32:27-0#

P1: **Weil mich das so etwas irritiert hat.** #00:32:28-1#

I: Okay, dann hast du gedacht es ist gaben als geben. #00:32:31-0#

P1: Ja. #00:32:31-1# (n.b.: highlights made by the author)

Here it remains unclear if P1 refers to English or German as a resource: “gave” and “gaben” are very similar to “gaven” and although P1 expressed “geben” as a solution, P1 wrote “gaben”. What is striking in this snippet is that P1 mentions that P1 was irritated by the “e” which could be seen as a sign that subconsciously P1 was referring to German and/or English grammar knowledge.

### 7.5.1 Brief Summary

The TAPs offered additional insights into how the participants approached an unknown Germanic language from a strategic point of view, showing more clearly which reading strategies actually play an important role in comprehension. To be more precise, as already stated in the theoretical part, reading strategies seem to be a blind spot in multilingual research: Multilingual researchers might profit from certain reading research methods which could positively contribute to Germanic IC research. As visible through the TAPs, not every strategy might be triggered through multilingualism, but might be a L1 strategy or even skill applied in a certain moment to decipher meaning. Summarising the results, support strategies are the most used strategy to overcome lack
of knowledge in an unknown language. The other strategy sub-scales, global reading and problem-solving strategies, were less frequently mentioned. However, metacognitive processes in the field of hypothesised grammar are traceable. To be more precise, the TAP participants most frequently referred to the German language when they tried to solve a linguistic problem. Although the participants showed difficulties in understanding grammatical differences (gender and articles in other languages), they were able to find a solution they were satisfied with. Moreover, the results for the word order task reflect that German is their main linguistic source. In a nutshell, the TAP participants contrastively used German to decipher meaning. However, due to the TAP participants’ language background, one question remains open: Will pupils with other language resources approach this task differently? This question will be of interest for future research and accompany the upcoming discussion of this dissertation’s results.
8 Discussion, Limitations and Outlook

The following section will discuss this dissertation’s results. First, the up-coming introductory part will briefly summarise the results on the basis of the research hypothesis. Section 8.1 will then examine these results and connect them with existing research in more detail. The second part of the discussion will briefly summarise the success of the test items used for this dissertation. Third, on the basis of the REM-Study results, future perspectives for multilingual learning and language teacher training will be discussed. The final section will then describe limitations and further research desiderata based on this dissertation.

Keep it short and sweet: the REM-Study results

The first proposed hypothesis of this present dissertation, investigating whether young adolescent German speaking pupils are able to comprehend a text in an unknown Germanic language, was supported. Of further interest was whether participants with tri- or quadrilingual backgrounds were advantaged in comparison with their bilingual peers: No difference was found in their global reading – or even overall task – performance. The second hypothesis, investigating whether tri- and quadrilinguals are advantaged in lexis and hypothesised grammar was partially confirmed. Concerning lexis, tri- and quadrilingual participants when grouped together outperformed bilingual participants. However, there was no difference found in the hypothesised grammar task performances. Finally, the assumption that advanced employment of certain reading strategies will lead to greater task performance was confirmed, as well. In short, a reading strategy was determined that will lead to higher success in Germanic IC task performances. Moreover, a second strategy was determined that will inhibit success. Nevertheless, the TAPs present other strategy frequencies in comparison with the REM-SORS results.

8.1 Findings on and Discussions of the Main Research Questions

First, it was proposed that adolescent German native speakers (all of whom have learned English on a basic level) would understand a text in an unknown Germanic language, namely Dutch. A further point of interest was whether participants with
multilingual backgrounds would be advantaged in this task. Similar to Gooskens, Kürschner and Bezooijen (2011) or Gooskens, van Bezooijen and Van Heuven (2015) – though both studies focus on the translation of isolated items – the different groups participants of this dissertation were able to decode Dutch equally well: There were no statistical differences between the language groups. Reviewing multilingual theory, this result is of interest. The DMM (Herdina and Jessner 2002) as well as the Factor Model (Hufeisen 2005) describe that multilinguals should be advantaged in comparison with mono- or bilinguals due to their language learning history and heightened exposure to languages. In other words, a multilingual’s contact to multiple languages should enhance her metalinguistic awareness and competences. Due to this theoretical assumption, a statistically difference between the language groups was expected. However, when looking at the outcome of the REM-Study, the M-Factor (Herdina and Jessner 2002 or Jessner 2006) seemed to have little to no effect: multilinguals were only significantly advantaged in lexis tasks, but performed on par with PGE on the other test formats. Summarising, this result was surprising. However, as pointed out in the literature review (Section 3.4.4), there are studies that found that multilinguals were not advantaged in RM tasks, for example, Marx’s (2011) results (n.b.: Marx’s participants were university students). Further disagreement concerning the M-Factor’s theoretical assumptions can be found through the hierarchical regression calculations focussing on multilingualism. The calculations revealed that adding the factor “multilingualism” would not have an impact on the participants’ performances. Rephrased, being multilingual\textsuperscript{103} did not have a predictive influence on Germanic IC task performances. Yet again, this is surprising because, as theoretically expected, multilingualism should have a positive or even facilitating effect on a language user’s unknown language encounters (see DMM, Herdina and Jessner 2002). Still, the REM-Study’s regression calculation results are comparable to Lambelet and Mauron’s (2017) study: these researchers also report that high linguistic factor-values in several languages are not a predictor for successful IC. It seems that linguistic knowledge does not necessarily have to be a predictive factor for success in IC task performances. Lambelet and Mauron’s results become even more interesting when considering their target audience:

\textsuperscript{103}Reminder: “Multilingual” here refers to L1 German, L2 English (first foreign language learned at school) plus Ln (heritage language, no specifications given on competence levels), to L1 German, L2 English (first foreign language learned at school) plus L3 (second foreign language learned at school) or to L1 German, L2 English (first foreign language learned at school), L3 (second foreign language learned at school) plus Ln (heritage language, no specifications given on competence levels).
participants aged 13-15, the same target audience that this study focuses on. Reflecting upon the results of the REM-Study and of Lambelet and Mauron’s study, the following question arises: Can individuals of that age even profit from multilingualism, or do they need ITAs in order to apply multilingual competences? As shown, for example, by Morkötter (2016b) or Bär (2009), pupils of this age are able to perform interlingual competences if they have been taught these at school. In other words, the REM-Study participants might not have been sensitised (enough) to activate their multilingual competences to a degree that the M-Factor, for instance, becomes (statistically) detectible. Thus, a longitudinal study analysing ITA vs. non-ITA language learning groups might be of interest for RM research.

Nevertheless, another factor had a significant predictive impact on the study results: Calculations including the participants’ self-reported attitudes towards the English language show that this factor had a statistically significant value on the overall REM-Study performance. It was also noticeable that the statistical calculations indicate that the tri- and quadrilingual participants when grouped together show significantly higher self-reported attitude towards English in comparison with the bilingual participants. Interestingly, participants with an additional Ln learned/acquired outside school contexts (heritage language) when grouped together show significantly higher self-reported attitude towards English in comparison with the participants without an additional Ln: having learned and/or acquired an additional language outside school contexts might have positive effects on self-reported attitudes towards the English language. As mentioned, the factor “attitude towards the English language” had a statistically predictive effect on the participants’ task performance, which raises the question arises whether the +Ln-participants will outperform the other participants because of their higher self-reported attitudes-score. Although a representative number of test takers with an additional Ln (n=97) was given, no overall statistically significant differences between participants with and without an additional Ln were found. In short, even though self-reported attitudes were detected as an influential factor in Germanic IC task performances, it was not possible to connect it with the knowledge of more than two languages. Hence, further research might be needed to investigate whether self-reported attitudes

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104 Nota bene: Their participants were confronted with another unknown target language, namely Italian.
105 N.b.: These results are based on self-reported data; meaning there may be a bias and the results should be interpreted accordingly. Nevertheless, regarding this matter, further investigations are desirable.
a) have an effect on Germanic IC performances or not
b) positively correlate with multilingualism.

Put into theory, the results mentioned above remain of interest because the DMM as well as the Factor Model discuss attitudes as influential affective factors for language learning. In other words, one’s openness towards a (certain) foreign language might have an initial impact on how one approaches unknown (Germanic) languages. Again, Lambelet and Mauron (2017) were able to determine that attitudes towards language learning had a significant predictive value. Still, there are other studies that stand in contrast to Lambelet and Mauron’s and the REM-Study’s results: Schüppert and Gooskens (2011a+b) and Schüppert, Haug and Gooskens (2015) do not confirm that attitudes have a significant impact on Germanic IC. However, these study results need to be compared to the REM-Study with caution, as these two studies use picture pointing tasks (thus listening performances and different testing procedures) while this dissertation focussed on IC reading performances. Rephrased, the research contexts might be related but the studies are still dissimilar. Furthermore, the two studies in question used a more extensive approach to the construct “attitude”. Concerning the REM-Study, adding more items on attitudes towards foreign languages to the study could offer more accurate results to compare with other studies. Another study worth looking at in connection with results on attitudes and IC task performances is Berthele (2011), who found English proficiency to be a predictor for successful IC task performances. However, English proficiency and self-reported attitudes towards English might be distantly related but, at the end of the day, are not the same construct. However, to the best of his knowledge the author of this thesis could not find studies with a more comparable IC test setting. In other words, there is a research gap for future RM research: Do English proficiency and attitudes towards foreign languages have an influence on IC performances? And do these factors correlate? The opposing results concerning attitudes and IC task performances show that there is still a need for additional research in order to cast light on correlations between affective factors and Germanic IC performances.

Another aspect needs to be discussed, namely relatedness and the language family tree. Möller (2011), Vanhove and Berthele (2013), Gobulovic and Gooskens (2017) and Gooskens et al. (2017) determined that IC was possible – even within non-Germanic European languages – if enough cognates and/or accessible transfer bases are present. Put into multilingual theory, the M-Factor might “kick in” more evidently if the unknown
target language is related and offers enough cognates to more easily decode it. Concerning this dissertation, this might be the reason why there is no overall difference between the bilingual and tri-/quadrilingual participants, as each participant was similarly advantaged because of the dissertation’s target language and comparable school language settings. Here, one can assume that using an unknown Romance language as a target language might have changed the results greatly for those participants with a Romance language in their language repertoire. Thus, relatedness and language distance seems to positively influence (Germanic) IC. However, further research with similar target groups and testing procedures is needed to shed light on whether additional languages positively contribute to Germanic IC or not.

By and large, the overall results support Kellerman’s hypothesis of psychotypology (in Dahm 2015): language users primarily use a linguistically similar language to approach unknown language patterns. This is also reflected in the TAPs of this dissertation. The TAP-participants mostly used German as a bridge language to comprehend the Dutch text (26 times) while their other linguistic resources (e.g. English) were used fairly rarely (13 times). Additionally, further proof can be found in the Dutch to German translation task: the participants mostly commented that German supported their comprehension (see Section 7.1.2, Items 1-7: participants commented that graphemic and/or phonological cues were most helpful strategies to perform their translations). A possible reason to rely on German as a linguistic resource might be that German is the participants’ most developed language. To be more precise, the participants’ English competences might not have passed the lower threshold as theorised by Cummins (See Section 2.1). Rephrased, the REM-Study participants might not have had enough English (or French) language learning experiences to positively profit from another language. Expanding the argument, why should a participant rely on L2 English if she can use her L1 German? Obviously, the dissertation’s participants grew up in a mostly German-speaking environment.\footnote{Reminder: Most of the participants are dialect speakers (Alemannic variant). As stated in the data presentation and due to reasons of simplicity, these participants were counted as High German L1 language users. However, Gooskens and Heeringa (2014) show with their study that exposure to additional language varieties does not have an impact on Germanic intelligibility. In short, multilingualism might not be triggered through contact with dialects. Nevertheless, further research on this topic is desirable.} Thus, it can be assumed that German is – for the vast majority if not at all – the best-developed language. Hence, the participants favoured and were presumably more familiar with German. One may safely assume that they had higher linguistic competences in German than in English, so the use of German in IC tasks can...
be seen as their primary strategy to approach unknown languages. This assumption can be supported by the participants’ explanations in the translation task as well as with the TAP-participants statements. Theoretically speaking, this linguistic behaviour is of interest: Both languages, German and English, are West Germanic languages like Dutch. From this point of view, both languages can be suitable for IC.107 By and large, it might be of interest to observe German native participants with higher English competences to see if their approach to decoding Dutch is different. The author of this thesis has already collected further data to shed light on this issue.

From a different point of view, Müller-Lancé’s (2006) results may support the hypothesis of psychotypology too: the participants with Latin as an additional linguistic resource were more successful in unknown Romance IC tasks (unknown target languages: Italian and Spanish) because of the additional lexical transfer possibilities. In other words, Müller-Lancé’s “Latin participants” were able to profit from their linguistic resources because they probably surpassed the lower threshold for the Latin language. Thus, due to Latin’s relatedness to the other Romance languages, positive crosslinguistic influences were possible. Comparably, Bär (2009) or Pargger (2013) were able to observe similar results (target language: Spanish/Romanian). Most recently, Gooskens et al. (2018) published research on mutual spoken intelligibility within European language groups. Roughly summarised, their results show that the more closely languages are connected in the language tree, the more likely IC is in spoken or written contexts.108 Although these results are presumably in line with the hypothesis of typology, this theoretical aspect is not mentioned in their article. Summarising this paragraph and worded as a question, is the hypothesis of psychotypology a blind spot in RM research and should multilingual theory pay closer attention to it?109 The short answer might be yes; however, Mieszkowska and Otwinowska (2015) do not fully support the hypothesis. The researchers were able to determine that distance need not necessarily play a decisive role in IC. Thus, further research in this field is needed to determine which aspect is most likely to be the crucial influential factor.

107 According to, e.g., Gooskens et al. (2018) English-Dutch IC might be even more likely due to the close relatedness.
108 See Gooskens (2007) and Gooskens and Schneider (2016) for similar results (n.b.: listening contexts).
109 N.b.: Put simply, Vanhove and Berthele (2015 + 2017), for example, use the term cognates for similar-looking words between (related and unrelated) languages. The author of this dissertation wants to comment that the comprehension of cognates might be facilitated via the hypothesis of psychotypology, however, both concepts share a common base.
Finally concerning familiarity, the concept of the uncanny (Cameron 2010), blocage de l’activation des connaissances (Ollivier 2008) or anxiety (Jessner 2006) need to be discussed. Language users might not activate a certain language because they are – put bluntly – afraid of a certain language and, hence, block access and transfer processes from other linguistic resources. For example, the participants might not have used English as a resource because of their negative attitudes towards or anxiety about the English language. Hence, access and transfer are inhibited or even blocked. However, none of the participants in the present study reported having a negative feelings toward English, the lowest scores marked on the 5-point Likert scale were “awful” (value 1) and “not very good” value and this was only marked by 4/19 participants (n=23, 12.8%). Hence, one may assume that English was considered as a linguistic resource, however, it may have been perceived as

a) a less desirable resource due to the participants’ limited linguistic range or

b) not suitable due to (lexical) access and/or transfer limitations.

One may preliminarily assume that English was chosen as a linguistic resource when the participants could not find a solution in the German language, but it is very likely that more effort was needed to activate and use the English language as a positively contributing linguistic resource (see threshold hypothesis). Additionally, considering language family trees, Dutch and German are both Netherlandic languages whereas English is an Anglo-Frisian language (Lyons 1981, 186).

Summarising the first hypothesis, it appears that young adolescent language learners are able to globally comprehend a text in an unknown Germanic language. However, whether further knowledge of additional languages may positively contribute to Germanic IC remains disputable. This dissertation is able to show that other aspects, e.g. self-reported motivation towards the English language, should be further investigated in order to shed light on Germanic IC phenomena.

Second, it was proposed that tri- and quadrilingual adolescent language learners are expected to outperform bilingual language learners in lexis and hypothesised grammar items due to their more highly developed M-Factor (see Herdina and Jessner 2002, or Jessner 2006). Concerning both aspects and as partially illustrated already in the discussion above, no differences could be found in the overall results. Thus, one may preliminarily conclude that the M-Factor may have no effect on Germanic IC task performances. Moreover, further hierarchical regression calculations revealed that
being multilingual does not predictively influence participants' performances. This result seems surprising. Previous study results (e.g. Müller-Lancé 2006 or Rauch, Naumann and Jude 2012)\textsuperscript{110} have shown that being multilingual does, to a certain extend, positively contribute to performance on lexical and metalinguistic tasks. Nevertheless, more detailed calculations of the REM-study translation tasks revealed that the participants with three or more languages when grouped together outperformed the bilingual participants. This difference was more evident when only looking at the content word-translation task. In contrast, there was no difference detectable in the function word-translation task Summing up, some evidence regarding performance advantages due to a more highly developed M-Factor could be determined; still, these results are not bulletproof and need to be interpreted with caution. Due to the limited data collection on learner biographies and participants' actual language competences, these results should be re-examined in a future study in more detail. Rephrased, an individual's language learning duration and language competence levels might be crucial in terms of whether the M-Factor's theoretical assumptions apply or not: Marx (2007, 112) comments that multilinguals do not automatically apply their linguistic knowledge to unknown languages. This suggests that particularly younger or adolescent language learners (see Bär 2009 or Morkötter 2016b) need to be sensitised to use their linguistic resources and perform access and transfer phenomena. Thus, the REM-study participants might lack interlingual experiences and are thus not able to fully profit from their other languages.

Considering the hypothesised grammar results, no differences between the language groups could be found. Yet again, this result is unexpected. In short, multilinguals should be able to comprehend an unknown language with greater ease due to their more elaborated metalinguistic competences as promoted by the M-Factor. Rauch, Naumann and Jude's (2012) or Spellerberg's (2016) study show that, inter alia, early L2 learners and learners with advanced L2/L3 language competences have a significant advantage in metalinguistic tasks when compared to late L2 learners. Nonetheless, the results of this dissertation concerning grammatical gender, word order and lexo-syntax revealed that there was no difference between the language groups determinable. Even participants with an additional language\textsuperscript{111} – a group which could cautiously be

\textsuperscript{110} Or other studies as well, e.g., Jessner (2006), Marx (2007) or Bérube and Marinova (2014).
\textsuperscript{111} Nota bene: These languages were mostly heritage languages.
considered as early bilingual language users – were not able to outperform the bilingual participants. Thus, three questions arise from this lack of support for the M-Factor:

1) Unreliable test procedures? Results might be biased due to the lack of testing accuracy. However, Cronbach’s alpha showed the tasks reach the reliability value \( \alpha = 0.65 \). According to George and Mallery (2002, 240), this value can be questioned, however offers a solid basis to discuss the results. In other words, the testing procedure does need refinement. Hence, items should be re-worked, taken out or added to the testing procedure in a follow-up study to improve the IC testing format.

2) Lack of interlingual practises? As explained by Marx (2007), for example, having experiences in multilingual practises might positively shape foreign and/or unknown language encounters: individuals who are experienced in using multiple languages to successfully decode unknown languages might be advantaged. In turn, an individual's metalinguistic competences should be heightened and lead to greater success in metalinguistic task performances. Participants in this study, however, underwent a multilingual teaching procedure focussing on listening (MeVoL, see Section 5.3) before this dissertation project was carried out, so they cannot be considered to be completely “ITA-blank”, and could reasonably be expected to have fairly evident metalinguistic competences (M-Factor) than similar students without any previous ITA learning processes. It is possible that young adolescent language learners are simply not capable of, or at least not particularly good at easily transferring multilingual competences to another skill. Additionally, the duration of the MeVoL-intervention might be too short. In other words, longer-lasting interventions might heighten the likelihood of successfully training multilingual competences or the transfer of metacognitive strategies from one skill to another. Hence, further research is needed that compares ITA participants to ITA-blank participants to receive a more detailed picture of the subject matter. Moreover, ITAs can be questioned as well: Which approach really does evoke multilingual learning?

3) Participants too young? Immediately, one needs to say that this question can easily be answered. ITA research by authors such as Bär (2009), Muilwijk (2014) or Morkötter (2016a+b) show that ITA is not suitable only for adults but for young adolescent language learners as well. Due to the possible influence of age on RM and the comparatively small number of studies on RM in children and
adolescents, the author of this thesis has already begun a follow-up study for which he recruited a further 80 participants aged 15-17 from Innsbruck, Austria. This sister-study tries to explore whether age has an influence on Germanic IC performances or not. Furthermore, longitudinal studies focusing on multilingual development of ITA and ITA-blank participants are a research desideratum. The longitudinal comparisons of these groups could elucidate whether ITAs are of crucial learning interest for educational contexts.

Summarising the previous paragraphs, the M-Factor, as for example similarly observed by Marx (2011), may only have little to no effect on Germanic IC task performances. Some evidence was found in the field of lexis; still, it is statistically not strong enough to support the M-Factor’s existence concerning the REM-Study participants.

Third, it was proposed that advanced employment of certain strategies would enhance the participants’ performances. On the one hand, some support strategies actually seem to have an inhibiting effect on task performances: Especially the strategy of word-to-word translation was calculated to lead to lesser success rates. On the other, another strategy was calculated to have enhancing effects: focussing on the text as a whole.

These results are of interest for IC research:

a) The SORS’s application in multilingual research is pioneering. So far, the author of this dissertation is the first to carry out quantitative reading strategy-research in the context of unknown languages. These results show that the REM-SORS seems to be a suitable testing format for IC research, $\alpha = 0.66$. Nevertheless, further adaptations are needed to fully meet expectations concerning reliability scores. As mentioned in Chapter 4, the original SORS was reworked for this research project: The REM-SORS was able to offer a more elaborated basis for IC test items to more accurately explore an individual’s self-reported reading strategy use in unknown languages.

b) The REM-SORS for this dissertation brought to light that certain reading strategies may lead to greater success when an individual is confronted with a text in an unknown Germanic language. Immediately, this result is of interest due to two reasons:

1) **Language Learning.** Conveying these pieces of information to teachers might be of interest for multilingual teaching and learning practises. On the one side, confronting learners with a strategy that will likely lead to success might keep
them from initial demotivation. On the other, conveying that certain strategies are more likely to lead to lesser success is of importance for future language learning scenarios, as well.

2) **Comparisons with research so far.** The literature review on the original SORS has shown that problem-solving strategies are the most salient self-reported reading strategy category (e.g., Alsheikh and Mokhtari 2011, or Li and Kaur 2014, see section 4.2). However, the results of this dissertation do not agree with the mentioned studies. To be more precise, among this study’s participants, problem-solving strategies were actually more likely to lead to lesser success in Germanic IC. However, the crux of the matter is that the researchers mentioned in the review used the SORS in L2 research while the author of this thesis adapted the SORS for tasks exploring the comprehension of unknown languages. In view of this difference, it is plausible that different strategies (e.g. focussing on the whole text vs. translating word-for-word) may lead to different outcomes depending on the context and status of the language in question and on participants’ linguistic and multilingual competence levels. In the present study, the target language (Dutch) is unknown. In L2 reading an individual has at least some knowledge of the target language and might even understand every single word. Thus, global reading strategies might be of a lesser importance. However, statistically speaking, the subconstruct global reading strategies has a significant predictive value for this dissertation’s research context. The collected TAP results add further evidence to this question. The author of this thesis was able to code that the three participants mostly used support strategies to decode unknown language patterns and that global reading strategies were the least frequently mentioned ones among the three participants who completed the TAPs. The TAP-participants’ results are, therefore, congruent with the REM-Study subconstruct frequency values.

One could compare the REM-Study TAP-results with Dahm’s (2015) results: Dahm’s participants used comparison and translation strategies the most. Global strategies (inferencing and deducing) were not prominent. Dahm’s observations stand in contrast with the REM-Study results. Thus, the question arises whether a language user’s reading strategy frequency might change depending on his language learning background and/or the unknown target.
language. This train of thought opens new research desiderata: One could carry out further IC research that includes more TAP-participants and different target languages in order to more precisely shed light on (Germanic and/or Romance) IC phenomena. Nevertheless the author wants to mention a limitation concerning his study: due to the low number of TAP-participants, the results might not be representative and, thus, be biased. A more extensive TAP-corpus might allow researchers to offer more solid insights to one's cognitive strategies when being confronted with an unknown Germanic language. Rephrased, more TAPs would allow researchers to have a deepened insight into how young adolescent language learners approach unknown Germanic languages.

One major difference between the original SORS’s application and the REM-SORS is that the REM-Study participants were under time pressure. Besides the main focus to complete the IC tasks, they additionally had to complete the REM-SORS. This might have influenced their answer-scheme in some way or to some degree. However, in a follow-up study this could be reconsidered in order to receive more accurate data. Another weakness of the REM-SORS might be the notion of self-assessment. In a nutshell, researchers rely on participants’ honesty. On the one hand, as shown with the TAPs of this dissertation, which reading strategies a participant perceives to have used (REM-SORS) and which she has actually used in the moment (TAPs) might differ. On the other, TAPs are the closest approximation of a participant’s cognitive processes and thoughts researchers can get.

Summarising, there is room to improve the SORS in IC research contexts. Nevertheless, this dissertation has shown that the potential is given (see further details in the upcoming section). Furthermore, with the combined approach of quantitative and qualitative methods, the author of this thesis was able to holistically observe and discuss the subject matter.

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112 Key word: Self-assessment bias (see, e.g. Andrade and Brown 2016).
8.2 Discussion: Reliability of the REM-Testing Design and its Potential for Future Research

The following section is devoted to the reliability discussion of the REM-Study test design. This is of concern for future research because – so far – quantitative RM research has rarely suggested which methodological approaches are suitable for this field of research.113

First, the REM-Study’s overall reliability will be discussed. Afterwards, each testing format will be discussed individually. The author will offer suggestions on how to refine the testing format. The author wants to mention that the up-coming reliability score discussions are based on George and Mallery (2002, 240).

Overall (task 1-7), the REM-Study’s reliability of the subscale scores is $\alpha = 0.70$. This desirable value indicates that the test design consistently targets Germanic IC. Additionally, it is a pleasing result because it reflects that the REM-Study design is suitable for participants aged 12-14. Nonetheless, the value consists of other subscales, which need to be looked at individually. Concerning the global comprehension reliability results (Task 1 and 2), the score is $\alpha = 0.27$. From a testing theory point of view this value is not acceptable. Put into context, the REM-Study used only two items to test global comprehension in an unknown Germanic language. Two items were chosen because the REM-Study is based on Marx’s 2011 study, and since this study aimed to replicate a similar testing situation, using more items was not considered in the first place. On the one hand, one may easily add more items to the testing format to improve the reliability of the results. On the other, one may use a different testing approach (e.g. multiple choice)114. However, the addition of further items might prime the participants’ execution of the up-coming test tasks. In other words, global comprehension tasks might function as scaffolds to more successfully master the follow-up tasks, and results might thus be primed to in some way or to some degree. However, the use of a longer text might be the solution to overcoming double targeting. Rephrased, a longer text offers the possibility to target more items. Concerning this dissertation, this solution was not possible due to the strict time frame the author was offered within the MeVoL-project.

Bringing the main concerns of this paragraph together, one could ask the following

113 Gooskens and Schneider (2016) state that picture pointing tasks in listening contexts are suitable to test mutual intelligibility between language varieties. However, Gooskens et al. (2017) and Golubovic and Gooskens (2017) could not confirm reliability for related languages.

114 For further information on techniques for testing reading see Alderson (2000, 202).
question: Could global comprehension (positively) influence translation and metacognitive task performances? The short answer is yes. Considering the REM-SORS results, the self-reported reading strategy global comprehension was calculated to have a significant predictive value. Rephrased, texts for IC research should be long enough and not double target items – additionally, there should be enough execution time for participants. Thus, future research should consider this discussion and eventually adapt the test design to receive more accurate data.

Looking at the overall value of the hypothesised grammar tasks (Task 5-7), the reliability score was $\alpha = 0.65$. According to theory, the testing procedure can be considered as questionable. Further analyses show that the most acceptable value was reached with Task 5, $\alpha = 0.72$. The definite article task achieved a questionable value, $\alpha = 0.65$. However, each translation tasks only reached a score of $\alpha = 0.51$ (poor scores). Finally and most unexpectedly, the word order tasks only reached $\alpha = 0.15$ (unacceptable results). Although the overall results may be summarised as satisfying, there is a clear need to work on the tasks. On the one side, additional items (e.g. word order task) might improve reliability results. On the other, the targeted items might need to be changed. Additional reliability calculations could reveal which items should be excluded, and changing the items might heighten reliability scores, as well.

Finally, the REM-SORS needs to be discussed. Overall, it was able to reach a reliability score of $\alpha = 0.66$ (original SORS, $\alpha = 0.93$). Although theoretically this value can be questioned without a doubt, these results are promising due to pioneering application of the REM-SORS in IC research. To be more precise, the results indicate that the test format is suitable for IC research contexts. However, there are some evident reasons why the reliability scores were lower in comparison with the original SORS: The selection of nine specific items out of the 30 items in the original SORS as well as possible translation issues (English to German) can be determined as reliability-reducing factors. Furthermore, the participants had to complete the REM-SORS under time pressure which was not the case in any of the studies (see section 4.2). Thus, future research might need to take these factors into account in order to receive better results. Another suggestion might be to use the MARSI-R as a starting point (15 items, $\alpha = 0.85$): This reworked version of the MARSI\textsuperscript{115} might offer more accurate items to receive data on self-reported reading strategies. Finally concerning the REM-SORS, additional

\textsuperscript{115} Nota: The MARSI is the L1 equivalent to the SORS. Reworded, the MARSI focuses on L1 self-reported reading strategies and the SORS focuses on L2 self-reported reading strategies.
hierarchical calculations could reveal which items were most consistent. The author of this thesis wants to comment that in a planned follow-up publication he wants to shed light on the REM-SORS's accuracy of the specific items. Another point that should be addressed is that this dissertation included very basic data collection method for self-reported attitudes towards the English language (a single item with a five-points Likert scale). Including a more elaborated test design on self-reported motivation towards the English language could offer the possibility to calculate whether motivation correlates with Germanic IC task performances or not. Finally, the REM-Study included the participants’ language backgrounds. However, no data was collected on the participants’ actual language competences and it was therefore were not included in the calculations. Therefore, another research desideratum is to carry out a refined version of the REM-Study which is able to distinguish between high- and low-performance (foreign) language users, which would allow for a more sophisticated distinction in terms of language groups. For example, the following questions concerning Germanic IC could be answered: Are proficient multilingual language users able to outperform proficient bilingual language users? Are literate heritage language users able to outperform participants without a heritage language? Which role does language learning duration of foreign languages play? Are proficient language users with an additional Romance language advantaged in Germanic IC? Do proficient multilingual language skills have a significant predictive value?

Summarising this section, the REM-testing design has shown its potential for IC research, though, clearly, there is room for improvement: A redesign might offer more accurate data and, thus, deepened insights into IC processes.

### 8.3 Future Perspectives: Implications for Language Learning, Future Language Teaching and Teacher Training Programme

Briefly summarising the REM-Study, the results on possible effects of multilingualism and its accompanying skills are sobering. Little to no effects were found to support the notion that the knowledge of more than two languages is likely to have enhancing effects on decoding unknown Germanic language patterns. However, some evidence of such an advantage was found in the field of lexis. Additionally, self-reported motivation towards the English language seems to positively contribute to the comprehension of unknown
Germanic languages. These results provide valuable information for language education, namely that, if these aspects are included in teaching and learning routines, then multilingual competences might be a) trained more easily and, hence, b) more salient for language learners. Thus, one question still remains unanswered: how can language education positively contribute to an individual’s multilingualism in order to foster multilingual competences? The upcoming penultimate section of this dissertation is dedicated to the presentation of several multilingual approaches that offer promising teaching scenarios to foster and train multilingual reading competences. This section will first briefly show that multilingual education is not only a demand promoted by research but politics as well. Afterwards, three overarching multilingual approaches will briefly be presented, followed by a few multilingual teaching and learning designs focussing on reading. This section will conclude with the REM-study’s implications for foreign language education teacher training programmes.

As mentioned in the introductory paragraph, there are political demands to include ITA in school contexts. This specific educational goal is mentioned in the CEFR, short for Common European Framework of Reference (EU 2001), a tool to internationally describe language competences. Furthermore, the CEFR is being used as a basic construct for current language curricula – already worldwide. Not only does the CEFR describe language competence levels, it also offers pieces of advice on how to approach multilingual language learning:

To meet the needs of a multilingual and multicultural Europe by appreciably developing the ability of Europeans to communicate with each other across linguistic and cultural boundaries, which requires a sustained, lifelong effort to be encouraged, put on an organised footing and financed at all levels of education by the competent bodies. (ibid., 3, nota bene: italics added by DU) […]

Instead, the aim is to develop a linguistic repertory, in which all linguistic abilities have a place. This implies, of course, that the languages offered in educational institutions should be diversified and students given the opportunity to develop a plurilingual competence. (ibid., 5, nota bene: italics added by DU)

Paraphrased, the EU promotes life-long language learning and inclusive multilingual language learning in educational settings. As mentioned before, these learning goals are reflected in school curricula as well (concerning the Austrian education system, see Krumm and Reich 2011, Government 2012, Government 2016 or Bildung 2012). Furthermore, another EU-led project was introduced to promote the learning and description of multilingual competences: the FREPA, short for Framework of Reference for Pluralistic Approaches. It gives guidelines on how to approach multilingual language
and multicultural learning as well as descriptors for multilingual competences. Summarising, political frameworks have been established to promote multilingualism in teaching routines.

8.3.1 Brief Overview of Current Multilingual Teaching Approaches
Motivated by political consensus, researchers have started to research and analyse multilingual teaching and learning approaches. In other words, the interest on how to foster multilingual language competences has steadily grown and created additional research interests for language education research. Over the past decade research results have shown that even young learners are able to profit from ITA and that learners perceive multilingual teaching techniques as useful (see, for example, Morkötter 2016a+b). This newly sparked interest has initiated a number of research projects. Hence, the following section will present a brief overview of ITAs. Afterwards, a few qualitatively and quantitatively researched multilingual teaching and learning designs, which focus on reading in two or more languages, will be presented. However, to stay within scope of this dissertation, only four of the mentioned teaching designs will be discussed in more detail.

Overview of Multilingual Teaching Approaches
Generally, one needs to mention that defining multilingual language teaching and learning approaches is not clear-cut. For example, Meier (2014, 132) defines the approach as follows: “learners and teachers use more than one language to access learning of languages and/or formal content in educational contexts” (italics added by DU). In contrast, other researchers (e.g. Wiater 2006) underline that multilingual teaching approaches need to include three or more languages; if this is not given, one should talk of bilingual teaching approaches. This definition imprecision is presumably rooted in the definition of the word multilingualism itself, as discussed in Chapter 2. Hence, the suggested definition continuum in Chapter 2 could also be used to define multilingual teaching approaches more accurately.\footnote{The author wants to comment that an epistemological study focussing on definitions of multilingual teaching approach using the definition continuum model are a research desideratum.}

\footnote{The English version is currently only partially available http://carap.ecmI.at/SeservirdeCARAP/tabid/3637/language/en-GB/Default.aspx (last seen on 8th August 2017. For the German version see: Candelier et al. (2009).}
1. Nevertheless, whether agreeing with Meier’s or Wiater’s definition, several approaches have emerged over the past two decades. Three established approaches will be listed and briefly described:

2. **Intercomprehension** (ITA) (see Section 3.2.5)

3. **Translanguaging** (TL): Originally, translanguaging was introduced in the 1980s to preserve Welsh in educational contexts and started out as a bilingual teaching and learning approach (Lewis, Jones and Baker 2012, 643-4). TL’s main aim is to make learners aware of their linguistic resources and use these in language learning scenarios. Furthermore, learners should be able to use two or more languages in the same context and/or within the same modality (spoken vs. written) to achieve a specific learning goal (see, for example García and Kano 2014, or Zhang and Chan 2017).118

4. **Tertiärsprachendidaktik** (TD, third language education approaches, translation by DU): The term TD was coined by Hufeisen with the introduction of the Factor Model (see Section 2.2.3). TD’s main aim is for learners to become aware of their L2 learning experiences and positively transfer, for example, learning strategies from their L1 and/or L2 to their L3. In other words, TD focuses on transfer rather than on interferences (Neuner 2005, 24-5). Hence, educators should focus on the creation of language and metalinguistic awareness as well as comprehension of links between languages (ibid., 28-29). These processes should be started with the use of authentic and motivating learning materials (ibid., 30).

These streams to approaching multilingual language learning have initiated the creation of teaching designs that target the same and further goals through specific techniques.119

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118 For TL introductory readings consult García (2009) and/or García and Wei (2014).
119 The author wants to comment that an extensive or comprehensive presentation and discussion of specific teaching and learning techniques is beyond the scope of this dissertation. However, many tried and tested techniques for children and young adolescents can be found in this database https://phzh.ch/de/Dienstleistungen/internationale-bildungsentwicklung/Projekte-und-Mandate/Europaweite-Projekte/Datenbank_Mehrsprachigkeit-EU-Projekt_Amuse/Datenbank-Mehrsprachigkeit/ (supported by PH Zurich) or http://www.oesz.at/OESZNEU/main_01.php?page=015&open=13 (supported by Österreichisches Sprachenkompetenzzentrum).
accompanied and carried out in educational contexts. These designs encompass specific aspects of multilingual language learning among other learning goals. Furthermore, a short description focusing on the approaches’ main goal will be offered.

- **AlphAlif** (see Böhm and Mehlem 2018)
  AlphAlif\(^{120}\) is a project that created multilingual teaching designs for children with Arabic as their L1 who are not familiar with the Latin alphabet to foster German L2 reading techniques, reading comprehension abilities and competences in vocabulary range as well as basic grammar. The aim is to offer learning possibilities which enable learners to make connections between their first language and German. In AlphAlif learners are systematically confronted with grapheme-phoneme reading tasks to understand, step by step, the differences between the Arabic and German language. Hence, learners contrastively learn how to read two languages and at the same time become aware of the graphemic differences.\(^{121}\)

- **MElang-E** (see Buendgens-Kosten 2015, 44-45; ibid. 2018, 99-113)
  MElang-E, short for *Multilingual Exploration of Languages in Europe*, is a computer-based adventure game which fosters multilingual reading competences. The game’s story line focuses on the main character Mali who wants to compete in a band competition. He travels across Europe to convince his friends to participate in this competition, and in order to do so, Mali needs to talk to other character who use the respective country’s majority language.
  MElang-E confronts gamers with a multitude of languages in written or audible contexts. Thus, a gamer may read and/or listen to a certain dialogue in order to make his choice on how to proceed the game. Thus, the game in itself uses concepts of code-switching and IC as well as interaction and game-theory-based approaches. However, the project leaders recommend that in order to unleash MElang-E’s full potential, further accompanying learning measures and scaffolds need to be prepared by teachers (e.g. pre- and post-scaffold techniques).\(^{122}\)

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\(^{120}\) The project’s name derives from the first letter of the Latin and Arabic alphabet.

\(^{121}\) Results in AlphAlif’s success have not been published. The teaching design is in trial phase (see https://www.uni-frankfurt.de/65409721/Praxisprojekt__AlphAlif).

\(^{122}\) Further information and the link to the game can be found here: http://eudoit.eu/melang-e

The game will be online by April 2019.
MELT (see Kutzelmann et al. 2017)

MELT, short for Mehrsprachiges Lesetheater [Multilingual Readers’ Theatre], is a guided teaching design for pupils between the fifth and eighth grade. MELT addresses the training of reading fluency in multiple languages. Each specifically designed readers’ theatre uses two or more languages – including school and heritage languages (for example, the text “Narreddin Hodsha” uses German, English and Turkish and the text “Heidi” uses German, English and French). Via read-aloud measures pupils become more efficient in decoding words in more than one language. As an educational result, reading competences may successfully develop. Moreover, the research project developed a fully elaborated design with accompanying scaffolds, pre- and post-measures as well as drama in education techniques to ensure MELT’s application outside of the trial phase in which it was developed. The promotional film “LOUD. CLEAR. SLOW. Bridging languages with Multilingual Readers’ Theatre” presents MELT in action: http://melt-multilingual-readers-theatre.eu/en/videos/. Finally, MELT’s effectiveness on reading fluency was observed and positive trends were detected (see Unterthiner 2018).

MeSH (see Dube and Gürsoy 2018)

MeSH, short for “Digitale Medien und sprachliche Heterogenität [digital media and linguistic heterogeneity, translation by DU], is a German as a second language reading project which focuses on creating language learning designs using reading wands and picture books. To be more precise, a learner uses the reading wand, which reads out loud words and phrases in multiple languages when a specific barcode is scanned, giving learners audible and visual clues to (potentially) learn two languages. Thus, learners have the possibility to read and listen to their heritage language and German as well. First results show that the design is able to initiate learning and reading motivation. Additionally, the participants enjoyed repeating the words and sentences and learnt their first and second language in a playful manner. Likewise, the multilingual books sparked the learners’ interest to share their reading experiences with peers. Obviously, there are many more designs that would be well worth discussing (e.g. EuroCom, see Hufeisen and Marx 2014, or MeVoL, see Section 5.3). However, the main

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124 The main target audience is newly immigrated children.
125 A technical handheld device which is pre-programmed to read aloud when a certain barcode is scanned.
aim of this section was to offer a glimpse of the existing possibilities for multilingual education.

8.3.2 Implications for Future Teacher Training Programmes

The dissertation's results might have an impact on future language teaching. The results show that young adolescent language learners are able to deduce meaning from an unknown Germanic language. These competences need to be nurtured in order to be more successful with other unknown languages as well. Furthermore, motivation towards the English language seems positively contribute to IC phenomena. Finally, multilinguals seem to have an advantage, albeit a limited one, in the field of lexis. Last but not least, the application of certain reading strategies is more likely to lead to success. These pieces of information might change current teaching routines – or even strengthen current teaching and learning measures. Summarised as a question, what can future language teachers do with these pieces of information?

First, one needs to mention that teacher training programmes need to react to such results: universities should offer students the possibility to participate in courses and seminars that

a) convey scientific discoveries on how language learners approach unknown/foreign languages and
b) expose them to multilingual teaching designs and micro-techniques so that they may use these in their future teaching.

Thus, approaching foreign language teaching in a more wholistic manner seems to be a solution for preparing future teachers for such teaching and learning scenarios more adequately.

Looking at the landscape of teacher training programmes, Innsbruck's IMoF presents a pioneering role concerning multilingual teacher training programmes. To keep it short and simple:

IMoF wurde 2000 konzipiert und setzt seit 2002 eine sprachendurchgängige und mehrsprachigkeitsdidaktischen verpflichtete universitäre Ausbildung für zukünftige FremdsprachenlehrerInnen [...] um. Basis dafür bietet die wissenschaftlich gut untermauerte These, dass dem Unterricht einer jeder Fremdsprache gleiche Prinzipien und Theorien zu Grunde liegen. (Hinger 2009, 498; italics added by DU)

Throughout one’s path in the foreign teacher training programme in Innsbruck, one is in touch with a multitude of topics and issues which are relevant not only for one specific
but all foreign languages in teaching contexts (ibid., 499-500). Furthermore, specific courses targeting multilingualism in the foreign language classroom are offered to prepare future teachers. In this regard, IMoF not only presents state-of-the-art foreign language education, members themselves are part of the academic discourse, and by integrating them into the teacher training programme, new results from areas such as language-specific scenarios to multilingual language learning are shared with students, as well (e.g., Hirzinger-Unterrainer 2013, Alter 2016, Schmiderer 2016, Hinger 2016 or Unterthiner 2018). Finally, IMoF was introduced in this thesis for two specific reasons: first, the author wanted to present that there are possibilities for teacher training programmes which are *d'accord* with modern standards and, second, because the author experienced IMoF himself which had an impact on why he started his PhD-studies. However, other teacher training programmes have also started to follow a similar path (e.g. Mannheim University, see Fernández Ammann, Kropp and Müller-Lancé 2015).

### 8.4 Limitations and Outlook

The final section of this chapter is devoted to the limitations of the REM-Study and to future RM research desiderata. A few limitations have already been presented in Chapter 5 and 6. Nevertheless, these will be presented here in a condensed and clear manner again.

**Limitations: Participants**

Due to the limited **data collection on the participants’ language backgrounds**, the REM-Study results might not accurately present reality. To be more precise, due to constraints (i.e. the limited 30-minute time frame the author was offered within the MeVoL-project), it was not possible to test or otherwise assess the participants’ language competences in school-learned languages or in any other languages (e.g. heritage languages). One needs to say that factors such as language proficiency in various languages or level of (bi)literacy might have an influence on performance on IC tasks. This, however, could be taken into consideration in a follow-up research project and statistical calculations and group comparisons might be of greater interest for multilingual research.
Additionally, **recruiting more participants** might offer more data to analyse. The participants with four or more languages were the smallest group within the REM-Study. Rephrased, more participants could offer a more solid basis for statistical calculations.

Concerning the TAP-participants, participants with the highest L1 reading motivation were chosen and included only bilingual participants (in other words, the REM-Study TAP-participants were literate in German and had basic competences in English.) (. **TAP-performances**, however, might be greatly **different** when observing participants with other language constellations (trilinguals, multilinguals) or lower levels of reading motivation Carrying out the TAP with multilingual participants, for instance, might bring to light how other language resources besides the two mentioned Germanic languages could be used to approach Germanic IC.

Finally, the author of this thesis was dependent on the respective classes’ and schools’ teachers to carry out his study during school times. The **participants’ performances** might have been **influenced** by a number of factors, including...

- ... tiredness or exhaustion (e.g. via a test prior the study).
- ... time of day (morning vs. late or afternoon classes).

Further individual factors might have had an influence on their performance, such as...

- ... negative attitudes towards unknown languages.
- ... nervousness.
- ... uncanny feelings towards the test design or the Dutch language.
- ... one’s emotional well-being.
- ... gender (although this factor was calculated to not have an effect).

Finally, a longitudinal study is desirable because it might be able to document the development of IC competences and possible growing reading strategy shifts. However, one might need to change to other Germanic languages in order to bypass possible priming effects.

**Limitations: Test format**

As mentioned above, the author was given a **time frame of 30 minutes** to carry out his study. Besides the test format inspired by Marx (2011), he included the REM-SORS as well. In Marx’s (ibid.) study, the researcher confronted university students with similar
tasks and fewer test items. Put into context, for this dissertation, 30 minutes might not have been suitable for the target audience, and young adolescent language learners might perform differently if given more time or fewer tasks to work on. Thus, one might change the execution time to 45 minutes in order to receive more thought-through answers. Furthermore, the resulting time pressure could have had a negative influence on participants' IC performances and self-evaluations (REM-SORS).

Concerning the REM-SORS, a desired next step is to recalculate each item regarding its inner consistency; further calculations will reveal which items most reliably test the construct. As a result, certain items might need to be modified or taken out. As a starting point, one could consider the Marsi-R, which offers a shortened and highly acceptable reliability basis concerning L1 reading strategies. Yet again, more time for the participants could offer the possibility that participants answer the self-reported test format truthfully.

As shown in the test format discussion, certain test formats did not achieve high reliability values. Thus, the introduction or modification of items might be a solution to gather more accurate data concerning the test construct. For example, one could use more global reading items, however, this would have an effect on the text length and test duration (see Section 8.2).

Finally, the introduction of more elaborated test formats on (foreign language) motivation could be used. This would allow researchers to calculate if Germanic IC performances correlate with motivation.

In sum, the REM-Study has opened several research desiderata in the field of multilingualism and Germanic IC. The study provides valuable information on how young adolescent language learners approach an unknown Germanic language. Although some results are sobering, the introduction of the SORS into multilingualism studies can be seen as a success. Lastly, the REM-Study offers potential for new projects which are of future research interest:

- Are multilinguals truly advantaged than mono- or bilinguals?
- Are older participants advantaged in IC tasks due to their, for example, longer language learning history or cognitive maturation?
- Will IC reading strategies change with a different target audience?
- How will results change when one uses another Germanic language or even an unknown Romance language?
• How will test takers with an L1 other than German (e.g. Italian) perform in Germanic IC tasks?
• Does foreign language motivation correlate with IC task performances?
These and further questions may trigger up-coming desirable research projects.
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Appendix

Studie und TAPs
Bitte fülle zuerst den Schülercode aus.

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<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td><strong>erste</strong> zwei Buchstaben des Vornamens Deiner Mutter:</td>
<td><strong>letzte</strong> zwei Buchstaben des Vornamens Deines Vaters:</td>
<td><strong>erste</strong> zwei Buchstaben Deines Geburtsortes:</td>
<td>Dein Geburtsmonat als zweistellige Zahl:</td>
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Fremde Sprachen verstehen

Arbeitsauftrag


<table>
<thead>
<tr>
<th>Text</th>
<th>Zeile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Simon ‘de Danser’ Simonszoon (Dodrecht, circa 1577 – 1611) was een piraat van Hollandse afkomst.</td>
<td>1</td>
</tr>
<tr>
<td>Simon was een man die kon vechten en plunderen als de besten.</td>
<td>2</td>
</tr>
<tr>
<td>Simon begon zijn carrière als bootsgezel werkte zich op tot zeeman en handelskapitein.</td>
<td>3</td>
</tr>
<tr>
<td>Zijn handelsplaatsen bevonden zich langs de Franse en Spaanse kust en in de Middellandse Zee.</td>
<td>4</td>
</tr>
<tr>
<td>Als extra kreeg hij kaperbrieven die voor hem waren gekocht.</td>
<td>5</td>
</tr>
<tr>
<td>Deze brieven gaven hem het recht om Spaanse of Engelse schepen te veroveren.</td>
<td>6</td>
</tr>
<tr>
<td>Simon groeide op in een land dat verscheurd werd door oorlog, en waar alleen de sterken en slimmen konden overleven.</td>
<td>7</td>
</tr>
<tr>
<td>Auf der nächsten Seite geht’s weiter.</td>
<td>8</td>
</tr>
</tbody>
</table>

Löse nun die folgenden Aufgaben (1-2). Verwende dabei nicht mehr als vier Wörter und antworte auf Deutsch.

1. Gib dem Text einen Titel.

2. Was konnte die Hauptperson gut? Nenne zwei Aktivitäten.

Auf der nächsten Seite geht’s weiter.
3. **Finde** die deutsche Übersetzung für die vorgegebenen Wörter (A-G). Schreibe im Kästchen daneben, wie du es geschafft hast, die **Bedeutung** des Wortes herauszufinden. Das erste Beispiel wurde für dich schon gelöst.

<table>
<thead>
<tr>
<th>N°</th>
<th>Wort</th>
<th>Zeile</th>
<th>Übersetzung</th>
<th>Begründung</th>
</tr>
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<tbody>
<tr>
<td>0</td>
<td>een</td>
<td>1, 3, 10</td>
<td>ein</td>
<td>Klingt ähnlich wie Englisch &quot;an&quot; und Deutsch &quot;ein&quot;</td>
</tr>
<tr>
<td>A</td>
<td>carrière</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>bootsgezel</td>
<td>4</td>
<td></td>
<td></td>
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<tr>
<td>C</td>
<td>Spaanse</td>
<td>6, 9</td>
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<td>D</td>
<td>hem</td>
<td>8, 9</td>
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<td>E</td>
<td>schepen</td>
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<td>G</td>
<td>oorlog</td>
<td>10</td>
<td></td>
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</tr>
</tbody>
</table>

4. **Finde Übersetzungen** für die folgenden Wörter (A-D) und **schreibe** sie in das Kästchen. Das erste Beispiel (0) wurde für dich schon gelöst.

<table>
<thead>
<tr>
<th>N°</th>
<th>Deutsches Wort</th>
<th>Zeile</th>
<th>Wort im Text (Seite 1)</th>
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<tbody>
<tr>
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<td>wie</td>
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<td><strong>als</strong></td>
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<td>A</td>
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<td>D</td>
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Auf der nächsten Seite geht's weiter.
5. **Finde** alle bestimmten Artikel im Text (A-E). **Finde auch die grammatische Erklärung heraus.** Ein Beispiel soll dir helfen, die Aufgabe zu lösen.

<table>
<thead>
<tr>
<th>N°</th>
<th>Artikel</th>
<th>Übersetzung</th>
<th>Zeile</th>
<th>Grammatikale Erklärung</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>de</td>
<td>der</td>
<td>1</td>
<td>Wird für das männliche Hauptwort in der Einzahl verwendet.</td>
</tr>
<tr>
<td>A</td>
<td></td>
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Auf der nächsten Seite geht’s weiter.
6. 6.1 Diese Sätze (A und B), **die nicht im Text vorkommen**, sind in **Stücke zerfallen**. **Setze** die Teile in die **richtige Reihenfolge** und **nummeriere** die Teile (1-6) in den grauen Kästchen. Ein Beispiel (0) soll dir helfen, die Aufgabe zu lösen.

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>was</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>Simonszoon</td>
<td>6</td>
</tr>
<tr>
<td>5</td>
<td>een</td>
<td>3</td>
</tr>
</tbody>
</table>

**A**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>landgenoten</td>
<td>Simon</td>
</tr>
<tr>
<td>hij</td>
<td>vrij kocht</td>
</tr>
<tr>
<td>omdat</td>
<td>wird geprezen</td>
</tr>
</tbody>
</table>

**B**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Kaapvaart</td>
<td>in de Middellandse Zee</td>
</tr>
<tr>
<td>al heel lang bekend</td>
<td>was</td>
</tr>
<tr>
<td>piraterij</td>
<td>en</td>
</tr>
</tbody>
</table>

6.2 **Bilde** nun eine Regel, wie die **Satzteile** in der **Sprache des Textes aneinandergereiht** werden. (Die englische Sprache verwendet zum Beispiel eine Subjekt-Verb-Objekt-Reihenfolge.)

---

7. Versuche, die folgenden **zwei Phrasen** (A und B) **zu übersetzen**. Ein Beispiel (0) soll dir helfen, die Aufgabe zu lösen.

<table>
<thead>
<tr>
<th>N°</th>
<th>Phrase</th>
<th>Zeile</th>
<th>Übersetzung</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Simon was een pirat.</td>
<td>1</td>
<td>Simon war ein Pirat.</td>
</tr>
<tr>
<td>A</td>
<td>Als extra kreeg hij kaperbrieven</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>Deze brieven gaven hem het recht</td>
<td>9</td>
<td></td>
</tr>
</tbody>
</table>
8. **Kreuze an:** Hast du bei der *Lösung* der Aufgaben an *bestimmte andere Sprachen* gedacht?
   
   Ja  Nein

8.1 *Falls ja,* an welche?

__________________________________________________________________________________

9. **Kreuze an:** Die Sprache *Englisch* finde ich ...

   😞 😞 😞 😊 😊 😊 😊
   
   Awful  Not very good  Good  Really good  Brilliant

10. **Kreuze an:** Hast du sonst noch *Sprachen gelernt* außer Deutsch und Englisch?

   Ja  Nein

10.1 *Falls ja,* welche?

__________________________________________________________________________________

**DANKE FÜR DEINE TEILNAHME! 😊**

Falls du mich persönlich kontaktieren möchtest, um Details über deine Ergebnisse zu erfahren, schreibe mir eine E-Mail an: dominik.unterthiner@uibk.ac.at
Strategiencheckliste

Die folgenden Aussagen beschreiben einige **Strategien**, die man beim **Hören** und beim **Lesen** verwendet. **Stimmst du den Aussagen zu?** Das ist kein Test, es gibt **keine richtigen** und **keine falschen Antworten**. Dieser Fragebogen dient dazu, dass du erkennst, was du machst, um Sprachen zu verstehen.

Lies dir jede Strategie **durch** und **kreuze** die für dich **passende Antwort an**, die du während der Bearbeitung des Textes verwendet hast.

<table>
<thead>
<tr>
<th>Die genannte Strategie verwendete ich...</th>
<th>...nie.</th>
<th>...fast nie.</th>
<th>...manchmal.</th>
<th>...öfters.</th>
<th>...fast immer.</th>
<th>...immer.</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Ich habe versucht, meine Konzentration die ganze Zeit auf das Lesen zu richten.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>B. Ich habe versucht, Buchstaben und Wörter mit ähnlichen mir bekannten Wörtern zu vergleichen.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>C. Ich habe versucht, Passagen Wort für Wort im Kopf zu übersetzen.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>D. Ich habe versucht, im Kopf Voraussagen zu machen und habe diese dann geprüft.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>E. Ich habe versucht, unbekannte Wörter zu erraten.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>F. Ich habe versucht, Textteile öfters zu lesen, um den Text zu verstehen.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>G. Ich habe versucht, mich auf den Text als Ganzes zu konzentrieren.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>H. Ich habe versucht, mir die Situation bildlich vorzustellen.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>I. Ich habe versucht, meine Konzentration bewusst auf Einzelheiten des Textes zu richten.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>

Danke für's Ausfüllen! 😊
I: Einmal da und einmal da und dann bitte ich dich jetzt, also ich darf dir keine Informationen geben, ich darf dir auch nicht sagen, wie die Sprache heißt äh sich nennt, ich kann dir zwar Sachen erklären, wenn dir eine Übung nicht klar ist, das ja, aber dir nicht eine Hilfestellung zum Lösen geben, okay? #00:00:40-4#

P1: Okay, ja. #00:00:43-6#

I: Okay, gut, dann bitte umdrehen und erst den Schülercode ausfüllen, und dann darfst du offiziell beginnen. #00:00:49-4#

P1: Aha, okay. Los gehts. Ähm erste zwei.. Darf ich laut lesen? #00:00:53-6#

I: Jaja, du sollst. #00:00:54-8#


I: Die 4 bedeutet in Zeile 4 vorne im Text ist es drinnen. #00:06:48-1#

P1: Ah carriere. #00:06:49-9#

I: Wenn du nochmals nachschauen möchtest. #00:06:50-6#

I: Mhm, ähm, Übersetzung. Karriere, musst halt ich bin nicht so gut im Rechtschreiben, ist ja Wurst. #00:07:02-5#

I: Passt schon. #00:07:04-0#

I: Jaja. #00:08:00-7#

P1: Ähm Spaanse, ähm ein, ein Spaner () Spaner () Kolleg () ähm hört sich das so an? Ähm () Ähm im meinem Dialekt, Dialekt ähm ist das ein Freund () Ähm hem hem hem #00:08:43-9#

I: Du kannst auch nachschauen, wo es im Text steht, Zeile 8 und 9. #00:08:52-5#


I: Mhm. #00:10:37-7#

P1: ge-. #00:10:38-1#

I: Wie hört es sich denn an? Also schreib das noch dazu. #00:10:40-6#

P1: Schepen. Hm. #00:10:42-2#

I: Also aus Dialekt, aus dem Dialekt oder? #00:10:44-1#

P1: Schepen, ja Scherpen, Schepen, das ist, eine Verbindung. #00:10:48-7#

I: Okay, mhm. #00:10:50-5#


I: Ja, sicher. #00:11:29-1#

P1: Spaanse das heißt Essen, im Dialekt ist es Essen. () Ähm, verovern, verovern, verovern, ver- Deze brieven gaven hem het recht om Spaanse of Engelse schepen te veroveren. Ähm, die haben ihn verarscht, veräppeln, veräppeln. Ähm, im Satz kommt es so rüber. Ähm oorlog. Okay (blättert) Simon groeide op in een land dat verscheurd werd door oorlog. Simon groeide op in een land dat verscheurd werd door oorlog, en waar alleen de sterken en slimmen konden overleven. land det verscheurd werd door oorlog. Oorlog, das hört sich, also wenn ich das jetzt übersetzen müsste. Simon kam in ein Land () und die ihm verscheuert haben und die auch ähm oorlog hm oorlog () ähm () ähm () oorlog, Scheibe, Scheibe. Oorlog, land det verscheuert werd door oorlog. Oorlog. Ähm, darf ich hinschreiben keine Ahnung oder so? #00:13:26-0#

I: Mhm. #00:13:27-1#

P1: Keine Ahnung. #00:13:31-0#

I: Und sonst kannst du es später nochmals probieren, wenn Zeit ist. #00:13:34-7#

P1: Mhm. Oh, Zeit? Achso, 30 Minuten genau ups. #00:13:38-7#

I: Mhm. #00:13:39-9#

P1: Keine Ahnung. Ähm () geraten. Finde Übersetzungen für die folgenden Wörter (A-D) und schreibe sie in das Kästchen. Das erste Beispiel (0) wurde für dich schon gelöst. Okay, da ist das Wort wie, Zeile 3, Wort im Text Zeile 1, als, also von () Zeile () hä? #00:14:09-6#

I: Das Wort, die Wörter sollst du suchen und du sollst die Zeile dazuschreiben, wo du es gefunden hast und wie es auf #00:14:16-4#
P1: Auf der Seite 1 da? #00:14:17-8#

I: Genau, und wie du es dann da in dieser Sprache heißt #00:14:18-7#

P1: Nur bei dem, also wie ich es mein. #00:14:22-3#

I: Mhm, genau. #00:14:22-8#


I: Genau. #00:17:05-2#

P1: Also der die das, okay. #00:17:08-9#

I: Was du findest. #00:17:11-7#

P1: die (blättert) ich glaube halt. Simon was en man die, weißt du es ist eigentlich, darf ich das unterstreichen? #00:17:22-5#

I: Sicher. #00:17:23-1#

P1: Es ist irgendwie voll schwer, du musst irgendwie auch das Nomen dazu auch finden, denn sonst kann es auch irgendwas anderes bedeuten. #00:17:29-1#

I: Aha, mhm. #00:17:31-1#

P1: Weil Simon was en man die konnt, der die (.) há? Simon, das ist doch kein die? Simon was en man, die konnt fechten, schreibe ich mal, die, Zeile 3, die, 3 ähm ähm wird für, wie lange habe ich noch? #00:17:52-5#

I: Ich schaue, wir sind ungefähr bei 18 Minuten. #00:17:55-8#

P1: Mhm. (.) Okay, wird für das weibliche, weibliche Hauptwort verwendet, Hauptwort, verwendet, ver- wendet. Ähm (.) Ähm (.) Äh, sich langs en de Middellandsezee, aber de haben sie schon übersetzt? #00:18:32-3#

I: Trotzdem kannst du es notieren. #00:18:34-8#

P1: Ahh. Okay, dann mache ich, de in de (.) de der (.) der Zeile 6 (.) ähm Simon groide op ähm (.) waar alleen de sterken, was en privat en Hollandse afkomst (?) begon zijn carrière als bootsgezel werkte sich op tot zeeman en handelskapitein. bevonden zich langs de Franse en de kust en in de Middellandse Zee. Als extra kreeg hij kaperbrieven die voor hem waren gekocht. Deze brieven gaven hem het recht om of Engelse schepen te veroveren. Te von die, det das, det das (.) 10 ähm (.) ähm sächliche, sächliche hauptwort, hauptwort, okay, die, aber was muss ich denn da noch so finden? #00:19:51-9#

I: Wenn du keine mehr findest, dann kannst du inzwischen weitermachen. #00:19:54-0#

P1: Aber ich, ist es egal, wenn da nur drei von denen? #00:19:56-7#

I: Ja. #00:19:57-5# #00:19:57-0#
P1: Aha. Okay, dann, van (murmelt) die habe ich mal, de besten, der, de, de, der () der, den begon () handelsskapitein, die sich zlangs in de habe ich schon, die habe ich schon, geeven hem het recht, af de schepen de von, de in de dat, ja, de, das habe ich noch nicht gesehen, de, aber das habe ich vergessen zu schreiben, ähm de besten 3, de 10, (blättert der () ähm () 6. 6.1 Diese Sätze (A und B), die nicht im Text vorkommen, sind in Stücke zerfallen. Setze die Teile in die richtige Reihenfolge und nummeriere die Teile (1-6) in den grauen Kästchen. Ein Beispiel (0) soll dir helfen, die Aufgabe zu lösen. Ein Beispiel soll dir helfen, okay, ähm, Null, was? Simon de Danser Simonzoon privat und Dodrecht () also muss ich die zwei ausfüllen? 00:21:27-1#

I: Genau. 00:21:27-4#

P1: Nur die zwei? 00:21:28-1#

I: Das nur ein Beispiel, damit 00:21:29-3#

P1: Und A? 00:21:29-9#

I: Bitte? 00:21:31-3#

P1: Und A? 00:21:31-6#

I: A und B also mit Zahlen da ausfüllen. 00:21:34-3#

P1: Achso die Zahlen, achso, jetzt die Zahlen, landesknoten, Simon, ähm, landesgenoten, Simon, also muss ich jetzt einfach die Zeile da suchen? 00:21:46-4#

I: Nein nein, die sind nicht im im im Die Sätze sind nicht im Originaltext drinnen, sondern ähm, das sind andere Sätze und du sollst versuchen, das in die richtige Reihenfolge zu bringen. 00:21:57-3#

P1: Aha. Also Simon de Danse Simonzoon was een privat. Okay, Simon ähm () Simon muss das immer so abwechselnd sein, oder kann ich da auch da und drei und da die anderen drei? 00:22:24-4#

I: Ich weiß nicht, wie du das machst. Ich darf dir da keine Informationen geben. 00:22:29-3#

P1: Simon 00:22:31-5#

I: Versuche die Sa, also die Elemente in die richtige Reihenfolge zu bringen 00:22:35-4#

P1: Simon wird geprezen, wird geprezen, omat, das, hij, also hij, lande () ein zwei drei gekocht, vier fünf, in de Middel, Kaapvart was al heel, Kaapvart was al geel lang bekend zwei drei, pri, ähm vier fünf sechs, wenigstien is auch diese Aufgabe, ähm, bilde nun eine Regel, wie die Satzteile in der Sprache des Textes aneinandergereiht werden. Die englische Sprache verwendet zum Beispiel eine Subjekt-Verb-Objekt-Reihenfolge. Bilde nun eine Regel, wie die Satzteile in der in der Sprache des Textes aneinandergereiht werden. Die englische Sprache ist das ein Spiel, also ein Beispiel? 00:23:51-0#

I: Mhm. 00:23:53-0#

P1: Also ich soll das in Klammer? 00:23:55-9#

I: Genau, ja. 00:23:56-8#

P1: Die englische Sprache verwendet zum Beispiel eine Subjekt-Verb-Objekt-Reihenfolge. Okay, bilde nun eine Regel, wie die Satzteile in der in der Sprache des Textes aneinandergereiht werden.Bilde nun eine Regel, wie Satzteile. Was sind Satzteile? 00:24:16-2#

I: Das zum Beispiel, also das sind einzelne Satzteile. 00:24:20-1#

P1: Okay, ähm, aneinander gereiht werden ähm () das ähm schwierige Aufgabe aber, die mache ich nachher. Also versuche, die folgenden zwei Phrasen (A und B) zu übersetzen. Ein Beispiel soll dir helfen, die Aufgabe zu lösen. Simon was een pirat 1, Simon war ein Pirat. Als extra kreg hij kaperbrieven kaperbrieven kaperbrieven,
Ja, ja, ich habe jetzt nicht 100 Prozent gewusst, wie man da draufkommt. #00:30:24

Am Anfang habe ich gedacht das wär, am Anfang habe ich gedacht dass es einfach nicht einfach wird, aber ich habe mich darauf eingestellt, also #00:30:18-5#

Mhm #00:30:19-8#

Ja, ja, ich habe jetzt nicht 100 Prozent gewusst, wie man da draufkommt. #00:30:24-0#
I: Mhm. #00:30:24-3#

P1: Und ähm ich habe dann ähm so versucht, so wie es möglich ist zu nehmen, weil es ist ja auch für dich und auch für mich. Also #00:30:35-7#

I: Mhm, gut äh, was war jetzt, welche Aufgaben waren schwierig, welche waren leicht für dich? #00:30:40-3#

P1: Ähm. #00:30:40-2#

I: Und warum dann auch. #00:30:40-1#

P1: Ähm, darf ich nachschauen? #00:30:42-6#

I: Sicher, ja ja. #00:30:43-8#

P1: Ähm also ähm am schwierigsten fand ich, fand ich Ähm (.) #00:30:51-6#

I: Das ist jetzt ganz stressfrei. #00:30:53-9#

P1: Am schwierigsten fand ich die Aufgabe 4. #00:30:59-2#

I: Warum? #00:31:01-1#

P1: Weil die Wörter nicht so leicht zum Erraten oder zum Finden in Anführungszeichen zum sind, weil man ja den anderen Text ja auch nicht verstanden hat, also die Hauptwörter oder halt das, was davor kommt eigentlich dann auch. #00:31:15-4#

I: Mhm. #00:31:17-0#

P1: Und ich fand die da habe ich etwas erraten können, also #00:31:21-9#

I: Die Aufgabe mit den Artikel. Mhm. #00:31:22-5#

P1: Ja. Ähm und Aufgabe 6, war auch nicht so leicht, aber ich habe es auch versucht alles zu meistern, weil besser dass man dann auch was Geratenes richtig hat statt wie nichts. #00:31:33-8#

I: Supper, gut. Was war für dich besonders leicht? #00:31:37-2#

P1: Hmm für mich war besonders leicht (.) ähm (.) die Aufgabe (.) leicht es so Mittelmaß, die 3 gewesen, das war, das war leicht 5. #00:31:56-3#

I: Mhm. #00:31:58-4#

P1: Und (.) ähm halt die anderen Sachen, 8, wo ich hab ankreuzen müssen. #00:32:01-2#

I: Ja, mhm. #00:32:02-5#

P1: Und ähm, ja und die Aufgabe 1 #00:32:06-5#

I: Okay, dann habe ich eine Frage ganz konkret, da, da hat du nämlich zuerst gehabt: Diese Briefe geben ihm das Recht und dann hast du es verbessert zu geben ihm das Recht. Warum? #00:32:17-4#

P1: Ähm, weil Deutsch? (lacht verlegen) #00:32:18-9#

I: Mhm, ja, aber kannst du gerne nochmals anschauen? #00:32:22-5#

P1: deze brieven gaven, gaben, weil da auch ein a ist. #00:32:26-1#

I: Aha, okay. #00:32:27-0#
P1: Weil mich das so etwas irritiert hat. #00:32:28-1#

I: Okay, dann hast du gedacht es ist gaben als geben. #00:32:31-0#

P1: Ja. #00:32:31-1#

I: Okay. #00:32:32-3#

P1: Und ja. #00:32:34-7#

I: Okay, und dann abbe ich noch eine kurze Frage und dann sind wir am Ende. #00:32:39-2#

P1: Jaja. #00:32:39-9#

I: Ähm, nämlich ähm, andere Sprachen, an die du gedacht hast, hast du zum Beispiel auch an Englisch gedacht? #00:32:47-8#

P1: Am Anfang habe ich gedacht, dass ist irgendwie so Französisch, Spanisch, sowas. #00:32:55-6#

I: Mhm. #00:32:55-4#

P1: Und dann habe ich mir, aber was für Sprache war das jetzt eigentlich? #00:32:58-6#

I: Das sage ich dir ganz am Ende. #00:32:59-4#

P1:Okay, ähm, dann habe ich mir den ersten Satz durchgelesen habe, habe ich mir gedacht, okay das ist so ein französischer. #00:33:07-2#

I: Mhm. #00:33:07-6#

P1: Und als und das u8nd das Wort afkomst war mal, war das Wort, als ich in den Dialekt gekommen bin, weil ich halt dachte #00:33:13-6#

I: Mhm, okay. #00:33:13-9#

P1: Für mich, wie ich den Dialekt kenne, halt den tiefen Dialekt. #00:33:19-6#

I: Mhm. #00:33:19-6#

P1: Eben versuchen zu erkundigen, und das habe ich eben versucht zum Reden. #00:33:22-8#

I: Okay, okay spannend, danke. Dann sind wir offiziell am Ende. Dann stoppe ich die Aufnahme zuerst, einmal und stopp und.
TAP 2 – P2 (MIEDE04)

I: Dich auch gut hör' (Streicht durch) okay? #00:00:09-3#

P2: Okay #00:00:14-6#

I: Na dann, auf los geht's los. #00:00:15-9#


I: Es gibt kein richtig und kein falsch. Einen Titel einfach. #00:03:39-0#

P2: Okay. Der Seemann und Handelskapitän, der () Seeman, Seemann schreibt man mit s, oder? #00:03:48-1#

I: Ich darf dir nichts sagen. #00:03:49-6#

P2: Okay, ähm. () Seemann und Handels () kapitän. Was konnte die Hauptperson gut? Nenne zwei Aktivitäten. Simon was en (nuschelt) Zijn handelsplaatsen bevond sich in der Middellandse See. Simon was een man die kon vechten en plunderen als de besten. () Plunderen () po, plunderen () ahm () oh Mann oh Mann, plunderen () plunderen () plunderen () stehlen, soll ich das durchstreichen? #00:05:20-4#

I: Mhm. #00:05:21-7#

P2: (streicht durch) stehlen, vechten () vechten () ähm, vechten vechten vechten, nein, de kon vechten, vechten, vechten, hâ? Vechten. Ahm, vechten vechten, vechten, vechten, vechten () vechten, wie () vechten () vechten () El. #00:06:15-9#

I: Du kannst auch immer wieder auf den Text zurück schauen, das habe ich dir vergessen zu sagen. #00:06:18-8#


I: Mhm. #00:07:58-5#

P2: Okay, bootsgezel. Ja, () bootsgezel, das habe ich wo gehört mal, glaube ich, bootsgezel, boots-gezel ähm () wie heißt das Boot () Boot () Boot Boot Boot Boot bootsgezel, jetzt fällt mir das Wort nicht mehr ein. #00:08:32-4
I: Mhm.  #00:08:33-7#

P2: Boot bootsgezel, Boot, Boot. Oh Mann (.) Bootsgzel, Boot, Boot, irgendwas mit Boot. (.) Boot ahm, Boot Boot Boot, Boot (.) ähm (.) #00:09:07-4#

I: Und sonst kannst du inzwischen die anderen Sachen anschauen. #00:09:12-2#


I: An was denkst du beim Wort? #00:14:20-4#

P2: Der, wo am Boot putzt, der Gehilfe, der das Boot putzt, aber mir fällt nicht ein, wie das heißt. #00:14:31-5#

I: Dann schreib einfach das hin.  #00:14:33-2#

P2: Also (.) #00:14:35-8#

I: Wenn dir das Wort nicht einfällt, dann schreibst du das hin. #00:14:36-4#

P2: Der, wo das Boot putzt. #00:14:37-8#

I: Mhm. #00:14:39-3#

P2: Der, #00:14:43-0#

I: Und daneben noch schreiben, warum du auf das gekommen bist. #00:14:44-2#

P2: der, der das Boot putzt (.) Ähm, bootsgezel (.) klingt ähnliche (.) wie (.) Brezeln (.) Brezeln (.) Spaanse, Spaanse (.) Spaanse, Spaanse, Spaanse, Spaanse (nuschelt) #00:15:32-1#

I: Sag's nochmal laut, was hast du gesagt? #00:15:40-5#

P2: Spanien.  #00:15:41-4#

I: Wie kommst du jetzt auf das? #00:15:43-1#

P2: Keine Ahnung. #00:15:47-3#

I: Ok. #00:15:48-5#

P2: Zijn handelsplaatsen bevonden zich langs de Franse en Spaanse kust (.) de Middellandse Zee. Franse en Spaanse, das muss nicht die genaue Bedeutung sein? #00:16:00-3#

I: Nein, nein, nein. #00:16:02-3#
P2: Okay. #00:16:02-9#

I: Nur was du selbst glaubst, es gibt keine richtig oder falsch. #00:16:03-3#

P2: Okay. Dann schreibe ich Spanien. (.) Spanien #00:16:11-6#

I: Und warum daneben schreiben. #00:16:16-4#

P2: Es klingt wie Französisch irgendwie, Spaanse, klingt ähnlich wie Spaanse, klingt ähnlich wie ähm (.) Spaanse, das könnte auch sparen heißen, Spaanse Spaanse, Spaanse (.) Spaanse (.) ich mach jetzt mal das schepen, schepen, schipper, schepen ähm (.) schepen, schipper, schepen, oder dich schleppen. Schlepp, Schleppen (.) Schleppen. Klingt (.) schepen (.) das klingt so wie (.) schepen, wie Schiff, nein ein Schiff schippt nicht (lacht) Schiff (hustet) fährt, schleppen, klingt wie, klingt wie (.) klingt nach schippern, ist das ein Wort im Englischen, schepen, schepen, nein, warte (.) ähm (.) schepen, schepen, schepen (.) schepen ähm #00:18:16-1#

I: Und was denkst du gerade? #00:18:17-4#

P2: Auf Tirolerisch irgendein Wort, habe ich das Gefühl, aber ich weiß nicht mehr, wie das heißt, ich weiß nicht mal, was ich meine eigentlich (lacht) schepen (.) schepen, meine Oma hat das zuletzt gesagt, schepen (.) ähm (.) schepen, schepen, klingt wie (.) schleppen, jemanden verschleppen, klingt wie, jemanden jemanden (.) verschleppen (.) overovern (.) overovern overovern (.) Diese briefen qaben hem het recht om Spaanse en Franse schepen te overovern, was suche ich eigentlich, overovern, te overovern, schepen te overovern, ver ver, overovern (.) erobern (.) nein, overovern schepen te overovern, Deze briefen gaven hem het recht om Spaanse en Franse schepen te overovern, overovern, das klingt wie erobern, erobern (.) overovern ähm overovern, klingt wie, klingt wie, ähm #00:20:26-3#

I: Wie das deutsche Wort, dann schreib das, oder? #00:20:29-7#

P2: Mhm. #00:20:29-9#

I: dann schreibst du einfach wie Deutsch #00:20:32-6#

P2: wie Deutsch #00:20:38-8#

I: Super #00:20:41-1#

P2: carriere, klingt wie Karriere, Karriere, Karriere, Karriere ähm klingt wie, klingt (.) wie Französisch Französisch (.) oorlog (.) ah nein (blättert). Simon groeide op in een land dat verscheurd werd door oorlog. Simon groeide op in een land dat verscheurd werd door oorlog. oorlog oorlog oorlog oorlog oorlog ähm (.) oorlog ähm oorlog (.) #00:21:45-1#

I: An was denkst du gerade? #00:21:45-1#

P2: Orlogo oder so, oorlog, nein wie heißt das oorlog, vorlog, vorlegen, vor- (.) oorlog (.) or (.) oorlog ähm oorlog oorlog oorlog ähm (.) oorlog ähm oorlog ähm #00:22:25-4#

I: Und und wenn’s zu schwierig ist, dann mach inzwischen weiter, weil wir sind schun. #00:22:27-4#

P2: okay #00:22:29-6#

I: Knapp bei der Hälfte vorbei. #00:22:32-0#

P2: Finde Übersetzungen für die folgenden Wörter (A-D) und schreibe sie in das Kästchen. Das erste Beispiel (0) wurde für dich schon gelöst. wie 3 als (.) Finde Übersetzungen für die folgenden Wörter (A-D) und schreibe sie in das Kästchen. Das erste Beispiel (0) wurde für dich schon gelöst.wie 3 als (blättert) 3 (.) (nuschet) wie als von (.) Ah, jetzt habe ich’s kapiert von (.) von (.) van (.) für für (.) für ähm für für sich op tot zeeman en handelskapitein. Zijn handelsplaatsen bevonden zich langs de Franse en Spaanse kust für kust. #00:23:57-5#
I: Was denkst du gerade, was suchst du gerade? #00:23:58-1#

P2: () Ein Wort wo () an Buchstaben von den Wort halt #00:24:04-7#

I: Okay von von für? #00:24:06-4#

P2: Ja, #00:24:07-9#

I: Ja #00:24:09-3#

P2: Was en man die für als Boot, kon kon, kon vechten en plundern als de besten, Simon begon zijn carrière als bootsgezel werkte zich op tot zeeman en handelskapitein. () Zijn handelsplaatsen bevonden zich langs de Franse en Spaanse kust en in de Middellandse Zee. Für () Als Extra kreeg () hij kaperbrieven die voor hem waren gekocht. () Deze brieven gaven hem het recht om Spaanse of Engelse schepen te veroveren. Simon groeide op in een land dat verscheurd werd door oorlog, en waar alleen de sterk en slimmen konden overleven. () Ich mach weiter zu () ähm Simon 'de Danser' Simonszoon (Dodrecht, circa) was een pirat van Hollandse a- afkomst. #00:25:50-9#

I: Wie suchst du jetzt das zu? #00:26:04-7#

P2: Ich überlege, wo es vielleicht dazupassen könnte. #00:26:05-6#

I: Mhm. okay. #00:26:08-1#

P2: En kust () ähm () was für eine Zeile, en () en, 3, ah! Jetzt habe ich das falsch geschrieben, da () en () und () und und was en Hollandse afkomst. Was een man die kon vechten en plundern als de besten. Simon begon zijn carrière als bootsgezel werkte zich op tot warte, Zeile tot 4. #00:26:54-7#

I: Wie hast du das jetzt gefunden? #00:26:56-4#

P2: Das mit dem Bootsgezel und und Seeman #00:27:05-1#

I: Mhm #00:27:06-2#

P2: Warte (blättert) tot tot für, man en simon was en kon, nein, de vechten, begon zijn carrière als bootsgezel werkte sich op tot zeeman en handelskapitein. Zijn handelsplaatsen bevonden zich langs de Franse en Spaanse kust en in de Middellandse Zee. () Zee. Als extra, als extra kreeg hij kaperbrieven die voor hem waren. Hem Engelse (nuschelt). Simon groeide op in een land dat verscheurd werd door oorlog, dat dat, jetzt finde ich's nicht mehr; dat dat hier dat (blättert). 10 () Dat dat () 10 dat dat dat () #00:28:41-9#

I: Dann würde ich dich bitten, zur nächsten Übung zu gehen wegen der Zeit. #00:28:40-6#


I: Mhm. #00:31:16-2#

P2: was en man die kon () die (blättert) die Übersetzung, wo ist es, da Simon was en man, Simon war ein Mann, der kon, kann kann fechten () und () plundern als das ist der () de en nein de ist (blättert) als der besten, als als den als der beste () als fechten, ma Mann, kon die Simon war ein Mann () der ()
nein, die (.) ein Mann, die kon, die kon die, was #00:32:39-1#

I: Was grübelst gerade nach genau? #00:32:42-1#

P2: Wie das auf Deutsch klingen könnte. #00:32:43-7#

I: Okay. #00:32:45-2#

P2: Simon (blättert) war ein Mann, der gut fechten und plündern, ahm, ich weiß (.) (nuschelt) wie als, wie der Beste, die (blättert) die ahm, die (.) könnte die heißen ahm, vielleicht gits es irgendwo anders, die die ahm die die die die die die die die die, da Als extra kreeg hij kaperbrieven die voor hem waren gekocht die voor hem waren gekocht die vor her, ah, die könnte die heißen. #00:34:01-5#

I: Wieso hast du jetzt nochmals nach einem zweiten gesucht? #00:34:08-6#

P2: Zum überlegen, ob es wirklich die heißen könnte. #00:34:10-4#

I: Okay. #00:34:12-2#

P2: die die die die die (.) 3. Zeile (.) wird für das weibliche (.) Hauptwort (.) in (.) der (.) Einzahl ein Einzahl, jetzt habe ich Zahl, Einzahl verwendet, ver-wendet (.) #00:35:07-9#

I: Dann würde ich dich bitten, weiterzuschauen wegen der Zeit. #00:35:12-0#


I: Wie bist du vorgegangen, dass du A und B oder die Sätze zusammengebaut hast, was war deine oder wie hast du das gemacht? #00:38:29-0#

P2: Ah (.) Ich habe ahm ich habe das Wort Kapvaart, was #00:38:43-5#

I: was ist da #00:38:46-4#

P2: Kapvaart was al heel lang bekend en pi- piraterij in de Middelandse Zee. Bilde nun #00:38:56-9#

I: Oder ich frage dich jetzt einfach, was hast du gemacht, um das, diese Aufgabe zu lösen. #00:39:01-8#

P2: Ich glaube wie's klingt #00:39:03-6#

I: Wie's klingt? #00:39:03-5#

P2: Ja #00:39:04-8#

I: Dann schreib mal hin. Ich habe, ich habe, geschaut, wie es klingt #00:39:12-2#

I: Mhm. #00:39:14-9#
P2: ich habe #00:39:16-8#
I: Hast du es verglichen mit Englisch oder mit Deutsch? #00:39:19-0#
P2: Mit Deutsch #00:39:19-4#
I: Mit Deutsch, okay. #00:39:19-7#
P2: Ich habe () ich habe () ich habe #00:39:29-0#
I: auf den Klang geachtet? #00:39:28-3#
P2: Ja, ich habe auf den Klang geachtet Punkt () #00:39:36-8#
I: Mhm. #00:39:38-3#
P2: Ähm () Nochmal oder weiter? #00:39:43-7#
I: Einfach weiter machen wegen der Zeit. #00:39:45-5#
P2: Versuche, die folgenden zwei Phrasen (A und B) zu übersetzen. Ein Beispiel (0) soll dir helfen, die Aufgabe zu lösen. Simon was een pirat. Simon war ein Pirat. Als extra kreeg hij kaperbrieven, als war ja wie glaube ich () wie nein wie nein doch wie, wie exakt, exakt e- exakt, exakt, wie schreibt man exakt? #00:40:40-1#
I: Einfach niederschreiben, so wie du denkst, das ist nicht so wichtig. #00:40:44-6#
P2: Ah okay, exakt, kreeg hij kaperbrieven, krieg, wie exakt kreeg hij, kreeg, kreeg, wie eakt kreeg kreeg, wie exakt hij Kaerbrieven. #00:41:12-6#
I: Und was denkst du gerade? #00:41:15-8#
P2: Wie exakt () keine Ahnung, wie exakt, wie exakt #00:41:29-0#
I: Und sonst das nächste probieren, denn wir sind mit der Zeit etwas knapp. #00:41:31-5#
I: Und sonst, wenn's zu schwierig ist, einfach die nächst Übung machen, denn wir sind schon über die Zeit drüber. #00:44:24-3#
P2: Okay. Kreuze an: Hast du bei der Lösung der Aufgaben an bestimmte andere Sprachen gedacht? Ja, kreuze an welche. Französisch, Französisch, wie heißt die Sprache, Fran, nein, nicht Spanisch, Französisch, Englisch, Englisch () Französisch, Englisch () müssen es richtige Sprachen sein? #00:45:06-8#
I: Ja, was du verwendet hast. #00:45:09-9#
P2: Quatschsprache (lacht) Quatsch-sprache () Kreuze an: Die Sprache Englisch finde ich awful, not very good, good, very good, brilliant. () Einfach einkreisen? #00:45:35-9#
I: Okay super. Dann habe ich noch eine Frage, was war jetzt für dich die größte Herausforderung, welche Übung und warum? #00:48:14-2#

P2: Das Übersetzen. #00:48:16-2#

I: Und warum war das so schwierig? #00:48:22-2#

P2: weil da hat man mehrere Wörter im Kopf gehabt aber irgendwie hat fast keines gepasst und wenn zwei gepasst haben, dann hat man sich nicht entscheiden können, welches Wort. #00:48:33-4#

I: Okay und wie hast du dich dann entscheiden? #00:48:37-4#

P2: Ähm. #00:48:39-0#

I: Du darfst gerne nochmals draufschauen, kein Problem. Weißt du noch, was so ein Beweggrund war, okay warum hast du gedacht, deshalb hast du dich so entschieden? #00:48:50-7#

P2: Welches besser klingt. #00:48:52-4#

I: Okay, welches besser klingt. Und ähm welche Übung war für dich ganz leicht? #00:48:57-6#

P2: Ähm (.) ähm das da. #00:49:06-0#

I: Das da. Wieso ganz kurz nur? Und dann erlense ich dich (lacht). #00:49:11-7#

P2: Geachtet (.) ich spiele ja selber ein Instrument und dann dann höre ich immer in der Stimme, wie das passt so. #00:49:26-2#

I: Ok. #00:49:21-4#


I: Okay, dann zum blauen Zettel noch übergehen, dann sind wir am Ende. #00:45:55
P2: Das höre ich auch, wenn ich spiele. #00:49:30-3#

I: Gut, super passt, danke. Das war’s. Schlimm gewesen? #00:49:36-4#

P2: Nein
I: (räuspert sich) (.) Und gleich schon laut mitdenken und mitmurmeln bei den Arbeitsaufträgen oder laut lesen. #00:00:36-5#


I: Wie bist du auf diese Lösung gekommen? #00:02:21-2#

P3: Ähm, weil da steht halt zum Teil etwas von anderen Ländern und halt plündern und so, also denk ich, dass es ein bisschen ähnlich klingt, dann denke ich, könnte sein, dass es ein pri, äh Pirat ist und da steht auch Pirat. #00:02:38-1#

I: Okay. #00:02:39-4#

P3: Was ko äh Was konnte die Hauptperson gut? Nenne zwei Aktivitäten. Also plündern denke ich (.) (nuschelt) (...) und (nuschelt) (.) ähm (.) #00:03:24-0#

I: Was suchst du gerade? #00:03:18-9#

P3: Äh, mit dem Schiff fahren, also segeln, segeln, oder? (.) Finde die deutsche Übersetzung für die vorgegebenen Wörter (A-G). Schreibe im Kästchen daneben, wie du es geschafft hast, die Bedeutung des Wortes herauszufinden. Das erste Beispiel wurde für dich schon gelöst. Een, Übersetzung, ein, Klingt ähnlich wie Englisch „an“ und Deutsch „ein“, aha. (.) Zeile ah ah wo im Text ist auch #00:04:03-0#

I: Genau genau. Also du darfst immer wieder auf den Text zurückblicken, also das ist, du darfst auch in den Text hineinkritzeln, wenn du das brauchst oder so, wie es dir passt #00:04:14-7#

P3: Im Zusammenhang, mhm (.) #00:04:20-6#

I: Was hast du jetzt gemacht #00:04:23-5#

P3: Also ich habe ich habe geschafft, was im Text vorkommt #00:04:26-1#

I: Okay #00:04:27-6#

P3: dann den Satz, ob ich da mehr verstehe, und dann ahm es klingt auch ähnlich, also ja, klingt ähnlich (.) bootsgezel (lacht) so ist da etwas (nuschelt) ähm (.) wie heißt das auf Deutsch? ähm (.) So hm (lacht) #00:05:07-5#

I: Was denkst du gerade? #00:05:04-3#

P3: Was heißt, wie man’s auf Deutsch nennt, so wo, so ein Mädchen für alles, Boots- (.) aber der Bootspage, ob man das sagen kann? (.) #00:05:23-3#

#00:05:23-4#

I: Schreib’s einfach mal hin. #00:05:23-2#
Okay. (...) Spaanse 6, 1 2 3 4 5 6 Okay. Zijn handelsplaatsen bevonden zich langs de Franse en Spaanse kust en in de Middellandse Zee, okay, (nuschelt, blättert) okay, Spanien, weil es klingt ähnlich wie halt es klingt im Deutschen ähnlich (...) #00:06:12-9#

I: Hast du da in beiden Zeilen kontrolliert? #00:06:14-2#

P3: Ja. #00:06:14-4#

I: Mhm. #00:06:15-9#

P3: hem 1 2 3 4 5 6 7 8 (nuschelt) hem waren (nuschelt) hem, hm (nuschelt) Als extra kreeg hij kaperbrieven die voor hem waren gekocht. Hem, ah (.) hem (.) hm () #00:06:55-7#

I: Was denkst du gerade? #00:06:55-2#

P3: Ja ich verstehe eigentlich fast kein Wort drinnen im Zusammenhang. (...) gaven hem. #00:07:02-7#

I: Und was machst du jetzt, um was zu verstehen? #00:07:05-0#

P3: Ja, ich schau es mir nochmals an. #00:07:06-0#

I: Okay. #00:07:06-8#

P3: Oder ich schaue, ob es ähnlich klingt, wie ein Wort, was ich schon kenne. #00:07:10-6#

I: Mhm. #00:07:12-2#

P3: (...) de voor hem waren gekocht (...) hem (lacht) #00:07:23-1#

I: Wieso hast du jetzt gelacht? #00:07:24-5#

P3: Ja klingt wie hem auf Dialekt. #00:07:27-4#

I: Was heißt das? #00:07:28-2#

P3: Nach Hause, wir gehen hem. #00:07:31-7#

I: Ah, mhm. #00:07:32-1#

P3: Hm (...) (nuschelt) Kann ich es auslassen? #00:07:38-1#

I: Ja sicher. #00:07:40-5#

P3: Schon. #00:07:41-6#

I: Du kannst später nochmals zurücksommen. Mhm. #00:07:44-7#

P3: Ah okay. Gut. #00:07:47-5#

I: Und sonst, wenn es nicht ausgefüllt ist, ist es nicht ausgefüllt, nicht so wild. Mhm. #00:07:50-3#

P3: Ah okay. (...) Sag man da schifern oder schippern? #00:08:04-5#

I: Aber gehört glaube ich da drunter, einfach einen Pfeil drunter machen. #00:08:06-1#

P3: Ach so ja genau, danke. Ach ja genau ich habe ja keinen Tintentod. (lacht) () Ahm (...) #00:08:29-2#

I: Klingt ähnlich wie? Ach so die zwei mhm. #00:08:33-9#
P3: Ja, wie ja, wie (.) wie das Deutsche verovern als deze brieven gaven hem dat recht (nuschelt) ähm te verovern (nuschelt) (.) deze brevene gaven hem het recht Spaanse te verovern. #00:09:04-3#

I: Was denkst du gerade? #00:09:06-6#

P3: Ja das könnte sein #00:09:08-2#

I: Weil das "hm" heißt ja irgendetwas. #00:09:07-8#

P3: Ja hm hm. Es könnte sein #00:09:10-7#

I: Was denn? #00:09:13-2#

P3: te veroveren (.) deze breven gaven hem het recht of Spaanse en Engelse ja (blättert) (.) ähm könnte vom Zusammenhang stimmen (.) oorlog (blättert) okay es klingt wie Ohrloch (.) Simon groeide op in een land dat verscheurd werd door oorlog, en waar alleen de sterken en slimmen konden overleven (lacht) Simon (nuschelt) Simon in een land dat verscheurd werd door oorlog, en waar alleen de sterken en slimmen konden overleven. (nuschelt) oorlog (.) oorlog (hm (.) oorlog (lacht) (nuschelt) (.) (blättert) ich schreibe einfach mal Ohrloch. #00:10:45-0#

I: Mhm, wie bist du zu der Lösung gekommen? #00:10:45-7#

P3: Weil's ähnlich, also äh, weil's ähnlich klingt. #00:10:48-7#

I: Mhm. (.) Aber du hast den Satz neu gelesen? #00:10:52-8#

P3: Ja, also es passt nicht so richtig dazu, aber ja, es klingt am oorlog. Ohrloch und davor steht halt door und halt Tür, keine Ahnung, aber #00:11:07-9#

I: Und wie machst da Sinn draus, also Tür? #00:11:11-2#

P3: (lacht) ein Tür zum Ohrloch. #00:11:15-5#

I: Okay. #00:11:17-4#

P3: Weil halt da er er wuchs auf in einem Land, ja, was klein war, ja keine Ahnung (lacht) aber es klingt halt mal ähnlich. #00:11:28-5#

I: Okay. #00:11:30-6#

P3: 4. Finde Übersetzungen für die folgenden Wörter (A-D) und schreibe sie in das Kästchen. Das erste Beispiel (0) wurde für dich schon gelöst. (.) als (.) ähm (.) aha auf die andere Sprache mhm, ah okay. (nuschelt) (.) Zeile ist das (.) 1 für (.) (nuschelt) door door (oh zeile, das müsste ich schauen, (.) 4 (.) zu (.) zich (.) langs (nuschelt) (.) in de Middelandse Zee von (.) (nuschelt) so (.) en (.) okay und (.) (nuschelt) Spaanse of (nuschelt) of enat (.) So und das ist (nuschelt) hm 10 aber, ist es dann (.) (blättert) ähm, ach ja 9 #00:13:47-7#

I: Wie bist du da zu den Lösungen gekommen, wenn ich kurz nachfragen darf? #00:13:47-4#

P3: Ähm weil manche Sätze versteht man gut, so halbwegs auf Deutsch. #00:13:51-9#

I: Mhm. #00:13:52-1#

P3: Und dann denkt man halt wenn das Beispiel, was een halt, war ein und halt eigentlich so vom Zusammenhang #00:14:02-2#

I: Okay. #00:14:03-6#

P3: und #00:14:05-7#
I: Gut #00:14:06-9#

P3: Finde alle bestimmten Artikel im Text (A-E). Finde auch die grammatische Erklärung heraus. Ein Beispiel soll dir helfen, die Aufgabe zu lösen. (nuschelt) aha bestimmte Artikel (blättert) (.) (blättert) de #00:14:36-4#

I: Eventuell kannst du das auch wegreißen. #00:14:37-6#

P3: Ach so schon? #00:14:38-8#

I: Ja, mach nur. #00:14:41-2#

P3: Ach ja, gut, okay eine Position ist ein, Zeile 1 unbestimmter Artikel, ist das, reicht das (nuschelt) ach so oh #00:15:04-7#

I: Mhm, nur das du Bescheid weißt. #00:15:07-0#

P3: Hm () Simon war ein Mann, der, der () (lacht) doch etwas herausgefunden, also der #00:15:32-2#

I: Da in der Sprache? #00:15:33-1#

P3: Mhm. #00:15:33-3#

I: Da dann die Übersetzung. #00:15:34-9#

P3: Okay, ja gut. Also, war en man de konn, der () die (nuschelt) aha () der () (nuschelt) hm 3 () ähm der Mann er war ein Mann, der konnte, wer oder was- Hm #00:16:10-7#

I: Was denkst du gerade? #00:16:11-7#

P3: in welchem Fall das steht #00:16:13-7#

I: Okay. #00:16:14-9#

P3: Ähm #00:16:15-4#

I: Und wie machst du das? #00:16:16-5#

P3: der ähm auf Deutsch schauen, wie hält der Mann, des äh welcher () hm en man de konn vechten, der konnte vech, ähm () ka, ich schreibe mal () männliches () männlicher Artikel () Artikel ahm, mit () hm welcher () welcher konnte, welcher konnte, hält wer, wer konnte fechten, der () hm () welcher konnte (nuschelt) dann ähm hä? Ein Mann welcher konnte fechten, also ahm (nuschelt) Artikel, gut als () (nuschelt) merkte sich () en (nuschelt) hä, sijn handelsplatsen bevonden sich (nuschelt) hem () hm de () die () in 6, 6. Zeile () weiblicher Artikel #00:18:20-6#

I: Was hast du gemacht, um zu dieser Lösung zu kommen? #00:18:21-8#

P3: Ähm also ich finde eingtlich je öfter, dass man es durchliest, desto mehr versteht man. #00:18:27-7#

I: Mhm. #00:18:28-7#

P3: Also und halt befanden sich da ahm, da, wo steht's da von der Küste bis in die, bis ins Mittelmeer, bis in die Mittel- in die Mittel- ja, in die #00:18:42-9#

I: Mhm #00:18:43-7#

P3: Mittelmeer oder so () hm () de die voor hem waren gekocht, die () hm () Mehrzahl die () hm () bestimmter Artikel hier () hm () #00:19:21-5#

I: Was denkst du gerade? #00:19:22-4#
P3: Ja ihm, das ist ja wirklich im dritten Fall, schreib einfach, () ihm im ( ) 8. Zeile, gut () hm () männlicher Artikel () (...) bestimmter, wie besitzanzeigenendes () #00:20:16-0#

I: Was denkst du gerade? #00:20:17-6#

P3: Ihm also warte mal, vor wem, vor ihm, ja doch müsste schon passen, so () hm het recht, im Spanische England schepen de hm in ein Land, das () das, ja recht halt () das hm 10. Zeile welches ähm () Artikel () so ist das letzte noch (nuschelt) er war (nuschelt) #00:21:11-0#

I: Du hast ungefähr 10 Minuten noch, nur, dass du ein Gefühl hast #00:21:16-8#

P3: Hm () der (lacht) war ein Pirat Simon war ein Mann, der kon fechten mhm began, sein () (nuschelt) sie seine () ist in Zeile, 4. () ähm () besitzanzeigenendes (...) Okay. (blättet) Diese Sätze, die nicht im Text vorkommen, sind in Stücke zerfallen. Setze die Teile in die richtige Reihenfolge und nummeriere die Teile (1-6) in den grauen Kästchen. Ein Beispiel (0) soll dir helfen, die Aufgabe zu lösen. Okay Simon de Danser Simonzoon Dodrecht was en pirat, aha okay. #00:22:45-3#

I: Alles klar oder? #00:22:47-6#

P3: ja #00:22:49-4#

I: Okay. #00:22:51-0#

P3: hm. 8.) ähm () Simon war () Simon () gekocht () hm (...) #00:23:15-2#

I: Was denkst du gerade? #00:23:10-6#

P3: Simon, ja was könnte sein das erste das ist eigentlich Subjekt, Simon () hm () landgenoten () also Simon () gekocht () Simon hm 1 Simon, dann genoten Simon gekocht, Simon () ähm #00:23:52-9#

I: Was probierst du gerade? #00:23:58-9#

P3: Ähm, ja, wie es am logisten klingt in welcher Reihenfolge und #00:24:06-6#

I: Klingt? #00:24:07-8#

P3: Ja. #00:24:06-9#

I: Du probierst jetzt einfach mal zu puzzeln. #00:24:08-7#

P3: Ja. #00:24:10-0#

I: Okay, mhm. #00:24:12-3#

P3: Simon wird, hm, gut ob das aber ein Verb ist () wird ja () hm () hat () hm #00:24:28-0#

I: Was hast du jetzt gesagt zu den Ding? #00:24:27-1#

P3: Ja ist schwer zum ein, ein deutsches Wort da zu, erkennen eben auch im Text () 2, schauen wir mal, weil da ist eigentlich ein Verb. Simon wird gepriesen, ähm () Wort () für (nuschelt) Simon wird gepriesen () für von () für () hm () gut schauen wir mal ob das passt, Simon wird gepriesen, heij landenoten war gekocht (nuschelt) gekocht () sie () hm () #00:25:39-9#

I: Wieso hast du dich jetzt für diese Reihenfogle entscheiden? #00:25:40-2#

P3: Weil also ich bin mir jetzt nicht ganz sicher. #00:25:43-4#

I: Mhm. #00:25:44-4#
P3: Aber es klingt am logischten eigentlich und #00:25:50-0#

I: Wieso logisch? #00:25:51-5#

P3: und dann irgendwas mit wird gekocht, dann habe ich mir gedacht, ja wenn es jetzt, wenn ich so auf’s Deutsche gehe, dass es ähm wird und kocht sind eigentlich Verben #00:25:58-1#

I: Mhm. #00:25:58-1#

P3: Und dann müsste das an 2. Stelle und das an letzter Stelle stehen. #00:26:01-2#

I: Wieso? #00:26:03-0#

P3: Ja wird ist halt ein Hilfsverb, wenn’s jetzt wirklich ein Verb wäre und kocht ist ja auch ein Verb und das andere klingt schon, ja. #00:26:14-5#

I: Okay. #00:26:15-2#

P3: Und es klingt eigentlich schon so als wäre es wie im Deutschen von der Satzstellung #00:28:37-8#

I: Okay #00:28:38-7#

P3: 7. Versuche, die folgenden zwei Phrasen zu übersetzen. Ein Beispiel (0) soll dir helfen, die Aufgabe zu lösen. Simon was een pirat. Hm. Als extra kreeg hij kaperbrieven, als extra, ha kaper hm (.) aber dann (nuschelt) voor hem waren gekocht ähm als extra ja, gut, als (.) Extra (.) Extra hat (.) kreeg ka (.) als extra (.) hm (.) Extra kreeg kaperbrieven (.) als extra hm (.) #00:29:31-7#

I: Was denkst du gerade? #00:29:33-2#

P3: Ja, Krieg, ja es klingt wie Krieg, aber es es passt nicht so ganz in den Satz hinein, extra hat hm (.) (nuschelt) als extra kreeg hat (nuschelt) ähm (.) (nuschelt) geht halt mehr um Essen, oder (.) kaperbrieven, extra (.) Kraut könnte es auch heißen (.) Kraut (.) (nuschelt) kaperbrieven hm (.) #00:30:29-3#

I: Du hast nicht mehr so viel Zeit #00:30:35-4#

P3: (lacht) ahm deze brieven gaven hem het recht. Diese (.) hm (.) #00:30:58-5#

I: Was denkst du gerade? #00:30:59-0#

P3: Ja ob’s jetzt um Essen geht oder doch irgendwas anderes? #00:31:03-0#
I: Okay. #00:31:03-9#

P3: Dieses, ja probieren wir es mal dieses Kraut ahm () Dieses Kraut war ihm () recht (blättert) gut () #00:31:33-6#

I: Da ist jetzt nichts mehr? #00:31:29-3#

P3: Nein, ja. (lacht) Hast du bei der Lösung der Aufgaben an bestimmte andere Sprachen gedacht? Ja halt Deutsch, ist das schon gültig, oder? #00:31:38-0#

I: Mhm, mhm, schreib. () Deutsch oder Dütsch (Dialekt)? #00:31:43-4#

P3: Dütsch #00:31:45-3#

I: Und dann ist noch der blaue Zettel auszufüllen und dann habe ich noch eine Frage an dich. #00:32:25-9#


I: Okay, ja super. Und dann habe ich noch eine Frage, einmal zu, einmal zum Text, also zu einer Lücke (blättert) du hast dich da für Krieg entscheiden bei der 7. Übung, wie bist du auf Krieg dann gekommen? #00:34:03-3#

P3: (lacht) Ja, weil also zuerst habe ich mir gedacht Krieg #00:34:07-7#

I: Mhm. #00:34:09-1#

P3: Weil es klingt ähnlicher, aber es passt nicht so ganz, weil ich habe mir gedacht, es \geht halt mehr um, um der ah Küche, die sie da haben. #00:34:18-8#

I: Okay. #00:34:16-1#

P3: Wie halt, auf einem Schiff. #00:34:21-2#

I: Aha. #00:34:22-1#

P3: Dann habe ich mir gedacht, ja Krieg #00:34:23-4#

I: Also das war dein Bild jetzt so zum. #00:34:23-7#

P3: Das passt jetzt nicht so ganz, weil es ist ja kochen und so habe ich mir gedacht, weil's halt ähnlich klingen, und weils ein bisschen besser passt, dann habe ich dan genommen. #00:34:29-8#
I: Mhm mhm, äh, welche Übung war für dich am schwierigsten insgesamt? 

P3: Ähm, ja (.) das da

I: Okay. 

P3: Das ist auch schwer gewesen.

I: Warum?

P3: Weil ähm man hat nicht so richtig einen Anhaltspunkt.

I: Mhm

P3: Und sonst hat man meistens eh so ein paar gewisse Wörter, die man verstanden hat.

I: Mhm


I: Mhm.

P3: Und dann ist es halt schon schwerer, finde ich.

I: Okay, und welche Übung war dafür leicht?

P3: Ja, am Anfang ist es eh leicht gewesen (blättert) ja also das da (.) I: Mhm, 1 und 2

I: Okay, wieso das, wieso war das für dich einfach?

P3: Weil ja, das ist eigentlich am einfachsten gewesen.

I: Okay, wieso das, wieso war das für dich einfach?


I: Okay. 

P3: Und nicht einfach also weil da geht's halt mehr, was versteht man im ganzen Text als wär's vielleicht in irgendeinem Satz oder so.

I: Ja, okay, hast du eine Vermutung, um welche Sprache es sich handelt?

P3: Ja, Holländisch.


P3: Ja ja.