Investigating an integrated didactics of language learning in school settings

An empirical study on the effect of the teaching of interlingual comparisons on lower secondary school learners' cross-linguistic awareness and psychotypology

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1. Introduction

In French-speaking Switzerland, students across compulsory school subsequently learn two foreign languages (German and English), along with the school language French. Following the recommendations of the Council of Europe, attempts have been made to foster multilingualism, which in turn impacts how languages are taught in schools. In opposition to the principles of Contrastive Analysis (Lado, 1957), pluralistic approaches – in which several languages can interact in the classroom – have gained interest for the past decades and are to prevail over isolated language learning. The *Plan d'étude romand* (PER), i.e. the school curriculum for the French-speaking Cantons, promotes a pluralistic view of language learning and teaching. The implementation of an integrated approach to language learning is already visible in the official coursebooks for English, in which students are invited to reflect upon similarities and differences between French, German and English. For the CIIP (2012), an emphasis on the connections between these languages may help learners develop metalinguistic abilities, such as reflecting upon how languages work and their relationship between one another. So far, there have been strong claims, but little empirical evidence which substantiates a positive impact of cross-linguistic reflection on cognitive abilities such as metal- and cross-linguistic awareness. The question whether such advantages can be generalised and applies to any language learners – especially young learners with relatively little out-of-school exposure to the foreign languages they learn – has not yet been borne out by solid evidence. The fact that the awareness of interlingual similarities can be trained and lead to positive results amongst learners seems to find some support (cf. e.g. Allgäuer-Hackl & Jessner, 2013). On the other hand, some warn of potential risks that pluralistic approaches may entail (cf. e.g. Berthele, Lambelet & Schedel, 2017). Pluralistic approaches may be a valid aim of multilingual education, but require the activation of complex cognitive processes. As a consequence, the gap between weaker and stronger learners may be further widened. Can lower secondary school students profit from such interlingual reflection? This study primarily aims to add further empirical evidence to the research agenda of meta- and cross-linguistic training and its potential boosting effect on learners' cross-linguistic awareness.

How do secondary school students perceive cross-linguistic similarities and differences? Does their typological representation evolve over time? Can cross-language activities trigger a shift in the learners' perspective of typological distance? In addition, the present research project will also look into the impact of short-term interlingual training on students' psychotypology, i.e. the typological distance between languages perceived by learners (Kellermann, 1983).

This paper is structured as follows: Chapter 2 presents the theoretical background, Chapter 3 describes the research methodology and Chapter 4 presents the results which are discussed in Chapter 5. Chapter 6 concludes with a summary and directions for future research.

2. Theoretical background

This chapter provides an overview of the definitions of the concept of multilingual education, its aims and purposes, a brief historical background of its development, and a review of its state of implementation in schools with a focus on French-speaking Switzerland (2.1). It is followed by a section on relevant research in the field (2.2) and a conclusion with a description of the present study (2.3).

2.1. Multilingual education

Multilingualism or *plurilingualism pedagogy*, as it can be referred to as (Marx, 2016a: 10), is characterised by a great terminological diversity across the literature. There does not seem to be a consensual definition or 'label' for the concept (Wokusch, 2008: 30). Let us first consider the terms 'multilingual' and 'plurilingual'. Although these may be used interchangeably, they may not be quite entirely synonymous. At this point, it is also worth pointing out that *plurilingualism* is usually not to be found in English dictionaries and appears ten times less frequently than its counterpart on the Internet (Tremblay, 2010). The Council of Europe (2001: 4) pins down multilingualism as 'the knowledge of a number of languages or the co-existence of different languages in a given society'. Since the early 2000s, the notion of plurilingualism has been favoured over multilingualism, as the former emphasises the concept of *plurilingual competence* (cf. Castellotti & Moore, 2002). In this respect, plurilingualism differs from multilingualism in that it highlights the interrelatedness of language competences built up by the learner and the relevance of accepting a variety of levels of proficiency of the languages learned (Council of Europe, 2001: 4). For the sake of clarity, the author may use multilingual and plurilingual synonymously as umbrella terms including the notion of plurilingual competences as explained above.

Multilingual pedagogy can be seen as a generic, across-the-board concept for a wide range of pedagogical approaches to multiple language learning and teaching. Within the European context, Candelier (2008: 68) speaks of *pluralistic approaches* (*approches plurielles*) and defines them as any approach to language learning and teaching that implements activities in which several linguistic and cultural varieties are included. These are hence to be distinguished from 'singular' approaches, in which attention is drawn to the isolated study of one single language or particular culture. Despite a considerable disparity between the various concepts (e.g.: *integrierte Sprachendidaktik, integrative Fremdsprachendidaktik*, Wokusch & Lys, 2007; or *integrale Sprachendidaktik,* Cathomas, 2003; *pédagogie intégrée*, Roulet, 1980; Tschoumy, 1983; *pédagogie inter-langues*, Herrenberger, 1999) related to pluralistic approaches across the different language communities (cf. Candelier & Schröder-Sura, 2016), there are some convergences between the underlying principles of the numerous concepts from both French

(*didactique du plurilinguisme*) and German (*Mehrsprachigkeitsdidaktik*) literature in the field (ibid., 2016: 36). Such conceptual commonalities, which fit in with the aforementioned definition of pluralistic approaches, can be found in the *Framework of Reference for Pluralistic Approaches to Languages and Cultures* (FREPA) to a large extent, elaborated by the European Centre for Modern Languages (ECML). On the basis of the website (http://carap.ecml.at/) and its main publication (Candelier et al., 2012), pluralistic approaches can be grouped into the following four main categories:

- **Awakening to languages**, in which some of the learning activities deal with languages generally not intentionally taught by the school (e.g. immigration languages and cultures);
- **Intercomprehension between related languages**, where the learner works on two or more languages of the same typological family (Romance, Germanic, Slavic languages, etc.);
- **Intercultural approach,** based on pedagogical principles which suggest relying on phenomena from one or more cultural area(s) as a basis for understanding others from one or more other area(s) (e.g. developing strategies to reflect about contact situations with people from different cultural background);
- **Integrated didactic approach to different languages studied**, which aims at helping students establish links between a limited number of languages taught at school.

Similarly, as in the Common European Framework of Reference for Languages (CEFR; Council of Europe, 2001), the FREPA aims at developing plurilingual and pluricultural competences (see figure 1), reflected by the activation of a variety of resources or abilities such as a set of items of *knowledge*, *attitudes* and *skills* (see figure 2) related to linguistic and cultural diversity (Candelier et al., 2012: 8). It is meant to devise and/or further multilingual/-cultural curricula (ibid.:9). To this end, within the German context, Neuner, Hufeisen, Kursiša, Marx, Koithan & Erlenwein (2009) also introduced guidelines for successful multilingual education to take place:

- Reflection on language learning, with an emphasis on interlingual/cross-linguistic comparisons and multilingual learning strategies;
- Topical and textual embeddedness of language structures, which implies regarding individual language structures within their larger communicative context;
- Early development of receptive skills in new foreign languages, by means of support of knowledge of other (related) languages;
- Stimulation of the learning process to boost learning efficiency.

According to Cavalli (2008: 16), multilingual education should rationalise and add to the coherence of multiple language learning, together with the aim of economising cognitive (and also teaching) efforts. In addition, competences should be reinforced through transfer strategies. As a matter of fact, some research into practices of multilingual pedagogy points towards manifold advantages, such as cognitive and learning improvement, a possible economy and a motivational boost in foreign language learning (cf. Marx 2016b).

C1 Competence in managing linguistic and cultural communication in a context of otherness		C2 Competence in the construction and broadening of a plural linguistic and cultural repertoire	
C1.1 Competence in resolving conflicts, overcoming obstacles, clarifying misunderstandings	C1.2 Competence in negotiation	C2.1 Competence in profiting from one's own inter-cultural / inter-language experiences	C2.2 Competence in applying more systematic and controlled learning approaches in a context of otherness
C1.3 Competence in mediation	C1.4 Competence of adaptability		

C3
Competence of decentring

C4
Competence in making sense of
unfamiliar linguistic and/or cultural features

C5
Competence of distancing

C6
Competence in critical analysis
of the (communicative and/or learning) situation
and **activities** one is involved in

C7
Competence in recognising
the „other" and otherness

Figure 1. Overview of the global competences in the FREPA (Candelier et al., 2012: 20)

KNOWLEDGE

K 4	Knows that languages are continuously evolving
K 4.1	Knows that languages are linked between themselves by so-called "kinship" relationships / knows that languages belong to families
K 4.1.1	Knows about some families of languages and of some languages which make up these families

ATTITUDES

A 2.2	Sensitivity to linguistic or cultural differences
A 2.2.1	Being aware of different aspects of language or culture which may vary from language to language or from culture to culture

SKILLS

S 3.4	Can perceive lexical proximity
S 3.4.1	Can perceive direct lexical proximity

Figure 2. Examples of descriptors for the different resources (knowledge, attitudes and skills) that can be developed in the FREPA. The training of these resources should promote and develop global competences (Council of Europe, 2020).

Multilingual education is not a brand-new approach to language learning and teaching *per se*. Similar ideological traces (i.e. the idea of relying on other related languages to learn a new one) date back to the 20th, 19th or even to the 17th century (cf. Brohy, 2008: 10f.). From the above pluralistic approaches, two of them, at least with regards to their principles, have been a matter of interest for decades now, namely the *intercultural approach* (cf. Porcher, 1978; Conseil de l'Europe, 1983; Cortier, 2007; Varro, 2007) and the *integrated didactic approach* (cf. Roulet, 1980 ; Bourguignon & Dabène, 1982 ; Bourguignon & Candelier, 1988; Castellotti, 2001 ; Hufeisen & Neuner 2003). *Awakening to languages* (cf. De Pietro, 1995; Perregaux, 1995 ; Candelier, 2003b, 2006) and *intercomprehension* (cf. Blanche-Benveniste & Valli, 1997; Meissner, Meissner, Klein & Stegmann, 2004 ; Doyé, 2005) – although it was discussed in the UK earlier in the 80s (cf. Hawkins, 1984 ; Donmall, 1985) – form a relatively more recent trend, apparently also amongst language teachers (Candelier, 2008: 68). Following on the Council of Europe's endeavour to train plurilingual citizens with the elaboration of the CEFR and the notion of plurilingual and pluricultural competence (ibid.: 133), multilingual school settings are nowadays more and more common across Europe. As a result, there is an opening and need for coordinated language curricula (Marx, 2016: 10). Concretely, this suggests a

'decompartmentalization' of the school subjects. However, it still clashes with more traditional foreign language (FL) teaching, which has left behind a more contrastive approach to language learning (cf. Lado, 1957) and continues 'blaming' L1 sources for errors (Marx, 2016a: 10). Moreover, the time-on-task hypothesis (e.g. Carroll, 1963) and the quite firmly established belief that FL learning matches L1 acquisition remain widespread. Its implementation in broader educational settings is still limited (Marx, 2016a: 11). This is manifest, for example, in the Swiss school curricula, in which plurilingual dimensions only seem to play a secondary role (De Pietro, Gerber, Leonforte & Lichtenauer, 2015: 59). Isolated FL learning and teaching may prevail, despite many efforts to implement and highlight a potential learning profit of a multilingual approach.

2.1.1. Multilingual education in French-speaking Switzerland

In the meantime, pluralistic approaches to language learning have 'ploughed their way' through the Swiss curricula, i.e. the *Piano di studio della scuola dell'obbligo ticinese* (DECS-DS, 2015) in the Italian-speaking areas, the *Lehrplan 21* (D-EDK, 2015) for the 21 German-speaking Cantons, and the PER (*Plan d'étude romand*; CIIP, 2012) for the French-speaking regions. With regards to the implementation of pluralistic approaches in Swiss French-speaking schools, the PER advocates a decompartmentalization of the school subjects and takes a pluralistic view of language learning and teaching. With one 'language domain' (*domaine Langues*) comprising the school language French and the foreign languages German and English, the curriculum tends towards objectives relatively similar to those of the FREPA, for instance, the ability to reflect upon languages, namely through language awakening approaches. More generally, the PER speaks of *interlingual approaches* and defines them as follows:

> Approaches related to any learning methodology which enables to establish links between the different languages taught (i.e. French, German, English and ancient languages) or languages spoken by the learners or in their environment (e.g. students' home languages, regional dialects, etc.) and, in so doing, to put into practice an integrated didactic approach to language learning. Language comparing, intercomprehension and discovery activities should facilitate students' learning abilities, provide them with linguistic knowledge, and promote positive attitudes towards these languages' (translated from CIIP, 2010: 62).

Classroom procedures and pedagogical indications for interlingual approaches across compulsory school appear to be outlined at a general level (De Pietro et al., 2015). Reflection on and openness to languages should start from the students' first languages and French from the first school year[1] on, and should be developed further as the L2s are introduced (German in year 5, English in year 7), at which point the main aim is to 'enrich students' comprehension and practice of languages by connecting different languages to one another' (cf. objective L37 in CIIP, 2012). With regards to school practices based on an interlingual approach, it does not seem clear as to how a coordination between foreign languages takes form in the classroom, especially at lower secondary school, where subjects are still taught mostly in separate units. As Manno & Klee (2009) point out, the implementation of an integrated didactics of languages may largely depend on the coursebooks used in schools and their opportunities for interlingual activities. Their analysis of the coursebooks used in eastern German-speaking Switzerland for L2-English and L3-French suggests that very few activities allow for interlingual transfers, both in terms of common lexis and learning strategies presented in both coursebooks. Promising and valuable aspects for interlingual interventions seem to be reserved for later use at the end of the 8th year at primary school. Barras, Peyer & Lüthi (2019) also analysed the coursebooks widely used in German-speaking Switzerland and identified six prototypical activities (in order of frequency): 1) comparisons between languages, 2) intercultural comparisons, 3) reflection on language(s) and culture(s), 4) use of and reflection on strategies, 5) language recognition, 6) intercomprehension.

In the French-speaking areas, the current materials for English *MORE!* for the 7th and 8th school years, and *English in Mind*, for the 9th, 10th and 11th school years, offer activities, in which L1 French, L2 German and L3 English can be compared to one another and relationships between these languages can be studied. Such interlingual activities become more common from the 9th school year (i.e. lower secondary school) and these *language links*, as they are called, are manifest in each unit of the *Language Builder* (Parminter, 2015), one of the coursebooks in which language-based content is focussed on. Looking back at the FREPA's types of pluralistic approaches, there reasonably seems to be a clear connection between the *language links* from *English in Mind* and an integrated didactic approach as conceptualised in the FREPA. As can be seen in Figures 3, 4 and 5, the *language links* draw on various aspects of language studied in an English unit (e.g. asking for permission, saying the months, compound nouns for places in town) and assign students to reproduce similar language structures in French and German. Depending on the teaching unit, the language focus might

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[1] In French-speaking Cantons, school years across compulsory school start from 1 to 11, including the first two pre-school years (i.e. kindergarten). In German-speaking Cantons, these first two years are not included, which gives an alternate numbering system starting from 1 to 9. The author uses the French-speaking numbering system across this paper when referring to Swiss school years.

be on different linguistic areas, such as lexis, morphology, syntax and pronunciation. Comparisons between and reflection on the three languages seem to remain implicit, i.e. students are not provided any explicit strategies, at least not unless the teacher does so.

💬 Language links ✳ Asking for permission

Put the words in order to ask for permission.

In English	go · Can · party · Saturday · we · the · on · to
	....?
En français	nous · - · samedi · à · Pouvons · la · aller · fête
	....?
Auf Deutsch	gehen · am · Können · auf · wir · Party · die · Samstag
	....?

Figure 3. Example of language comparison activity (focusing here on syntax or word order) from the Language builder 9ᵉ (Parminter, 2015: 28).

💬 Language links ✳ Saying months

1 Say the months in the three languages.

In English	En français	Auf Deutsch
① September	septembre	September
② April	avril	April
③ October	octobre	Oktober
④ December	décembre	Dezember

Figure 4. Example of language comparison activity (focusing here on word stress) from the Language builder 9ᵉ (Parminter, 2015: 35).

Language links ✷ Places in town

These are compound nouns:

| shoe | shop | | magasin | de chaussures | | Schuh | Geschäft |

shoe shop *magasin de chaussures* *Schuhgeschäft*

Match the words to make more compound nouns.
Write them in the table.

| bus | Sekundar | clothes | school | Bus | magasin |

| secondaire | Bahnhof | Schule | station | Kleider | routière |

| secondary | de vêtements | gare | Geschäft | shop | école |

In English	En français	Auf Deutsch

Figure 5. Example of language comparison activity (focusing here on morphology or word formation) from the Language builder 9ᵉ (Parminter, 2015: 55).

Further insights into interlingual practices in the classroom provided by Schedel und Bonvin (2017), who interviewed English teachers about language comparisons, point out potential limits of the implementation of an integrated didactic approach at Swiss French-speaking lower secondary schools. While these teachers showed rather positive attitudes towards cross-linguistic comparisons in general and seemed to practise them relatively often, some teachers, however, also claimed that, due to insufficient skills in German or the students' first languages, they were not able to fall back upon them for language comparisons. On the other hand, some teachers saw their learners' German skills as too poor to allow transfer from German to English to occur. Moreover, a few teachers assumed that they intentionally did not refer back to other languages during their English lessons in order to exclusively focus on English. In addition, some teachers reported that weaker and younger learners may be cognitively overtaxed by interlingual comparisons.

2.2. Investigating multilingual education

As already touched upon in the previous sections, pluralistic approaches generate high expectations such as an economy of the learning process and quick progress for learners (cf. e.g. Egli Cuenat, Grossenbacher, Gubler & Lovey, 2018; Egli Cuenat, Manno & Le Pape Racine, 2010; Manno, 2005; Manno & Egli Cuenat, 2018). However, it should be pointed out that there is still little empirical evidence of the expected benefits that pluralistic approaches may provide in instruction-based foreign language learning (cf. e.g. Berthele, et al., 2017; Elmiger, 2008; Schedel & Bonvin, 2017). This section will review relevant research on multilingualism in order to address current issues on the implementation of pluralistic approaches in classroom contexts with a focus on integrated didactic approaches to language learning.

2.2.1. Third language acquisition

Owing to a greater number of language systems acquired, multilinguals presumably benefit from a wider range of linguistic knowledge, which turns out to be helpful for transfer (from L1-L2 into L3) when learning additional, typologically close languages (cf. e.g. Cenoz, Hufeisen & Jessner, 2001; 2003; Ringbom, 2007). In fact, transfer phenomena have been found in a variety of linguistic areas, such as grammar, phonology, spelling, discourse, pragmatics and sociolinguistic competence (cf. e.g. Jarvis & Pavlenko, 2008). Some researchers, however, point out lexis as the domain with supposedly the greatest potential for positive transfer to occur, especially between closely related languages (cf. e.g. Bravo, Hiebert & Pearson, 2007; Dressler, Carlo, Snow, August, & White, 2011; Lubliner & Hiebert, 2011).

On the basis of studies on third language acquisition (TLA) in school settings, some findings suggest that learners of a second or third foreign language show substantial learning advantages over learners of only one foreign language (cf. e.g. Dentler, Hufeisen & Lindemann, 2000; Hufeisen, 2003a). Such advantages may translate into an economy of the learning process. In the German-speaking Swiss context, first insights gained from pioneering studies (Häni Hoti & Werlen, 2009; Heinzmann, Müller, Oliveira, Häni Hoti & Wicki, 2009) revealed that young learners of a second foreign language (here French after English) outperformed those with only French as a foreign language in French reading and listening comprehension at the end of their 7th school year. As a result, it was argued that learners with an additional foreign language were able to draw on their previous experience in learning German and English, and transfer it to the learning of French. The follow-up study (ibid., 2009) came to encouraging results for learners with previous English in French spoken interaction at the end of year 8 as well. However, the 'more experienced' students' reading and listening skills did not outreach those of the students with only French. The authors put down the

absence of difference in listening to a 'lack of difficulty in the French test's tasks. The similar scores in French reading comprehension in both groups was accounted for by the fact that previous strategic and language knowledge 'wears off' as time draws on, especially if little use of that knowledge is made in instructed French learning.

On account of these two studies, it was assumed that the attainment of equal proficiency levels in both foreign languages at the end of obligatory school – as it is expected by the Swiss educational authorities (EDK, 2011) – could only be possible if learning a new foreign language was consciously and specifically built upon previous language learning experiences. Some empirical studies seem to bear out the idea that sensitising learners to similarities between languages has a positive impact on students' performances in the acquisition of further foreign languages (cf. e.g. Ender, 2007; Marx, 2008). Thus the learning and teaching of all (foreign) languages should relate to and support one another (cf. Neuner, 2003; Manno, 2009). Creating connections between languages, through the awareness raising of interlingual words or cognates and common learning strategies in interlingual activities (cf. Manno & Klee, 2009), may contribute to an economy and a better coordination of multiple language learning. In this vein, interlingual activities are believed to generate reflections about languages on a meta-level and help learners develop a higher sense of language awareness.

2.2.2. The role of language awareness

Rooted in a vast variety of different theoretical and linguistic backgrounds, the concept of language awareness is subject to an important and confusing terminological variation (cf. Pinto, Titone & Trusso, 1999: 35). It originated in the English scientific community in the 1970s with the first attempts to promote language awareness amongst school learners (Hawkins, 1984, 1999). Competing terms such as *language awareness*, *linguistic awareness*, *metalinguistic awareness*, and *knowledge about language* are common across the literature. According to James (1999), language awareness (and its related versions) is basically made up of a mix of general knowledge about language, a mastery of metalanguage, and intuitions converting to insight and then beyond to metacognition. The Association for Language Awareness (ALA, 2012) refers to it as follows:

> explicit knowledge about language, and conscious perception and sensitivity in language learning, language teaching and language use. It covers a wide spectrum of fields. For example, language awareness issues include exploring the benefits that can be derived from developing a good knowledge about language, a conscious understanding of how languages work, of how people learn them and use them.

More importantly in the context of multilingual learners, Jessner (2006: 42) refers specifically to metalinguistic awareness as a key factor in multilingual proficiency and defines it as 'the ability to focus attention on language as an object in itself or to think abstractly about language and, consequently, to play with or manipulate language'. On the basis of the *Dynamic Model of Multilingualism* (DMM; Herdina & Jessner, 2002), it is assumed that language acquisition processes are backed up and improved by strong synergetic effects due to the extensive multilingual knowledge and the enhanced degree of metalinguistic awareness which experienced multilingual learners garner as language learners and users (Jessner 2008). Metalinguistic awareness plays an important part in the DMM in that it may considerably affect multilingual proficiency and thus distinguishes multilingual from mono- or bilingual individuals (Jessner, 2006: 42*.*). In addition, *cross-linguistic awareness*, often viewed as a 'sub-type' or component of metalinguistic awareness, also belongs to the multiple language learners' assets. It is described as 'a mental ability which develops through focusing attention on and reflecting upon language(s) in use and through establishing similarities and differences among the languages in one's multilingual mind' (Angelovska & Hahn, 2014: 187) and, in so doing, allows learners to draw on and utilise all available prior language resources (cf. Angelovska, 2017). In Jessner (2006: 116), it is referred to as 'the third language learners' awareness of the links between their language systems expressed tacitly and explicitly during language production and use'. Since *cross-linguistic influence*, i.e. 'the influence resulting from similarities and differences between the target language and any other language that has been previously (and perhaps imperfectly) acquired' (Odlin, 1989: 27), can interfere with (one of) the target language(s) or, on the contrary, lead to correct, target-like productions, the interactions between the learner's languages may depend on cross-linguistic awareness (cf. Angelovska, 2018: 137). Consequently, higher levels of cross-linguistic awareness should result in more beneficial cross-linguistic influence. There is, however, some evidence that multilingual learners do not automatically fall back upon their multiple language knowledge and hence interlingual connections need be trained (cf. e.g. Müller-Lancé 2003; Fischer 2009). Thus, some advocates of multilingualism argue for an instruction-based development of cross-linguistic and metalinguistic awareness amongst learners and view it as a valuable aim of multilingual education (cf. Allgäuer-Hackl & Jessner, 2013; Hofer, 2014).

Many researchers set out to explore the relationship between multilingualism and metalinguistic awareness. Some of them (cf. e.g. Cenoz & Valencia, 1994; Fehling, 2005; Jessner, 2006; see also MacKenzie, 2012: 92–3) suggest that learners of several languages are more likely to show enhanced levels of metalinguistic and cross-linguistic awareness than monolingual or bilingual speakers. Many advantages have been attributed to multilingual learners, such as a better understanding of how language(s) work(s), a meaningful use of contrastive comparisons between languages and an extensive application of strategies based

on their previous language knowledge and learning experiences to support and make up for lexical deficiencies or fill in knowledge gaps (cf. e.g. Cenoz, 2001; Clyne, 1997; Jessner, 1999; Hammarberg, 2001; Ó Laoire & Singleton 2009; Williams & Hammarberg, 1998). Thus higher levels of metalinguistic awareness is deemed to be inextricably associated with increased knowledge of the learner's language(s) and an acceleration of the language learning process (cf. Jessner, 1999; 2006).

So far, there have been only very few studies that investigated potential effects of an intervention such as metalinguistic training on learners' language awareness and skills. Still, it is assumed that more efficient language learning in educational contexts is enhanced by means of an intensified emphasis on previous language knowledge (cf. e.g. Hufeisen, 2005, 2011), on metalinguistic and cross-linguistic awareness (cf. e.g. James, 1996, 1999; Jessner, 2006), and on multilingual language learning strategies (cf. e.g. Kemp, 2001, 2007; Mißler, 1999). The few results of classroom-based studies on the effects of multiple language learning and 'seemingly' pluralistic approaches – especially those of an *integrated* nature as explained further above, i.e. approaches with a focus on commonalities and differences across languages – appear to be in agreement with the generally purported advantageous metalinguistic abilities. More recently, a study carried out in South Tyrol (Hofer, 2015; Hofer & Jessner, 2019) with young primary school students may be referred to as a claim to promote multilingualism in schools. Students (*n*=84) from two different schools with similar instruction settings were split into two groups, i.e. one experimental and one control group. The students in the experimental group were taught L1 Italian, L2 German and L3 English, and received bilingual instruction for non-language subjects (i.e. 50% of the core curriculum in Italian and 50% in German). The other students (control group) were only taught in L1 Italian, though also benefited from L2 German and L3 English classes. Both schools provided language-sensitive instruction, particularly one school which offered lessons dedicated to reflection on language (*riflessione lingua*). In so doing, students would explore and analyse the structures and functions of their L1 and L2, looking into cross-linguistic similarities and differences at various linguistic levels, such as grammar, morphology and lexis. After several months of teaching, all students were administered a series of tests, i.e. a German and an English proficiency test, and a *metalinguistic abilities test* (MAT-2) based on Pinto et al. (1999) and Pinto, Candilera & Iliceto (2003). The MAT-2 test is directed at students aged 9-14 and evaluates linguistic and metalinguistic knowledge and skills in the learners' L1 (i.e. Italian). The test version used in this study was made up of 39 items asking questions on acceptability, ambiguity, grammatical function, and phonemic segmentation. 28 items elicit linguistic knowledge (i.e. the 'know-what' about specific language aspects) and 11 items target metalinguistic knowledge, where learners are asked to justify their answers, which requires non-negligible levels of linguistic and cognitive skills (Hufeisen, 2003b: 104).

(1) **Il gattino afferrava il cordino**.
LQ: Si può dire? _____
Il cordino afferrava il gattino.
LQ: Si può dire? _____
MLQ: Perché hai dato queste
risposte? _____

(1) The kitten pulled on the cord.
LQ: Can we say that?_____
The cord pulled on the kitten.
LQ: Can we say that? _____
MLQ: Why do you think so?_____

Figure 6. Example of acceptability item with linguistic (LQ) and metalinguistic questions (MLQ) from the MAT-2-test (taken from and English translation based on Hofer, 2014: 218).

As a result, the students in the test group performed significantly better than the participants in the control group on all three tests, including in the LQs and the MLQs of the MAT-2. Furthermore, the tests' results showed significant positive correlations between the test scores (German, English tests and MAT-2), which suggests that pupils with a high score in one test and language also achieved high scores in the other tests and languages. Based on these findings, one may argue that early multilingual education is likely to contribute to students' (meta-) linguistic and cognitive abilities and should be recommended to public schools. Furthermore, a seminal study involving older students (17-18 years old) in an Austrian school (Allgäuer-Hackl, 2017) also seems to substantiate the positive claims about the effects of multilingual training on the learners' metalinguistic awareness. Over their school career, students had learnt several Indo-European languages (e.g. English, French, Italian and Spanish) in addition to their L1 German. Some students participated in a multilingual training seminar which consisted in the study of positive transfer and interferences between languages, the acquisition of language learning strategies, the practice of oral skills and multilingual tasks in which receptive skills in other languages are developed, e.g. through the EuroCom approach (Klein, 2007). The results suggest that, compared to the other participants, the seminar students scored better in metalinguistic and cross-linguistic awareness tasks. Further advantages were identified, such as higher 'multi-directional' cross-language proficiency (positive transfer), increased awareness of language learning strategies and higher motivation to language learning.

Interestingly, however, it should be noted that, despite inspiring results arguing in favour of multilingual training in classroom settings, the two aforementioned studies involved learners relatively more prone to successfully execute language comparisons (e.g. bilingual individuals or/and older learners, participation in facultative courses, etc.). In the author's eyes, from a methodological perspective, it is not unlikely that the test groups' benefits may be due to other factors such as the learners' language aptitude, overall cognitive abilities and higher socio-economic background. Thus, concluding that multilingual training inextricably equals increased metalinguistic awareness seems a little hasty.

2.2.3. Potential 'side effects' of pluralistic approaches

At the same time, a body of empirical research highlights potential shortcomings and/or limits in relation to the implementation of pluralistic approaches. First of all, pluralistic approaches – especially intercomprehension approaches by which receptive competences in typologically close but unlearnt languages are to be developed – require the activation of pre-existent mental resources in order to infer meaning from words or texts in an unknown language(s) (Berthele et al., 2017: 148). This cognitive process of abductive nature (see Figure 7) called *interlingual inferencing* (cf. Berthele, 2011) precisely consists in transfer of available knowledge and structures from one language to another.

Deduction   Induction   Abduction

Rule → Case → Result (Deduction)

Rule ← Case ← Results (Induction)

Rule → Case → Result → Rule (Abduction)
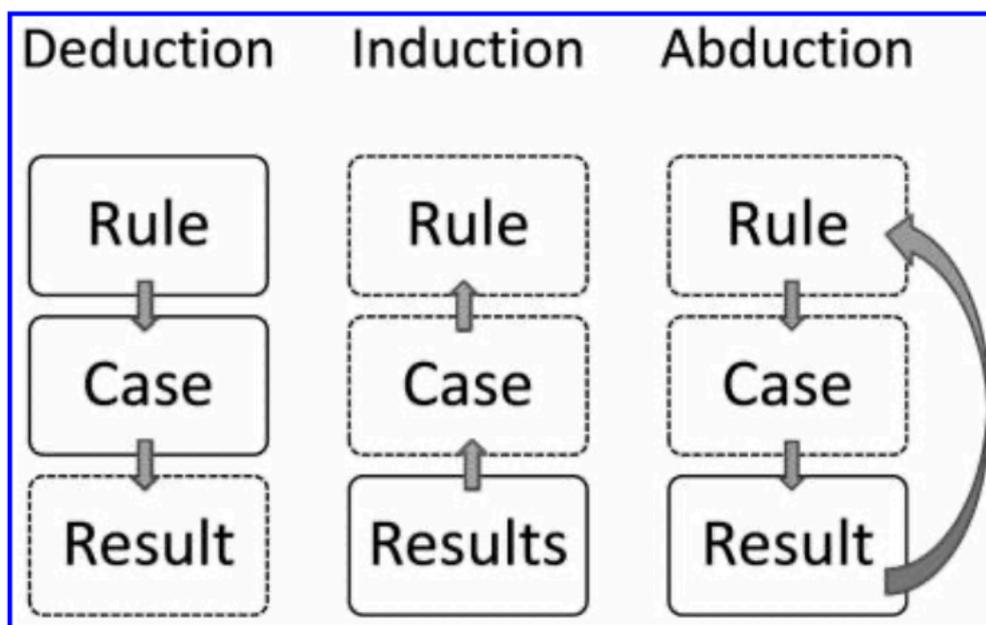
Figure 7. Three types of inferencing (based on Eco, 1984: 42). Bold lines correspond to given knowledge, dotted lines correspond to inferenced knowledge.

Successful interlingual inferencing seems to depend on various factors, some of which might be out of young learners' range of competence. In a project involving German-speaking children, teenagers and adults (cf. Berthele & Vanhove, 2014; Vanhove, 2014; Vanhove & Berthele, 2015), the ability to infer the meaning of Swedish words proved positively associated with good English competences, crystallised intelligence and biological age. As a matter of facts, young individuals – but also bilinguals from an immigration and lower social background, and often with smaller productive vocabulary (cf. e.g. Hoff, Core, Place, Rumiche, Señor & Parra, 2012) – are far more likely to be helpless in the face of inferencing tasks. Another study focussing on the comprehension of whole texts in unknown languages in lower secondary school settings (Lambelet & Mauron, 2017) yielded similar results, i.e. students in higher school tracks were better at understanding texts in unlearnt languages. According to Berthele

et al. (2017), a risk of a *Matthew effect* as in reading literacy (cf. Stanovich, 2000) may be worth considering, i.e. the possibility that, instead of promoting and settling students' varying competences, a certain pedagogical approach based on interlingual inferences leads to greater discrepancies between the 'high achievers' (i.e. the 'good learners') and the 'low achievers' (i.e. the 'poor' learners). In this view, good learners profit more from the pedagogy, whereas vulnerable learners get even poorer. One may argue that such a phenomenon may only apply to careless intercomprehension approaches involving unknown languages and to a minority of learners. However, as in many European countries, Swiss schools also show both linguistically and socially heterogenous classes. Furthermore, inferencing tasks in other types of pluralistic approaches, like an integrated didactic approach, does not rule out the activation of complex abductive processes. For instance, guessing the meaning of German and English cognates or equivalents and identifying their similarities may not be necessarily striking (e.g. *lieblos* vs. *loveless*; *machtvoll* vs. *powerful*), since, for instance, a word may be unknown in one of the two languages (see Figure 8 for an example).
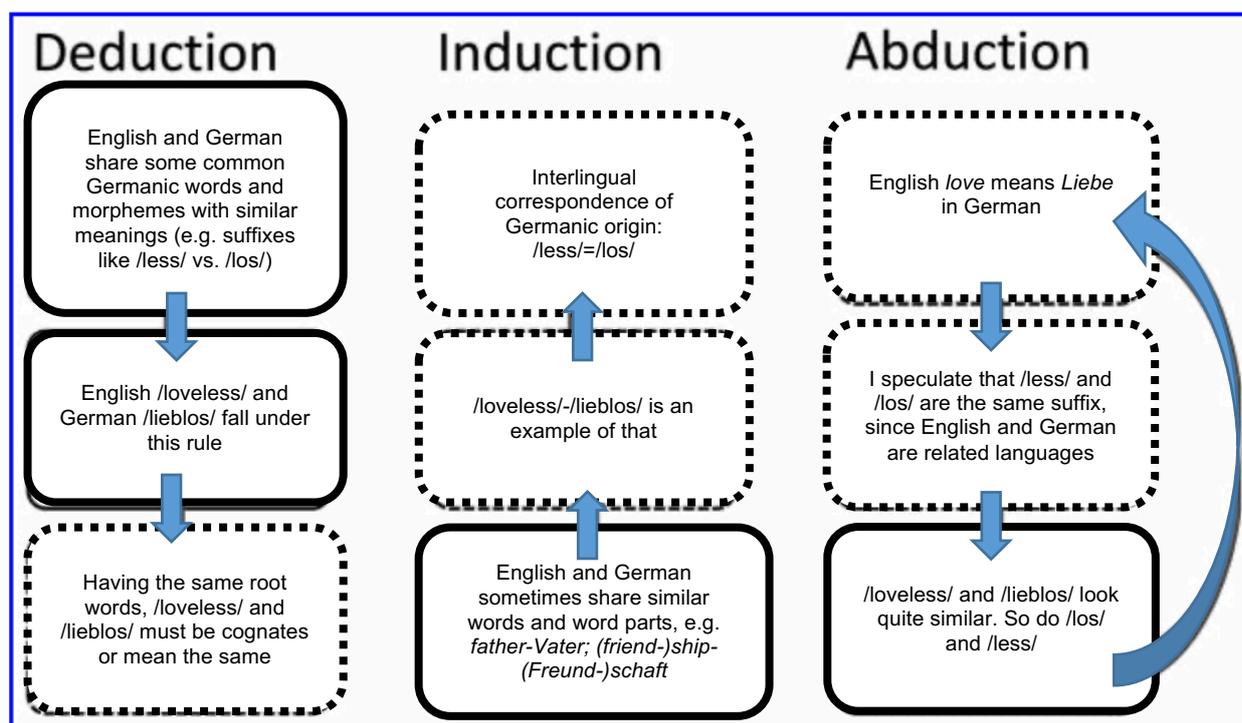
Figure 8. Possible deduction, induction and abduction processes exemplified with English-German comparisons at the morphological level (adapted from Berthele, 2011:195).

Inferencing processes in interlingual comparisons may certainly be abductive as well and training in interlingual comparisons should, from a pedagogical point of view, promote more accurate inferential guessing by introducing tasks in a deductive or inductive manner. As can be seen in Figure 8 from the made-up example, correct inferences in this case may depend

on one's lexical *and* (meta-) linguistic knowledge, i.e. one should know the cognates *love* and *Liebe*, the notion of pre- and suffixes, and their meanings in at least one of the target languages. Consequently, such reasoning may not be self-evident for young learners.

Again, further empirical research is needed to provide more robust findings in favour of an interlingual approach in line with its target group in school settings. Moreover, pluralistic approaches with their high expectations and promising results do not escape research biases, such as lack of (theoretical) fit, e.g. findings from a theoretical frame are reused to argue for their application to instructional setting, and/or a lack of methodological robustness, e.g. no randomised selection of subjects (see Berthele, 2019 for concrete examples).

2.2.4. Further factors involved in multilingualism: psychotypology

In the research field of multilingualism and L3 learning, a great deal of attention is paid to cross-linguistic influence or transfer phenomena (cf. Jessner, 2006). As a consequence, one essential concern of the L3 learning research agenda has been to look into potential factors affecting transfer and stimulating interactions between all the languages in the learner's mind (cf. e.g. De Angelis & Dewaele, 2011). According to ibid., 2011; Hammarberg, 2009; Williams & Hammarberg, 1998, crucial factors accounting for cross-linguistic influence include typological/psychotypological relatedness, cultural similarity, proficiency level, recency of use (i.e. the longer an L2 has not been used by the speaker, the less this L2 influences the L3; cf. Hammarberg, 2001) and the foreign language effect (i.e. the fact that L3 learners tend to activate their L2 rather than L1; cf. Hufeisen ,1991). An important factor, psychotypology, describes the learner's own perceived distance between Lx and Ly (cf. Kellerman, 1983), as opposed to typology[2] which refers to an objective categorisation of languages by structural commonalities. Kellerman suggested that learners' perception of similarities between languages guides them in acquiring and using particular languages. Amongst the vast array of factors impacting cross-linguistic transferability, psychotypology is deemed decisive in determining the nature of transfer mechanisms (see also De Angelis, 2007: 22–33; Jarvis & Pavlenko, 2008: 76–182; Ringbom & Jarvis, 2009). For example, it may exert constraint on L3 learning if transferable L1 and/or L2 structures are then considered 'incompatible' with L3 by the learner (cf. e.g. Ó Laoire & Singleton, 2009). Learners may or may not be conscious of objective similarities between languages, and they may or may not know about language relatedness.

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[2] According to Falk & Bardel (2010), a distinction has to be made between language *typology*, i.e. differences and similarities of specific linguistic structures between genetically unrelated languages, and language *relatedness*, i.e. a general classification of languages based on their origin or the language family they are affiliated with.

In turn, psychotypology seems to be subject to a variety of factors. For instance, learners' perception of typological distance seems to depend on their target language proficiency (cf. e.g. Kellerman, 1986) and may hence change as language proficiency develops. The number of languages in one's repertoire also plays a significant role (cf. Otwinowska-Kasztelanic, 2011; Tsang, 2015). These findings suggest that multilinguals seem more likely to elaborate on similarities and differences between languages from their repertoire, namely by their ability to identify more cognates. Also, psychotypology turns out to be asymmetrical in that similarity between two languages may be perceived more frequently by native speakers of one of these two languages (cf. e.g. Gooskens & Heeringa, 2014; Kaivapalu & Martin, 2014). For example, in ibid. (2014), Finnish speakers perceived commonalities between Finnish and Estonian more often than the Estonian speakers, while both groups of speakers did not know the other language.

Finally, as the results of a study conducted by Cenoz (2001) suggest, learners with higher metalinguistic awareness are more able to fall back on transferable acquired languages to learn a new language. Therefore, the development of metacognitive skills such as metalinguistic awareness may also profit the learners' psychotypological assessment. Also, to the author's knowledge, little – if nothing – has been carried out so far to explore the effects of multilingual training on learners' psychotypology.

2.3. Conclusion, aim and scope of the present study

The notion of a multilingual education based on pluralistic approaches to language learning – which argues for a more coherent teaching and learning of languages and strives for an economy of the acquisition process and enhanced metacognitive abilities – is well-intentioned and promising in societies where multilingualism holds an important status. Multilingual speakers are often argued to profit from manifold advantages in terms of (meta-) cognitive and language learning abilities (cf. 2.2.1), such as increased language awareness (cf. 2.2.2), as well as more accurate psychotypological judgement (cf. 2.2.4). Based on converging evidence, claims on multilingualism leading to cognitive advantages and, as a result, to general benefits in TLA (cf. e.g. De Angelis, 2007) have been hypothesised. In multilingual school settings, many calls have been made to encourage the training of metalinguistic skills similarly to pluralistic approaches. An integrated didactic approach to languages is already a reality in many European countries, like Switzerland. This being said, empirical evidence of beneficial effects of multilingual training such as language comparisons in instruction settings including a strong heterogeneity of learners remains scarce. Also, the possibility of putting weaker, socio-economically less favoured learners at risk through multilingual pedagogy involving abductive processes is real. Further research is thus required and would be valuable for language educational policy recommendations. As Berthele et al. (2017: 152f.) argue, guided multilingual training of cross- and meta-linguistic awareness as purported in the theoretical Dynamic Model of Multilingualism (cf. e.g. Allgäuer-Hackl & Jessner, 2013; Hofer, 2015) might still be a valid aim of multilingual education, provided it takes social conditions in schools into consideration and is likely to trigger a 'multilingual awareness' in school learners' minds.

In order to provide further empirical insights into the implementation of an integrated didactic approach, the present quasi-experimental study will explore the impact of the training of language comparison on the ability of young lower secondary school learners of several languages to identify cross-linguistic similarities and differences. Based on the language links of the English coursebooks *English in Mind* used in the French-speaking Cantons, additional interlingual activities will be administered to these students. Such activities require learners to draw on and activate the language resources at their disposal, i.e. in L1-French, L2-German and L3-English. In other words, the author of this paper attempts to tap into students' cross-linguistic awareness. The present research project is restricted to the study of cross-linguistic awareness. The rationale behind this is that, as it has been explained further above (see 2.2.2), metalinguistic awareness refers to a broader concept, i.e. the ability to think abstractly about language, whereas cross-linguistic awareness relates to the ability to identify commonalities and differences between several languages (cf. Jessner, 2006). Given the present study and its relatively short and limited intervention (cf. Chapter 3), it would not make much sense to

investigate its impact on such a general metalinguistic skill. To address a research question of this kind, further longitudinal and cross-sectional studies would be required (cf. Berthele, 2019: 4, e.g. on literacy development). Rather, the author assumes that, despite the brevity of the intervention, potential effects may be more likely found in subordinate components of linguistic awareness that are directly linked to the multilingual training in question (i.e. the development of cross-linguistic awareness through language comparisons). Importantly, also, as Jessner (2006) defines cross-linguistic awareness as a tacit *and* explicit awareness of language links, the present study is limited to the exploration of the tacit, i.e. implied students' cross-linguistic awareness. In order to tap into an explicit kind of awareness, a measure by means of metalinguistic questions (see e.g. in the MAT-2-test) may be necessary. To facilitate data analyses[3], the study will focus on the tacit nature of cross-linguistic awareness. On the account of the few recent research outcomes in the field, it is still assumed that targeted training in awareness raising of interlingual differences and commonalities will result in enhanced (tacit) cross-linguistic awareness of specific similarities and differences studied via the intervention.

The second concern of this study is to measure the students' psychotypological distances between the languages they are learning and the effects training in language comparisons may have on them. Chinese Mandarin will be added to their repertoire to gain insights into the learners' psychotypological perspective on unlearnt and typologically unrelated (or far less related) languages. Based on the literature (see 2.2.3), it is expected that, as the learners make progress in learning German and English, the perceived proximity between these two languages may increase. Since the activities will focus specifically on the learners' languages (i.e. French, German and English), but specifically on the two Germanic ones (German and English) to highlight other transfer sources than French and English lexical similarities, one may expect the proximity between these two languages to be further increased by the interlingual training, but also distances between other language pairs to be altered from the students' perspective. Consequently, depending on the students' psychotypological state prior to the intervention, the cross-linguistic training may or may not trigger a new, more informed assessment of the interlingual proximity. Thus, the learners may or may not associate the intervention with a need for changing the distance they perceive between the target languages.

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[3] When mentioning cross-linguistic awareness in the following chapters, the author will then refer exclusively to a tacit form of awareness. To the author's knowledge, no instrument allowing a quantitative measure of the concept exists as yet (see 3.4.5). Although metalinguistic questions (e.g. as in the MAT-2-test) could be used instead, these require to be assessed and ranked (cf. Pinto et al., 1999; Hofer, 2014: 223f.). For the sake of more reliable results, the author judges it preferable to concentrate on linguistic questions and hence will use items of linguistic nature, which can only yield 'correct' or 'erroneous' answers.

3. Method

As discussed in the theoretical part of this paper, more evidence from classroom-based research is needed to ensure the potential of pluralistic approaches based on language comparisons in schools. This chapter provides information on the research questions and hypotheses of the present study (3.1), the research design (3.2), the participants (3.3) and the procedure, tests and tasks designed to answer the research questions (3.4).

3.1. Research questions and hypotheses

The present study will compare two groups of L1 French, L2 German, and L3 English learners, i.e. an intervention group who was given extra training in language comparisons and a control group without such an intervention. First, this study will address the question whether there is a difference between the two groups in terms of cross-linguistic awareness. Second, it will explore the short-term development of the students' psychotypological distances between four languages (Chinese, English, French and German) and investigate the effect of interlingual training on them, hence the following **research questions**:

Does the additional interlingual training affect the learners' cross-linguistic awareness? How does the learners' psychotypological distances between the learners' L2 and L3 and other languages (i.e. French-English, French-Chinese, French-German, German-Chinese, English-Chinese, English-German) develop over time and does additional interlingual training influence their psychotypology?

On the basis of the research questions, the author postulates the following hypotheses:

Hypothesis 1: The additional interlingual training has a positive impact on the learners' cross-linguistic awareness. The learners of the intervention group outperform those of the control group in the interlingual tasks.

Hypothesis 2: There is a general downward trend in the learners' psychotypological distance between English and German as learners make progress in learning, but the additional interlingual training decreases this psychotypological distance even more so.

Also, further possible impacts of time and the interlingual training on the distances between the other language pairs will be explored.

3.2. Research design

To answer the research questions, a quantitative research design was chosen in order to provide statistically representative and generalisable results. As differences in the students' scores could stem from many influential factors such as e.g. their (meta-) cognitive abilities, language proficiency and socio-economic background, an ideally large number of participants from several classes should be tested to minimise the effect of these factors. In so doing, any potential differences between the control and test (i.e. intervention) group can be more likely assigned to the intervention and not to external variables (cf. Hua & David, 2010: 92).

3.3. Participants

Students from several public schools in the French-speaking area of the Canton of Fribourg participated in the study. They were all between 11 and 14 years old (median age: 13) and in their 1st year of lower secondary school (i.e. year 9) and had learnt L2 German since year 5 and L3 English since year 7. As these students are divided into three school tracks with different levels of academic achievement – *exigence de base*: lower school track, *générale*: middle school track, and *prégymnasiale*: higher school track – it was initially decided that only those in the middle track would take part in the experiment to avoid further influences on scores due to tracking. After submitting a permission request to the Canton's education authorities for the present research purpose in autumn 2019, five schools were selected, making up a predictive sample of about 300 participants in total. Since many university students also solicit schools for experimental projects, the selection of the schools was made by the Canton's authorities. The five selected schools turned out to be primarily set in urban areas (four out of five schools). However, it should be noted that a considerable number of students studying in urban schools actually live in nearby rural areas. Depending on the schools, between two and four 9-year, middle-track classes were made available, adding up to a total of 15 classes. All participants had experienced the same curricular path. The few students who had recently taken up residence in Switzerland and showed relatively low proficiency in the target languages were reported prior to data collection and thus not included in the research project. Given the COVID-19 outbreak, lower secondary schools were closed down from 16th March to 2nd June 2020. Consequently, not every class were able to carry out all necessary tasks and tests, which considerably reduced the final number of participants.

While sampling subjects from instruction settings and taking all necessary measures to ensure significant results is crucial for the aims of the present study, further unexpected circumstances came along and, as a result, exerted constraints on the methodological choices and proceedings. Not only was the number of participants affected by an international pandemic, but further shortcomings had also emerged before the onset of the COVID-19 outbreak. In

order to attribute any observed effects to the actual intervention in a sample involving 'clusters' (i.e. school classes in the present study), one recommendation is to randomly assign half of the classes to the control group, and the other half to the test group (cf. e.g. Vanhove, 2015: 137ff.). To the author's regret, no randomisation could be applied to the present intervention study. Several teachers refused to take part in the intervention and teach the additional interlingual activities for various reasons, i.e. time constraints or, as some reported, because the activities (e.g. their topics and/or contents) would not fit in with the L1/L2/L3 program. Consequently, eight classes were selected on a volunteer basis to form the intervention group. The final sample was made up of 142 participants (77 girls and 65 boys) divided into four schools and eight out of the 15 originally available classes. 89 students belong to the intervention group and 53 to the control group (cf. Table 1).

Class	9A	9B	9C	9D	9E	9F	9G	9H
School	A	A	B	B	C	A	B	D
Urban area	Fribourg	Fribourg	Fribourg	Fribourg	Fribourg	Fribourg	Fribourg	Bulle
Group	INT	INT	INT	INT	INT	CONT	CONT	CONT
Number of learners	16	21	18	14	20	17	20	16

Table 1. Main characteristics of the classes (INT=intervention; CONT=control)

3.4. Procedure, tests and tasks

The present study was conducted in a series of three main steps outlined in Table 2.

Time 1: before intervention (November-December 2019)	Intervention (January-early March 2020)	Time 2: after intervention (February-early March 2020)
- Background questionnaire - 1st measure of psychotypology - C-tests (L1-L1-L3 language competence)	- Teaching of 8 interlingual activities	- Test on cross-linguistic awareness - 2nd measure of psychotypology

Table 2. Course of the study

3.4.1. Background questionnaire

Prior to the intervention, i.e. in mid-November 2019, the students were required to fill out a brief questionnaire on personal information (age, gender, school, class) and language background. They indicated their first language(s) and, at this point, were already asked to answer questions on language interrelatedness. They indicated: 1) which language (English or German) they think is easier to learn for native speakers of French, and 2) which languages they believe are the closest to each other by selecting one language pair (i.e. French-English; French-German; German-English). This was meant to provide further details on their psychotypology. The first measure of the learners' psychotypology happened at the same time. The background questionnaire can be found in Appendix II (see 3.4.2 below for further information about the instrument).

3.4.2. Visual Language Distance Measure (ViLDiM)

The students' psychotypological distances between different languages were measured using a fairly new instrument called *Visual Language Distance Measure* (ViLDiM) devised by researchers from Münster University and Adam Mickiewicz University in Poznań (Wrembel, Lewandowska, Krzysik & Golin, 2018). It was developed to capture learners' perceived relatedness between languages in one's repertoire in a timesaving and comprehensive fashion. Participants receive transparent circles each representing one language, which they arrange on a dotted sheet of paper depending on how related these languages are in their view. While this instrument has not yet been empirically validated, the authors claim that a much more informative and nuanced insight into the learner's perception of language distance can be gained in relation to usual questionnaire items. Based on De Bot (2012), they also argue that usual measures of psychotypology (e.g. think-aloud protocols and questionnaires mostly consisting of separate, pair-wise language distances) do not tally with 'the increasingly established understanding of the multilingual mind as a complex interconnected' (Wrembel et al., 2018: 13). As a consequence, similarly as in the DMM conceived by Herdina & Jessner (2002), the learner's languages – or language systems – and thus the typological location in their mind should not be seen in isolation but holistically, in connection to one another, creating a complex 'geometric' pattern. The ViLDiM tool may be one way of tapping into and visually representing learners' perceived typology (see Figure 9).
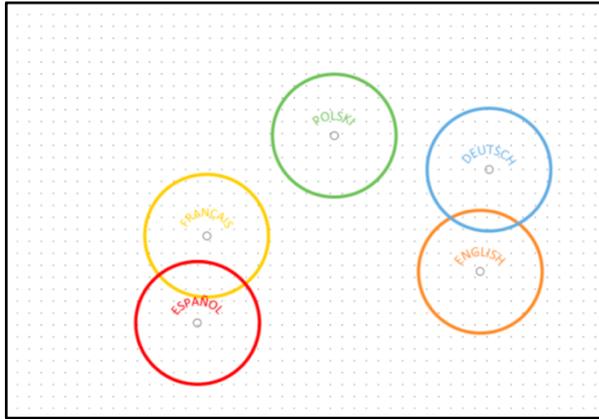
Figure 9. Example of use of the ViLDiM-tool (by Golin, Lewandowska, Krzysik, Wrembel & Kopeckova, n.d.)

In the present study, the learners' psychotypological measure took place twice to allow a comparison of measures and capture possible effects of the intervention and time: once in time 1, right after the students had filled out the background questionnaire, and in time 2, right after taking the test on cross-linguistic awareness. The materials (i.e. circles[4] and dotted sheets) were created, printed out and delivered to the class teachers beforehand. They were given all necessary information for the students to carry out the task accordingly and individually. Once the students had placed the four language circles (i.e. English, French, German and Chinese) on the dotted A4 sheet, they were then asked to mark the centres of the circles with a cross and to signal which languages the crosses refer to. After data collection, the different distances between the languages were measured manually, as accurately as possible, with a ruler in millimetres. An example of dotted sheet can be found in Appendix II.

3.4.3. Language competence tests

Since higher language proficiency is often associated with higher levels of metalinguistic and cross-linguistic awareness (see 2.2.1; 2.2.2), the participants' overall language competence in L1, L2 and L3 was assessed to serve as a covariate for the data analysis. For this purpose, C-tests in all three languages were devised and administered to the students by their L1, L2 and L3 teachers in midst-December, before the beginning of the intervention. 20 minutes were allotted for each C-test. There is a general consensus that C-tests are easy-to-administer and reliable tools to measure global language competence (cf. e.g. Eckes & Grotjahn, 2006; Reichert, Keller & Martin, 2010; Harsch & Hartig, 2016). The C-tests were conceived following

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[4] The circles in the present study were made of thick, white, not transparent paper to save further material costs. The students were however told that they could 'stack up' the circles if they wanted to, i.e. the circles could be placed overlapping with one another.

most of Grotjahn (2002)'s canonical C-test construction principles[5]. For the three tests (one in each language), four excerpts from the coursebooks used in year 8 were selected, i.e. in French: *L'île aux mots 8ᵉ* (Bentolila et al., 2012), in German: *Junior 8* (Endt, Koenig, Pfeifhofer, Ritz-Udry & Pistorius, 2017), and in English: *More! 8ᵉ* (Puchta et al., 2014). Starting from the second word of the second sentence, half of every other word was erased and left blank for the students to complete. The first and final sentences in each text were left unchanged or sentences were added if not available in the original texts. Every other word's erasure was carried out by an online pedagogical tool by the Deutsche Welle (2020) for C-tests and checked for potential errors or necessary modifications (e.g. shortening sentences, replacing words). Each text contained 25 gaps and scoring was based on correctly completed gaps (i.e. correct or deemed acceptable in the context). Correctly completed words yield 1 point each, which adds up to a total of 300 points for the three C-tests. The C-tests and their answers can be found in Appendix III.

Another 'quick-and-dirty' measurement of the learners' language proficiency had been considered, e.g. by means of segmentation tasks (cf. e.g. Alderson, Haapakangas, Huhta, Nieminen & Ullakonoja, 2015), in which short texts without spaces between words must be 'rearranged' (i.e. split into words appropriately). However, the scoring of the segmentation tasks turned out to be extremely time-consuming and many students did not or could not carry out the task in time, as some teachers reported. Thus, the segmentations tasks and their scores were not included eventually in the present study.

3.4.4. Intervention

The students in the intervention group were given additional interlingual training focusing on language comparisons. A series of short activities were created to this end. In order for teachers and learners to be familiarised with the activities, these extra tasks were devised on the basis of the existent language links activities from the English coursebooks in use. The set of coursebooks *English in Mind 9ᵉ* take an inductive approach to language focus and teaching grammar (cf. Parminter, Reilly, Hart, Puchta & Stranks, 2015: 7). New or revised language structures are introduced via examples from which students work out the rules (see Figure 10). Students are guided by questions to help them infer the rules.

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[5] The four German texts show some redundancies, as most texts in the coursebook somehow relate to the theme of school. Further details: in English and French, words with apostrophes (e.g. *they're*; *l'eau*) were seen as separate words. In compound nouns split by a hyphen (e.g. *Musik-Kurs*), the second half of the second word should be erased. However, in one of the German texts, the second word was completely removed by mistake in two occurrences. It should be noted that the C-tests were not pretested and not checked for reliability, level of difficulty and discrimination power.

Figure 10. Example of focus on language (present simple tense) in *English in Mind 9^e* (Parminter et al., 2015: 8)

The extra interlingual activities were based on a similar approach. In general, the activities start with an introduction of a cross-linguistic phenomenon, then invite students to identify further similarities and differences on their own, and end up with a conclusion (e.g. the formulation of a rule; see Figure 11). Sometimes, only observations from the students are elicited.

Figure 11. Example of an interlingual activity used in the intervention (from activity 7)

The activities cover a scope as large as possible of cross-linguistic phenomena. In doing so, one should, however, bear in mind the students' levels of language competence and the contents and topics they had or would come across in year 9. They should aim at activating prior language resources, without excluding the possibility to introduce new knowledge. Also, these activities had to remain brief to be implemented in the teachers' lessons without affecting their actual teaching temporally. As cross-linguistic similarities seem particularly more striking at the lexical level (see 2.2.1), and French and English do share a significant number of transfer opportunities, students may already be aware of their lexical relatedness, at least to some extent. Consequently, one of the aims of this intervention was not only to highlight interlingual

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similarities and differences in different language areas other than lexis, but also to emphasise supposedly less obvious sources of transfer. The extra interlingual activities were hence designed to address mostly commonalities between L2 German and L3 English.

Before the onset of the intervention, a total of 16 activities had been planned to be taught over a period of about eight weeks (two activities a week). The first eight activities would tackle different cross-linguistic comparisons and the next eight activities would consolidate aspects studied previously. All the activities were initially supposed to be taught by the English teachers, but for practical reasons, it was decided that they could also be taught by any language teachers, including L1 and L2 teachers. Since many teachers refused to participate in the intervention, a compromise had to be made. Finally, only the first eight interlingual activities were created and implemented at a rate of one activity a week, from activity 1 to activity 8. The teachers were given all the materials (worksheets and answers). Table 3 outlines these activities, their topics and pedagogical aims. The cross-linguistic phenomena studied by the students included aspects related to lexis (activities 1, 3), phonology (activities 2, 4, 5), morphology (activities 6, 8), morphosyntax (activity 7). Activity 1 – which summarises the historical development of the English language and introduces words of German and of French origin – was taken and adapted from an activity presented in a teaching unit of the 10th year's coursebook (Puchta, Stranks & Parminter, 2016: 11) Some phonological aspects on sound equivalences in Germanic languages (activities 4 and 5) were partially based on Grzega (2005) following the EuroCom approach. One exercise on English and German cognates in activity 3 was taken from Kursiša & Neuner (2006: 24). The activities and their answers can be found in Appendix I.

Activities	linguistic area	Pedagogical (interlingual) aims
1.	Brief history of English; words of French and German origin.	Introduction to history of English: distinguish between English words of French and those of German origin
2.	Word stress	Revise English and German weekdays. Place the word stress correctly. Be aware that English and German have (variable) word stress as opposed to French
3.	Common words in familiar topics, e.g. family and body	Be aware of common words (i.e. cognates) in L1, L2 and L3. Be aware that English words are, in some topics, more related to German than French.
4.	Sound (consonant) equivalences	Identify some consonant equivalences in L2 and L3. Be aware that English and German consonants can change according to some constant rules.
5.	Sound (vowel) equivalences	Identify some vowel equivalences in L2 and L3. Be aware that English and German vowels can change according to some constant rules (though far less than with consonants).
6.	Suffixes to form adjectives	Identify common suffixes and sort them into Germanic and French categories. Create adjectives in L1, L2, L3 with nouns.
7.	Word order (adjectives and nouns)	Be aware that German and English predicative adjectives never change (unlike in French). Be aware that German and English attributive adjectives come before nouns unlike in French (usually).
8.	Compound nouns	Form compound nouns in L1, L2, L3. Be aware that German and English compound nouns work similarly.

Table 3. Tasks administered to the students during the intervention

3.4.5. Measure of cross-linguistic awareness

Cross-linguistic awareness was measured using a test consisting of a series of tasks related to cross-linguistic phenomena between languages of the students' repertoire. Again, the test was created on the basis of and is limited to cross-linguistic similarities and differences studied within the scope of the intervention. Cross-linguistic awareness depends on the learners' language repertoire and, to the author's knowledge, no instrument *per se* has been ever been created and implemented to measure it quantitatively. As a matter of fact, it was usually analysed rather than measured, using introspective (cf. e.g. Jessner, 2006; Cenoz, 2001) or retrospective methods (cf. e.g. Angelovska, 2018).

In order to tap into learners' cross-linguistic awareness in a 'quick-and-dirty' fashion, the test was conceived to be easy to administer and to assess. Thus, the author opted for a test format that does not require students to write, but to select answers individually on the basis of their cross-linguistic knowledge. The tasks were hence designed to elicit students' tacit ability to activate and use their accumulated L1, L2 and L3 resources (which had been practised during the interlingual training) in order to correctly identify interlingual commonalities and differences. Rather than a valid and reliable measuring tool, this test should therefore be seen as a series

of tasks which presumably yield a certain measure of cross-linguistic awareness. The test was made up of seven tasks corresponding to specific cross-linguistic phenomena. Each task was composed of series of items from which the learners were required to choose one correct option. The test consists of 43 items in total, resulting in a maximal score of 43 points These tasks differ from the activities the students in the test group were exposed to, but refer to the cross-linguistic phenomena studied during the interlingual training. Only word stressing (cf. Activity 2) was not included, since English and German word stresses do not necessarily follow the same rules and were thus deemed less relevant. Figure 12 shows an example of task.

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1. **Dans chaque liste de mots anglais (a-f), souligne LE mot d'origine française.**
   Exemple : man – wash – driver – <u>advertisement</u> – hat

   a) good – year – bed – chair – day
   b) sing – aunt – milk – brother – make
   c) red – white – go – see – supper
   d) money – green – twenty – eight – friend
   e) what – love – old – return – drink
   f) sun – winter – ice – cold – flower

Figure 12. Task 1 from the cross-linguistic awareness test

For the sake of clarity of instructions, examples were made available in the first four tasks. No examples were given in the next tasks since this may have hardly been possible to do without deliberately providing answers (e.g. in task 5, only a limited number of Germanic suffixes had been studied previously). The test administration took place in late February or early March (time 2), depending on the classes. 30 minutes[6] were allotted to the students. Table 4 provides an overview of the tasks and items from the test. The test and its answers are reported in Appendix IV.

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[6] The teacher of the first class who took the test reported an approximate required time of 20 minutes for the fastest and 30 minutes for the slowest students.

Tasks	Prerequisite language resources	Items/Points
1. Identify English words of French origin	English-French vs. English-German cognates	6
2. Identify English words of Germanic origin	English-French vs. English-German cognates	6
3. Identify English and German cognates	English and German consonant equivalences	6
4. Identify English and German cognates	English and German vowel equivalences	6
5. Identify English and German equivalents	English, German and French suffixes	7
6. Identify correct word order according to the language (English, German, French)	English, German and French adjective phrases (word order)	6
7. Identify English and German equivalents on the basis of French words	English, German and French compound nouns	6
Total		43

Table 4. Tasks in the cross-linguistic test

As shown in Table 4, lexis and, more specifically cognates, make up important components of the tasks. To ensure the activation of interlingual links, a strategic selection of words was carried out. Tasks 1 and 2 include English words supposedly known by the learners in L1 and/or L2 to ensure that their answer choice can be referred to their recognition of a German or French cognate. This principle is also applied in tasks 6 and 7 since the focus is on word order and not cognates. In task 7, at least one of the nouns in the compound nouns had to be known by the learners to select the correct word order. In contrast, it was deemed important that tasks 3, 4 and 5 do not contain (or at least to a much lesser extent) known words since students should use their knowledge of sound equivalences to make their selection.

4. Results

This chapter presents the results obtained from data collection. At first, Section 4.1 briefly outlines relevant characteristics of the participants' language biography. Sections 4.2 and 4.3 present the students' scores on the cross-linguistic awareness and language competence tests, the perceived distances between the languages and the results related to the research questions and hypotheses.

4.1. Students' language biography

As shown in Table 5, most participants have another language – usually together with French – as first languages. Such languages are typically Portuguese, Albanian, Italian, Lingala and Turkish. Only a few reported having English or German as L1 with French. No participants were excluded on the basis of their first languages. The data suggest relatively high rates of immigration background amongst the students and confirm that the majority are school learners of English and German, i.e. with limited out-of-school exposure to these languages.

	Number of participants
L1 only French	59
L1 also English	3
L1 also German	6
Other L1	74
Total	142

Table 5. Participants' L1s

4.2. Scores on cross-linguistic awareness and language competence tests

The collected data were analysed by means of linear mixed models fitted in the R software (R Core Team, 2020) with the lme4 package (Bates, Maechler, Bolker & Walker, 2015). *p*-values were computed using Satterthwaite's degrees of freedom method as implemented in the lmerTest package (Kuznetsova, Brockhoff & Christensen, 2017). Since the participants are clustered in classes and hence tend to perform more similarly within their group, such models allow for clustering to be considered when looking into the effect of an intervention on the participants' test scores. As a result, the multilevel model was fitted with class as a random effect. The students' scores on the C-tests were added up and used as a covariate, as it follows from previous studies that learners with higher levels of meta- and cross-linguistic awareness show higher language competences. The significance level was fixed at 0.05. All computations are available in Appendix V.

Table 6 presents summary data for the students' scores on the cross-linguistic awareness test and the C-tests (language competence). The following descriptive statistics of the global scores on the cross-linguistic awareness test (cf. Figure 13) show that the collected data in both groups correspond to an approximate normal distribution. The two outliers in the intervention group were not removed, since no legitimate reason seems to account for these extreme values. For both tests, the scores of the intervention group slightly outreach those of the control group.

		Range		Max	Median	Mean	SD
	Min	Lower	Upper	Max	Median	Mean	SD
CLA (INT)	10	18	23	31	21	20.29	4.24
CLA (CONT))	10	15	22	28	19	18.47	4.72
C-test (INT)	53	108	159	237	142	137.56	38.19
C-test (CONT)	37	106	159	214	129	129.98	43.85

Table 6. Summary data for the scores on the cross-linguistic test (CLA) and on the C-test per group (INT=intervention; CONT=control)

The results indicate that the interlingual training affected the global test score, increasing it by 1.51 points ± 0.72 (standard errors), which can be considered very small. This effect is just significant ($t(139)= 2.10$, $p = 0.04$). The residuals were also examined and showed no major disturbing patterns (cf. Appendix V). Alternatively, the mean covariate (c-test scores) value per class was computed and the mean outcome (cross-linguistic awareness test) was analysed in a linear model using the mean covariate as a control variable. The results yielded a similar effect size for the intervention, which is however no longer significant (cf. Appendix V).
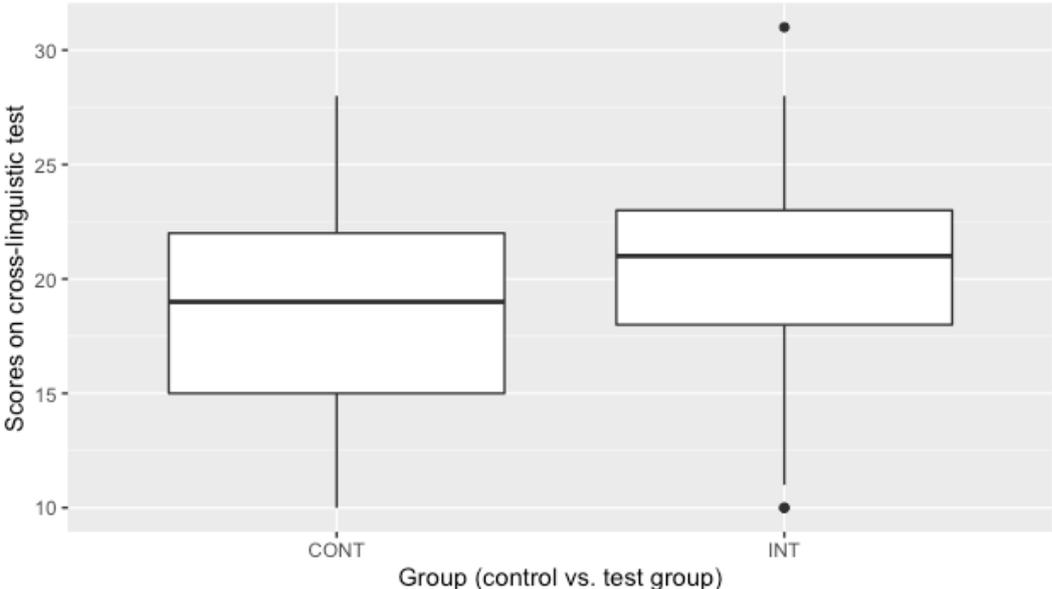
Figure 13. Global scores on the cross-linguistic test

Figure 14 shows the results for the cross-linguistic awareness test in each class. Most classes in the intervention group performed slightly better than those in the control group. According to the multilevel model, the class effects seem to be very low, as the model estimates the between-cluster variance to be 0.
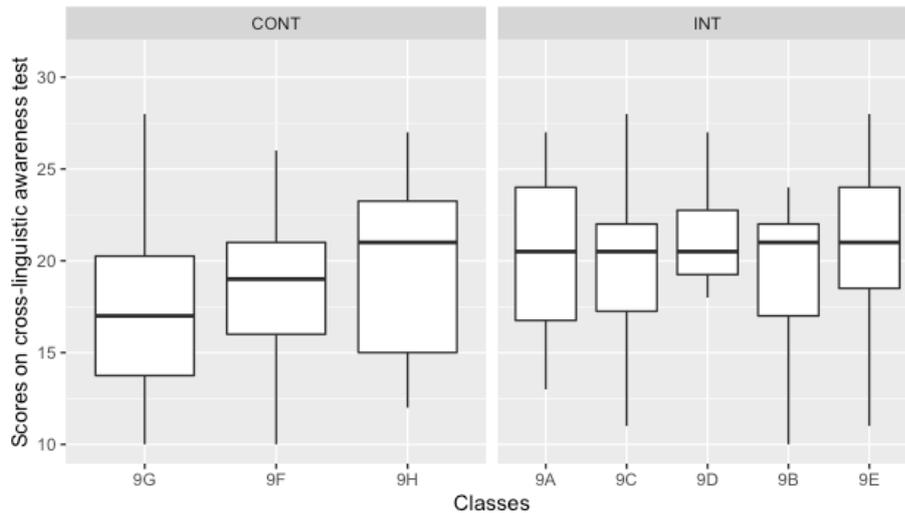
Figure 14. By-class scores on the cross-linguistic test

As expected, the students' scores on the cross-linguistic awareness test appear to correlate with their competence in the three languages. Figure 15 shows the general trend for each group plotted with (here non-mixed) linear models. The C-test's global score forms a significant predictor of the cross-linguistic awareness test scores (cf. Appendix V).
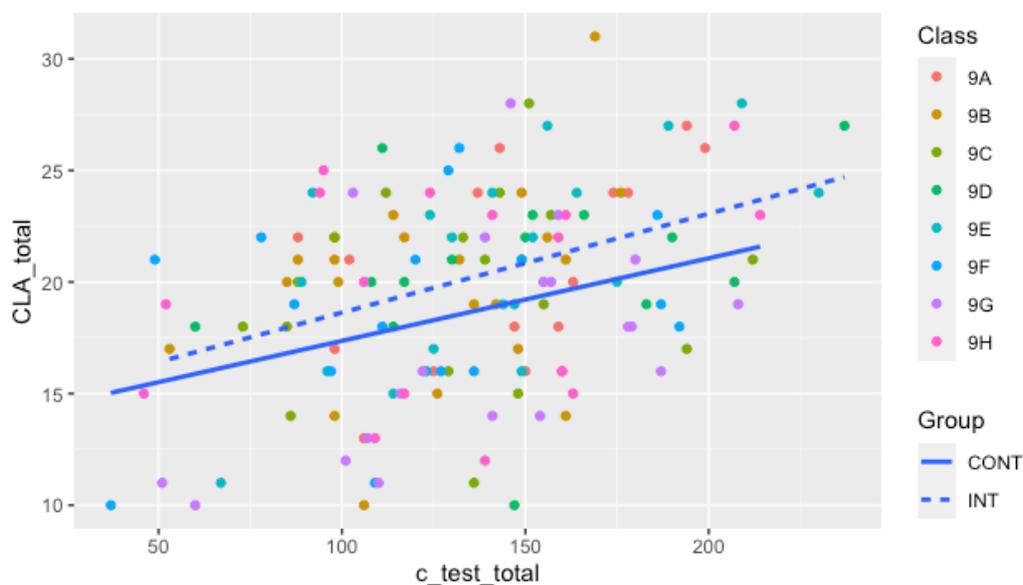
Figure 15. Relationship between language competence (c_test_total) and cross-linguistic awareness (CLA_total)

Figure 16 shows the by-task differences in the students' scores between the two groups. The achieved scores remain particularly low in tasks 2, 3 and 4 across both groups A larger number of learners achieved higher scores in the test group than in the control group, except in task 6 (i.e. similar distribution in both groups) and hardly in task 4 (with one more outlier each above and below the median).
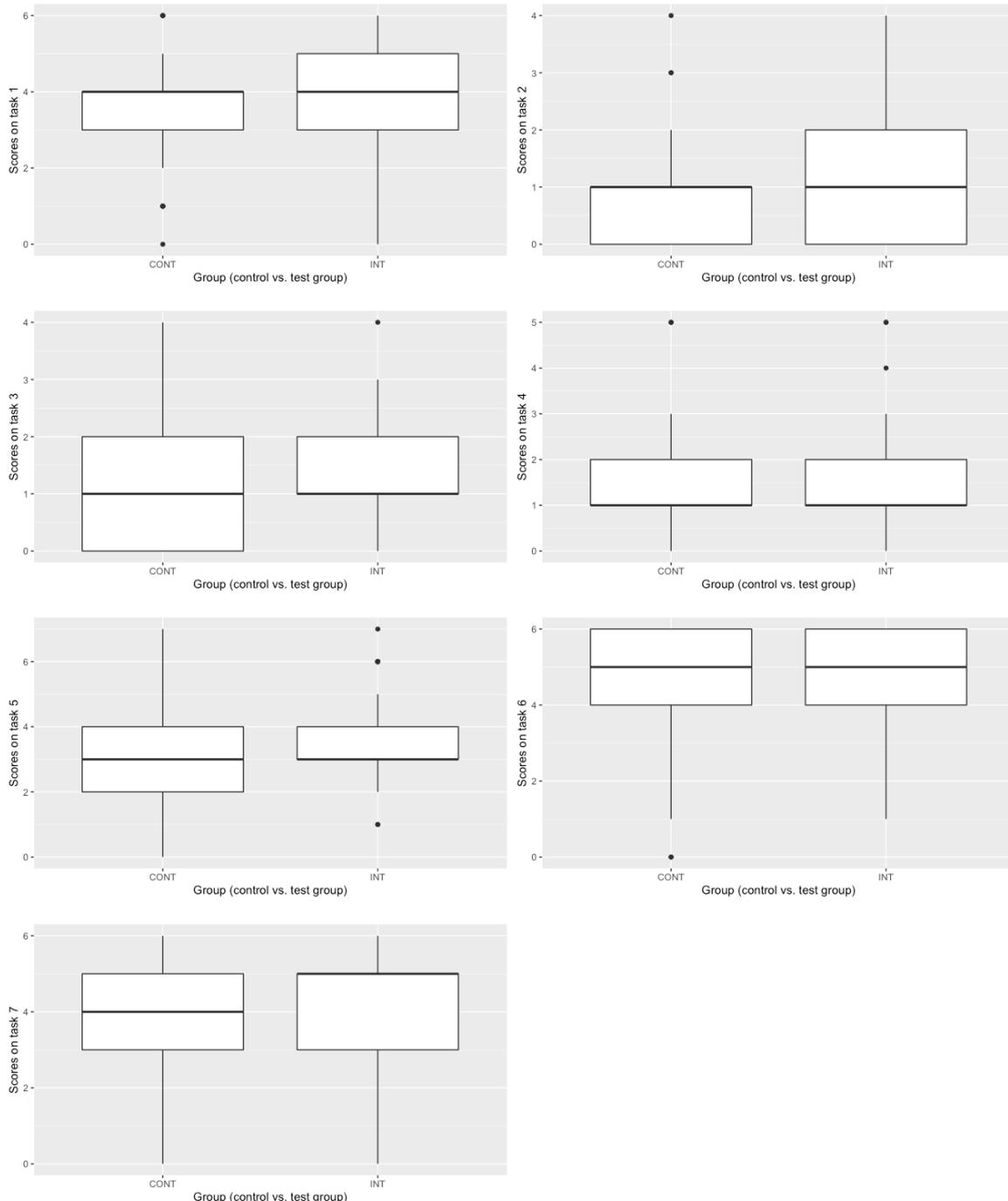
Figure 16. By-group scores on each of the 7 tasks[7] of the cross-linguistic awareness test

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[7] Tasks' topics:1 English words of French origin. 2: English words of Germanic origin. 3: English and German consonant equivalences. 4: English and German vowel equivalences. 5: English and German suffix equivalents. 6: English, French and German adjective word order. 7: English and German compound nouns.

4.3. Psychotypological distances

The secondary research question aimed at investigating the impact of time and of the interlingual training on the students' psychotypological distances between various languages, with particular attention to their perception of English and German typological relationship. According to the data collected from the background questionnaire prior to the intervention, most students (104) viewed English as easier to learn for native French speakers, whereas only 38 of them reported German as an easier language. In addition, when asked to choose one language pair to decide which languages are typologically closer, 83 students opted for English and German, 44 for French and English, and only 15 for French and German. Figure 17 illustrates the by-group mean distances between the four languages perceived by the learners before and after the intervention. The distances refer to the normalised measures (as percentages) and were rounded up. They form a three-dimensional figure (tetrahedron) that provides a realistic representation of the learners' psychotypology with regards to the respective four languages. The solids were obtained using the GeoGebra 5.0 software (GeoGebra, 2020).
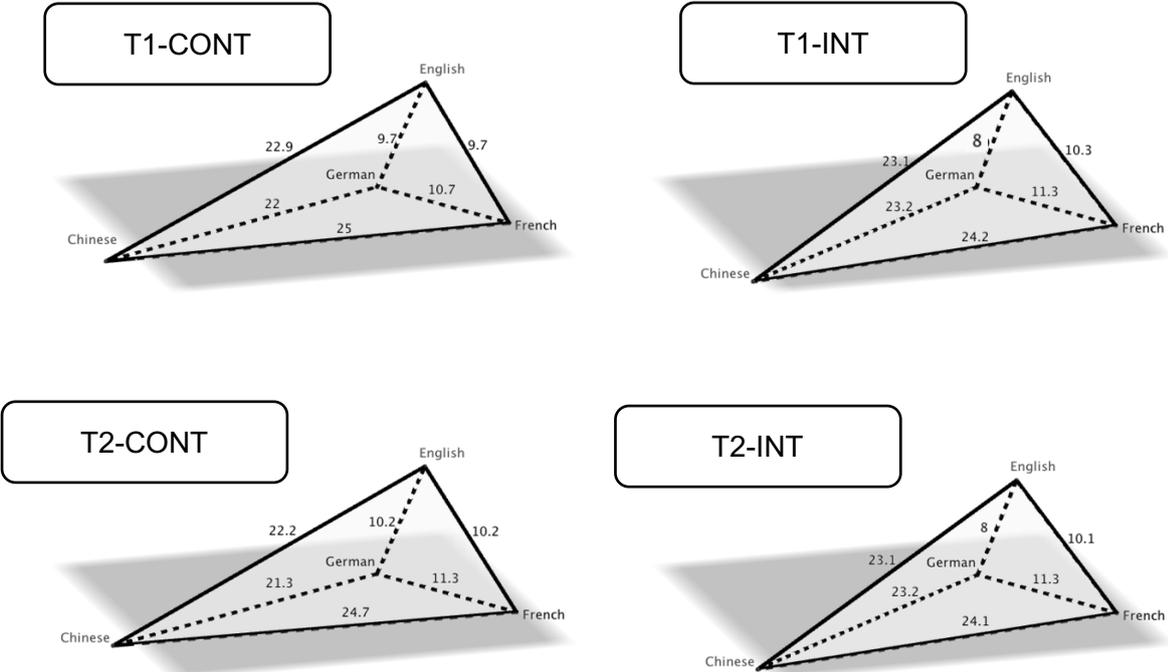
Figure 17. By-group and by-time three-dimensional representation of the students' psychotypology for the four languages (distances = normalised means as percentages)

Table 7 provides summary data for the psychotypological distances between English and German. The students' psychotypological distances were examined similarly as in the previous analyses, i.e. using linear mixed models, with class as a random effect but no covariate. First, the distances were normalised, i.e. the original distances measured in millimetres were divided by the sum of all distances between the six languages, which yields a percentage. As a result, a lower percentage indicates a shorter psychotypological distance. In order to capture a possible shift over time, interacting with the effect of the intervention, the differences between each learner's perceived distance prior to and after the intervention were calculated and the group (i.e. intervention) factor was sum-coded so that the intercept reflects the grand average shift over time, aggregated over the two groups. In so doing, the estimated group parameter represents the difference in shift between the control and test groups. All computations can be found in Appendix V.

| | | Min | Range | | Max | Median | Mean | SD |
			Lower	Upper				
T1	INT	0.53	4.95	10.55	22.05	6.70	7.96	4.31
	CONT	2.15	5.77	12.98	25.57	7.93	9.66	5.55
T2	INT	1.59	5.07	10.02	18.76	7.54	8.04	3.85
	CONT	1.15	5.50	12.15	25.54	9.00	10.21	6.03

Table 7. Summary data for the psychotypological distance between English and German per group and time (as percentages)

As shown in Figure 18, the learners consider English and German to be quite similar languages, including before the interlingual training. The values seem to be approximately normally distributed, but less so at time 1. According to the model, the class effects remain close to zero. The model's residuals are displayed in Appendix V. English and German are viewed as barely closer by the intervention group, also at time 1, compared to their counterparts. In fact, the perceived distance has increased (very slightly) from time 1 to time 2, even though the intervention negatively affects the shift from time 1 to time 2 (cf. Figure 20). The model computations did not yield a significant interacting effect of the intervention and time ($t(140)$= -0.53, p = 0.59).
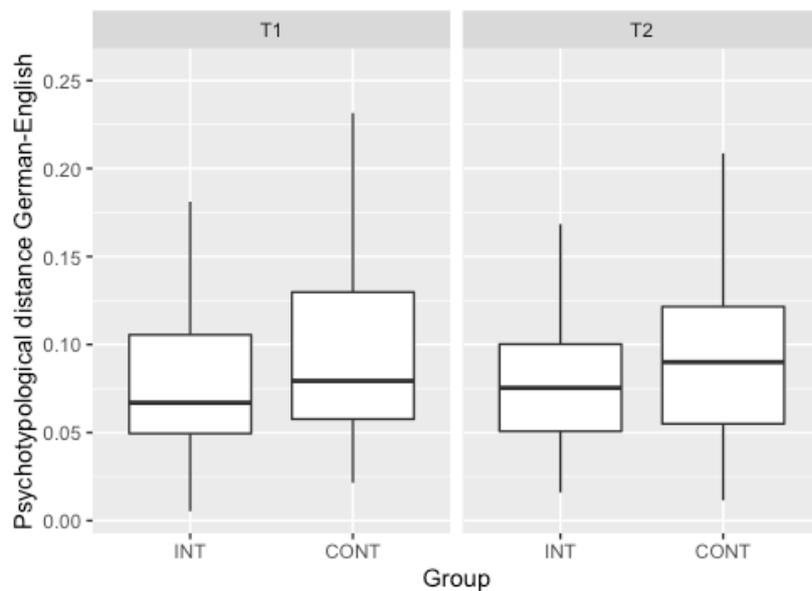
Figure 18. By-group psychotypological distance (as a percentage, e.g. 0.25 = 25% of all distances) between English and German before (T1) and after (T2) the interlingual training

The class effects also seem low since the multilevel model's estimate for the random class effect lies around 0. Figure 19 presents the by-class and by-group perceived distance between English and German before and after the intervention.
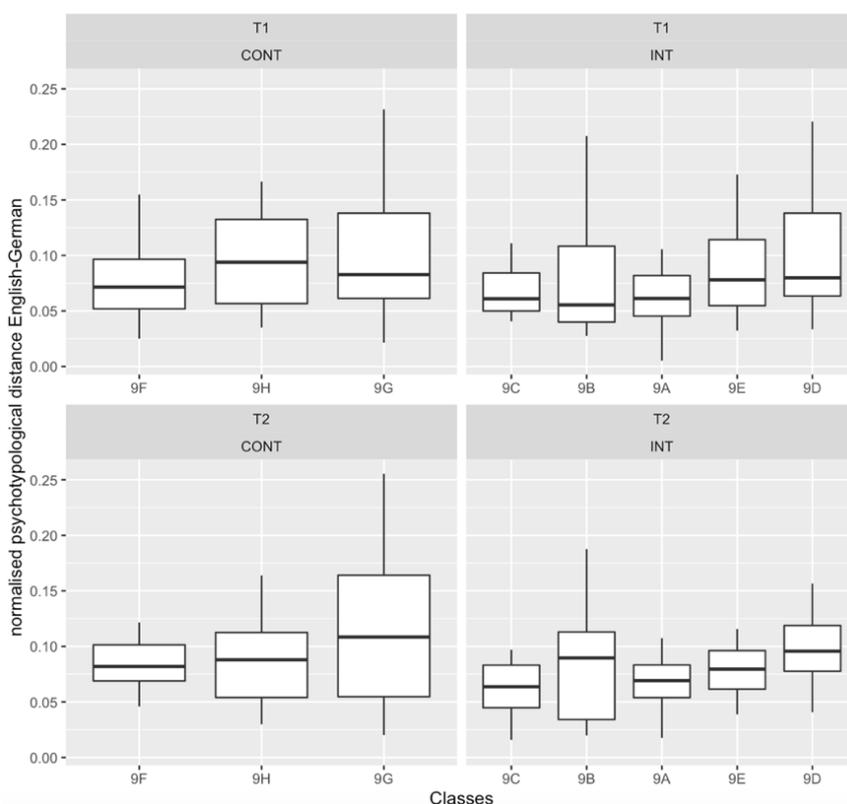
Figure 19. By-class psychotypological distance (as a percentage) between English and German before (T1) and after (T2) the interlingual training

As for the psychotypological distances between the other language pairs, no major by-time and by-group differences could be observed, as shown in Figure 20. Multilevel analyses did not yield any significant interactions between time and group for all the language pairs (cf. Appendix V).
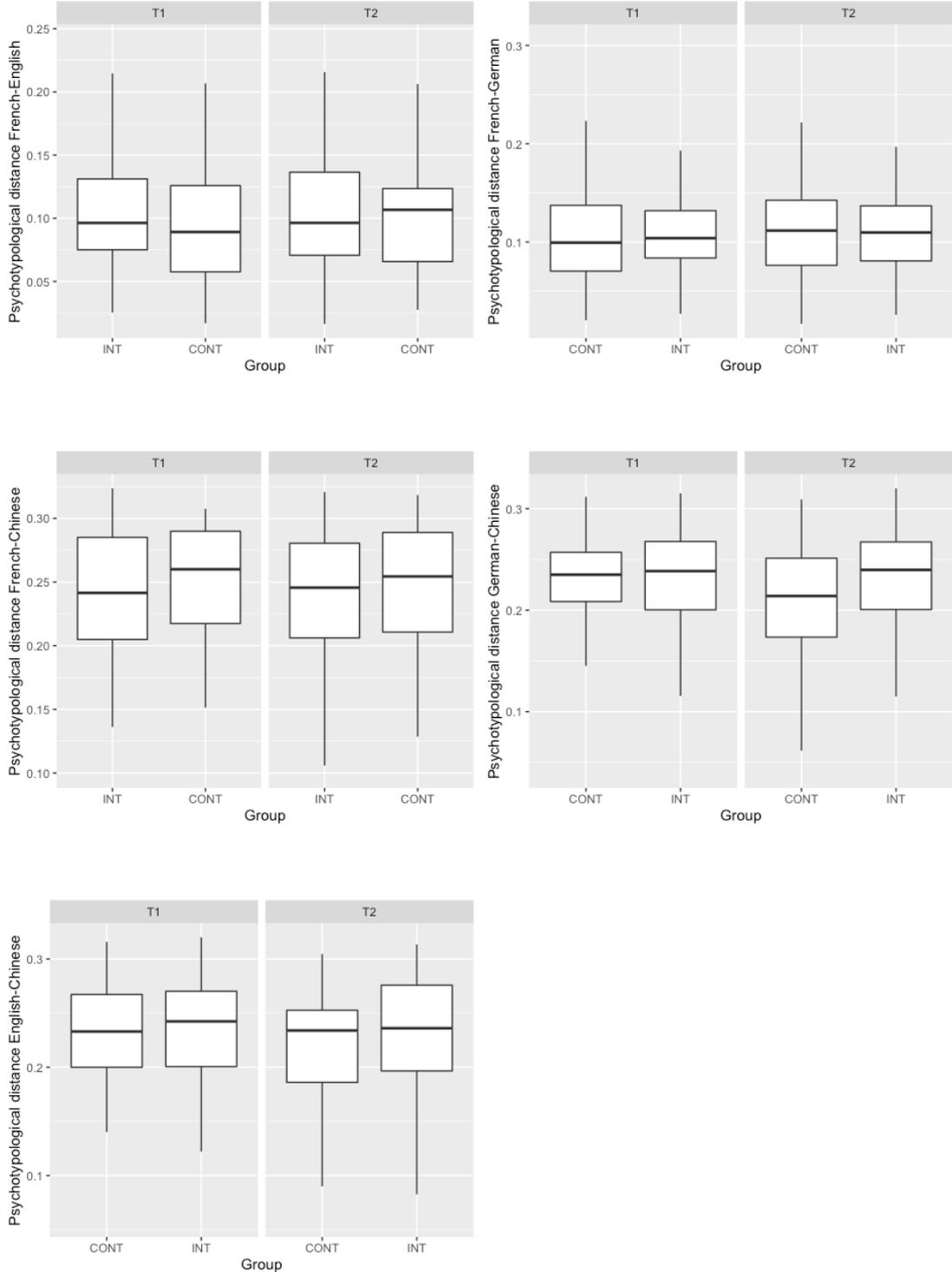
Figure 20. Psychotypological distances (as percentages) between the five other language pairs before (T1) and after (T2) the interlingual training by group.

The following illustration (Figure 21) depicts the by-time differences in perceived distance and the effect of the intervention (by-group differences) within the shift from time 1 to time 2. The intercepts represent the grand average shift from time 1 to time 2 and the estimates (n.Group) the difference in shift between the intervention and control groups.
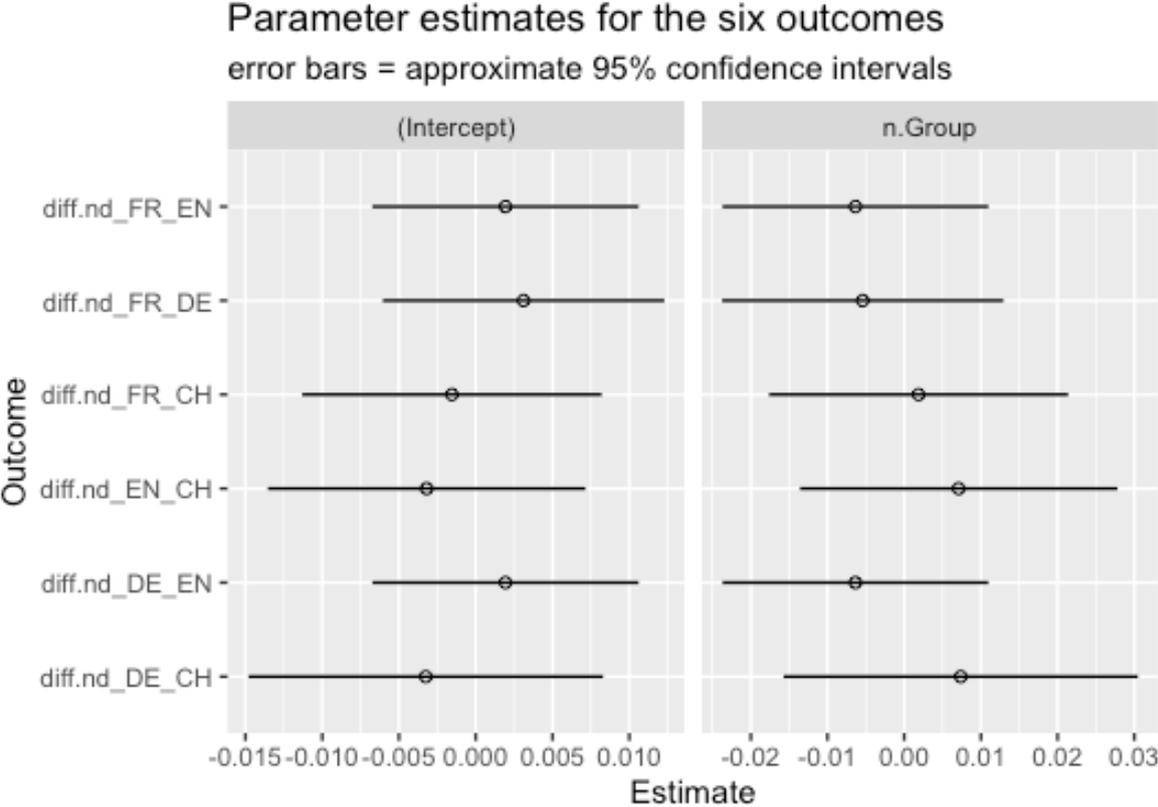
Figure 21. Parameter estimates for the six outcomes

5. Discussion

Based on the results presented in Chapter 4, the following sections will address the research questions and hypotheses in the light of the results (5.1), discuss and interpret these critically against the backdrop of the theoretical findings introduced previously in this paper (5.2).

5.1. Hypotheses and research questions

The analyses in Section 4.2 suggest that the intervention, i.e. the training in interlingual comparisons, had a limited, though significant impact on lower secondary school learners' cross-linguistic awareness, reflected by their scores in seven tasks eliciting their ability to identify cross-linguistic similarities. The students in the intervention group outperformed their counterparts by about one point and a half out of 43 in total. This small significant effect was, however, not confirmed in an alternative cluster-analysis. Consequently, the first hypothesis can only be accepted with a few reservations, particularly as the classes were not randomly assigned to the groups, and given the very small resulting effect size. Also, the students' global language competence in the three languages seems to be a stronger predictor of their scores on the cross-linguistic tasks.

Hypothesis 2 purported that time combined with interlingual training would decrease the learners' psychotypological distance between English and German. The results indicated that neither time nor the intervention significantly affected their psychotypology. The students in both groups showed similar perceived distances before and after the interlingual training. No major by-group differences could be observed. In this vein, Hypothesis 2 is rejected. Furthermore, no such significant interactions between time and groups were identified for the psychotypological distances between the other language pairs.

5.2. Interpretations

The students in the intervention group outstripped those in the control group by about 1.5 point (between 0.79 and 2.23 points) on the cross-linguistic test, which does not point to a considerable difference in scores. This suggests that a participant in the intervention can globally identify between (hardly) one and two additional correct items, compared to one of their counterparts. Yet, the relatively small difference between groups in the total test score remains interesting, particularly as learners may also have selected correct items at random, given the multiple-choice format of the test. However, it must be pointed out that the intervention group is nearly twice as large as the control group. Ideally, a greater number of participants would have been sampled to add more certainty to the statistical analyses.

A small difference between groups in scores is also manifest when looking at the distribution of the scores in each task, individually. In most tasks, a larger number of trained learners achieved higher scores (except in tasks 4 and 6, where the distribution of the scores is almost identical in both groups). Nevertheless, there are generally no clear-cut between-group differences.

The students performed differently in the seven tasks, with some tasks yielding higher scores than others. Tasks 2, 3 and 4 appeared to be the most challenging of all and showed floor effects. While recognising Latin- or French-related English words worked out rather well in task 1, the learners encountered more difficulties finding English words of Germanic origin in task 2. This may reflect a limited lexical range in L2 and/or L3, even though the given words should have been familiar to the learners and could have been selected by process of elimination if one can spot and rule out the French equivalents. Moreover, as explained in Section 2.2.3, cross-linguistic, and therefore also lexical similarities, as presented in the task (i.e. *street*; *king*; *two; have; do; house* – German equivalents: *Strasse; König; zwei; haben; tun; Haus*) are not necessarily self-evident, especially for young learners with restricted L2/L3 competence. The low scores may be the result of unsuccessful abductive reasoning. Also, it has been found that cognates are not necessarily viewed as such – at least not to the same extent – by different individuals (cf. Kaivapalu & Martin, 2014; Vanhove, 2014). In contrast, the last item of task 2, with the word 'house' (*Haus* in German) was oftentimes chosen correctly. Both English and German versions are well-known by the learners. Their spelling resemblance may be more striking and both words are pronounced identically. Also, the words 'card' and 'paper' may have caused some confusions as they are not only French but also German cognates as well (*Karte* and *Papier*).

The following tasks 3 and 4 – which focussed on phonological similarities – also showed floor effects in both groups, although a larger number of trained students performed better. Interlingual comparisons at the phonological level were a new and a probably cognitively more taxing task for these learners, which may explain the low scores. In fact, it is likely that the students were not aware of the phonological relationship at play, particularly as the task instructions do not hint at it explicitly. The learners may have been able to identify only the cognates whose equivalents they knew in the other language. English and German sound equivalences had hardly been practised, including during the interlingual training, wherein the students were merely introduced to phonological equivalences in English and German. Further exercises had been planned for consolidation, but were not administered since the extent of the intervention had to be shortened (cf. 3.4.4). Interestingly also, as discussed in Berthele (2011: 208ff.) – and this may apply to tasks 1, 2, 3 and 4 – correct inferences in written cognate guessing tasks may depend on the form (i.e. spelling) of the words, for instance if the beginning of a word in an unknown language is similar to the onset of its cognate in a learnt language

(e.g. English). For these school learners, if an English or German word differs more or less from its written equivalent in the other language, they may be less likely to identify it as a cognate.

Task 5 revealed a greater concentration of trained participants with higher scores. However, some learners in the control group achieved higher values than their counterparts, except for two extreme outliers in the intervention group. It is likely that the students in the intervention group were more prone to select the correct words on the basis of the suffixes since they had been exposed to the very same suffixes during the interlingual training. The learners in the control group may also have perceived the relationship between some English and German words' endings – some even better than most of the trained students – though not as well as their counterparts on average.

A ceiling effect can be observed in tasks 6 and 7, which focussed on word order (adjective – noun for English and German vs. noun – adjective for French) and the formation of compound nouns in the L1/L2/L3 respectively. The absence of difference in scores in tasks 6 may be due to the fact that students – early in year 9 – learn about adjectives and the ensuing rules (i.e. adjectives precede nouns) in English. For German, however, this topic is first covered in the next years. Task 6 offers two items per language. Most participants scored between 4 and the maximal score, i.e. 6. This means that, amongst these learners, many were able to apply the English rule to the German word order, including students in the control group. For one of them (item e)), however, the students may simply have translated it into French, which in this case results in the same word order as the German one (i.e. *Er hat eine grosse* Katze; in French: *Il a un grand chat*). Task 7 shows a similar picture, though with proportionally more students with higher scores in the intervention group. As a matter of fact, the rule for forming English and German compound nouns is very similar to the adjective word order. From the perspective of a French speaker, the word order is reversed. Consequently, the students may already have acquired a sense of this rule, as they should have encountered some examples of compound nouns in both languages from very early on (e.g. *Wörterbuch*; *school bag*; etc.). The trained students may have benefitted from the additional input, thus the slightly higher number of them with higher scores.

Be that as it may, one should be careful when interpreting the present results. The classes could not be randomly assigned to the two groups, which, as a result, may bias the outcome. For example, the intervention group's small advantage may be partially due to a teacher's effect. The intervention group's teachers participated voluntarily and were perhaps keener on working on language comparisons. In the experimental group, three of the five teachers were teachers of both English and German, whereas only one out of three teachers taught both languages in the control group. These students may already have been more sensitised to interlingual similarities by their teacher(s) prior to and during the interlingual training. The fact

that teachers resort to language comparisons is not unusual (cf. Schedel & Bonvin, 2017). On the other hand, the very small effect of the interlingual training may simply reflect the restricted influence metalinguistic training has on young learners with relatively low L2 and L3 language competence. In this view, cross-linguistic awareness may develop especially as a function of one's own language competences and other cognitive abilities.

Finally, the intervention combined with time did not impact the students' perceived typology between English and German as hypothesised, nor their psychotypology between any other language pair. In fact, their spatial representation of the typological distances between the suggested languages remained fairly similar over time, and in relative conformity with a 'factual' typological classification of the four languages, i.e. with English, German and French being closer to each other than Chinese to these languages. Each group follows a similar, though distinct pattern in terms of an increasing order of the perceived distances, although the mean distances are comparatively quite similar across both groups. For the control group, the perceived distances between English and German, and English and French are nearly equally the shortest distances of all, followed by French and German, Chinese and German, Chinese and English, and Chinese and French. This ascending order applies to both times of measure. The students in the intervention group perceive at both times English and German as the closest languages, followed by English and French, French and German, Chinese and English, Chinese and German (these two latter language pairs being though nearly identically close), and Chinese and French.

On the basis of the psychotypological measures prior to the intervention, the absence of difference in time and group between English and German suggests that the learners were already quite aware of cross-linguistic similarities shared by these languages. This can be confirmed by the fact that more than half of the participants in both groups (59 in the intervention group; 30 in the control group) chose English and German as more closely related compared to other language pairs. It is hard to determine whether their perception of similarities is indeed perceived objectively (i.e. based on existing knowledge) or only assumed (cf. Jarvis & Pavlenko, 2008). However, the students may already have assimilated commonalities between English and German (and French) through their early subsequent learning of French, German and English, and some sensitisation to interlingual similarities. From primary to early secondary school, such activities have particularly emphasised the existence of cognates and international words, which may have been the main feature retained by the learners when asked to use the ViLDiM-tool. It should be pointed out that the students were not required to assess typological distances on the basis of a specific structure or language area (e.g. lexis, word order, pronunciation, etc.).

Chinese being an unlearnt language, it seems quite fair to affirm that the students associated their lack or absence of knowledge in this language with remoteness (cf. 2.2.3). Interestingly also, despite the relatively similar perceived distances between these language pairs, the distances between the learners' L2/L3 and Chinese are slightly closer than their perceived distance between French and Chinese. This may suggest that the learners tend to 'group' unknown and/or less dominant languages together and points up the impact of language proficiency on psychotypology.

6. Conclusion

6.1. Summary

The present study aimed to examine the effect of an integrated approach to multiple language learning on young lower secondary school learners' tacit cross-linguistic awareness, and on their psychotypology including languages in and out of their repertoire, i.e. French, German, English, and Chinese. To do so, two groups of students were tested: an intervention group who received additional training in language comparisons and a control group with conventional instruction settings. The analysis of the students' cross-linguistic awareness was based on their scores on a test made up of multiple-choice items. These items should elicit cross-linguistic knowledge from the learners' L1/L2/L3 repertoire. In addition, the students' perceived typological distances between several language were measured at two different times – before and after the intervention – to identify any impact of time and the experiment on their psychotypology.

The widely accepted claim that extensive training in reflection upon languages leads to higher levels of meta- and cross-linguistic awareness finds some limited support in the present study. The trained students significantly, but only slightly outperformed their counterparts (by 1.5 points out of 43) in terms of a tacit form of cross-linguistic awareness. Given the very small advantage, it is doubtful whether the intervention carried out in this research project is worth the effort. Furthermore, owing to methodological impediments and constraints (see 3.3), one may also question the generalisability of the outcome.

Several reasons for this small, but still significant difference have been advanced. Some tasks in the cross-linguistic test turned out to be more challenging than others across both groups. The tasks where the focus lies on structures that the students had previous knowledge of (e.g. adjective-noun word order) were easier and showed little to no between-group differences. Newer and perhaps more complex aspects, such as phonological equivalences in German and English appeared to be more of a strain for both groups. A limited lexical range, a lack of practice in phonological similarities, and possibly 'inadequate' abductive processes may have hindered the learners from reaching higher scores, e.g. in the identification of English words of Germanic origin and the recognition of Germanic sound equivalences. Although more trained students achieved higher scores throughout the test, there is no certainty that this is entirely due to the interlingual training. The non-randomised assignment of the classes to the groups suggests that the intervention group's small advantage may as well depend on their teachers' practices, for instance, some of whom teach both English and German, and may more likely tend to tackle interlingual comparisons in general. Also, the results may suggest a limited effect of the intervention, as young learners may also need to further develop their

language competences and cognitive abilities (e.g. abductive interlingual inferencing) in order to be successful in tasks involving comparisons between languages.

With regards to the students' psychotypology, neither time nor the interlingual training affected their perceived distances between the six language pairs. Both groups presented – from a strictly typological point of view – arguably typologically 'appropriate' distances before and after the intervention. This suggests that the learners manifest a certain knowledge of structural similarities and differences for languages in and out of their repertoire. Whether this awareness of typological relationship is mostly perceived objectively or assumed remains unexplored.

6.2. Limitations and future directions

As already mentioned further above, this research project has shown its limitations in various aspects, but also highlights relevant prospects for future research on the implementation of an integrated approach to language learning and teaching in schools and its consequences.

First, methodological constraints arose before and during the execution of the intervention, which would in turn impact the quality and the meaningfulness of the results. The extent of the intervention and the choice of the teachers had to be negotiated. As a result, the classes were not randomly assigned to the groups. Still, it is likely that the trained students' advantage in cross-linguistic awareness – as small as it may be – is not caused by the interlingual training. Feedback from the learners on the reason for their answers in the test, for example, could have shed further light on their explicit cross-linguistic awareness, as Jessner (2006) defines it. Arguably, qualitative data – both from the learners and the teachers – may have brought about deeper insights into the interpretation of the results. However, it was deemed preferable not to overload the test, as recommended by some of the teachers, in addition to favouring quantitatively measurable data. Thus, again, only a tacit cross-linguistic awareness was analysed in the present study. School closures caused by the COVID-19 pandemic forced the total sample to be reduced, which inherently affects the statistical power of the experiment. Ideally, the larger the sample is, the more generalisable and statistically powerful the outcome is (cf. 3.2).

The findings suggest that reflection on cross-linguistic similarities and differences may only increase a certain form of cross-linguistic awareness to a restricted degree. At any rate, the present study does not invalidate the often claimed benefits of metalinguistic training as a valid aim of multilingual education. This being said, further longitudinal studies, involving a large number of participants in classroom settings and a long-term implementation of an integrated teaching approach, are still to be conducted in order to provide stronger evidence of such claims. Also, the results highlight the need for the development of measuring tools specifically for the field of cross-linguistic awareness and for the ability to reflect upon language. The

present study included only 9th- year, middle-track, lower-secondary school learners. Had this quasi-experiment been carried out in a lower or higher school track, or with a sample population of different age groups, there may have been a greater difference or no difference in the scores at all. As it could be seen previously (cf. 2.2), language proficiency seems to be a strong predictor of successful interlingual tasks, but further factors such as school tracking, socio-economic status, crystallised intelligence and age may as well play a part in successful metalinguistic training. Although no striking Mathew effect was identified in the present study, this does not imply that the risk does not exist, especially if stronger language learners achieve higher scores. Thus, lower and higher school tracks could be taken into account in future research. Moreover, no information about the students' attitudes towards such interlingual activities were collected. If these led to more positive attitudes towards language learning, this would mean that one of the aims of the CIIP to promote language learning would have been fulfilled (cf. CIIP, 2010: 62). Consequently, this could inspire future research.

Finally, the results regarding the students' psychotypology show that these learners – even with only a few years of language learning – are aware of the typological proximity between languages from and out of their repertoire. Again, it would be interesting to look into the reasons behind their perception of interlingual typological distances. Knowing about their psychotypology may help understand further how young school learners perceive language proximity in order for language teaching practitioners to facilitate positive transfer between related languages (cf. 2.2.4).

7. References

ALA. (2012). About language awareness. Association for language awareness. URL: https://www.languageawareness.org/?page_id=48 [21. 03. 2020].

Alderson, J. C., Haapakangas, E.-L., Huhta, A., Nieminen, L., & Ullakonoja, R. (2015). *The diagnosis of reading in a second or foreign language*. New York: Routledge.

Allgäuer-Hackl, E. (2017). *Multilingual/Metalinguistic Awareness in School Contexts Within a Dynamic Systems and Complexity Theory Perspective. The Effects of Training on Multiple Language Use and Multilingual Awareness*. PhD Dissertation, Universität Innsbruck.

Allgäuer-Hackl, E. & Jessner, U. (2013). Mehrsprachigkeitsunterricht aus mehrsprachiger Sicht: Zur Förderung des metalinguistischen Bewusstseins. In E. Vetter (Ed.). *Professionalisierung für sprachliche Vielfalt. Perspektiven für eine neue Lehrerbildung.* (pp. 111-148). Baltmannsweiler: Schneider Verlag Hohengehren.

Angelovska, T. (2017). Beyond instructed L2 grammar acquisition: Theoretical insights and pedagogical considerations about the role of prior language knowledge. *Studies in Second Language Learning and Teaching (SSLLT)*, 7(3), 397–419.

Angelovska, T. (2018). Cross-linguistic awareness of adult L3 learners of English: a focus on metalinguistic reflections and proficiency. *Language Awareness, 27*(1-2), 136-152. https://doi.org/10.1080/09658416.2018.1431243.

Angelovska, T., & Hahn, A. (2014). Raising language awareness for learning and teaching grammar. In A. Benati, C. Laval & M. Arche (Eds.). *The grammar dimension in instructed second language learning* (pp. 185–207). London: Bloomsbury Academic.

Barras, M., Peyer, E. & Lüthi, G. (2019). Mehrsprachigkeitsdidaktik im schulischen Fremdsprachenunterricht: Die Sicht der Lehrpersonen. *Zeitschrift für Interkulturellen Fremdsprachenunterricht 24*(2), 377–403. Retrieved from http://tujournals.ulb.tu-darmstadt.de/index.php/zif [22. 03. 2020].

Bates, D., Maechler, M., Bolker, B., Walker, S. (2015). Fitting Linear Mixed-Effects Models Using lme4. *Journal of Statistical Software, 67*(1), 1-48. doi:10.18637/jss.v067.i01.

Bentolila, A. (Ed.), Bastien, R., Benaych, P., Chiss, R., Crinon, J., Gallet, D., Guérault, D., Lallias, J.-C., Pachet, S., Robert, N., Sebag, S. (2012). *L'île aux mots. Francais 8e.* Paris: Nathan.

Berthele, R. (2011). On abduction in receptive multilingualism. Evidence from cognate guessing tasks. *Applied Linguistics Review, 2*, 191–219.

Berthele, R. (2019). Policy recommendations for language learning: Linguists' contributions between scholarly debates and pseudoscience. *Journal of the European Second Language Association, 3*(1), 1–11. https://doi.org/10.22599/jesla.50

Berthele, R., & Vanhove, J. (2014). Entre jeunes barbes et vieux de la vieille. Usages du répertoire plurilingue dans une tâche d'intercompréhension à travers les âges. *Bulletin Suisse de Linguistique Appliquée, 99*(3–4), 31–50.

Berthele, R., Lambelet, A. & Schedel Larissa S. (2017). Effets souhaités et effets pervers d'une didactique du plurilinguisme: L'exemple des inférences inter-langues. *Recherches et Applications, 61*, 146–155.

Blanche-Benveniste, C. & Valli, A. (Eds.) (1997). *L'intercompréhension : le cas des langues romanes.* Recherches et applications. Paris : Hachette.

Bourguignon, C. & Dabène, L. (1982). Le métalangage, un point de rencontre obligé entre professeurs de langue maternelle et de langue étrangère. *Le Français dans le Monde*. 245-250.

Bourguignon, C. & Candelier, M. (1988). La place de la langue maternelle dans la construction par l'élève des notions grammaticales requises pour l'apprentissage d'une langue étrangère. *Les Langues Modernes*, *82*, 19-34.

Bravo, M. A., Hiebert, E. H. & Pearson, P. D. (2007). Tapping the linguistic resources of Spanish/English bilinguals: The role of cognates in science. In R. K. Wagner, A. Muse and K. Tannenbaum (Eds.). *Vocabulary development and its implications for reading comprehension* (pp.140–156). New York: Guilford.

Brizic, K. (2006). The secret life of languages: Origin-specific differences in L1/L2 acquisition by immigrant children. *International Journal of Applied Linguistics* 16.3, 339–362.

Brohy, C. (2008). La didactique intégrée des langues: évolution et définitions. *Babylonia, 1*, 9-11.

Candelier, M. (Ed.) (2003). *Evlang – l'éveil aux langues à l'école primaire – Bilan d'une innovation européenne*. Bruxelles : De Boek - Duculot.

Candelier, M. (2006). L'éveil aux langues – une proposition originale pour la gestion du plurilinguisme en milieu scolaire – Contribution au Rapport mondial de l'UNESCO Construire des Sociétés du Savoir. In D. Cunningham, R. Freudenstein, & C. Odé (Eds.). *Language Teaching: A Worldwide Perspective - Celebrating 75 Years of FIPLV*. (pp.145-180). Belgrave: FIPLV.

Candelier, M. (2008). Approches plurielles, didactiques du plurilinguisme : le même et l'autre. *Cahiers de l'ACEDLE, 5*, 65-90.

Candelier, M., Camilleri-Grima, A., Castelloti, V., De Pietro, J.- F., Lörincz, I., Meissner, F.-J., Schröder-Sura, A., Noguerol, A., Molinié, M. (2012). *FREPA: A Framework of Reference for Pluralistic Approaches to Languages and Cultures: Competences and Resources*. Strasbourg. Conseil de l'Europe. Retrieved from https://www.ecml.at/Portals/1/documents/ECML-resources/CARAP-EN.pdf?ver=2018-03-20-120658-443 [10. 07. 2019].

Candelier, M. & Schröder-Sura, A. (2016). Mehrsprachigkeitsdidaktik et Didactique du plurilinguisme : structure du champ et terminologie - Quelques repères. *Synergie – Pays germanophones, 9*, 33-46.

Carroll, J. (1963). A Model of School Learning. *Teachers College Record*, *64*, 723-733.

Castellotti, V. (2001). *La langue maternelle en classe de langue étrangère.* Paris: CLE international.

Castellotti, V. & Moore, D. (2002). *Social representations of languages and teaching: Guide for the development of language education policies in Europe from linguistic diversity to plurilingual education.* Strasbourg: Language Policies, Council of Europe. Retrieved from http://www.coe. int/t/dg4/linguistic/Source/CastellottiMooreEN.pdf [10. 07. 2019]

Cathomas, R. (2003). Einblicke in eine integrale Sprachendidaktik (ISD). *Babylonia*, *3-4*, 64-67.

Cavalli, M. (2008). Didactique intégrée et approches plurielles. Conditions-cadres et place dans le curriculum. *Babylonia, revue pour l'enseignement et l'apprentissage des langues*, *1 (La didactique intégrée des langues: expériences et applications)*, 15-19.

Cenoz, J. (2001). The effect of linguistic distance, L2 status and age on cross-linguistic influence in third language acquisition. In J. Cenoz, B. Hufeisen & U. Jessner (Eds.). *Crosslinguistic Influence in Third Language Acquisition: Psycholinguistic Perspectives*. (pp. 8–20). Clevedon: Multilingual Matters.

Cenoz, J. (2003). The role of typology in the organization of the multilingual lexicon. In J. Cenoz, B. Hufeisen & U. Jessner (Eds.). *The Multilingual Lexicon*. (pp. 103–16). Dordrecht: Kluwer.

Cenoz, J. (2005) English in bilingual programs in the Basque Country. *The International Journal of the Sociology of Language, 171*, 41–50.

Cenoz, J. & Valencia, J. (1994). Additive trilingualism: evidence from the Basque country. *Applied Psycholinguistics, 15*, 197–209.

Cenoz, J., Hufeisen, B. & Jessner, U. (2001). *Cross-linguistic influence in third language acquisition. Psycholinguistic perspectives*. Clevedon: Multilingual Matters.

Cenoz, J., Hufeisen, B. & Jessner, U. (Eds.) (2003). *The multilingual lexicon*. Dordrecht: Kluwer Academic.

Clyne, M. 1997. Some of the things trilinguals do. In L. Wei (Ed.) (2010). *Bilingualism and Multilingualism. Critical Concepts in Linguistics, I*. (pp. 242–65). London and New York: Routledge.

Conférence intercantonale de l'instruction publique de la Suisse romande et du Tessin (CIIP) (2010). *Plan d'études romand: Langues (L) - Français*. Neuchâtel: CIIP. Retrieved from http://www. plandetudes.ch/ [08. 04. 2020].

Conférence intercantonale de l'instruction publique de la Suisse romande et du Tessin CIIP (2012). Plan d'étude romand: Conférence intercantonale de l'instruction publique de la Suisse romande et du Tessin. Retrieved from https://www.plandetudes.ch/home [10. 07. 2019].

Conseil de l'Europe (1983). *L'éducation des enfants migrants. Recueil d'informations sur les opérations d'éducation interculturelle en Europe*. Strasbourg : Conseil de la Coopération Culturelle, Division de l'Enseignement Scolaire.

Council of Europe (2020). A framework of reference for pluralistic approaches to languages and cultures. Retrieved from: https://carap.ecml.at/Descriptorsofresources/tabid/2654/language/en-GB/Default.aspx [08. 04. 2020]

Cortier, C. (2007). Perspectives interculturelles et interlinguistiques dans l'accueil et la scolarisation des nouveaux arrivants. *Les Cahiers de l'Asdifle*, *18*, 15-28.

Council of Europe (2001). *A Common European Framework of Reference for languages: Learning, teaching, assessment (CEFR)*. Strasbourg: Conseil de l'Europe. Retrieved from https://rm.coe.int/1680459f97 [10. 07. 2019].

De Angelis, G. (2007). *Third or additional language acquisition*. Clevedon: Multilingual Matters.

De Angelis, G. & Dewaele, J. M. (2011). *New trends in crosslinguistic influence and multilingualism research*. Clevedon: Multilingual Matters.

De Bot, K. (2012). Rethinking multilingual processing: From a static to a dynamic approach. In J. Cabrelli Amaro, S. Flynn, & J. Rothman (Eds.). *Third Language Acquisition in Adulthood* (pp.79-94). Amsterdam: John Benjamins.

DECS-DS (Eds.) (2015). *Piano di studio della scuola dell'obbligo ticinese.* Retrieved from https://scuolalab.edu.ti.ch/temieprogetti/pds [13. 05. 2019].

D-EDK (2015). *Lehrplan 21. Sprachen* (bereinigte Fassung vom 26.03.2015). Retrieved from www.lehrplan.ch [22. 03. 2020].

Dentler, S., Hufeisen, B. & Lindemann, B. (Eds.) (2000). *Tertiär- und Drittsprachen: Projekte und empirische Untersuchungen*. Tübingen: Stauffenburg

De Pietro, J.-F. (1995). Vivre et apprendre les langues autrement à l'école – une expérience d'éveil au langage à l'école primaire. *Babylonia, 2*, 32-36.

De Pietro, J.-F., Gerber, B., Leonforte, B. & Lichtenauer, K. (2015). Quelle place pour les approches plurielles dans les nouveaux plans d'études des trois régions linguistiques de la Suisse? *Babylonia, 2*, 59-65.

Deutsche Welle (2020). Didaktisierungstool. LingoFox.URL: https://lingofox.dw.com [10. 05. 2020].

Donmall, B.G. (Ed.) (1985). *Language Awareness*. London: Centre for Information on Language Teaching and Research.

Doyé, P. (2005). *L'intercompréhension.* Strasbourg. Conseil de l'Europe.

Dressler, C., Carlo, M. S., Snow, C. E., August, D. & White, C. E. (2011). Spanish-speaking students' use of cognate knowledge to infer the meaning of English words. *Bilingualism: Language and Cognition, 14*: 243–255.

Eckes, T. & Grotjahn, R. (2006). A closer look at the construct validity of C-tests. *Language Testing, 23*(3), 290–325. https://doi.org/10.1191/0265532206lt330oa

Eco, U. (1984). *Semiotica e filosofia del linguaggio*. Torino: Einaudi.

EDK, Schweizerische Konferenz der kantonalen Erziehungsdirektoren (2011). Grundkompetenzen für die Fremdsprachen. Nationale Bildungsstandards. Bern: EDK/CDIP/CDPE/CDEP .

Egli Cuenat, M., Manno, G. & Le Pape Racine, C. (2010). Lehrpläne und Lehrmittel im Dienste der Kohärenz im Fremdsprachencurriculum der Volksschule. *Beiträge zur Lehrerbildung 28*: 1, 109–124.

Egli Cuenat, M., Grossenbacher, B., Gubler, B. & Lovey, G. (2018). Plurale Ansätze in Lehrwerken und Lernmaterialien. Einblicke in aktuelle Entwicklungen mit besonderem Fokus auf die Schweiz. In S. Melo-Pfeifer & D. Reimann (Eds.). *Plurale Ansätze im Fremdsprachenunterricht in Deutschland. „State of the Art", Implementierung des REPA und Perspektiven* (pp.107-138)*.* Tübingen: Narr Francke Attempto.

Elmiger, D. (2008). L'introduction de l'anglais comme L3 à l'école primaire romande: vers l'application d'une didactique intégrée des langues. In M. I. Gibson. (Ed.). *Mehrsprachigkeit und multiples Sprachenlernen / Multilingualism and Multiple Language Acquisition and Learning. Mehrsprachigkeit: lernen und lehren / Multilingualism: Learning and Instruction / Le Plurilinguisme: apprendre et enseigner / O Plurilinguismo: aprender e ensinar. Selected papers from the L3 conference in Freiburg/Switzerland 2005* (pp.175-186)*.* Baltmannsweiler: Schneider Verlag Hohengehren.

Ender, A. (2007). *Wortschatzerwerb und Strategieeinsatz bei mehrsprachigen Lernenden. Aktivierung von Wissen und erfolgreiche Verknüpfung beim Lesen auf Verständnis in einer Fremdsprache*. Baltmannsweiler: Schneider Verlag Hohengehren.

Endt, E., Koenig, M., Pfeifhofer, P., Ritz-Udry, N., Pistorius, H. (2017). *Junior. Deutsch für die Romandie. Kursbuch 8. Klasse*. 1. Auflage. Stuttgart: Ernst Klett Sprachen.

Falk, Y. & Bardel, C. (2010). The study of the role of the background language in third language acquisition. The state of the art. *International Review of Applied Linguistics in Language Teaching, 48*(2-3), pp. 185-219.

Fehling, S. (2005). *Language Awareness und bilingualer Unterricht: Eine komparative Studie*. Frankfurt: Peter Lang.

Fischer, J. (2009). *Mehrsprachig sein – sprachenübergreifend denken. Eine empirische Studie zum Strategieeinsatz von mehrsprachigen Lernenden beim Übersetzen*. Diss. Univ. Innsbruck.

GeoGebra (2020). GeoGebra Math App. URL: https://www.geogebra.org [18. 06. 2020].

Golin, C., Lewandowska, H., Krzysik, I., Wrembel, M. & Kopeckova, R. (n.d.). Psychotypology. Exploring tools to measure language distance for research and teaching purposes. Retrieved from https://psychotypology.wordpress.com [15. 04. 2020].

Gooskens, C. & Heeringa, W. (2014). The role of dialect exposure in receptive multilingualism. *Applied Linguistics Review, 5* (1), 247–271.

Grotjahn, R. (2002). Konstruktion und Einsatz von C-Tests: Ein Leitfaden für die Praxis. In R. Grotjahn (Ed.). *Der C-Test: Theoretisch Grundlagen und praktische Anwendungen* (pp. 211-225). Bochum: AKS-Verlag.

Grzega, J. (2005). The Role of English in Learning and Teaching European Intercomprehension Skills. *Journal for EuroLinguistiX 2*, 1-18.

Häni Hoti, A. & Werlen, E. (2009). *Der Einfluss von Englisch auf das Französischlernen. Schlussbericht*. Nationales Forschungsprogramm 56 "Sprachenvielfalt und Sprachkompetenz in der der Schweiz". Schweizerischer Nationalfonds.

Hammarberg, B. (2001). Roles of L1 and L2 in L3 production and acquisition. In J. Cenoz, B. Hufeisen and U. Jessner (Eds.). *Cross-linguistic Influence in Third Language Acquisition: Psycholinguistic Perspectives* (pp. 21–41). Clevedon: Multilingual Matters.

Hammarberg, B. (2009). *Processes in third language acquisition*. Edinburgh: Edinburgh University Press.

Harsch, C. & Hartig, J. (2016). Comparing C-tests and Yes/No vocabulary size tests as predictors of receptive language skills. *Language Testing, 33*(4), 555–575. https://doi.org/10.1177/0265532215594642

Hawkins, E. (1984). *Awareness of language: An introduction*. Cambridge: Cambridge University Press.

Hawkins, E. (1999). Foreign language study and language awareness. *Language Awareness, 8*(3-4), 124-142.

Heinzmann, S., Müller, M., Oliveira, M., Häni Hoti, A., Wicki, W. (2009). *Englisch und Französisch auf der Primarstufe – Verlängerung des NFP-56-Projekts. Schlussbericht*. Forschungsbericht Nr. 23 der PH Zentralschweiz. Hochschule Luzern, Forschung und Entwicklung.

Herdina, P. & Jessner, U. (2002). *A Dynamic Model of Multilingualism. Changing the Psycholinguistic Perspective*. Clevedon: Multilingual Matters.

Herrenberger, A. (Ed.) (1999). *Vers une pédagogie inter-langues. Anglais, allemand, espagnol, portugais*. Strasbourg: CRDP d' Alsace.

Hoff, E., Core, C., Place, S., Rumiche, R., Señor, M. & Parra, M. (2012). Dual language exposure and early bilingual development. *Journal of Child Language, 39*(1), 1-27.

Hofer, B. (2014). Frühe Mehrsprachigkeit in Südtirol. Wie wirkt sich mehrsprachiger Unterricht auf das Sprachbewusstsein und auf die L2 und L3 der Lernenden aus? *Zeitschrift für Fremdsprachenforschung, 25*(2), 207-236.

Hofer, B. (2015). *On the Dynamics of Early Multilingualism. A Psycholinguistic Study*. Berlin/Boston: Mouton de Gruyter.

Hofer, B. & Jessner, B. (2019). Multilingualism at the primary level in South Tyrol: how does multilingual education affect young learners' metalinguistic awareness and proficiency in L1, L2 and L3? *The Language Learning Journal, 47*(1), 76-87. https://doi.org/10.1080/09571736.2016.1195865

Hoffmann, C. (1985). Language acquisition in two trilingual children. *Journal of Multilingual and Multicultural Development, 6*, 281–287.

Hua, Z. & David, A. (2010). Study Design: Cross-sectional, Longitudinal, Case, and Group. In L. Wei & M. Moyer (Eds.). *The Blackwell Guide to Research Methods in Bilingualism and Multilingualism. 3rd Ed* (pp. 88-107). Oxford: Blackwell Publishing Ltd.

Hufeisen, B. (1991). *Englisch als erste und Deutsch als zweite Fremdsprache. Empirische Untersuchung zur fremdsprachlichen Interaktion*. Frankfurt/M.: Lang.

Hufeisen, B. (2003a). Kurze Einführung in die linguistische Basis. In B. Hufeisen & N. Gerhard (Eds.). *Mehrsprachigkeitskonzept - Tertiärsprachenlernen - Deutsch nach Englisch* (pp.7-9). Strasburg: Europarat.

Hufeisen, B. (2003b). L1, L2, L3, L4, Lx – alle gleich? Linguistische, lernerinterne und lernerexterne Faktoren in Modellen zum multiplen Spracherwerb. In: N. Baumgarten, C. Böttger, M. Motz & J. Probst (Eds.). Übersetzen, Interkulturelle Kommunikation, Spracherwerb und Sprachvermittlung – das Leben mit mehreren Sprachen. Festschrift für Juliane House zum 60. Geburtstag. *Zeitschrift für Interkulturellen Fremdsprachenun- terricht* 8(2-3), 97-109. Retrieved from https://pdfs.semanticscholar.org/bd47/984793f5c21463a7ddc3939f0ccb3263 9618.pdf [27. 03. 2020].

Hufeisen, B. (2005). Multilingualism: Linguistic models and related issues. In B. Hufeisen & R.J. Fouser (Eds.). *Introductory readings in L3* (pp. 31–45). Tübingen: Stauffenburg.

Hufeisen, B. (2011, June). Whole language policy. Additional thoughts on a prototypical model. Retrieved from http://www.ecml.at/plurcur [26. 03. 2020].

Hufeisen,B. & Neuner,G. (Eds.) (2003). *Le concept de plurilinguisme : Apprentissage d'une langue tertiaire – L'allemand après l'anglais*. Strasbourg & Graz : Conseil de l'Europe.

James, C. (1996). A cross-linguistic approach to language awareness. *Language Awareness, 5*(3–4), 138–148. http://dx.doi.org/10.1080/09658416.1996.9959903

James, C. (1999). Language Awareness: Implications for the language curriculum. *Language, Culture and Curriculum, 12*(1), 94–115. http://dx.doi.org/10.1080/07908319908666571

Jarvis, S. & Pavlenko, A. (2008). *Cross-linguistic influence in language and cognition*. New York: Routledge.

Jessner, U. (1999). Metalinguistic awareness in multilinguals: cognitive aspects of third language learning. *Language Awareness* 3–4, 201–9.

Jessner, U. (2006). *Linguistic awareness in multilinguals: English as a third language.* Edinburgh: Edinburgh University Press.

Jessner, U. (2008). Multicompetence approaches to language proficiency development in multilingual education. In J. Cummins and N.H. Hornberger (Eds.). *Encyclopedia of Language and Education*, *Vol. 5: Bilingual Education* (pp. 91–103). Nueva York: Springer.

Jessner, U. (2017). Language awareness in multilinguals: Theroretical trends. In J. Cenoz, D. Gorter and S. May (Eds.). *Language Awareness and Multilingualism* (pp.19-29). Cham: Springer International Publishing.

Kaivapalu, A. & Martin, M. (2014). Measuring Perceptions of Cross-Linguistic Similarity between Closely related Languages: Finnish and Estonian Noun Morphology as a Testing ground. In H. Paulasto, L. Meriläinen, H. Riionheimo & M. Kok (Eds.). *Language Contacts at the Crossroads of Disciplines* (pp. 283-318). Cambridge: Cambridge Scholars Publishing.

Kellerman, E. (1983). Now you see it, now you don't. *Language Transfer in Language Learning 54*(12), 112–134.

Kellerman, E. (1986). An Eye for an Eye: Crosslinguistic Constraints on the Development of the L2 Lexicon. In E. Kellerman & M. Sharwood Smith (Eds.). *Crosslinguistic Influence in Second Language Acquisition* (pp.35-48). New York: Pergamon Press.

Kemp, C. (2001). *Metalinguistic awareness in multilinguals: Implicit and explicit grammatical awareness and its relationship with language experience and language attainment.* Unpublished Dissertation, University of Edinburgh, UK.

Kemp, C. (2007). Strategic processing in grammar learning: Do multilinguals use more strategies? *International Journal of Multilingualism, 4*(4), 241–261. http://dx.doi.org/10.2167/ijm099.0

Klein, H. G.. (2007). EuroComprehension. URL: http://www.eurocomprehension.eu [28. 06. 2020].

Kursiša, A., Neuner, G. (2006). *Deutsch ist easy! Lehrerhandreichung und Kopiervorlagen „Deutsch nach Englisch" für den Anfangsunterricht*. Ismaning: Max Hueber Verlag.

Kuznetsova, A., Brockhoff P. B., & Christensen R. H. B. (2017). lmerTest Package: Tests in Linear Mixed Effects Models. *Journal of Statistical Software*, *82*(13), 1-26. https://doi.org/10.18637/jss.v082.i13.

Lado, R. (1957)*. Linguistics Across Cultures: Applied Linguistics for Language Teachers*. Ann Arbor: The University of Michigan Press.

Lambelet, A. & Mauron, P.-Y. (2017). Receptive multilingualism at school: an uneven playing ground? *International Journal of Bilingual Education and Bilingualism*, *20*(7), 854-867. https://doi.org/10.1080/13670050.2015.1114583

Lubliner, S. & Hiebert, E. H. (2011). An analysis of English-Spanish cognates as a source of general academic language. *Bilingual Research Journal, 34*, 76–93.

MacKenzie, I. (2012). English as a lingua franca in Europe: bilingualism and multicompetence. *International Journal of Multilingualism, 9*(1), 83–100.

Manno, G. (2005): Das Frühenglische in der Deutschschweiz. Eine Chance für den Französischunterricht zum Neuanfang? Einige Überlegungen zu Spracheinstellungen und Tertiärsprachendidaktik. In B., Hufeisen & G., Neuner (Eds.). *Mehrsprachigkeitskonzept - Tertiärsprachenlernen - Deutsch nach Englisch* (2nd Edition) (pp.157.176). Europäisches Fremdsprachenzentrum: Council of Europe Publishing.

Manno, G.(2009). Französisch nach Englisch: Überlegung zur Tertiärsprachendidaktik. In A. Metry, E. Steiner, T. Ritz (Eds.). *Fremdsprachenlernen in der Schule* (pp. 129-144). Bern: hep-Verlag.

Manno, G. & Klee, P. (2009). Erste Erfahrungen in der Ostschweiz mit der Implementierung der integrativen Fremdsprachendidaktik: Eine Analyse des Lehrmittels *Young World. Babylonia, 4/2009,* 29-35*.*

Manno, G. & Egli Cuenat, M. (2018). Sprachen- und fächerübergreifende curriculare Ansätze im Fremdsprachenunterricht in der Schweiz. Curricula in zwei Bildungsregionen und Resultate aktueller empirischer Studien in der Deutschschweiz. *Zeitschrift für Fremdsprachenforschung (ZFF), 29*(2), 217–243.

Marx, N. (2008). Is the training of interlingual comprehension strategies possible? In M., Gibson, B. Hufeisen & C. Personne (Eds.). *Le plurilinguisme: apprendre et enseigner.* Selected papers from the L3 conference in Freiburg/Switzerland 2005 (pp.135-150). Baltmannsweiler: Schneider Verlag Hohengehren.

Marx, N. (2016a). Introduction to the Section 'Multilingual and Plurilingual Education and Learning'. *Babylonia, 3*, 10-13.

Marx, N. (2016b). Lernen von zweiten und weiteren Fremdsprachen im Sekundarschulalter. In K.-R. Bausch, E. Burwitz-Melzer, H.-J. Krumm, G. Mehlhorn & C. Riemer (Eds.). *Handbuch Fremdsprachenunterricht* (6th edition) (pp. 295-300). Tübingen/Basel: Franke.

Meissner, F.-J., Meissner, C., Klein, H. & Stegmann, T. (2004). *EuroComRom. Les sept tamis. Lire les langues romanes dès le début*. Aachen : Shaker-Verlag.

Müller-Lancé, J. (2003). *Der Wortschatz romanischer Sprachen im Tertiärsprachenerwerb. Lernerstrategien am Beispiel des Spanischen, Italienischen und Katalanischen*. Tübingen, Stauffenburg.

Mißler, B. (1999). *Fremdsprachenlernerfahrungen und Lernstrategien*. Tübingen: Stauffenburg.

Neuner, G. (2003). Mehrsprachigkeitskonzept und Tertiärsprachendidiaktik. In B. Hufeisen & G. Neuner (Eds.). *Mehrsprachigkeitskonzept – Tertiärsprachenlernen – Deutsch nach Englisch* (pp.13-34). Graz: Council of Europe/European Centre for Modern Language.

Neuner, G., Hufeisen, B., Kursiša, A., Marx, N., Koithan, U. & Erlenwein, S. (2009). *Deutsch als zweite Fremdsprache*. Berlin: Langenscheidt.

Odlin, T. (1989). *Language transfer: Cross*-linguistic *influence in language learning*. Cambridge: Cambridge University Press.

Oksaar, E. (1977). On becoming trilingual. In C. Molony, H. Zobl & W. Stölting (Eds.). *Deutsch im Kontakt mit anderen Sprachen* (pp. 296-307). Kronberg: Scriptor.

Ó Laoire, M. & Singleton, D. (2009). The role of prior knowledge in L3 learning and use. Further evidence of psychotypological dimensions. In L. Aronin and B. Hufeisen (Eds.). *The Exploration of Multilingualism* (pp. 79–102). Amsterdam: John Benjamins.

Otwinowska-Kasztelanic, A. (2011). Awareness and affordances: Multilinguals versus bilinguals and their perception of cognates. In G. De Angelis & J.-M. Dewaele (Eds.). *New trends in crosslinguistic influence and multilingualism research* (pp.1–18)*. Bristol: Multilingual Matters.

Parminter, S.(2015). *English in Mind 9e . Language Builder*. Cambridge: Cambridge University Press.

Parminter, S., Reilly, T., Hart, B., Puchta, H. & Stranks, J. (2015). *English in Mind 9e . Teacher's Resource Book*. Cambridge: Cambridge University Press.

Perregaux, C. (1995). L'école, espace plurilingue. *Lidil*, *11*, 125-139.

Pinto, M.A., Titone, R. & Trusso, F. (1999). *Metalinguistic Awareness: Theory, Development and* Measurement *Instruments*. Pisa and Rome: Istituti Editoriali e Poligrafici Internazionali.

Pinto, M.A., Candilera, G. & Iliceto, P. (2003). *TAM-2 Test di abilità metalinguistiche n. 2 (9-14 anni). La valutazione dello sviluppo metalinguistico tra scuola elementare e scuola media*. Roma: Scione Editore.

Porcher, L. (1978). *L'interculturalisme en Europe*. Strasbourg: Conseil de l'Europe.

Puchta, H., Stranks, J., Gerngross, G., Holzmann, C., Lewis-Jones, P., Parminter, S. & De Henseler, Y. (2014). *More! Student's Book 8^e*. Cambridge: Cambridge University Press.

Puchta, H., Stranks, J. & Parminter, S. (2016). *English in Mind 10^e. Student's Book*. Cambridge: Cambridge University Press.

R Core Team (2020). R: A language and environment for statistical computing. R Foundation for Statistical Computing, Vienna, Austria. URL: https://www.R-project.org/.

Reichert, M., Keller, U. & Martin, R. (2010). The C-test, the TCF and the CEFR: a validation study. In R. Grotjahn (Ed.). *Der C-Test: Beitrage aus der aktuellen Forschung/The C-Test: Contributions from Current Research* (pp.205-234). Frankfurt am Main: Peter Lang.

Ringbom, H. (2007). *Crosslinguistic similarity in foreign language learning.* Clevedon: Multilingual Matters.

Ringbom, H. & Jarvis, S. (2009). The importance of cross-linguistic similarity in foreign language learning. In M. H. Long and C. J. Doughty (Eds.). *Handbook of language teaching* (pp. 106–118). Chichester: Wiley Blackwell.

Roulet, E. (1980). *Langue maternelle et langues secondes – vers une pédagogie intégrée*. Paris: Hatier-Credif.

Schedel, Larissa S. & Bonvin, A. (2017): „Je parle pas l'allemand. Mais je compare en français": LehrerInnenperspektiven auf Sprachvergleiche. *Zeitschrift für Interkulturellen Fremdsprachenunterricht, 22(*2), 116–127.

Stanovich, K. E. (2000). *Progress in understanding reading: Scientific foundations and new frontiers.* New York: Guilford Press.

Tremblay, C. (2010). L'Observatoire européen du plurilinguisme: présentation et projets. In C. Clairis (Ed.). *Variétés et enjeux du plurilinguisme* (pp. 13–31). Paris: Harmattan.

Tsang, W. L. (2015). Learning more, perceiving more? A comparison of L1 Cantonese-L2 English-L3 French speakers and L1 Cantonese–L2 English speakers in Hong Kong. *International Journal of Multilingualism, 12*(3), 312-337.

Tschoumy, J.-A. (1983). *Pédagogie intégrée de la langue maternelle et des langues secondes*. Neuchâtel: IRDP.

Vanhove, J. (2014). *Receptive multilingualism across the lifespan: Cognitive and linguistic factors in cognate guessing*. Ph.D. thesis. University of Fribourg.

Vanhove, J. (2015). Analyzing randomized controlled interventions: Three notes for applied linguists. *Studies in Second Language Learning and Teaching*, *5*(1). 135–152.

Vanhove, J., & Berthele, R. (2015). The lifespan development of cognate guessing skills in an unknown related language. *Iral-International Review of Applied Linguistics in Language Teaching, 53(*1), 1–38. https://doi.org/10.1515/iral-2015-0001

Varro, G. (2007). Les présupposés de la notion d'interculturel – Réflexions sur l'usage du terme depuis trente ans. *Synergies Chili*, *3*, 35-44.

Williams, S. & Hammarberg, B. (1998). Language switches in L3 production: implications for a polyglot speaking model. *Applied Linguistics, 19*(3), 295–333.

Wokusch, S. & Lys, I. (2007). Überlegungen zu einer integrativen Fremdsprachendidaktik. Beiträge zur Lehrerbildung. *Beiträge zur Lehrerinnen- und Lehrerbildung (BZL), 25*(2), 168-179. Retrieved from http://hdl.handle.net/20.500.12162/172 [10. 07. 2019].

Wokusch, S. (2008). Didactique intégrée des langues (étrangères) à l'école: vers l'enseignement des langues de demain!. *Prismes. Revue pédagogique HEP, 8*, 30-34.

Wrembel, M., Lewandowska, H., Krzysik, I., Golin, C. (2018). The perception of language distance in multilingual acquisition: A proposal of a new measure. Conference talk at *The XIth International Conference on Third Language Acquisition and Multilingualism* in Lisbon, Sep 13-15, 2018. Retrieved from https://psychotypology.wordpress.com/vildim/ [14. 04. 2020].

8. Declaration of honour

I, the undersigned, Cédric Diogo, do solemnly declare that I prepared this Master's thesis independently and that the thoughts taken directly or indirectly from other sources are indicated accordingly.

Fribourg, July 14th 2020, Cédric Diogo

9. Appendices

I. Interlingual activities with answers

Activity 1: A look at the history of English

Environ 350 millions de personnes sur Terre parlent l'anglais comme langue première. Ils vivent en Grande-Bretagne, en Amérique du Nord, en Australie en Nouvelle Zélande, en Inde, et à certains endroits en Afrique et aux Caraïbes. Voici un petit résumé de l'histoire de la langue anglaise.
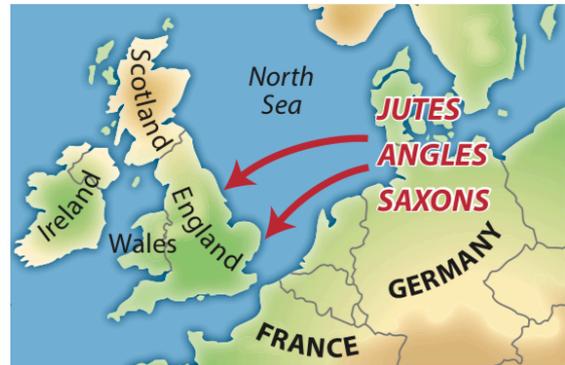
(Source: English in Mind 10e, p.11)

Old English: Au 5ème siècle après J.-C., les Angles, les Saxons et les Jutes envahissent la Grande-Bretagne par le nord. Ils viennent de pays que l'on nomme aujourd'hui le Danemark et l'Allemagne du nord. Ces peuples parlaient des langues germaniques. Le people d'Angleterre adopte alors la même langue que l'on appelle aujourd'hui le vieil anglais (*Old English*). Les mots **strong** et **water** viennent du viel anglais.

Middle English: En 1066, Guillaume de Normandie conquiert la Grande-Bretagne. Les nouveaux envahisseurs, les Normands, parlent à cet époque un dialecte français. Les Anglais se mettent alors à l'apprendre et à le parler, et de nombreux mot français sont intégrés dans le vocabulaire anglais, comme par exemple les mots **beef** et **pork**. On appelle cette langue le moyen anglais (*Middle English*). Cette langue était très différente de l'anglais parlé actuellement.

A l'époque de Shakespeare: Autour du 16ème siècle, l'anglais de l'époque n'était pas très différent de celui d'aujourd'hui. William Shakespeare était un écrivain anglais connu de cette époque. C'est également à cette période que l'on a commencé à inventer des mots anglais d'origine grecque et latine.

Modern English: L'anglais moderne (*Modern English*) a continué à évoluer au fur et à mesure des conquêtes et des déplacement des Anglais à travers le monde. A chaque rencontre avec un autre peuple, l'anglais change et adopte de nouveaux mots. Par exemple, **kangaroo** vient de la langue des aborigènes australiens, et **shampoo** vient d'une langue indienne. L'anglais est bel et bien une langue internationale.

1. Which language do these English words come from? Complete the table.

Words:

~~beef~~ – ~~pork~~ – ~~water~~ – ~~strong~~ – adult– interest – milk – generous – go – create – drink – hour – shoe – sun – land – government – come – beauty – hot – jealous

French	German
beef, pork, _____, _____, _____, _____, _____, _____, _____, _____	**water, strong,** _____,_____, _____, _____, _____, _____, _____, _____,

Activity 1: A look at the history of English. Answer key

Which language do these English words come from? Complete the table.

Words:

> beef – pork – water – strong – adult– interest – milk – generous –
> go – create – drink – hour – shoe – sun – land – government –
> come – beauty – hot – jealous

French	German
beef, pork, adult, interest, generous, create, hour, government, beauty, jealous	**water, strong, milk, go, drink, shoe, sun, land, come, hot**

Activity 2: A bilingual week (word stress)

1. **Write down the weekdays in English**

Mon_____ / Tue_____ / _____ / _____ / _____ /
_____ / _____

2. **Listen to your teacher and repeat the days. Where's the stress? Highlight the stressed syllables.**
3. **Listen to the weekdays in German. Highlight the stressed syllables.**

Mon-tag / Diens-tag / Mitt-woch / Don-ners-tag / Frei-tag / Sams-tag / Sonn-tag

4. **Complete the rules and put a cross in the correct boxes.**

En anglais, on accentue la **première**   / **dernière**   syllabe de mots à 2 ou 3 syllabes (en général).
En allemand, on accentue la **première**   / **dernière**   syllabe de mots à 2 ou 3 syllabes (en général).

Activity 2: A bilingual week (word stress). Answer key

1. **Write down the weekdays in English**

Monday / Tuesday / Wednesday / Thursday / Friday / Saturday / Sunday

2. **Listen to your teacher and repeat the days. Where's the stress? Highlight the stressed syllables.**
3. **Listen to the weekdays in German. Highlight the stressed syllables.**

Mon-tag / Diens-tag / Mitt-woch / Don-ners-tag / Frei-tag / Sams-tag / Sonn-tag

4. **Complete the rules and put a cross in the correct boxes.**

En anglais, on accentue la **première** ■ / **dernière**   syllabe du mot (en général).
En allemand, on accentue la **première** ■ / **dernière**   syllabe du mot (en général).

Activity 3 : So many things in common!

1. **A lot of French, German and English words are alike. Complete the table with the correct words below and compare the words.**

the family – la famille – die Familie

English	Français	Deutsch
parents	les parents	die Eltern
_____	le père	_____
_____	_____	die Mutter
Child (pl. children)	_____	_____
_____	la sœur	_____
_____	_____	der Bruder
daughter	_____	_____
_____	le fils	_____
_____	_____	der Cousin, die Cousine
aunt	_____	_____
_____	l'oncle	_____
_____	_____	die Nichte
nephew	_____	_____

der Onkel – father – der Vater – die Tochter – la tante – le cousin,-e – der Neffe – le neveu – brother – uncle – der Sohn – mother – l'enfant – la fille – das Kind,-er – la nièce – son – niece – la mère – sister – le frère – der Bruder – die Schwester - cousin

2. **The body. Complete with the words from the box below. Write the French words on the dashed line (_ _ _ _).**

3. **Compare the words. Which language is closer to the English words**

_____

the body – le corps – der Körper

die Schulter
shoulder
- - - - - - - - - - - - -

_____
arm
- - - - - - - - - - - - -

_____
breast / chest
- - - - - - - - - - - - -

_____
elbow
- - - - - - - - - - - - -

_____
hand
- - - - - - - - - - - - -

_____
finger
- - - - - - - - - - - - -

_____
knee
- - - - - - - - - - - - -

_____
foot
- - - - - - - - - - - - -

die Schulter · die Brust · der Arm · der Ellbogen · die Hand · der Finger · das Knie · der Fuß

(Source: *Deutsch ist easy!*, p.24)

Activity 3 : So many things in common! Answer key

1. **A lot of French, German and English words are alike. Complete the table and compare the words. Use a dictionary if necessary.**

the family – la famille – die Familie

English	Français	Deutsch
parents	les parents	die Eltern
father	le père	der Vater
mother	la mère	die Mutter
Child (pl. children)	l'enfant	das Kind (pl. die Kinder)
sister	la sœur	die Schwester
brother	le frère	der Bruder
daughter	la fille	die Tochter
son	le fils	der Sohn
cousin	le cousin, la cousine	der Cousin, die Cousine
aunt	la tante	die Tante
uncle	l'oncle	der Onkel
niece	la nièce	die Nichte
nephew	le neveu	der Neffe

2. **The body. Complete with the words from the box below. Write the French words on the dashed line (_ _ _).**

3. **Compare the words. Which language is closer to the English words?**

For body parts, German is closer to English

the body – le corps – der Körper

die Schulter
shoulder
l'épaule

die Brust
breast / chest
la poitrine

die Hand
hand
la main

das Knie
knee
le genou

der Arm
arm
le bras

der Ellbogen
elbow
le coude

der Finger
finger
le doigt

der Fuss
foot
le pied

die Schulter · die Brust · der Arm · der Ellbogen · die Hand · der Finger · das Knie · der Fuß

(Source: *Deutsch ist easy!*, p.24)   68

Activity 4: English and German sounds compared: the consonants.

1. Look at each set of words (English vs. German). Look at the <u>consonants</u>. <mark>Highlight</mark> the differences and complete the sentences.

Ex.:   EN: good-blood-do ⬌ DE: gut-Blut-tun

➡ In English, "<u>d</u>"   is (often) "<u>t</u>" in German.

ENGLISH	DEUTSCH
water – heart – foot	Wasser – Herz – Fuss

➡ In English, _____   is (often) _____ or _____ in German.

ENGLISH	DEUTSCH
apple – help – pepper	Apfel – helfen – Pfeffer

➡ In English, _____   is (often) ____ or ____ in German.

ENGLISH	DEUTSCH
thank – that – three	Dank – das – drei

➡ In English, _____   is (often) _____ in German.

ENGLISH	DEUTSCH
cook – book – week	kochen – Buch – Woche

➡ In English, _____   is (often) _____ in German.

ENGLISH	DEUTSCH
give – love – evening	geben – Liebe – Abend

➡ In English, _____   is (often) _____ in German.

Activity 4: English and German sounds compared: the consonants. Answer key

1. Look at each set of words (English vs. German). Look at the <u>consonants</u>.

<mark>Highlight</mark> the differences and complete the sentences.

Ex.:　　　　　　EN: goo<mark>d</mark>-bloo<mark>d</mark>-<mark>d</mark>o　⟷　DE: gu<mark>t</mark>-Blu<mark>t</mark>-<mark>t</mark>un

⟹　　In English, "<u>d</u>"　　　　　is (often) "<u>t</u>" in German.

ENGLISH	DEUTSCH
water – heart – foot	Wasser – Herz – Fuss

⟹ In English, "**t**"　　　　　is (often) "**s**" or "**z**"[**ts**] in German.

ENGLISH	DEUTSCH
apple – help – pepper	Apfel – helfen – Pfeffer

⟹ In English, "**p**"　　　　　is (often) "**f**" or "<u>**pf**</u>" in German.

ENGLISH	DEUTSCH
thank – that – three	Dank – das – drei

⟹ In English, "**th**"　　　　　is (often) "**d**" in German.

ENGLISH	DEUTSCH
cook – book – week	kochen – Buch – Woche

⟹ In English, "**k**"　　　　　is (often) "**ch**" in German.

ENGLISH	DEUTSCH
give – love – evening	geben – Liebe – Abend

⟹ In English, "**v**"　　　　　is (often) "**b**" in German.

Activity 5: English and German sounds compared: the vowels.

1. Look at each set of words (English vs. German). Look at the <u>vowels</u>. <mark>Highlight</mark> the differences and complete the sentences.

Ex.: EN: st<mark>o</mark>ne-b<mark>o</mark>ne-al<mark>o</mark>ne ⬌ DE: St<mark>ei</mark>n-B<mark>ei</mark>n-all<mark>ei</mark>n

➡ In English, "o [ou] " is (often) "ei" in German.

ENGLISH	DEUTSCH
my – wine – fire	mein – Wein – Feuer

➡ In English, _____ is (often) ___ or ____ in German.

ENGLISH	DEUTSCH
house – mouse – out	Haus – Maus – aussen

➡ In English, _____ is (often) _____ in German.

ENGLISH	DEUTSCH
good – foot – book	gut – Fuss – Buch

➡ In English, _____ is (often) _____ in German.

ENGLISH	DEUTSCH
dream – cheap – leaf	Traum – kaufen – Laub

➡ In English, _____ is (often) _____ in German.

ENGLISH	DEUTSCH
light – right – daughter	Licht – richtig – Tochter

➡ In English, a vowel + gh is (often) a vowel + _____ in German.

Activity 5: English and German sounds compared: the vowels. Answer key

1. Look at each set of words (English vs. German). Look at the <u>vowels</u>. <mark>Highlight</mark> the differences and complete the sentences.

Ex.:   EN: st<mark>o</mark>ne-b<mark>o</mark>ne-al<mark>o</mark>ne ⬌   DE: St<mark>ei</mark>n-B<mark>ei</mark>n-all<mark>ei</mark>n

➡ In English, "o [ou] "   is (often) "ei" in German.

ENGLISH	DEUTSCH
my – wine – fire	mein – Wein – Feuer

➡ In English, <u>"i" [aI]</u>   is (often) <u>"ei" [aI]</u> or <u>"eu" [OI]</u> in German.
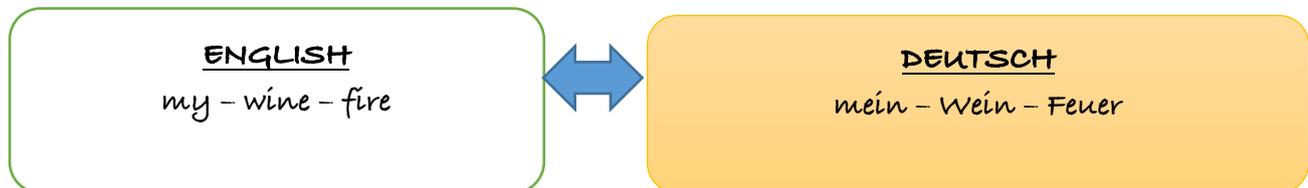
ENGLISH	DEUTSCH
house – mouse – out	Haus – Maus – aussen
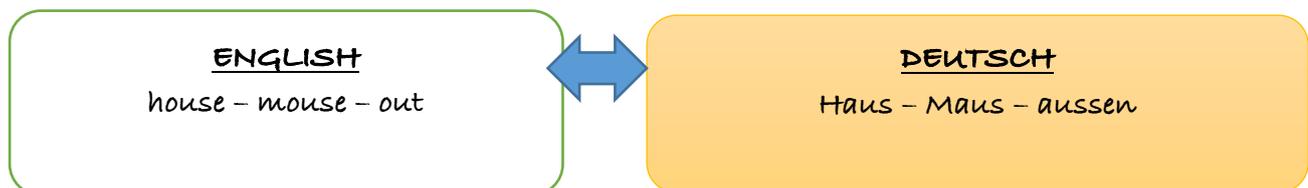
➡ In English, <u>"ou" [au]</u>   is (often) <u>"au"</u> in German.

ENGLISH	DEUTSCH
good – foot – book	gut – Fuss – Buch
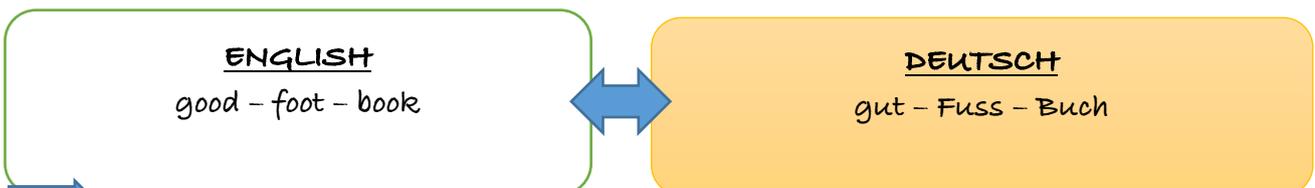
➡ In English, <u>"oo" [u:]</u>   is (often) "u" [u:] in German.

ENGLISH	DEUTSCH
dream – cheap – leaf	Traum – kaufen – Laub
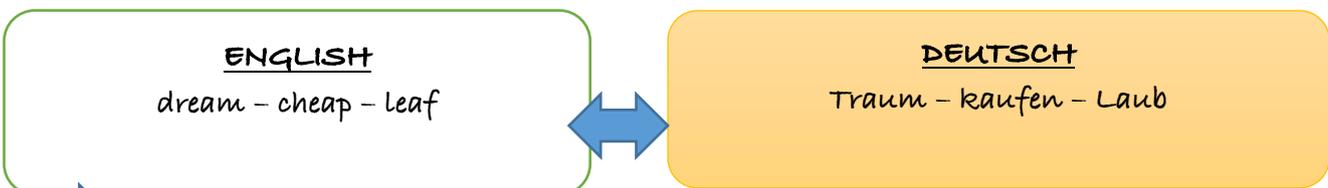
➡ In English, <u>"ea" [i:] or [e]</u>   is (often) <u>"au"</u> in German.

ENGLISH	DEUTSCH
light – right – daughter	Licht – richtig – Tochter
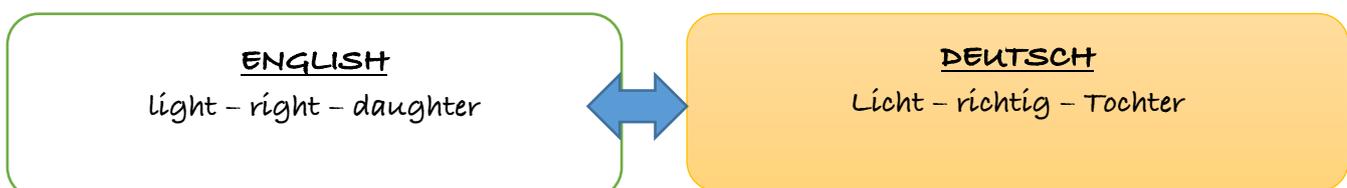
➡ In English, a vowel + gh   is (often) a vowel + <u>"ch" [ç] or [x]</u> in German.

Activity 6: Word formation – suffixes in adjectives

1. Here are some common English suffixes in adjectives. We use suffixes to form new words. Look at the examples below.

   -y: cloud**y** - tin**y**
   -ful: beauti**ful** - success**ful**
   -able/-ible: drink**able** - poss**ible**
   -ish: child**ish** – Engl**ish**
   -ly: year**ly** – month**ly**
   -less: help**less** - home**less**

2. Adjectives: Complete the table with the adjectives in the box. Highlight the suffixes.

English	French	German
childish	enfantin	kindisch
loveless	sans-coeur	
	curieux	neugierig
	capable	fähig
	respectueux	
	venteux	
	journalier	

Adjectives in EN-DE:
curious – täglich – ~~sans-coeur~~ – ~~neugierig~~ – respectful – ~~fähig~~ – lieblos – windy – capable - respektvoll – daily – ~~kindisch~~ – ~~childish~~ – windig – ~~loveless~~ - ~~capable~~

- These suffixes are similar in English and German:
  <u>-ish</u>/<u>-isch</u>; _____ /_____; _____ /_____; _____ /_____; _____ /_____

- These suffixes are similar in English and French:
  <u>-eux/-ous</u>; _____ / _____

3. Look at these words. Find the correct suffixes and make adjectives.
   Example: nuage=>nuag**eux**   cloud=>cloud**y**   Wolke=>wolk**ig**

   French   **English**   **German**
   1. ami=> ami__   friend=>friend<u>ly</u>   Freund=>freund___
   2. courage=> courage__   courage=>courage__   Mut=> mut**ig**
   3. peur => sans peur, intrépide   fear=> fear___   Angst=>angst___

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Activity 6: Word formation – suffixes in adjectives. Answer key

1. Here are some common English suffixes in adjectives. We use suffixes to form new words.
    Look at the examples below.

    -y: cloud**y** - tin**y**

    -ful: beauti**ful** - success**ful**

    -able/-ible: drink**able** - poss**ible**

    -ish: child**ish** – Engl**ish**

    -ly: year**ly** – month**ly**

    -less: help**less** - home**less**

2. Adjectives: Complete the table with the adjectives from the box. Highlight the suffixes.

English	French	German
childish	enfantin	kindisch
loveless	sans-coeur	lieblos
curious	curieux	neugierig
capable	capable	fähig
respectful	respectueux	respektvoll
windy	venteux	windig
daily	journalier	täglich

> curious – täglich – ~~sans-coeur~~ – ~~neugierig~~ – respectful – ~~fähig~~ – lieblos – windy – capable - respektvoll – daily – ~~kindisch~~ – ~~childish~~ – windig – ~~loveless~~ - ~~capable~~

-   These suffixes are similar in English and German:

    <u>-ish</u>/<u>-isch</u>; <u>**-less**</u> /<u>**-los**</u>; <u>**-ful**</u> /<u>**-voll**</u>; <u>**-y**</u> /<u>**-ig**</u> ; <u>**-ly**</u> / <u>**-lich**</u>

-   These suffixes are similar in English and French:

    <u>-eux/-ous</u>; <u>-able</u> / <u>-able</u>

3. Look at these nouns and verbs. Find the correct suffixes and make adjectives.

    Example:

    4. ami=> ami<u>**cal**</u>   friend=>friend<u>**ly**</u>   Freund=>freund<u>**lich**</u>

    5. courage=> courage<u>**ux**</u>   courage=>courage<u>**ous**</u>   Mut=> mut<u>**ig**</u>

    6. peur => sans peur, intrépide   fear=> fear<u>**less**</u>   Angst=>angst<u>**los**</u>

Activity 7: Word order – adjectives and nouns.

1. Read the sentences in the table below. <mark>Highlight</mark> the adjectives. What do you see? Is the rule true or false? Mark your answer with a cross (x).

English	Français	Deutsch
My mum is <mark>tall.</mark>	Ma mère est grande.	Meine Mutter ist gross.
These jeans are too tight!	Ces jeans sont trop serrés !	Diese Jeans sind zu eng!
Parrots are colourful.	Les perroquets sont colorés.	Papageien sind bunt.

En **anglais**, les adjectifs attributs du sujet s'accordent en genre et en nombre avec le nom. T   F

En **français**, les adjectifs attributs du sujet s'accordent en genre et en nombre avec le nom. T   F

En **allemand**, les adjectifs attributs du sujet s'accordent en genre et en nombre avec le nom. T   F

2. Read the sentences below. <mark>Highlight</mark> the adjectives and <u>underline</u> the nouns. What do you see? Complete the rules and mark your answer with a cross (x).

English	Français	Deutsch
That's a <mark>great</mark> <u>idea</u>!	C'est une idée géniale !	Das ist eine tolle Idee!
I love your black coat.	J'adore ton manteau noir.	Ich liebe deinen schwarzen Mantel.
I'd like to have blond hair.	J'aimerais avoir des cheveux blonds.	Ich hätte gern blonde Haare.

En **anglais**, l'adjectif se place **avant**   / **après**   le nom.

En **français**, l'adjectif se place (en général) **avant**   / **après**   le nom.

En **allemand**, l'adjectif se place **avant**   / **après**   le nom.

Activity 7: Word order – adjectives and nouns. Answer key.

1. Read the sentences in the table below. <mark>Highlight</mark> the adjectives. What do you see? Is the rule true or false? Mark your answer with a cross x.

English	Français	Deutsch
My mum is <mark>tall.</mark>	Ma mère est <mark>grande</mark>.	Meine Mutter ist <mark>gross</mark>.
These jeans are too <mark>tight</mark>!	Ces jeans sont trop <mark>serrés</mark> !	Diese Jeans sind zu <mark>eng</mark>!
Parrots are <mark>colourful</mark>.	Les perroquets sont <mark>colorés</mark>.	Papageien sind <mark>bunt</mark>.

En **anglais**, les adjectifs attributs du sujet s'accordent en genre et en nombre avec le nom. T   <mark>F</mark>

En **français**, les adjectifs attributs du sujet s'accordent en genre et en nombre avec le nom. <mark>T</mark>   F

En **allemand**, les adjectifs attributs du sujet s'accordent en genre et en nombre avec le nom. T   <mark>F</mark>

2. Read the sentences below. <mark>Highlight</mark> the adjectives and <u>underline</u> the nouns. What do you see? Complete the rules and mark your answer with a cross x.

English	Français	Deutsch
That's a <mark>great</mark> <u>idea</u>!	C'est une <u>idée</u> <mark>géniale</mark> !	Das ist eine <mark>tolle</mark> <u>Idee</u>!
I love your <mark>black</mark> <u>coat</u>.	J'adore ton <u>manteau</u> <mark>noir</mark>.	Ich liebe deinen <mark>schwarzen</mark> <u>Mantel</u>.
I'd like to have <mark>blond</mark> <u>hair</u>.	J'aimerais avoir des <u>cheveux</u> <mark>blonds</mark>.	Ich hätte gern <mark>blonde</mark> <u>Haare</u>.

En **anglais**, les adjectifs se place <mark>avant</mark>   / après   le nom.

En **français**, les adjectifs se place (en général) avant   / <mark>après   le nom</mark>.

En **allemand**, les adjectifs se place <mark>avant</mark>   / après   le nom.

Activity 8: Compound nouns

1. Look at the compound nouns below. Complete the table.

| hall | sports | | salle | sport | | Halle | Sport |

English	Français	Deutsch
sports hall	salle de sport	Sporthalle

| Spiel | Film | school | game | film | voyage | film | Mathe | jeu | horreur |

| agency | ordinateur | horror | école | Reise | Horror | language | Büro |

| computer | teacher | maths | travel | langues | Computer |

| Sprachen | professeur | agence | Schule | Lehrer | math (EN) |

English	Français	Deutsch
	film d'horreur	

2. What do you see? Complete the rules with the correct answer. Mark it with a cross x.

a) En français, le mot principal (ex. « film ») se trouve en 1ère / 2ème position et les 2 mots sont reliés en général par un trait d'union / une préposition / un espace .

b) En anglais, le mot principal (ex. « film ») se trouve en 1ère / 2ème position et les 2 mots sont reliés en général par un trait d'union / une préposition / un espace .

c) En allemand, le mot principal (ex. « Film ») se trouve en 1ère / 2ème position et les 2 mots sont reliés en général par un trait d'union / une préposition / rien, ils ne font qu'un .

Activity 8: Compound nouns. Answer key.

1. Look at the compound nouns below. Complete the table.

[hall] [sports]   [salle] [sport]   [Halle] [Sport]

English	Français	Deutsch
sports hall	salle de sport	Sporthalle

[Spiel] [Film] [school] [game] [~~film~~] [voyage] [film] [Mathe] [jeu] [~~horreur~~]

[agency] [ordinateur] [horror] [école] [Reise] [Horror] [language] [Büro]

[computer] [teacher] [maths] [travel] [langues] [Computer]

[Sprachen] [professeur] [agence] [Schule] [Lehrer] [math (EN)]

English	Français	Deutsch
horror film	film d'horreur	Horrorfilm
travel agency	agence de voyage	Reisebüro
computer game	jeu d'ordinateur	Computerspiel
math teacher	professeur de maths	Mathelehrer
language school	école de langues	Sprach(en)schule

2. What do you see? Complete the rules with the correct answer. Mark it with a cross x.

a) En français, le mot principal (ex. « film ») se trouve en 1ère / 2ème position et les 2 mots sont reliés en général par un trait d'union / une préposition / un espace .

b) En anglais, le mot principal (ex. « film ») se trouve en 1ère / 2ème position et les 2 mots sont reliés en général par un trait d'union / une préposition / un espace .

c) En allemand, le mot principal (ex. « Film ») se trouve en 1ère / 2ème position et les 2 mots sont reliés en général par un trait d'union / une préposition / rien, ils ne font qu'un .

II. Questionnaire on language biography and ViLDiM

UNI
FR

UNIVERSITÉ DE FRIBOURG
UNIVERSITÄT FREIBURG

Bonjour,

Dans le cadre d'un travail de recherche à l'Université de Fribourg, nous cherchons à mieux comprendre comment les élèves apprennent les langues à l'école (le français, l'allemand et l'anglais).

Les données récoltées seront traitées __confidentiellement__ (aucune information à ton sujet ne sera divulguée à qui que ce soit). Ni les enseignants, ni tes parents ne sauront ce que tu as répondu. Merci de répondre à toutes les questions.

Réponds aux questions suivantes, et coche ou complète la réponse qui convient

1. Nom et prénom: _____

2. Je suis :
   une fille ❏   un garçon ❏

3. Quel âge as-tu ? _____ ans

4. Dans quelle école es-tu (CO de/du…) ? _____

5. Dans quelle classe es-tu (ex. : 9C, 1D, etc.) ? _____

6. Quelle est la langue que tu as apprise en premier (tu peux cocher plusieurs cases) ?
   ❏ français   ❏ allemand   ❏ italien ❏ anglais   ❏ autre(s) : _____

7. Pour une personne de **langue maternelle française**, quelle langue est **plus facile** à apprendre ?
   ❏ anglais   ❏ allemand

8. D'après toi, lesquelles de ces langues se ressemblent le plus ? Ne coche **qu'une seule case**.
   ❏ français/anglais   ❏ allemand/anglais   ❏ français/allemand

9. D'après toi, dans quelle mesure le français, l'anglais, l'allemand et le mandarin (chinois) se ressemblent-ils ? Lis les consignes ci-dessous et reporte ton avis au verso de cette feuille.

Consignes :
   1. Place les 4 cercles (= 4 langues) selon ta perception de leur ressemblance. Il n'y a pas de juste ou faux. Tu peux placer les langues n'importe où sur la feuille, selon la distance que tu perçois entre elles (**plus tu en places une près d'une autre, plus cela veut dire qu'elles se ressemblent**).
   2. Avec un **stylo**, trace **une croix** dans le centre des cercles (petit trou au centre des cercles). **N'enlève et ne déplace pas les cercles tout de suite !**
   3. **Écris** sur la feuille, à côté de chaque cercle, l**a langue** qui correspond à la croix que tu as marquée.
   4. Enlève les cercles au fur et à mesure et **trace une flèche** qui relie la croix et la langue correspondante.
   5. Attache les cercles avec le trombone et remets le matériel à ton enseignant(e).

Étapes pour 1 cercle (tu places les 4) — Étape 1 (placer cercle) — Étape 2 — Étape 3 — Étape 4
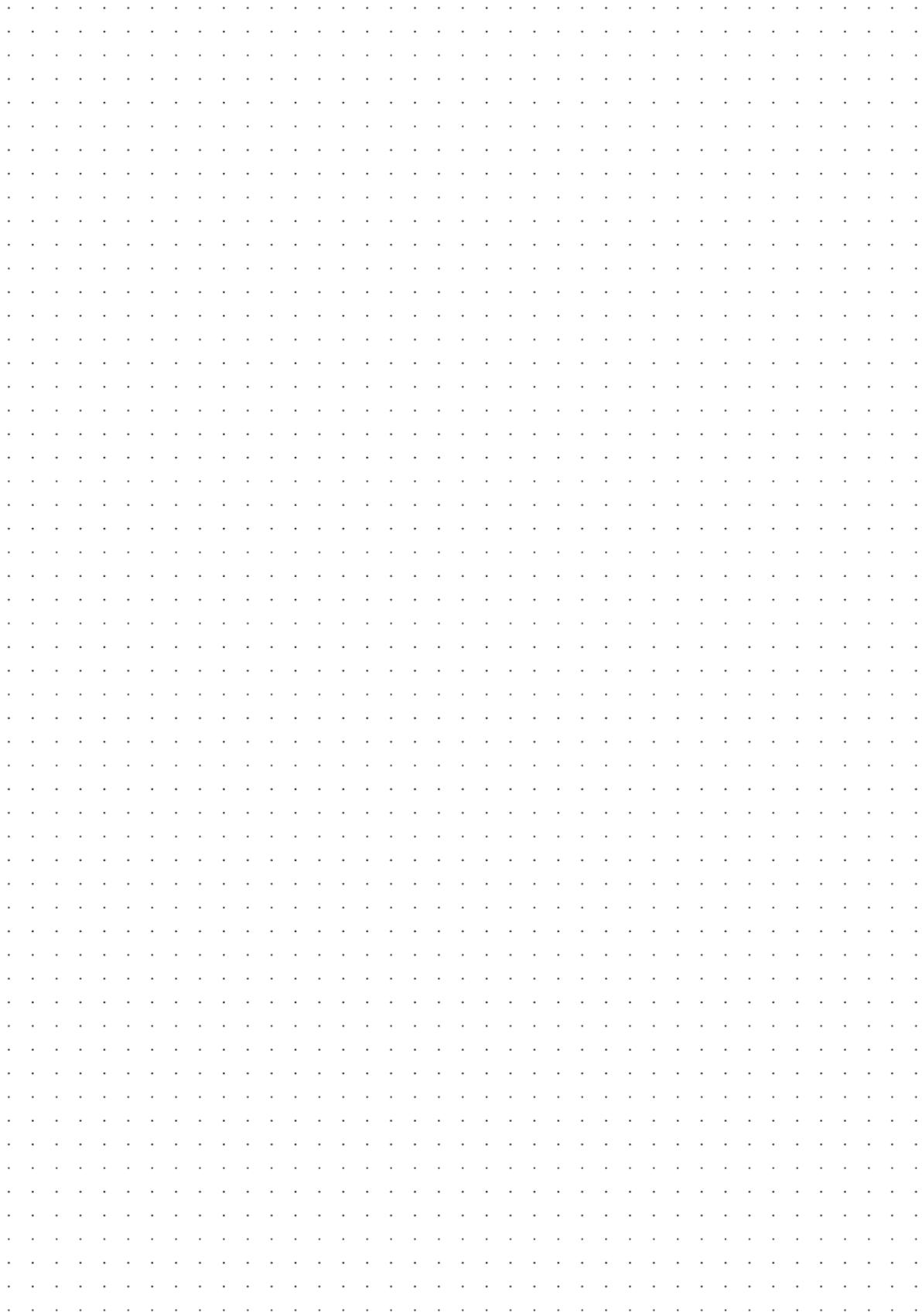
III. C-tests (original versions with answers further below)

Textes français   **Nom, Prénom :** _____   **Classe :** _____

1. Les mots numérotés dans les textes suivants sont incomplets. Complète chaque mot manquant.

Texte 1

Cher Arthur,

Il faut que je te raconte ce qui m'est arrivé ce soir. En rent_____ [1), j'a__ [2) entendu da_____ [3) l'obsc_____ [4) quelqu'u__ [5) qui cri_____ [6). C'ét_____ [7) une vo_____ [8) à l__ [9) fois ai_____ [10) et étou_____ [11). J'a__ [12) encore ent_____ [13) : Au sec_____ [14) ! Je sen_____ [15) un fri_____ [16) qui m__ [17) parcourait l__ [18) moelle épin_____ [19). Puis, j__ [20) n'a__ [21) plus ent_____ [22) de cr_____ [23), rien q__ [24)'un gargoui_____ [25) étrange qui a expiré à son tour. Ce n'était pas moins effrayant. J'en ai encore des frissons.

Texte 2

En 1914, Joey abandonne sa vie paisible de cheval de ferme : il e_____ [1) vendu __ [2) l'ar_____ [3) britannique. U_____ [4) nuit, Jo_____ [5) est ble_____ [6) sur u__ [7) champ d__ [8) bataille. l__ [9) s'immob_____ [10), paralysé p_____ [11) la pe_____ [12), au mil_____ [13) du broui_____ [14) et d_____ [15) coups d__ [16) feu... Lor_____ [17) la bata_____ [18) cesse e__ [19) que l__ [20) brouillard s__ [21) dissipe, i__ [22) s'aper_____ [23) qu'i__ [24) est d_____ [25) un large couloir de boue entre les deux camps ennemis : ce que les soldats appellent le no man's land.

Texte 3

Il était une fois une veuve qui avait deux filles ; l'aînée lui ressemblait si fort et d'humeur et de visage, que qui la voyait voyait la mère. Elles éta_____ [1) toutes de_____ [2) si désagr_____ [3) et s__ [4) orgueilleuses, q__ [5)'on n__ [6) pouvait vi_____ [7) avec el_____ [8). La cad_____ [9), qui ét_____ [10) le vr_____ [11) portrait d__ [12) son pè_____ [13) pour l__ [14) douceur e__ [15) l'honn_____ [16), était av_____ [17) cela u_____ [18) des pl_____ [19) belles fil_____ [20) qu'o__ [21) eût s__ [22) voir. Co_____ [23) on ai_____ [24) naturellement s_____ [25) semblable, cette mère était folle de sa fille aînée, et en même temps avait une aversion effroyable pour la cadette.

Texte 4

L'avion d'Air France venait de franchir les Pyrénées. Après l____¹⁾ cimes d__²⁾ neige, l____³⁾ gradins cou_____⁴⁾ d'arg_____⁵⁾ s'affais_____⁶⁾ jusqu'__⁷⁾ la pla_____⁸⁾ étalée co_____⁹⁾ une imm_____¹⁰⁾ carte __¹¹⁾'un ja_____¹²⁾ ardent. Per_____¹³⁾ haut s____¹⁴⁾ les pit_____¹⁵⁾ de cai_____¹⁶⁾, les pet_____¹⁷⁾ villages a____¹⁸⁾ toits d__¹⁹⁾ tuiles rou_____²⁰⁾ s'échelo_____²¹⁾ sur l____²²⁾ pentes, po____²³⁾ devenir minus_____²⁴⁾ au fo____²⁵⁾ de la vallée. Une maison, deux ou trois granges... Tous ces hameaux me rappelaient la ferme de Montignac, la ferme de mon oncle Antoine.

Deutsche Texte Nom, Prénom : _____ Classe : _____

1. Les mots numérotés dans les textes suivants sont incomplets. Complète chaque mot manquant.

Text 1

Unsere Schule ist nicht sehr gross. Wir si____ 1) zweihundert Kin_____ 2), fünf Lehre_____ 3) und dr____ 4) Lehrer. Ab____ 5) die Sch_____ 6) ist se____ 7) modern. W____ 8) haben e____ 9) Schwimmbad u____ 10) im Comput_____ 11) gibt e__ 12) dreissig Comp_____ 13). Unser Leh_____ 14) heisst He____ 15) Stress, ab____ 16) er i____ 17) sehr ne____ 18) und sympa_____ 19) und se____ 20) Unterricht i____ 21) sehr inter_____ 22). Ich fi_____ 23) meine Sch_____ 24) einfach kla_____ 25)! Ich freue mich auch aufs nächste Jahr!

Text 2

Wir suchen wieder die Lehrerin oder den Lehrer des Jahres! Frau Jahn ko_____ 1) aus Öster_____ 2), aber s____ 3) unterrichtet sc_____ 4) achtundzwanzig Ja_____ 5) an d____ 6) Albert-Einstein-Schule i__ 7) Basel. Fr____ 8) Jahn i____ 9) sehr spor_____ 10): Sie fä_____ 11) Ski u____ 12) spielt Ten_____ 13). Ihr Lieblin_____ 14) ist ab____ 15) Schwimmen. S____ 16) schwimmt hun_____ 17) Meter i__ 18) zwei Min_____ 19). Frau Ja____ 20) macht au____ 21) einen Musik-_____ 22). Sie li_____ 23) Rock'n Roll-_____ 24) und si_____ 25) auch gern. An unserem Schulfest singt sie mit dem Musiklehrer in der Turnhalle

Text 3

Ich möchte dir meine Lehrer vorstellen. Also, Fr____ 1) Falke i____ 2) sehr str_____ 3). Sie h____ 4) eine Bri_____ 5), ihre Au_____ 6) sind ni_____ 7) gut. Ab____ 8) sie hö____ 9) alles. I____ 10) Unterricht i____ 11) interessant, ab____ 12) man da____ 13) nicht la____ 14) sein. He____ 15) Behrend i____ 16) schon a____ 17). Er i____ 18) geduldig u____ 19) hat im_____ 20) Zeit f____ 21) seine Sch_____ 22). Seine Fr____ 23) macht manc_____ 24) Kuchen f____ 25) die ganze Klasse. Herr Rodriguez ist gross, jung und sympathisch.

Text 4

Hallo Lisa,

wie geht's? Hoffentlich gut! Ich möchte dir über meinen Tagesablauf in der Schule erzählen. Ich ha____ 1) jetzt mei_____ 2) Stundenplan. A__ 3) Montag ha_____ 4) wir i__ 5) der ers_____ 6) Stunde Ma_____ 7). Das m____ 8) ich ni_____ 9) so se____ 10). Ich fi_____ 11) es sch_____ 12). Am Nachm_____ 13) haben w____ 14) dann zw____ 15) Stunden Sp_____ 16). Ich m____ 17) das se____ 18). Aber me____ 19) Lieblingstag i____ 20) der Dien_____ 21). Da ha_____ 22) wir Geog_____ 23) und Biol_____ 24). Das i____ 25) mein Lieblingsfach. Ich finde es total interessant.

English texts   **Nom, Prénom : _____**   **Classe : _____**

1. Les mots numérotés dans les textes suivants sont incomplets. Complète chaque mot manquant.

Text 1

Hi! My name's Isolda. __1)'m 12 ye_____2) old. __3)'m fr_____4) Wales. __5) go t__6) St David's Sch_____7). Today i__8) the fi_____9) day o__10) the sch_____11) year. Th_____12) are four_____13) girls a_____14) twelve bo_____15) in m__16) class. M__17) favourite subj_____18) are Sci_____19), Music a_____20) Welsh. W__21) 've g_____22) Science o__23) Mondays, Wedne_____24) and Fri_____25). Music's on Tuesdays and Welsh on Thursdays.

Text 2

Hi, so here's a picture of Alex, Kim, Steve, Greg and Emma. These a_____1) my fri_____2). They'r__3) playing i__4) the pa_____5) and th_____6)'re hav_____7) fun. W__8) love skateb_____9) and w__10) go a__11) the wee_____12). It'__13) cool! I__14) this ph_____15) my fri_____16) Alex i__17) jumping. T_____18) other fri_____19) are watc_____20) him. Th_____21)'re wea_____22) sunglasses. Gr_____23) and Em_____24) are hav_____25) a rest. I like to hang out with them.

Text   3

Hi!

I'm writing this in a park in London. There a_____1) people i__2) boats o__3) a la_____4). They'r__5) rowing. Lon_____6) is fant_____7). There a_____8) great sh_____9), the peo_____10) are co_____11) and i__12)'s h_____13)! I'__14) sitting out_____15) a ca_____16) and eat_____17) an i_____18) cream. M__19) little bro_____20) is pla_____21) cricket wi_____22) my cou_____23). We'r__24) staying wi_____25) my aunt and uncle here. I think they're nice.

Text 4

This is Danni and she's 13 years old. She co_____1) from Calif_____2) in t_____3) United Sta_____4). Danni'__5) favourite sp_____6) is sur_____7). Danni li_____8) next t__9) the s_____10) in __11) big ci_____12). Her fam_____13) love sur_____14), and h_____15) sister i__16) a sur_____17) champion. Da_____18) goes sur_____19) every d_____20), if t_____21) weather i__22) good a_____23) there a_____24) good wa_____25). Danni really loves the ocean and the water.

C-tests (answers)

Textes français   **Nom, Prénom :** _____   **Classe :** _____

Texte 1

Cher Arthur,

Il faut que je te raconte ce qui m'est arrivé ce soir. En rent**rant**[1], j'a**i**[2] entendu da**ns**[3] l'obsc**urité**[4] quelqu'u**n**[5] qui cri**ait**[6]. C'ét**ait**[7] une voi**x**[8] à la[9] fois ai**guë**[10] et étou**ffée**[11]. J'a**i**[12] encore ent**endu**[13] : Au sec**ours**[14] ! Je sent**ais**[15] un fri**sson**[16] qui me[17] parcourait la[18] moelle épin**ière**[19]. Puis, je[20] n'a**i**[21] plus ent**endu**[22] de cr**is**[23], rien q**u**[24]'un gargoui**llement**[25] étrange qui a expiré à son tour. Ce n'était pas moins effrayant. J'en ai encore des frissons.

(Excerpt based on *A. Hitchcock, Le perroquet qui bégayait, trad. V. Volkoff, © Le Livre de Poche Jeunesse, 2007.* Taken from *L'île aux mots, 8e*, p.185 *)*

Texte 2

En 1914, Joey abandonne sa vie paisible de cheval de ferme : il e**st**[1] vendu à[2] l'ar**mée**[3] britannique. U**ne**[4] nuit, Jo**ey**[5] est ble**ssé**[6] sur u**n**[7] champ d**e**[8] bataille. Il[9] s'immob**ilise**[10], paralysé p**ar**[11] la pe**ur**[12], au mil**ieu**[13] du broui**llard**[14] et d**es**[15] coups d**e**[16] feu... Lor**sque**[17] la bata**ille**[18] cesse e**t**[19] que l**e**[20] brouillard s**e**[21] dissipe, i**l**[22] s'aper**çoit**[23] qu'i**l**[24] est d**ans**[25] un large couloir de boue entre les deux camps ennemis : ce que les soldats appellent le no man's land.

(Excerpt from *Michael Morpurgo, Cheval de guerre, trad. d'André Dupuis et illustrations de François Place © Gallimard pour la traduction française.* Taken from *L'île aux mots, 8e*, p.82)

Texte 3

Il était une fois une veuve qui avait deux filles ; l'aînée lui ressemblait si fort et d'humeur et de visage, que qui la voyait voyait la mère. Elles éta**ient**[1] toutes de**ux**[2] si désagr**éables**[3] et s**i**[4] orgueilleuses, q**u**[5]'on n**e**[6] pouvait vi**vre**[7] avec el**les**[8]. La cad**ette**[9], qui ét**ait**[10] le vr**ai**[11] portrait d**e**[12] son pè**re**[13] pour l**a**[14] douceur e**t**[15] l'honn**êteté**[16], était av**ec**[17] cela u**ne**[18] des pl**us**[19] belles fil**les**[20] qu'o**n**[21] eût s**u**[22] voir. Co**mme**[23] on ai**me**[24] naturellement s**on**[25] semblable, cette mère était folle de sa fille aînée, et en même temps avait une aversion effroyable pour la cadette.

(Excerpt from *Charles Perrault, Les fées.* Taken from *L'île aux mots, 8e*, p.22)

Texte 4

L'avion d'Air France venait de franchir les Pyrénées. Après l**es**[1] cimes d**e**[2] neige, l**es**[3] gradins cou**leur**[4] d'arg**ile**[5] s'affais**saient**[6] jusqu'**à**[7] la pla**ine**[8] étalée co**mme**[9] une imm**ense**[10] carte **d**[11]'un ja**une**[12] ardent. Per**chés**[13] haut s**ur**[14] les pit**ons**[15] de cai**llou**[16], les pet**its**[17] villages a**ux**[18] toits d**e**[19] tuiles rou**ges**[20] s'échelo**nnaient**[21] sur l**es**[22] pentes, po**ur**[23] devenir minus**cules**[24] au fo**nd**[25] de la vallée. Une maison, deux ou trois granges... Tous ces hameaux me rappelaient la ferme de Montignac, la ferme de mon oncle Antoine.

(Excerpt from *Montignac, la ferme de mon oncle Antoine*: *René Guillot, Le maître des éléphants, coll. « Tipik Junior n° 25 », © Éd. Magnard, 2004.* Taken from *L'île aux mots, 8e,* p.95)

Les mots numérotés dans les textes suivants sont incomplets. Complète chaque mot manquant.

Text 1

Unsere Schule ist nicht sehr gross. Wir si**nd**1) zweihundert Kin**der**2), fünf Lehre**rinnen**3) und dr**ei**4) Lehrer. Ab**er**5) die Sch**ule**6) ist se**hr**7) modern. W**ir**8) haben e**in**9) Schwimmbad u**nd**10) im Comput**erraum**11) gibt e**s**12) dreissig Comp**uter**13). Unser Leh**rer**14) heisst He**rr**15) Stress, ab**er**16) er i**st**17) sehr ne**tt**18) und sympa**thisch**19) und se**in**20) Unterricht i**st**21) sehr inter**essant**22). Ich fi**nde**23)meine Sch**ule**24) einfach kla**sse**25)! Ich freue mich auch aufs nächste Jahr!

(Based on and taken from *Junior, Kursbuch, 8. Klasse.*, p.49)

Text 2

Wir suchen wieder die Lehrerin oder den Lehrer des Jahres! Frau Jahn ko**mmt**[1)] aus Öster**reich**[2)], aber s**ie**[3)] unterrichtet sc**hon**[4)] achtundzwanzig Ja**hre**[5)] an d**er**[6)] Albert-Einstein-Schule i**n**[7)] Basel. Fr**au**[8)]Jahn i**st**[9)] sehr sport**lich**[10)]: Sie fä**hrt**[11)] Ski u**nd**[12)] spielt Ten**nis**[13)]. Ihr Lieblin**gssport**[14)] ist ab**er**[15)] Schwimmen. S**ie**[16)] schwimmt hun**dert**[17)] Meter **in**[18)] zwei Min**uten**[19)]. Frau Jahn**20)** macht **auch**[21)] einen Musik-**Kurs**[22)]. Sie li**ebt**[23)] Rockn Roll-**Musik**[24)] und si**ngt**[25)] auch gern. An unserem Schulfest singt sie mit dem Musiklehrer in der Turnhalle.

(Based on and taken from *Junior, Arbeitsbuch, 8. Klasse*, p..27)

Text 3

Also, Fr**au**[1)] Frau i**st**[2)] sehr str**eng**[3)]. Sie h**at**[4)] eine Bri**lle**[5)], ihre Au**gen**[6)] sind ni**cht**[7)] gut. Ab**er**[8)] sie hö**rt**[9)] alles. I**hr**[10)] Unterricht i**st**[11)]interessant, ab**er**[12)] man da**rf**[13)] nicht la**ut**[14)] sein. He**rr**[15)] Behrend i**st**[16)] schon a**lt**[17)]. Er i**st**[18)] geduldig u**nd**[19)] hat im**mer**[20)] Zeit f**ür**[21)] seine Sch**üler**[22)]. Seine Fr**au**[23)] macht man**chmal**[24)] Kuchen f**ür**[25)] die ganze Klasse. Vielleicht macht sie morgen Kuchen

(Based on and taken from *Junior, Kursbuch, 8. Klasse.*, p.13)

Text 4

Hallo Lisa,

wie geht's? Hoffentlich gut! Ich möchte dir über meinen Tagesablauf in der Schule erzählen. Ich ha**be**1) jetzt mei**nen**2) Stundenplan. A**m**3) Montag ha**ben**4) wir i**n**5) der ers**ten**6) Stunde Ma**the**7). Das m**ag**8) ich ni**cht**9) so se**hr**10). Ich fi**nde**11) es sch**wer**12). Am Nachm**ittag**13) haben w**ir**14) dann zw**ei**15) Stunden Sp**ort**16). Ich m**ag**17) das **sehr18**). Aber me**in**19)Lieblingstag i**st**20) der Dien**stag**21). Da ha**ben**22) wir Geog**rafie**23) und Biol**ogie**24). Das i**st**25) mein Lieblingsfach. Ich finde es total interessant.

(Based on and taken from *Junior, Kursbuch, 8. Klasse*., p.12)

English texts   Nom, Prénom : _____   Classe : _____

Les mots numérotés dans les textes suivants sont incomplets. Complète chaque mot manquant.

Text 1

Hi! My name's Isolda. I**1**)'m 12 ye**ars2**) old. I**3**)'m fr**om4**) Wales. I**5**) go t**o6**) St David's Sch**ool7**). Today i**s8**) the fi**rst9**) day o**f10**) the sch**ool11**) year. Th**ere12**) are four**teen13**) girls an**d14**) twelve bo**ys15**) in m**y16**) class. M**y17**) favourite subj**ects18**) are Sci**ence19**), Music an**d20**) Welsh. W**e21**)'ve g**ot 22**) Science o**n 23**) Mondays, Wedne**sdays24**) and Fri**days25**). Music's   on   Tuesdays   and   Welsh   on   Thursdays. (Based on and taken from *More!, Student's book, 8ᵉ*, p.9)

Text 2

Hi, so here's a picture of Alex, Kim, Steve, Greg and Emma. These a**re1**) my fri**ends2**). They'r**e3**) skateboarding in**4**) the pa**rk5**) and th**ey6**)'re hav**ing7**) fun. W**e8**) love skateb**oarding 9**) and w**e10**) go a**t11**) the wee**kend12**). It'**s13**) cool! I**n14**) this ph**oto15**) my fri**end16**) Alex i**s17**) jumping. T**he18**) other fri**ends19**) are wat**ching20**) him. Th**ey21**)'re wea**ring22**) sunglasses. Gr**eg23**) and Em**ma24**) are hav**ing25**) a rest. I like to hang out with them.

(Based on and taken from *More!, Student's book, 8ᵉ*, p.38)

Text 3

Hi!

I'm writing this in a park in London. There a**re1**) people i**n2**) boats **on3**) a la**ke4**). They'r**e5**) rowing. Lon**don6**) is fant**astic7**). There a**re8**) great sh**ops9**), the peo**ple10**) are co**ol11**) and i**t12**)'s h**ot13**)! I'**m14**) sitting out**side15**) a ca**fé16**) and eat**ing17**) an i**ce18**) cream. M**y19**) little bro**ther20**) is pla**ying21**) cricket w**ith22**) my cou**sins23**). We'r**e24**) staying wi**th25**) my aunt and uncle here. I think they're nice.

(Based on and taken from *More!, Student's book, 8ᵉ*, p.39)

Text 4

This is Danni and she's 13 years old. She co**mes1**) from Cali**fornia2**) in t**he3**) United Sta**tes4**). Danni'**s5**) favourite sp**ort6**) is sur**fing7**). Danni li**ves8**) next t**o9**) the **sea**) in a**11**) big ci**ty12**). Her fam**ily13**) love sur**fing14**), and h**er15**) sister i**s16**) a sur**fing17**) champion. Da**nni18**) goes sur**fing19**) every d**ay20**), if t**he21**) weather i**s22**) good a**nd23**) there a**re24**) good wa**ves25**). Danni really loves the ocean.

(Based on and taken from *More!, Student's book, 8ᵉ*, p.18)

IV.   Cross-linguistic test (answers further below)

Final test ☺   Prénom, nom: _____   Classe: _____

1. Dans chaque liste de mots anglais (a-f), souligne LE mot d'origine française.
Exemple : man – wash – driver – <u>advertisement</u> – hat

 a) good – year – bed – chair – day
 b) sing – aunt – milk – brother – make
 c) red – white – go – see – supper
 d) money – green – twenty – eight – friend
 e) what – love – old – return – drink
 f) sun – winter – ice – cold – flower

2. Dans chaque liste de mots anglais (a-f), souligne LE mot d'origine germanique (allemande).
Exemple : parent – <u>luck</u> – cousin – advertisement – very

 a) serious – regular – do – beautiful – dictionary
 b) have – library – jacket – country – car
 c) card – necessary – cry – two – quarter
 d) paper – street – lake – city – story
 e) turn – king – tower – real – bottle
 f) forest – corner – mountain – castle – house

3. Pour chaque mot donné (allemand=DE ou anglais=EN), souligne SON équivalent (a-e) dans l'autre langue. Il n'y a qu'1 possibilité.

Exemple : Water (EN)=> (DE)?
 a) Watte
 b) waschen
 c) <u>Wasser</u>
 d) Wählen
 e) Wolle

1.
heiss (DE) => (EN)?

a) high
b) half
c) hot
d) her
e) heist

2.
heap (EN)=> (DE) ?

a) Hoppen
b) hören
c) Hose
d) Hupen
e) Haufen

3.
Leder (DE) => (EN)?

a) leather
b) lid
c) lighter
d) latter
e) liter

4.
seek (EN) => (DE)?
a) setzen
b) sitzen
c) sehen
d) suchen
e) Seide

5.
Leber (DE)=>(EN)?
a) liver
b) lip
c) leader
d) library
e) labour

6.
tough (EN) => (DE)?
a) Tag
b) taub
c) durch
d) zäh
e) Tür

4. Pour chaque mot (allemand=DE ou anglais=EN), souligne SON équivalent (a-e) dans l'autre langue. Il n'y a qu'1 possibilité.

Exemple : Stein (DE)=> (EN)?
a) <u>stone</u>
b) stain
c) stir
d) stop
e) stand

1.
shine (EN)=> (DE)?
a) schauen
b) Schiene
c) schön
d) scheinen
e) scharf

2.
Laus (DE)=> (EN)?
a) loose
b) louse
c) lose
d) lease
e) lawn

3.
food (EN)=> (DE)?
a) Feder
b) Fuss
c) Feld
d) fett
e) Futter

4.
Traum (DE)=> (EN)?
a) drum
b) draw
c) drama
d) drown
e) dream

5.
might (EN)=>(DE)?
a) Milch
b) mich
c) Mehl
d) Macht
e) mit

6.
sauer (DE)=>(EN)?
a) sure
b) sore
c) sour
d) sir
e) soar

5. Pour chaque mot (a-g) allemand (DE) ou anglais (EN), souligne SON équivalent dans l'autre langue.
a) Mitgliedschaft (DE)=>(EN?):   membership / memberance / memberity
b) powerless (EN)=>(DE?):   entmächtig   / machtlos /   unmächtig
c) begehrt (DE)=>(EN?):   desireful / desirehood / desirable
d) fruity (EN)=>(DE?) :   fruchtig / fruchté / fruchtibel
e) geschmackvoll (DE)=>(EN?):   tastous / tasteful / tastible
f) yearly (EN)=>(DE?):   jahrvoll / jährlich / jahrös
g) Kindheit (DE)=>(EN?):   childance / childity / childhood

6. Parmi les 3 phrases de chaque liste (a-f), souligne LA phrase correcte.
a) Draw a sky blue / Draw blue a sky / Draw a blue sky
b) Das ist ein grünes Haus / Das ist ein Haus grünes / Das ist grünes ein Haus
c) Il a une importante mission / Il a importante une mission / Il a une mission importante
d) I'm a girl tall / I'm a tall girl / I'm tall a girl
e) Er hat grosse eine Katze / Er hat eine Katze grosse / Er hat eine grosse Katze
f) Tu as pratique un outil / Tu as un outil pratique /Tu as un pratique outil

7. Pour chaque mot composé français (a-f), souligne LE mot composé correspondant dans l'autre langue.
a) Salle de chimie (DE) : Raum-Chemie / Chemieraum / Raum von Chemie
b) Place de jeu (EN): playground / groundplay / play of ground
c) Enseignant d'allemand (DE): Lehrer-Deutsch / Lehrer von Deutsch / Deutschlehrer
d) Enseignant de français (EN):   teacher French / French teacher / French of teacher
e) Jeu vidéo (DE) : Videospiel / Spiel-Video / Spielvideo
f) Film de guerre (EN):   film of war / film war / war film

Cross-linguistic test (answers)

1. **Dans chaque liste de mots anglais (a-f), souligne LE mot d'origine française.**

   a) good – year – bed – **chair** – day
   b) sing – **aunt** – milk – brother – make
   c) red – white – go – see – **supper**
   d) **money** – green – twenty – eight – friend
   e) what – love – old – **return** – drink
   f) sun – winter – ice – cold – **flower**

2. **Dans chaque liste de mots anglais (a-f), souligne LE mot d'origine germanique (allemande).**

   a) serious – regular – **do** – beautiful – dictionary
   b) **have** – library – jacket – country – car
   c) card – necessary – cry – **two** – quarter
   d) paper – **street** – lake – city – story
   e) turn – **king** – tower – real – bottle
   f) forest – corner – mountain – castle – **house**

3. **Pour chaque mot donné (allemand=DE ou anglais=EN), souligne SON équivalent (a-e) dans l'autre langue. Il n'y a qu'1 possibilité.**

1.	2.	3.
heiss (DE) => (EN)?	heap (EN)=> (DE) ?	Leder (DE) => (EN)?
a) high	a) Hoppen	a) **leather**
b) half	b) hören	b) lid
c) **hot**	c) Hose	c) lighter
d) her	d) Hupen	d) latter
e) heist	e) **Haufen**	e) liter

4.	5.	6.
seek (EN) => (DE)?	Leber (DE)=>(EN)?	tough (EN) => (DE)?
a) setzen	a) **liver**	a) Tag
b) sitzen	b) lip	b) taub
c) sehen	c) leader	c) durch
d) **suchen**	d) library	d) **zäh**
e) Seide	e) labour	e) Tür

4. Pour chaque mot (allemand=DE ou anglais=EN), souligne SON équivalent (a-e) dans l'autre langue. Il n'y a qu'1 possibilité.

1.
shine (EN)=> (DE)?
a) schauen
b) Schiene
c) schön
d) **scheinen**
e) scharf

2.
Laus (DE)=> (EN)?
a) loose
b) **louse**
c) lose
d) lease
e) lawn

3.
food (EN)=> (DE)?
a) Feder
b) Fuss
c) Feld
d) fett
e) **Futter**

4.
Traum (DE)=> (EN)?
a) drum
b) draw
c) drama
d) drown
e) **dream**

5.
might (EN)=>(DE)?
a) Milch
b) mich
c) Mehl
d) **Macht**
e) mit

6.
sauer (DE)=>(EN)?
a) sure
b) sore
c) **sour**
d) sir
e) soar

5. Pour chaque mot (a-g) allemand (DE) ou anglais (EN), souligne SON équivalent dans l'autre langue.
a) Mitgliedschaft (DE)=>(EN?):   **membership** / memberance / memberity
b) powerless (EN)=>(DE?):   entmächtig   / **machtlos** /   unmächtig
c) begehrt (DE)=>(EN?):   desireful / desirehood / **desirable**
d) fruity (EN)=>(DE?) :   **fruchtig** / fruchté / fruchtibel
e) geschmackvoll (DE)=>(EN?):   tastous / **tasteful** / tastible
f) yearly (EN)=>(DE?):   jahrvoll / **jährlich** / jahrös
g) Kindheit (DE)=>(EN?):   childance / childity / **childhood**

6. Parmi les 3 phrases de chaque liste (a-f), souligne LA phrase correcte.
a) Draw a sky blue / Draw blue a sky / **Draw a blue sky**
b) **Das ist ein grünes Haus** / Das ist ein Haus grünes / Das ist grünes ein Haus
c) Il a une importante mission / Il a importante une mission / **Il a une mission importante**
d) I'm a girl tall / **I'm a tall girl** / I'm tall a girl
e) Er hat grosse eine Katze / Er hat eine Katze grosse / **Er hat eine grosse Katze**
f) Tu as pratique un outil / **Tu as un outil pratique** /Tu as un pratique outil

7. Pour chaque mot composé français (a-f), souligne LE mot composé correspondant dans l'autre langue.
a) Salle de chimie (DE) : Raum-Chemie / **Chemieraum** / Raum von Chemie
b) Place de jeu (EN): **playground** / groundplay / play of ground
c) Enseignant d'allemand (DE): Lehrer-Deutsch / Lehrer von Deutsch / **Deutschlehrer**
d) Enseignant de français (EN):   teacher French / **French teacher** / French of teacher
e) Jeu vidéo (DE) : **Videospiel** / Spiel-Video / Spielvideo
f) Film de guerre (EN):   film of war / film war / **war film**

V. Statistical computations (results)

Cross-linguistic awareness test (total)

Linear mixed model fit by REML. t-tests use Satterthwaite's method ['lmerModLmerTest']

Formula: CLA_total ~ Group + c_test_total + (1 | Class)

  Data: Dt_only_T1

REML criterion at convergence: 808.4

Scaled residuals:

Min	1Q	Median	3Q	Max
-2.5966	-0.7296	0.1080	0.7028	2.2891

Random effects:

Groups	Name	Variance	Std.Dev.
Class	(Intercept)	0.00	0.000
Residual		16.92	4.113

Number of obs: 142, groups: Class, 8

Fixed effects:

	Estimate	Std. Error	df	t value	Pr(>|t|)
(Intercept)	1.313e+01	1.253e+00	1.390e+02	10.473	< 2e-16 ***
GroupINT	1.509e+00	7.166e-01	1.390e+02	2.105	0.0371 *
c_test_total	4.112e-02	8.608e-03	1.390e+02	4.777	4.46e-06 ***

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Correlation of Fixed Effects:

	(Intr)	GrpINT
GroupINT	-0.274	
c_test_totl	-0.893	-0.091

convergence code: 0

boundary (singular) fit: see ?isSingular

Residuals vs. outcome
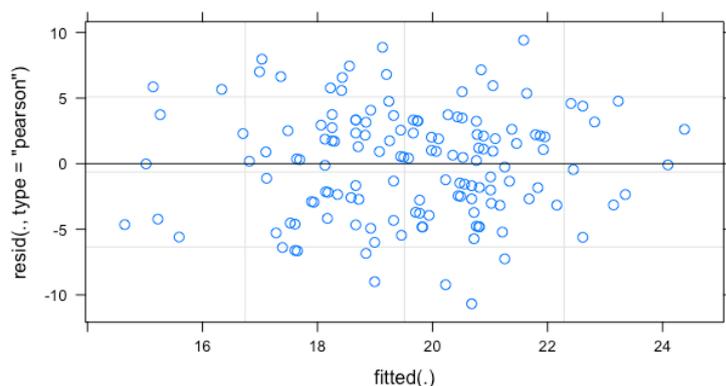
Cross-linguistic awareness test (total; cluster-level analysis)

Call:

lm(formula = mean_cla ~ mean_lc + Group, data = d_per_class)

Residuals:

1	2	3	4	5	6	7	8
0.1113	-0.2962	-0.5804	0.2224	0.5429	0.2392	-1.4104	1.1712

Coefficients:

	Estimate	Std. Error	t value	Pr(>|t|)	
(Intercept)	17.10349	5.17724	3.304	0.0214	*
mean_lc	0.01131	0.03976	0.284	0.7874	
GroupINT	1.64305	0.75869	2.166	0.0826	.

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.9164 on 5 degrees of freedom

Multiple R-squared: 0.579,   Adjusted R-squared: 0.4106

F-statistic: 3.438 on 2 and 5 DF, p-value: 0.115

Psychotypological distances

English-German

Linear mixed model fit by REML. t-tests use Satterthwaite's method ['lmerModLmerTest']

Formula: diff.nd_DE_EN ~ n.Group + (1 | Class)

Data: Dt2

REML criterion at convergence: -432.4

Scaled residuals:

Min	1Q	Median	3Q	Max
-2.6505	-0.5397	-0.0980	0.5729	3.8278

Random effects:

Groups	Name	Variance	Std.Dev.
Class	(Intercept)	0.000000	0.00000
Residual		0.002511	0.05011

Number of obs: 142, groups: Class, 8

Fixed effects:

	Estimate	Std. Error	df	t value	Pr(>|t|)
(Intercept)	0.003148	0.004347	140.000000	0.724	0.470
n.Group	-0.004635	0.008694	140.000000	-0.533	0.595

Correlation of Fixed Effects:

	(Intr)
n.Group	-0.254

convergence code: 0

boundary (singular) fit: see ?isSingular

Residuals vs. outcome
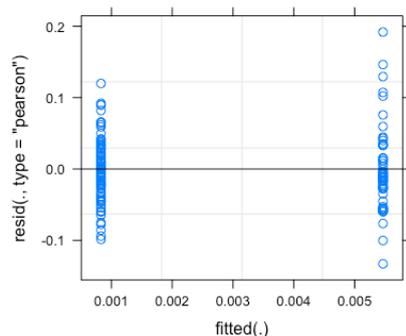
French-English

Linear mixed model fit by REML. t-tests use Satterthwaite's method ['lmerModLmerTest']

Formula: diff.nd_FR_EN ~ n.Group + (1 | Class)

Data: Dt2

REML criterion at convergence: -433.1

Scaled residuals:

Min	1Q	Median	3Q	Max
-3.2839	-0.5454	-0.0012	0.4862	2.9830

Random effects:

Groups	Name	Variance	Std.Dev.
Class	(Intercept)	0.000000	0.00000
Residual		0.002498	0.04998

Number of obs: 142, groups: Class, 8

Fixed effects:

	Estimate	Std. Error	df	t value	Pr(>|t|)
(Intercept)	0.001937	0.004336	140.000000	0.447	0.656
n.Group	-0.006356	0.008672	140.000000	-0.733	0.465

Correlation of Fixed Effects:

	(Intr)
n.Group	-0.254

convergence code: 0

boundary (singular) fit: see ?isSingular

Residuals vs. outcome
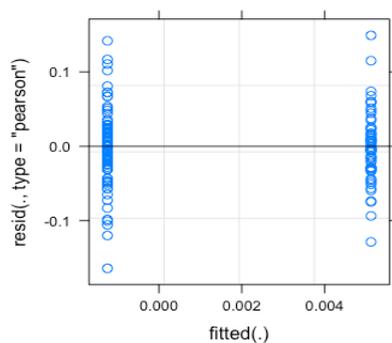
French-German

Linear mixed model fit by REML. t-tests use Satterthwaite's method ['lmerModLmerTest']

Formula: diff.nd_FR_DE ~ n.Group + (1 | Class)

  Data: Dt2

REML criterion at convergence: -417.5

Scaled residuals:

   Min   1Q Median   3Q   Max

-2.5789 -0.6288 -0.1161 0.6699 2.3159

Random effects:

 Groups   Name   Variance Std.Dev.

 Class   (Intercept) 0.000000 0.00000

 Residual   0.002795 0.05286

Number of obs: 142, groups: Class, 8

Fixed effects:

	Estimate	Std. Error	df	t value	Pr(>|t|)
(Intercept)	0.003111	0.004586	140.000000	0.678	0.499
n.Group	-0.005402	0.009172	140.000000	-0.589	0.557

Correlation of Fixed Effects:

    (Intr)

n.Group -0.254

convergence code: 0

boundary (singular) fit: see ?isSingular

Residuals vs. outcome
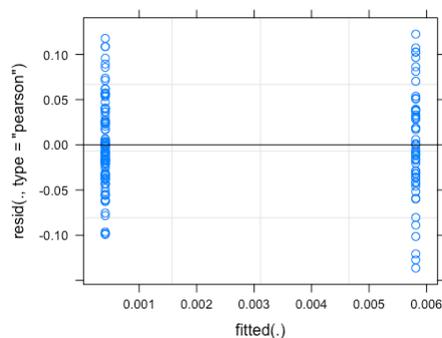
Chinese-French

Linear mixed model fit by REML. t-tests use Satterthwaite's method ['lmerModLmerTest']

Formula: diff.nd_FR_CH ~ n.Group + (1 | Class)

   Data: Dt2

REML criterion at convergence: -400.2

Scaled residuals:
```
    Min      1Q   Median      3Q      Max
-2.94154 -0.65430  0.04889  0.63704  2.21576
```

Random effects:
```
 Groups   Name        Variance Std.Dev.
 Class    (Intercept) 0.000000 0.00000
 Residual             0.003161 0.05623
```
Number of obs: 142, groups: Class, 8

Fixed effects:
```
             Estimate Std. Error        df t value Pr(>|t|)
(Intercept)  -0.001549   0.004878 140.000000  -0.317    0.751
n.Group       0.001878   0.009756 140.000000   0.193    0.848
```

Correlation of Fixed Effects:
```
        (Intr)
n.Group -0.254
```
convergence code: 0

boundary (singular) fit: see ?isSingular
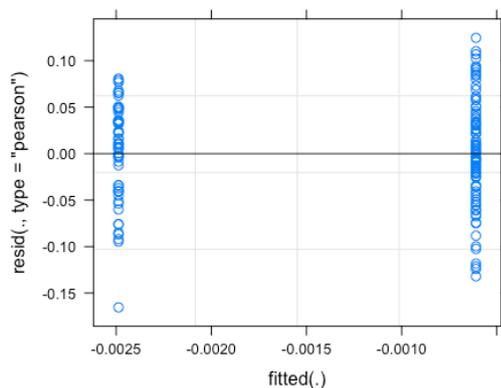
Chinese-German

Linear mixed model fit by REML. t-tests use Satterthwaite's method ['lmerModLmerTest']

Formula: diff.nd_DE_CH ~ n.Group + (1 | Class)

   Data: Dt2

REML criterion at convergence: -352.9

Scaled residuals:

   Min   1Q Median   3Q   Max

-3.6535 -0.5174 -0.0005 0.5566 3.6797

Random effects:

 Groups   Name   Variance Std.Dev.

 Class   (Intercept) 0.000000 0.00000

 Residual   0.004431 0.06657

Number of obs: 142, groups: Class, 8

Fixed effects:

            Estimate Std. Error   df t value Pr(>|t|)

(Intercept) -0.003253   0.005775 140.000000 -0.563   0.574

n.Group   0.007376   0.011550 140.000000   0.639   0.524

Correlation of Fixed Effects:

        (Intr)

n.Group -0.254

convergence code: 0

boundary (singular) fit: see ?isSingular
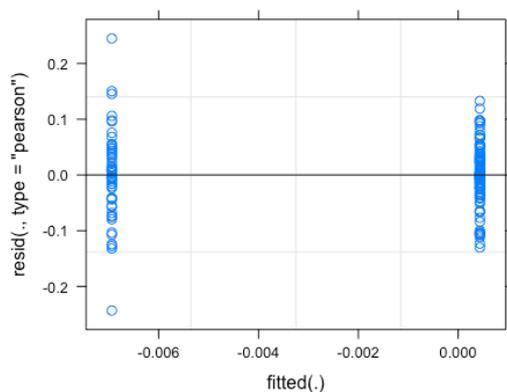
Chinese English

Linear mixed model fit by REML. t-tests use Satterthwaite's method ['lmerModLmerTest']

Formula: diff.nd_EN_CH ~ n.Group + (1 | Class)

   Data: Dt2

REML criterion at convergence: -406.5

Scaled residuals:

    Min   1Q Median   3Q   Max

-2.68127 -0.51687 0.04446 0.55464 2.70029

Random effects:

 Groups   Name   Variance Std.Dev.

 Class   (Intercept) 3.097e-05 0.005565

 Residual   3.000e-03 0.054774

Number of obs: 142, groups: Class, 8

Fixed effects:

        Estimate Std. Error   df t value Pr(>|t|)

(Intercept) -0.003195   0.005173 6.039907 -0.618   0.559

n.Group   0.007098   0.010345 6.039907 0.686   0.518

Correlation of Fixed Effects:

     (Intr)

n.Group -0.252

Residuals vs. outcome