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Are out-of-school exposure, motivation, and anxiety related to English listening and reading proficiency?

Door: Michiel Wouters
Promotor: Elke Peters
Copromotor: Lieven Bollansée

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Abstract

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The main objective of this study was to investigate whether out-of-school exposure to English language media is related to listening and reading proficiency. To this end, data were collected with 108 pupils of primary and secondary education. Furthermore, this study investigated whether language anxiety, motivation, and the extent to which the teacher utilises typical out-of-school activities were correlated with the listening and reading comprehension of 72 secondary school pupils. All participants were administered a questionnaire and a listening and reading comprehension test. A first interesting finding is that a great number of primary school pupils could already perform listening tasks at the A2 level of the Common European Framework of Reference for Languages (CEFR) prior to formal English instruction. Furthermore, it was suggested that Flemish primary and secondary school pupils are frequently exposed to the English language. Watching non-subtitled TV in English appeared to be positively related with either the listening or reading proficiency of each of the three groups of participants (primary school, A-stream and TSO pupils). Concerning motivation, all secondary school pupils appeared to believe that they will need English in the future. Another variable concerning motivation was found to be positively related to listening and reading comprehension: the degree to which students could imagine themselves speaking English fluently in the future. In general, the in-class speaking anxiety of the participants seemed to be higher than their out-of-class anxiety. Finally, anxiety related to speaking English outside of the school setting was negatively correlated with listening and reading comprehension.

Nederlands

Het hoofddoel van deze studie was onderzoeken of er een verband is tussen buitenschoolse blootstelling aan Engelstalige media en luister- en leesvaardigheid. Daarvoor werden er gegevens verzameld bij 108 leerlingen uit het basis- en secundair onderwijs. Daarnaast onderzocht deze studie of taalangst, motivatie en de mate waarin de leerkracht typische buitenschoolse activiteiten gebruikt, gecorreleerd waren met de luister- en leesvaardigheid van 72 leerlingen uit het secundair onderwijs. Alle deelnemers vulden een vragenlijst en een luister- en leestoets in. Een eerste interessante bevinding is dat een groot aantal leerlingen in het basisonderwijs al luistertaken op niveau A2 van het Gemeenschappelijk Europees Referentiekader voor Moderne Vreemde Talen (ERK) kon uitvoeren, nog voordat ze Engelse les hadden gekregen. Daarnaast toonden de bevindingen van dit onderzoek aan dat Vlaamse leerlingen in het lager en secundair onderwijs frequent worden blootgesteld aan de Engelse taal. Kijken naar niet-ondertitelde TV in het Engels bleek positief samen te hangen met de luister- of leesvaardigheid van elk van de drie groepen deelnemers (lagere school, A-stroom en TSO-leerlingen). Wat motivatie betreft, bleken alle middelbare scholieren te geloven dat ze in de toekomst Engels nodig zullen hebben. Een andere variabele met betrekking tot motivatie bleek positief gerelateerd te zijn aan luister- en leesvaardigheid: de mate waarin leerlingen zich konden voorstellen dat ze in de toekomst vloeiend Engels zouden spreken. In het algemeen leek de spreekangst van de deelnemers in de klas hoger te zijn dan hun spreekangst buiten de klas. Tot slot bleek de angst voor het spreken van Engels buiten de schoolsetting negatief gecorreleerd met luister- en leesvaardigheid.

1. Introduction

In the 20th century, English has grown to become one of the most important languages in the world. It is estimated that the English language has over 520 million native speakers and that about 1.5 billion people are learning English as a second or foreign language (Noack & Gamio, 2015). As a result of globalisation and this omnipresence of English, adults, adolescents, and even the younger generation from all over the world are increasingly exposed to different types of English-language media, such as television programmes, video games, music, and books (Sundqvist & Sylvén, 2016).

Previous research has shown that out-of-school contact with English-language media is positively related to the vocabulary knowledge of elementary and secondary school pupils (Bollansée et al., 2021; Puimège & Peters, 2019; Peters, 2018). However, relatively little is known about the relationship between different types of language contact and learners' listening and reading comprehension. Similarly, the role of the secondary school teacher in incorporating typical out-of-school foreign language activities in the lesson programme has not yet been properly investigated.

Moreover, although it is believed that several psychological factors play a critical role in second language acquisition, there is little published data on the influence of motivation and in-class and out-of-class language anxiety on learners' listening and reading comprehension.

The present study therefore set out to assess whether out-of-school exposure, motivation and language anxiety are related to the listening and reading comprehension of Flemish primary and secondary school (A stream and TSO) pupils. Furthermore, this dissertation seeks to examine the perceived role of the teacher in introducing typical out-of-school activities in the classroom.

2. Literature review

This chapter is aimed at providing background to various aspects of the present study. First, by way of introduction, the terms second language learning, second language acquisition and foreign language acquisition will be defined in section 2.1. Second, in section, 2.2., multiple aspects regarding out-of-school exposure will be discussed, e.g., how teachers could incorporate typical out-of-school activities in their lesson programme and which types of out-of-school activities are found to be related to foreign language acquisition. Furthermore, section 2.3. will deal with psychological factors and other individual differences that are believed to affect second language acquisition. Finally, in section 2.4., the importance of the research population of the present study will be highlighted, and a brief overview of the Belgian secondary education system will be presented.

2.1. Second language learning, second language acquisition or foreign language acquisition?

The terms second language learning, second language acquisition and foreign language acquisition are often used interchangeably. Nevertheless, as will be illustrated in this section, there are some major differences between these terms.

The language that one is exposed to during the first few years of life and that one originally learns without classroom instruction is called one's first language or native language (Yule, 2020). Any additional language that is acquired much later is referred to as one's second language (L2) (Yule, 2020). However, early bilinguals are considered to have two first languages, as both these languages are processed in overlapping areas of the brain (Meisel, 2011). The processing of a second language would rely on more complex cerebral networks (Meisel, 2011).

Furthermore, in his Monitor Theory, Krashen (1981) distinguished between "subconscious language acquisition and conscious language learning" (p. 1) and argued that, although the terms are interrelated, subconscious second language acquisition (SLA) seems to be of much greater importance. Second language acquisition is similar to first language acquisition since "it requires meaningful interaction in the target language (…) in which speakers are concerned not with the form of their utterances but with the messages they are conveying and understanding" (Krashen, 1981, p. 1). In other words, individuals would be able to acquire a grammatical feel and linguistic rules, while not being consciously aware that they are doing so. The conscious system of second language learning, on the other hand, relates to absorbing explicit rules and correcting errors.

Sometimes, based on the contextual setting, an additional distinction is made between foreign language acquisition (FLA), i.e., acquiring "a language that is not generally spoken in the surrounding community" (Yule, 2020, p. 220) and second language acquisition, i.e., acquiring "a language that is spoken in the surrounding community" (Yule, 2020, p. 220). Sundqvist (2009) argued that for English this distinction

between foreign and second language acquisition is no longer clear-cut in the 2000s: inhabitants of non-English-speaking countries are frequently exposed to the English language outside the classroom.

In this dissertation, the term foreign language acquisition is the most appropriate, as the main aim of the present study is to investigate the subconscious development of second language proficiency in a setting where the language is not generally spoken in the surrounding community. However, previous studies have shown that Flemish EFL learners are frequently exposed to English outside of the classroom (De Wilde et al., 2019; Kuppens, 2010; Peters, 2018).

2.2. Out-of-school exposure

2.2.1. Out-of-school exposure and related concepts

Over the past decades, the relationship between out-of-school exposure to foreign language media and language acquisition has been studied extensively. Therefore, different frameworks have been established and several concepts related to out-of-school L2 contact have been formulated. This section will give a general overview of a variety of concepts and terms related to out-of-school exposure to English-language media.

A first concept that is related to out-of-school exposure is Extramural English (EE). In 2009, this term was first proposed in a second language acquisition context in Sundqvist's dissertation. Extramural English refers to the "English that learners come in contact with or are involved in outside the walls of the classroom" (Sundqvist & Sylvén, 2016, p. 6). In general, this implies that the learners' contact with the language is voluntary and is not initiated by their teachers. Furthermore, this contact or involvement does not require any "degree of deliberate intention to acquire English" (Sundqvist & Sylvén, 2016, p. 6) on the part of the learner. However, the concept does not exclude out-of-school engagement with English with the deliberate intention to learn either.

In addition, Sundqvist and Sylvén (2016) introduced the Extramural English House (see Figure 1). This metaphor was developed to translate complex research findings into a visual form that is easier to comprehend by a non-specialist audience (Sundqvist & Sylvén, 2016). Sundqvist and Sylvén (2016) explicated that the EE House, comprising two floors and an attic, is usually visited by children and teenagers after school, during holidays and in the weekend. The house is easily accessible: generally, learners just need to make a wish and enter the door. Some, however, need a helping hand from their friends. "How much time a learner spends in specific rooms usually depends on personal preferences but other factors, such as peer pressure or parental influence, may also affect how a learner distributes his or her time inside the house" (Sundqvist & Sylvén, 2016, p. 183). On the first floor of the EE House, there are three rooms: the Music room, the TV room and the Film room. Reaching the second floor of the EE House, where the Office and the Library are situated, demands more effort from the learner, but also has a greater impact on the learners' L2 English proficiency. The Library comprises captivating books, magazines, comics, etc., while the Office provides the learners with a computer that is connected

to the Internet. In this case, the computer is used as an umbrella term. It does not only encompass the devices we typically call computers, "but also other technical devices, such as tablets and smartphones, different kinds of home video game consoles (…) and any other [electronic] gadgets" (Sundqvist & Sylvén, 2016, p. 186). While in the Library reading is the only activity available for learners, in the Office they can participate in multiple L2 activities simultaneously. For instance, nowadays, playing video games can include L2 reading, listening, speaking and writing. Finally, the EE House has an Attic, which is described by Sundqvist and Sylvén (2016) as being "in a mess" (p. 189): it contains all L2 activities that do not fit in any of the other rooms of the EE House. The Attic can include actions such as going on a language holiday, talking to a family member, or watching a theatre play in English. However, language learners rarely visit the Attic, thus it is of minor importance for L2 English learning.

Figure 1
The EE House (illustration by Julius Sylvén). In Sundqvist, P., & Sylvén, L. K. (2016). Extramural English in Teaching and Learning (p. 139). Palgrave Macmillan

Dressman (2020), on the contrary, stated that Sundqvist's (2009) term Extramural English is not inclusive enough and opted for the concept of informal language learning, referring to "all activities undertaken by learners outside a formally organized program of language instruction" (Dressman, 2020, p. 4). Furthermore, the author described new language-learning platforms such as Duolingo, Babbel and Rosetta Stone as hybrid cases, combining elements of formal instruction (e.g., structured learning paths) and non-formal elements (e.g., voluntariness on the part of the learner).

According to Toffoli and Sockett (2010) informal language learning has three characteristics: it is "unofficial, unscheduled and impromptu" (p. 2). Informal language learning is unofficial in that it involves activities which are not part of a lesson, neither part of a homework assignment. In other words, the learning practices are performed autonomously and are not prescribed by a teacher. The unscheduled aspect refers to the idea that the learner does not adhere to a fixed timetable and that it "often follows a natural order" (Toffoli & Socket, 2010, p. 2). Finally, informal language learning is inherently impromptu since the learner does not have the explicit objective to learn while participating in a certain activity but acquires L2 language skills incidentally.

Earlier, building from a theory of Schugurensky (2000), Bennett (2012) proposed four relevant subcategories of informal learning in general: self-directed learning, incidental learning, tacit learning and integrative learning. Self-directed learning refers to the learning activities "undertaken by individuals (alone or as part of a group) without the assistance of an 'educator' (teacher, instructor, facilitator)" (Schugurensky, 2000, p. 3). This type of learning is intentional and conscious. The second subcategory, incidental learning, is used very often in relation to out-of-school exposure to foreign language media. Incidental learning occurs when individuals learn something out of an activity they participate in, without having any explicit intention of learning the language. Hulstijn (2013) defined incidental language acquisition as "the acquisition of a word or expression without the conscious intention to commit the element to the memory" (p. 1). Incidental learning is therefore contrasted with intentional learning, i.e., deliberately attempting to memorise factual information that often includes rehearsal techniques, such as studying for an exam (Hulstijn, 2013). The third subcategory of informal learning, tacit learning, was summarized by Kukulska-Hulme and Lee (2020) as "the most subtle form of informal learning which occurs at the subconscious level based on aspects such as intuition and personal experiences" (p. 171). In other words, individuals can intentionally develop skills through practice, without being fully aware of the actions (cf. many professions require internships to develop skills unconsciously). The last subtype of informal learning, integrative learning, "combines intentional nonconscious processing of tacit knowledge with conscious access to learning products and mental images" (Bennet, 2012, p. 28). Individuals may find the solution to a problem they are trying to solve when they turn their attention away from the problem, e.g., during sleep or exercise (Bennet, 2012).

Finally, Benson (2011) advocated for the use of the term language learning beyond the classroom, which is closely related to out-of-school exposure, extramural English, and informal and incidental learning. More specifically, the author defined language learning beyond the classroom in terms of four parameters: location, formality, pedagogy, and locus of control.

With regard to location, Benson (2011) pointed out the inappropriacy of the terms out-of-school, extramural and after-school learning as they "all focus on location or setting and usually imply something that is supplementary to classroom learning and teaching" (p. 10). However, individuals who are exposed to foreign language media do not necessarily attend foreign language classes. Furthermore, Benson (2011) argued that the term out-of-school is ambiguous since incidental language learning activities are sometimes implemented in in-school teaching (cf. section 2.2.4.).

Secondly, the author referred to the previously discussed term informal learning. Similar to the definitions of Dressman (2020) and Toffoli and Sockett (2010), Benson (2011) claimed that the dimensions of formality "refers to the degree to which learning is independent of organized courses leading to formal qualifications" (p. 10).

According to Benson (2011), pedagogy is another important parameter that is related to language learning beyond the classroom. The author discussed several types of pedagogy such as instructed,

non-instructed, self-instructed, and naturalistic learning. Interestingly, the process of self-directed naturalistic learning, combines intentional and incidental learning: the learner engages in an activity with the intention of language learning, but once they are engaged in the activity the language is acquired incidentally.

A last element which according to Benson (2011) relates to language learning beyond the classroom, is locus of control. This implies that in non-classroom settings the individual's decision about learning is crucial. Locus of control can be described by terms such as independent, self-directed (cf. supra, Bennett, 2012) and autonomous language learning. The learners can choose to shift the locus of control away themselves, e.g., by using self-instructional materials, or can choose to learn independently, e.g., by intentional exposure to foreign language media.

In this dissertation the term out-of-school exposure is adopted to refer to all types of informal contact (written and spoken; unofficial, unscheduled and impromptu) between young individuals and English language media, which could result in incidental acquisition of English listening and reading proficiency.

2.2.2. Types of out-of-school exposure

A large and growing body of literature has investigated the relationship between several out-of-school activities and second language acquisition. This section will deal with out-of-school exposure to the following types of foreign language media: watching TV; reading books, magazines, and comics; computer use; and listening to songs.

Watching TV

Data from several studies suggest that TV viewing in a foreign language can contribute to remarkable gains in vocabulary knowledge and can have a positive influence on language proficiency in general. Multiple studies attributed these gains in proficiency to the role of both on-screen text (first language or foreign language subtitles) and imagery (Peters, 2019; Rodgers, 2018). Consequently, a distinction should be made between subtitled and non-subtitled TV programmes and films on the one hand, and between the use of captions (subtitles in the foreign language) and L1 subtitles on the other hand.

In a European context, Lindgren and Muñoz (2013) investigated the relationship between out-of-school exposure and foreign language achievement of 865 10- and 11-year-old pupils from 7 countries. These young English language learners were in their fourth year of English instruction. In this sub-study of the project Early Language Learning in Europe (ELLiE), foreign language attainment was measured by listening and reading tasks, and the children's out-of-school contact was mapped using a parents' questionnaire. The study found that exposure was a strong predictor of both listening and reading scores and that watching movies and films in the foreign language appeared to be the most important exposure factor. However, no distinction was made between exposure to subtitled and non-subtitled TV/films.

González Fernández and Schmitt (2015), however, looked into the relation between out-of-school exposure to TV, video or films, and the collocation knowledge of 108 Spanish learners of English aged 18 to 64. In this study, the researchers made use of a "questionnaire designed to collect information about the degree to which participants engaged with and used the L2" (González Fernández & Schmitt, 2015, p. 104). The findings suggested that watching TV, videos or films were positively related to the participants' knowledge of collocations (González Fernández & Schmitt, 2015).

Another relevant study is that of Leona et al. (2021), examining the role of Extramural English exposure and motivation in explaining individual differences in young English language learners' English proficiency. In their study, 262 10-year-old Dutch pupils were instructed to complete two questionnaires (one concerning Extramural English activities and one concerning motivation), and two receptive vocabulary tests (one oral and one written). More than half of the participants were receiving formal English education. The researchers found that communicating with family and exposure to entertaining media was positively related to the young participants' vocabulary knowledge. Moreover, their "path analysis showed that the total impact of familial extramural English exposure and extramural English exposure through entertaining media was greater for the YELLs learning English informally, compared to YELLs learning English also formally" (Leona et al., 2021, p. 1).

Apart from the European, Spanish and Dutch studies above, some studies regarding the correlation between out-of-school exposure and foreign language achievement were conducted in a Flemish setting. For instance, Kuppens (2010) investigated the relationship between three types of English language activities on the English-to-Dutch and Dutch-to-English translation skills of 374 pupils in the last year of primary education. The average age of the participants was 11 years. Kuppens (2010) found that listening to English music and watching subtitled English-language programmes and films were very popular among the young participants in her study. Moreover, a positive relationship was found between watching subtitled television and movies and the achievement on both translation tests. This effect was revealed to be stronger with girls than with boys (Kuppens, 2010).

More recently, Peters (2018) examined the relationship between out-of-school exposure to English language media on the vocabulary knowledge of 47 pupils in the fourth year of secondary school and 32 university students. The age of these two groups of participants was respectively 16 and 19 years. Peters (2018) made use of the European Survey of Language Competences (ESLC) to measure the participants' out-of-school contact with English. Vocabulary knowledge was gauged by means of a frequency-based multiple choice test. Peters (2018) found that "Flemish learners are regularly exposed to English language songs, to English language movies with and without subtitles, and TV programs with and without subtitles" (p. 152). With regard to the relationship between out-of-school exposure and learners' vocabulary knowledge, Peters (2018) found positive correlations with regard to non-subtitled TV programmes and non-subtitled movies. Surprisingly, Peters (2018) did not find a correlation between watching subtitled TV programmes or movies and vocabulary knowledge.

Puimège and Peters (2019), however, focussed on various learner-related and word-related variables that are believed to affect young learners' vocabulary knowledge prior to formal instruction. The data of 560 Flemish primary school pupils between 10 and 12 years old was included in their study. Participants were instructed to complete a questionnaire about their extramural English activities and a vocabulary test (meaning recognition or meaning recall). Puimège and Peters (2019) found that the 11-year-old and 12-year-old participants were more often exposed to English language media than the 10-year-old participants. Moreover, the findings of Puimège and Peters (2019) "suggest that there is a positive relationship between extramural English (gaming and TV viewing) and learners' vocabulary knowledge in English" (p. 966). More specifically, of the factors regarding out-of-school exposure, playing video games and video streaming "seemed to play a more consistent role than the Passive Exposure and the Reading factors in predicting participants' word knowledge" (p. 969).

Also the study of De Wilde and Eyckmans (2017) investigated the relationship between out-of-school exposure and the language proficiency of young learners in a Flemish setting. In this study, De Wilde and Eyckmans (2017) measured four language skills (listening comprehension, reading comprehension, writing, and speaking) of 30 11-year-old pupils in the last year of primary school. Similar to Puimège and Peters' (2019) study, the young participants had not yet received formal English instruction. De Wilde and Eyckmans (2017) found that "watching television with subtitles in the first language and listening to English music did not seem to be related to the test scores of the children" (De Wilde & Eyckmans, 2017, p. 682).

Similarly, De Wilde et al. (2019) examined the correlation between English proficiency (listening, reading, speaking, writing) and the out-of-school exposure 780 10- to 12-year-old Dutch-speaking children. In a questionnaire gauging participants' out-of-school exposure, nearly all children reported to listen to English music on a daily basis. Moreover, watching television with subtitles, gaming in English, and social media use were found to be popular out-of-school activities. De Wilde et al.'s (2019) study found significant relationships between social media use, speaking English, listening to English music and gaming on the one hand, and at least one of the four skills on the other hand. Surprisingly, however, the regression analysis did not yield significant results with regard to watching (non-subtitled, subtitled and captioned) English TV.

Finally, Bollansée et al. (2021) explored the relationship between extramural English and the productive vocabulary knowledge of 61 11- and 12-year-old participants prior to formal instruction. To gain insight in the participants' extramural English, the researchers used the questionnaire developed by Puimège and Peters (2019). The participants seemed to most frequently engage in listening to music with English lyrics. Reading and watching English TV programmes with captions, on the other hand, seemed "to be the least popular types of EE activity" (Bollansée et al., 2021, p. 206). Furthermore, the researchers found a positive correlation between watching non-subtitled TV and vocabulary knowledge. Nonetheless, watching TV with L1 subtitles was argued to have a negative effect on young learners' lexical knowledge. Bollansée et al. (2021) maintained that this negative relationship could be due to the

fact that “L1 subtitles might distract attention away from the spoken words because learners are more focused on reading the L1 subtitles” (p. 211)

Apart from the correlational studies mentioned above, multiple interventional studies have demonstrated the causal effect of watching TV and L2 proficiency. For instance, Vulchanova et al. (2015) examined the long- and short-term effects of native language subtitles and captions on second language comprehension and potentially, second language acquisition. The participants in her study were 65 16-year-old and 49 17-year-old monolingual native speakers of Norwegian. Vulchanova et al.’s (2015) findings showed that the availability of on-screen text, in Norwegian or in English, could improve comprehension in the short term. However, it appeared that the availability of subtitles did not have any significant long-term effects on the vocabulary scores.

More recently, Peters (2019) investigated the effect of imagery, L1 subtitles and captions on vocabulary acquisition of Dutch-speaking EFL learners. The 118 Flemish participants in her study were in their fourth and fifth year of formal education and their average age was 16.4. Peters (2019) study showed a positive relationship between imagery and word learning at the level of form recognition as well as meaning recall. Furthermore, the findings suggest that language learners benefit more from captions than L1 subtitles (Peters, 2019).

Finally, Montero Perez et al. (2013) conducted a meta-analysis of the effect of watching captioned video on listening comprehension and vocabulary knowledge. In line with the findings of Peters (2019), the researchers showed that captioned video can be beneficial for vocabulary acquisition. Additionally, Perez et al. (2013) found that captioning can significantly improve English listening comprehension.

Reading books, magazines and comics

Also out-of-school reading has been proposed to be positively related to language proficiency (Peters, 2018; Sundqvist, 2009). In some studies, a distinction is made between different types of print media, such as books, magazines, and comics.

Sundqvist (2009) made use of a language diary to collect information about the out-of-school activities of 74 15- and 16-year-old students from Sweden to examine the relationship between extramural English on the other hand, and oral proficiency and vocabulary knowledge on the other hand. A distinction was made between reading books, newspapers, comics, and other texts. Based on the language diary data, Sundqvist (2009) claimed that “reading books in English was more common than reading newspapers or comics” (p. 128). Sundqvist’s (2009) analysis suggested that reading books and reading newspapers and/or magazines were positively related to both oral proficiency and vocabulary knowledge.

As mentioned in the previous section *Watching TV*, Lindgren and Muñoz (2013) explored the correlation between out-of-school exposure and receptive language proficiency of 10- and 11-year-old European

pupils. However, since the results of the parents' questionnaire indicated that the great majority of the children spent less than 0.5 hours per week reading, the reading factor was not included in their analysis.

González Fernández and Schmitt (2015) investigated the relation between daily out-of-school engagement with English and the collocation knowledge of 108 Spanish speakers. González Fernández and Schmitt (2015) found a strong correlation between reading and knowledge of collocations. Interestingly, this correlation appeared to be higher than that between watching films and collocation knowledge (González Fernández & Schmitt, 2015).

Furthermore, Peters (2018) found a positive relationship between out-of-school reading and vocabulary knowledge in her study with 16- and 19-year-old Flemish pupils. Similar to Lindgren and Muñoz' (2013) findings, it emerged that reading books or magazines was one of the least popular out-of-school activities.

De Wilde et al. (2019) suggested that reading in English can be beneficial to the overall proficiency of 10- to 12-year-old learners (vocabulary knowledge, and listening, reading, writing and speaking ability). Again, few participants in their study reported to read books regularly.

While the studies mentioned above have shown a positive correlation between out-of-school reading and learners' L2 proficiency, some intervention studies have found a causal effect of reading on vocabulary knowledge and reading comprehension.

For instance, a relevant study by Webb and Chang (2015) studied the effect of extensive reading on L2 vocabulary knowledge. The researchers found "that L2 learners may gain sizable word knowledge from the regular reading and listening of graded readers" (Webb & Chang, 2015, p. 683). Furthermore, Webb and Chang's (2015) findings suggested that reading a large number of texts resulted in higher vocabulary gains than reading a single text.

Furthermore, the effect of comic strips on L2 Learners' reading comprehension has been studied by Liu (2004). The study suggested that comics may not enhance the performance of high-level participants but could have a significant impact on the scores of low-level students.

Computer use: playing video games, using social media, and surfing the Internet

A third important source of out-of-school exposure to EFL learners is computer use. However, it is important to note that while using a computer, learners can engage in multiple L2 activities simultaneously, such as reading, listening, and even writing in English (Sundqvist & Sylvén, 2016).

In her dissertation, Sundqvist (2009) investigated the relationship between oral proficiency and vocabulary knowledge, and different types of extramural English activities, one of which being surfing

the Internet. The findings of Sundqvist (2009) suggested that using the internet was an important EE activity for both the oral proficiency and vocabulary knowledge of 15- and 16-year-old Swedish students.

Computer use can entail playing video games, which is believed to be a valuable source of out-of-school exposure to EFL learners. Multiple studies have shown positive correlations between L2 proficiency and frequency of playing video games. (Bollansée et al., 2021; De Wilde & Eyckmans, 2017; De Wilde et al., 2019; Hannibal Jensen, 2017; Sylvén & Sundqvist, 2012,).

Sylvén and Sundqvist (2012), for instance, measured the extramural English habits of 86 11- and 12-year-old learners from Sweden by means of a questionnaire and a one-week language diary to investigate the potential relationship between learners' L2 proficiency and their engagement in extramural English activities. Additionally, participants were asked to complete a vocabulary test that was divided in three separate parts, testing receptive and productive vocabulary knowledge. As previous studies suggested that playing digital games can be beneficial for language learning, the main focus of this study was to verify whether gaming and L2 proficiency really correlate. After examining the learners' gaming habits, the researchers divided the participants into three digital game groups: non-gamers, moderate gamers and frequent gamers. Frequent gamers appeared to achieve a significantly higher score on the vocabulary test than the moderate gamers, who in turn obtained higher results than the non-gamers.

However, in her empirical study with 374 participants in the last year of primary education in Flanders, Kuppens (2010) found only limited effects of English-language computer games on the children's Dutch-to-English and English-to-Dutch translation skills. Although these young research participants had not yet received English instruction in school, they reported to frequently consume English language media (Kuppens, 2010). Even though a significant interaction effect was found between playing English computer games and listening to English music on the results of the Dutch-to-English translation test, Kuppens (2010) argued that this effect could probably be attributed to the low number of respondents in some of the categories. However, a minimal significant effect was found between playing English computer games on the English-to-Dutch translation scores. Kuppens (2010) attributed these limited effects of playing video games to the fact that no distinction was made between the different types of computer games. Therefore, some games could be more beneficial to language acquisition than others.

Moreover, De Wilde and Eyckmans (2017) used children's and parents' questionnaires to look into the effect of digital gaming and computer use on the listening, speaking, reading and writing skills of 30 11-year-old Flemish children in their pre-instructional phase. The researchers found that "the amount of gaming in English and the number of hours of computer use in English were significant predictors of children's test scores" (De Wilde & Eyckmans, 2017, p. 685).

De Wilde et al. (2019) found that another aspect concerning computer use, exposure to social media, was an important type of exposure to English for young Flemish learners and that it was positively

related to the overall English language proficiency of 780 10- to 12-year-old learners (receptive vocabulary knowledge and listening, reading, writing and speaking proficiency).

Peters (2018) did not find any significant correlations between playing computer games and vocabulary knowledge of 16- and 19-year-old Flemish EFL learners. According to the researcher, this unexpected finding might be explained by two differences with previous studies. Firstly, the participants in Peters' (2018) study were older than the learners in studies by Kuppens (2010) and, Sylvén and Sundqvist (2012). Secondly, in the study of Sylvén and Sundqvist (2012), participants were grouped according to their frequency of gameplay.

The effect of digital gameplay on L2 learners' willingness to communicate was examined by Reinders and Wattana (2014). The researchers developed two sets of questionnaires, gauging the participants' own perception of their willingness to use English, as well as their communication anxiety, confidence and perceived communicative competence. In this intervention study, 30 Thai EFL learners of different ages and at different ages filled in the questionnaires before and after playing the commercial game Ragnarok Online. This game is played simultaneously by a great quantity of players in a complex virtual environment, thus allowing a significant amount of player interaction. The findings of the study suggest that whereas the participants were reluctant to communicate in English during class, during gameplay the students reported feeling more confident to talk to and more willing to interact with other students. In conclusion, the researchers stated that game-based tasks may positively influence the language learning process.

Similarly, a case study of two Spanish learners playing a Spanish language version of World of Warcraft conducted by Rama et al. (2012) suggested that this Massively Multiplayer Online Role-Playing Game (MMORPG) could positively influence language learning. Their study discussed the learners' language development and socialisation and highlights several attributes of the online game space that are beneficial to SLA. More specifically, the analysis suggested that groups of players, called guilds or parties, can act as safe learning environments for L2 learners. Nevertheless, it should be noted that this affordance is not without limitations: language learners do not always find native players with whom they feel comfortable interacting.

Listening to songs

Also listening to songs has previously been proposed as a popular out-of-school activity that may affect English language proficiency.

For instance, Lindgren and Muñoz (2013) found that foreign language learners frequently listen to music in their target language and that listening to foreign language songs could have a modest positive impact on listening and reading skills of 10- to 11-year-old language learners.

However, in the previously mentioned study of González Fernández and Schmitt (2015), no correlation between listening to music and collocation knowledge was found. It is important to note that, in contrast with Lindgren and Muñoz' (2013) study, the participants in this study were all adult learners aged 18 to 64.

A recent study by Peters (2018), investigating the relationship between different types of out-of-school activities and the vocabulary knowledge of secondary school pupils and university students, found only a negligible effect of listening to English music. Peters' (2018) findings about the popularity of listening to music in the target language were in line with those of Lindgren and Muñoz (2013).

Finally, in their recent study, Bollansée et al. (2021) observed a positive relationship between listening to songs and young Flemish learners' vocabulary knowledge prior to formal English instruction. Moreover, the authors state that "the type of EE the participants in both grade five and six seem to most frequently engage in is listening to English language songs" (Bollansée et al., 2021, p. 206).

2.2.3. Mapping learners' out-of-school L2 activities

In SLA research, several methods can be adopted to measure learners' out-of-school activities. This section will present some of the most commonly used instruments for mapping learner interests, as suggested by Sundqvist and Sylvén (2016).

First, a seven-day language diary may be useful to gain insight in learners' out-of-school L2 activities. Such a language diary could be structured as follows: "on the first page of every spread a number of EE activities are listed (…), and for each such activity there is a column to fill in the total time spent during that particular day. On the second page, questions are asked regarding the 'normality' of that day regarding the activities reported" (Sundqvist & Sylvén, 2016, p. 155). After one week, the researcher can analyse the diaries to gain understanding of how often the pupils are exposed to English in their free time. Sundqvist (2009) made use of such a language diary in her dissertation on Extramural English.

Another method to map learners' out-of-school L2 activities is by using questionnaires with open-ended and simple yes/no questions. In studies examining the effect of extramural English on English proficiency, this is by far the most common technique of measuring the frequency in which learners are exposed to foreign language media. For instance, in her study, Peters (2018) made use of the European Survey of Language Competences (ESLC) to gauge secondary school and university students' out-of-school contact with English. Furthermore, it is important to notice that a questionnaire must not include too many questions, as this may fatigue the respondents, which in turn could affect the results negatively. Here, a golden rule can be applied: the younger the participants, the fewer questions.

Also interviews can be used to map learners' language-related extramural interests. Sundqvist and Sylvén (2016) claim that, although time-consuming, they are probably the best way to examine what students do and appreciate in their extramural lives. An audio recording device can be used when conducting the interview, with the purpose that the researcher can remain interested and does not have to worry about writing everything down.

A fourth method to investigate learners' interests is by means of a portfolio. For instance, the European Language Portfolio (ELP) may be a useful tool to not only raise the learners' awareness of the learning process, but also to map their EE habits. There are different versions of the ELP for different age and population groups. Such a portfolio can be divided into various parts: a Language Passport, which "provides an overview of the individual's proficiency in different languages at a given point in time" (Council of Europe, 2000, p. 7), a Language Biography, which "facilitates the learner's involvement in planning, reflecting upon and assessing his or her learning process and progress" (p. 9) and a Dossier, which "offers the learner the opportunity to select materials to document and illustrate achievements or experiences recorded in the Language Biography or Passport" (p. 10).

In the present study, a questionnaire with Likert scales and few open questions is used to map the learners' out-of-school English activities. Since too many questions could tire the young participants in this study, the questionnaire was developed to be only two pages long (cf. section 3.2.2.2.).

2.2.4. Out-of-school activities and the role of the teacher

As suggested previously in this paper, different types of out-of-school activities are found to positively influence learners' L2 proficiency. Therefore, Sundqvist and Sylvén (2016) argue that teachers should gain "information about students' extramural activities involving English" (p. 154) and should use this information to incorporate typical out-of-school English language activities in their lesson programmes.

A first typical out-of-school activity that teachers are proposed to implement in L2 English schoolwork is reading (Sundqvist & Sylvén, 2016). For instance, the teacher could develop stimulating reading assignments and promote further reading by inviting pupils to share their thoughts on different texts they read. It is important to note that reading does not only include books, but also magazines, comic strips and fan fiction.

Furthermore, as several studies have found that watching English TV shows can improve language proficiency, the teacher could give their pupils assignments that involve watching a number of episodes of a popular TV series. Sundqvist and Sylvén (2016) suggest that, afterwards, L2 teachers could hold class discussion about certain terms and collocations that were used in the episodes.

Similarly, watching films can be introduced into the teaching programme, by means of school projects for which the students are free to choose which films to watch. Sundqvist and Sylvén (2016) argue that

students at secondary level enjoy comparing story lines of films based on novels. As some studies (Peters, 2019; Bollansée et al., 2021) have found a differentiated effect of captions and L1 subtitles on language proficiency, the teacher may have to decide on forehand whether or which type of on-screen text the students are allowed to use.

A less evident out-of-school activity to bring into the classroom is digital gaming. Sundqvist and Sylvén (2016) note that gaming "seems to be an excellent way of promoting the acquisition of a large L2 English vocabulary" (p. 171). However, the language used in video games is often too informal or even foul. Therefore, English teachers could use digital gaming as a starting point to make the pupils aware of the different registers and styles. Moreover, teachers could ask their pupils to build a glossary of the terms and phrases that are used in a certain game.

In 2015, the beforementioned activities and more were included in the 30-day Extramural English Challenge developed by the Swedish teacher Emmeli Johansson, to build a bridge between in- and out-of-class learning. This challenge is believed to be beneficial for both pupils' that did not yet engage in out-of-school L2 activities and for students that were already involved in EE activities. The 30-day Extramural English Challenge included daily tasks, such as "Use Facebook in English for at least 24 hours", "Cook a meal using a recipe in English" and "Make your own meme in English" (Smith, 2015).

2.3. Individual differences influencing SLA

2.3.1. Psychological factors

Learners' motivation and language anxiety are believed to influence second language acquisition considerably (Bernaus & Gardner, 2008; Teimouri et al., 2019). It is important to bear in mind that these two factors concern the psychology of the language learner, which is a research topic studied by the interdisciplinary field of psycholinguistics.

This section will briefly introduce some of the main frameworks of motivation and anxiety and will give an overview of some relevant studies about the effect of those psychological factors on second language acquisition.

2.3.1.1. Motivation

According to Dörnyei and Ushioda (2011) motivation "concerns the direction and magnitude of human behaviour, that is: the choice of a particular action, the persistence with it [and] the effort expended on it" (p. 4). Furthermore, motivation is often subdivided into two broad categories: intrinsic and extrinsic motivation. Intrinsic motivation would result from the pleasure one enjoys when undertaking an interesting activity, while extrinsic motivation would not be directly related to the enjoyment of the activity itself (Dörnyei, 2009).

One of the dominant theoretical frameworks in the field, Dörnyei's (2005) L2 Motivational Self System (L2MSS), suggested that language learning motivation is comprised of three components: the ideal L2 self, the ought-to L2 self and L2 learning experience. "The ideal L2 self is who a learner would like to become in terms of language ability and use (…), whereas the ought-to L2 self is who the learner feels that he or she is obliged to become based on external pressures." (Thompson & Vásquez, 2015, p. 159) In other words, the ideal L2 self encompasses the learner's intrinsic motives for second language learning, such as internal desires or wishes. In consequence, the ideal L2 self is considered an important motivator if the person the language learner would like to become speaks the L2 (Dörnyei, 2009). The second component, the ought-to L2 self, consists of one's more extrinsic motives for learning a second language, for instance meeting societal expectations and avoiding possible negative outcomes (Dörnyei, 2009). The third component of the L2MSS, L2 Learning Experience, is concerned with the L2 learner's past and current experiences, e.g., interaction with the teacher, the peer group, the experiences of successes or failures and the curriculum (Dörnyei, 2009).

Several previous studies have revealed a positive relation between motivational factors and effort towards second language learning (Csizér & Dörnyei, 2005; Islam et al. 2013). Consequently, it might be suggested that higher levels of learning effort may result in higher L2 proficiency.

The relationship between motivation and L2 proficiency was examined by Bernaus and Gardner (2008). By administering a questionnaire entitled mini-Attitude Motivation Test Battery (AMTB), they found a positive correlation between motivation levels and receptive language skills of 694 15-year-old students from the Catalan Autonomous Community of Spain.

With regard to Dörnyei's (2005) L2MSS, a meta-analysis by Al-Hoorie (2018) discovered that all three components (the ideal L2 self, the ought-to L2 self, and the L2 learning experience) are positively related to subjective intended effort, and in a lesser extent to achievement. Moreover, it appeared that the predictive validity of the ideal L2 self in relation to achievement was higher than that of the ought-to L2 self. Al-Hoorie (2018) offered a possible explanation: since, by definition, the ought-to L2 self concerns someone else's expectations, "learners may simply aim to achieve the minimum required to satisfy another person's desires, rather than fulfilling them more thoroughly as one might do with one's own ideals" (p. 737)

2.3.1.2. Language anxiety

Language anxiety, on the other hand, is believed to have a direct negative effect on second language achievement (Bernaus and Gardner, 2008). According to Bernaus and Gardner (2008) language anxiety can be divided in L2 use anxiety and L2 class anxiety. The latter has been studied extensively by Horwitz et al. (1986), who developed the Foreign Language Classroom Anxiety Scale (FLCAS), a questionnaire consisting of 33 items with a five-point Likert scale. To date, FLCAS is still the most commonly used instrument for assessing foreign language anxiety. Nevertheless, it should be mentioned that over the

past decades, variations of the FLCAS have been developed, taking into consideration separate language skills, such as the Foreign Language Listening Anxiety Scale (FLLAS) (Elkhafaifi, 2005), the Foreign Language Reading Anxiety Scale (FLRAS) (Saito et al., 1999), and the Second Language Writing Anxiety Inventory (SLWAI) (Cheng, 2004).

In his study, Abu-Rabia (2004) used the FLCAS to investigate the relationship between foreign language anxiety and the English achievement of 67 12- and 13-year-old pupils. The researcher found significant negative correlations between anxiety and the scores on spelling, reading comprehension and creative writing tests.

Furthermore, Brunfaut and Révész (2015) found a negative correlation between listening anxiety and the listening performance of 93 non-native adult English speakers from various linguistic backgrounds (aged 18 to 43). In their study, Elkhafaifi's (2005) FLLAS was used to measure general listening anxiety. This questionnaire does not differentiate between L2 use and L2 class anxiety. Listening proficiency was gauged by a select missing word task and the Pearson Test of English Academic Scored Practice Test, which included 11 different task types.

Recently, Teimouri et al. (2019) carried out a meta-analysis in which the results of 97 reports were assessed. The researchers reported that language anxiety may account "for 13% of the variance in L2 achievement scores" (p. 372). It should be noted however that in this study, no distinction was made between in-class and out-of-class anxiety.

2.3.2. Other factors

Apart from out-of-school contact, motivation and anxiety, multiple other factors are suggested to have an impact on the second language acquisition process. This section will briefly introduce the role of age and gender on second language acquisition.

2.3.2.1. Age

There is a consensus among SLA researchers that age plays a significant role in second language acquisition (Gass & Selinker, 2008). More specifically, it is "believed that children are better language learners than adults in the sense that young children typically can gain mastery of a second language, whereas adults cannot" (Gass & Selinker, 2008, p. 405).

One of the most prominent theories on the role of age on second language acquisition is Lennenberg's (1967) Critical Period Hypothesis. According to Lennenberg (1967), "automatic acquisition from mere exposure to a given language seems to disappear [after puberty], and foreign languages have to be taught and learned through a conscious and labored effort" (as cited in Gass & Selinker, 2008, p. 406). Consequently, this theory suggests that if a learner does not acquire a certain language between the

age of 2 and puberty, it will become difficult or even impossible for the learner to master that language through passive exposure, i.e., without formal language instruction.

Another hypothesis on the effect of age in second language acquisition is the Sensitive Period Hypothesis, which "predicts sensitivity, but not absolute drop-offs such that a learning decline might be gradual" (Gass & Selinker, 2008, p. 406). It is maintained that during this sensitive period children would be highly sensitive to linguistic input so that language acquisition may be greatly facilitated (Lee, 2009).

At first thought, it may seem odd that children acquire a language with ease, while adults, having an advantage in most cognitive activities, often struggle with learning a foreign language (Gass & Selinker, 2008). Therefore, in SLA research, the variable of Age of Acquisition has been investigated in depth.

2.3.2.2. Gender

Some researchers maintain that the learner's gender (as a social construct) or sex (as a biological variable) may have an influence the language acquisition process (Burman et al., 2008; van Wyk & Mostert, 2016). In particular, researchers believe that females have a clear advantage in first language acquisition (van Wyk & Mostert, 2016) and in second language acquisition (López Rúa, 2006). Nevertheless, the reasons for this gender gap in language development remain a source of controversy.

Burman et al. (2008) used functional magnetic resonance imaging (fMRI) to investigate the sex differences in brain activation during two language judgment tasks in the L1. Their study showed "that girls and boys preferentially use different brain areas for performing [certain] cognitive functions" (p. 1358). More specifically, girls were "found to have significantly greater activation in linguistic areas of the brain" (p. 1359). According to the researchers, this would explain why, in general, language performance is better among females than among males.

However, López Rúa (2006) argued that the gender gap is due to an interaction between nature and nurture. In other words, she hypothesised "that girls' achievement in foreign language learning is enhanced by the interaction of neurological, cognitive, affective, social and educational factors" (López Rúa, 2006, p. 99). With regard to social factors, for instance, López Rúa (2006) suggested that "girls and boys are still expected to satisfy different requirements concerning both their future occupations and social roles" (p. 106). Girls would be more motivated to learn languages, since they believe that they could help them find work.

Although the researchers mentioned above maintained that the female language learners have an advantage in the language learning process, it is noteworthy that several studies did not find significant gender differences concerning L2 vocabulary knowledge (Peters et al., 2019), and reading and listening skills (Hatami, 2015; van der Slik et al., 2015).

2.4. Participants

This cross-sectional study is aimed at investigating and comparing the relationship between extramural English and the listening and reading proficiency of three groups of participants: sixth-year elementary school, second-year secondary school pupils and fourth-year secondary school students. In contrast with the youngest group, the latter two had received English classes prior to this study. This section will offer some background information on young English language learners and A-stream and technical secondary school (TSO) students to underline the significance of these groups as research participants.

2.4.1. Young English language learners (YELLs) without formal instruction

Since in this day and age English-language media are omnipresent in many non-English speaking European countries, a large number of adults, adolescents and even children are frequently exposed to English language input (Peters et al., 2020). Unfortunately, relatively little is known about the effect of extramural English exposure on children's English language proficiency, and even less about its impact on their receptive language skills (De Wilde et al., 2019).

In many studies, the label young English language learners (YELLs) refers to "primary/elementary school age children who learn English as a second or foreign language" (Papp, 2018, p. 389) or more specifically to "children who learn English as a second or foreign language from five years up to twelve or thirteen years" (Leona et al., 2021, p. 2). The term encompasses both young children receiving formal English education and young learners who have not yet received English classroom instruction, but have learned the language informally (Leona et al., 2021).

Interestingly, studies have shown that YELLs may attain high levels of language proficiency prior to formal English instruction and that this achievement could, at least partly, be attributed to regular exposure to English-language media (Bollansée et al., 2021; De Wilde & Eyckmans, 2017; Kuppens, 2010; Lindgren & Muñoz, 2013; Peters et al., 2020; Puimège & Peters, 2019). Therefore, it would be valuable to study the relation between Flemish YELLs' exposure to different types of English-language media and their English language proficiency prior to formal education.

2.4.2. A-stream and technical secondary school (TSO) students with formal instruction

In order to fully understand the significance of the present study's group of participants, the Flemish secondary education system has to be explained first.

The first stage of secondary education, which lasts two years, is divided into two streams: the A stream and the B stream (Vlaamse overheid, 2012). Subsequently, from the third year onwards, pupils select one of four possible education types: (1) General secondary education (ASO), (2) technical secondary education (TSO), (3) vocational secondary education (BSO), or secondary arts education (KSO) (Nusche et al., 2015; Vlaamse overheid, 2012). Traditionally, students from A-stream education opt for the ASO, KSO or TSO trajectory, even though they are allowed to continue in any of the four educational trajectories. Conversely, pupils "who were enrolled in the B stream of the first stage are automatically referred to vocational education (BSO) in the second stage of secondary education" (Nusche et al., 2015, p. 33).

Furthermore, Flemish secondary education is organised by three different educational networks: community education (GO!), grant-aided public education (OGO) and grant-aided private education (VGO), each of which is allowed to develop their own curricula (Nusche et al., 2015). Consequently, not all secondary school pupils start formal English education during the same year, neither do they receive the same number of English classes per week.

Whereas previous studies investigating the relationship between out-of-school exposure and English language proficiency have mainly focused on pupils attending general secondary education (ASO) (Peters, 2018; Peters et al., 2020), the research sample of the present study consists, in addition to YELLs without formal English instruction, of second-year A-stream students and fourth-year technical secondary school (TSO) students.

3. Research

3.1. Research questions

Although a large number of studies have examined the relationship between extramural English activities and learners' second language proficiency, the present study is distinctive for a variety of reasons.

Whereas the majority of previous studies have found a positive relationship between extramural English activities on teenage pupils' vocabulary knowledge, to date few studies have investigated the relation between out-of-school exposure and learners' listening and reading proficiency. Therefore, the present study is aimed at filling this research gap.

As indicated in the literature review (see section 2.4.), the group of participants in the present study is also unique. Previous research on the impact of out-of-school exposure to English on second language acquisition has mainly focussed on pupils attending general secondary education (ASO) (Peters, 2018; Peters et al., 2020) or on primary school age children (Bollansée et al., 2021; De Wilde & Eyckmans, 2017; Kuppens, 2010; Lindgren & Muñoz, 2013; Peters et al., 2020; Puimège & Peters, 2019). The research sample of the present study, however, consists of (1) children in the last year of primary school who had not yet received formal English instruction, and (2) second year A-stream students and (3) fourth-year technical secondary school (TSO) students with formal English instruction.

Finally, the present study is the first one to examine the impact of learners' L2 speaking anxiety and the perceived use of typical out-of-school materials by the English teacher on both listening and reading comprehension. With regard to anxiety, previous studies mainly explored the relation between L2 listening anxiety and listening comprehension on the one hand (Elkhafaifi, 2005) or between L2 reading anxiety and reading comprehension on the other hand (Badara, 2019; Tsai & Li, 2012).

This dissertation aims to answer the following research questions:

> *RQ1: How do primary school, A-stream and TSO pupils score on an English listening and reading test?*
>
> *RQ2: Is there a relationship between out-of-school exposure and listening and reading comprehension?*
>
> *RQ3: Are motivation, anxiety, and perceived teachers' use of typical out-of-school English language activities related to listening and reading comprehension?*

3.2. Methodology

3.2.1. Participants

The convenience sampling method was used to recruit a total of 108 pupils from three different age groups: (1) children in the last year of primary school (*n* = 36), (2) pupils in the second year of a hospitality management secondary school (A stream) (*n* = 33) and (3) pupils in the fourth year of an agricultural secondary school (TSO) (*n* = 39). Table 1 gives a clear overview of the characteristics of the three groups of participants.

For the youngest group, 38 participants were recruited from two classes of sixth-year elementary school pupils in Flanders (Belgium). However, the data of 2 participants was incomplete and was therefore removed, bringing the total number of participants to 36 11- to 12-year-olds. The sample consisted of 18 girls and 18 boys. Prior to this study, the respondents of the first group had not had English classes as English is not part of primary schools' curricula in Flanders, but two participants indicated on the survey that they had attended a language camp before.

The second group of participants consisted of 39 EFL learners in the second year of secondary school from three different classes. The test sample included 16 boys and 23 girls, who prior to this study, had received approximately 2 hours of English classes per week over a period of 5 months: the pupils had attended English classes since September and the data collection took place in January.

The third group of respondents was the smallest one, comprising 33 fourth-year pupils from four classes of a secondary school. However, in this group the boy to girl ratio was very uneven with 28 male and only 5 female respondents. The participants had received approximately 2 hours of English classes per week for 2 years and 5 months.

Because the study involved children and underage adolescents, the ethical guidelines developed by the Social and Societal Ethics Committee (SMEC) of the KU Leuven were strictly adhered to. The participation in the data collection was completely voluntary and the requirements of the General Data Protection Regulation (GDPR) were met. Before collecting data, participants were informed about the scope of the study and were required to complete written consent forms. Moreover, respondents were instructed to ask consent to their parents before participating in the study by means of a second consent form. In addition, in light of the current health crisis, participants were requested to sign a document that described the measures that were taken to avoid the spread of COVID-19.

Table 1
Summary of characteristics of the three groups of participants

Education level	n	Male-female	Age
6th year of primary education	36	18 - 18	11-12
2nd year of secondary education (A stream)	39	16 - 23	13-14
4th year of secondary education (TSO)	33	28 - 5	15-16

3.2.2. Data collection instruments

3.2.2.1. Reading and listening test

Data was collected by means of an extract from the English reading and listening test of the first European survey on language competences (European Commission, 2012a). The reading and listening test each consisted of three multiple-choice exercises on the three lowest levels of the Common European Framework of Reference for Languages (CEFR): A1, A2 and B1. Whereas the multiple-choice answers were only made available in English, the questions and instructions were provided both in English and Dutch. The three reading test tasks consisted of short texts (a notice, an article and an email) and 4 to 6 multiple-choice questions, with three possible answers. With regard to the listening tasks, the participants were allowed to listen to each recording twice while completing the test. According to Hemmati and Ghaderi (2014), this format of multiple-choice questions, called full question preview (FQP), can facilitate listening comprehension, since it might motivate the listener "to get necessary information to answer the questions" (p. 642) or "decrease the stress of hearing something suddenly" (p. 642).

For the groups of A-stream pupils and TSO pupils, one listening and one reading task at level B2 were added, since a previous study by Peters et al. (2020) found that A-stream pupils had already achieved level B1 for listening proficiency in the second year of secondary education. Nevertheless, the learning goals formulated by the Flemish government state that students in the A-stream trajectory should achieve only level A2 at the end the second year of secondary education (GO! onderwijs van de Vlaamse Gemeenschap, 2014). Furthermore, De Wilde and Eyckmans (2017) indicated that among the young participants in their study "40% (…) had already reached the required competence level for listening comprehension at the end of the second year of secondary education when they were in the final year of primary school" (p. 685).

3.2.2.2. Questionnaire

The participants were asked to complete a questionnaire about their extramural English activities (see Appendix A for the original version, see Appendix B for the English translation).

The first part of the questionnaire focussed on the pupils' use of different English language media, such as digital games, TV programmes, songs and books (see Figure 2).

Figure 2

Example of an item concerning out-of-school exposure to English (Translated from Dutch)

1. How often do you watch **English-language** television programmes, films, cartoon films, documentaries (on TV, tablet, computer, mobile phone…)?	never	sometimes	often	always
Without subtitles	□	□	□	□
With **Dutch** subtitles	□	□	□	□
With **English** subtitles	□	□	□	□
With **other foreign-language** subtitles	□	□	□	□
Which programmes/films do you like watching/do you watch most?				

For groups of A-stream pupils and TSO pupils, two more parts were added to the questionnaire. One part was aimed at assessing the participants' motivation and L2 speaking anxiety, using six questions drawing on the L2 Motivational Self System (Dörnyei, 2005) and the English-language version of Gardner's (2004) Attitude/Motivation Test Battery (see Figure 3). More specifically, the first two questions were related to Dörnyei's ideal L2 self (2005), the next two questions were aimed at gauging the pupils' anxiety towards speaking English (inside and outside the classroom), and the last two questions of this part dealt with Dörnyei's ought-to L2 self (2005). One element of Dörnyei's L2 Motivational Self System, L2 learning experience, was not included in this study, since the majority of the participants only had less than 2 years of learning experience with English.

Figure 3

Two questions regarding Dörnyei's (2005) L2 speaking anxiety and ought-to L2 self (Translated from Dutch)

	Strongly disagree	Disagree	Agree	Strongly agree
I find it scary to speak English during class.	□	□	□	□
My friends think English is an important language.	□	□	□	□

The last part of the survey for secondary school pupils examined the perceived role of the English teacher in incorporating typical out-of-school English activities (Youtube videos, series, films, games, …) into their lesson programme. In this part the respondents had to rate the perceived frequency of the following three activities: "The English teacher gives us reading assignments", "The English teacher gives us assignments that require us to watch an English movie, series or YouTube video" and "The

English teacher uses authentic [L1] materials during the lesson (e.g., a Youtube video, music, series or movie, game ... in English)".

The listening and reading test were each completed within approximately 20min, while for filling in the questionnaire the A-stream and TSO participants were given approximately 10min. Due to time constraints, the group of primary school pupils was instructed to fill in the questionnaire at home. Consequently, all participants were able to complete the data collection within the allotted time frame of 50min.

3.2.3. Data Analysis

The English reading and listening tests were scored dichotomously: a correct answer corresponded to a score of 1, an incorrect answer received a score of 0. Unanswered questions were also coded as 0.

Furthermore, the questionnaire Likert-scale items regarding out-of-school exposure and perceived role of the English teacher were coded as follows:

0 = never, 1 = sometimes, 2 = often, 3 = always

Additionally, the Likert-scale items concerning motivation and L2 speaking anxiety were coded as follows:

-2 = strongly disagree, -1 = disagree, 1 = agree, 2 = strongly agree

Subsequently, to examine how the three age groups scored on the listening and reading test (Research Question 1), the results were added into an Excel file to calculate the mean scores, standard deviations, median, and minimum and maximum scores per age group. A score of at least 80% of the maximum on a task would be considered full mastery and a result between 50% and 80% would be considered moderate mastery (European Commission, 2012b). A score of less than 50% would count as no mastery (European Commission, 2012b). The results can be found in the next section.

To answer Research Question 2, concerning the relation between out-of-school exposure to English language media and pupils' listening and reading achievement, the total results on the listening and reading comprehension tests at levels A1 to B1 were converted to percentages and were imported into the IBM SPSS Statistics program (version 27) together with the coded Likert-scale responses. Thereafter, Spearman's rank correlations were calculated between the pupils' self-reported out-of-school exposure to English and their scores on the listening and reading comprehension test. Spearman's correlation coefficient was used since the data was not normally distributed and included ordinal and scale variables, viz., coded Likert-scale responses and test results (Larson-Hall, 2015; Selvamuthu & Das, 2018)

For Research Question 3, concerning the relationship between motivation, anxiety and perceived teachers' use of typical out-of-school English language activities as part of the teaching programme and the pupils' listening and reading proficiency, again Spearman's rank correlations were computed with the IBM SPSS Statistics program. However, these correlations were be calculated only for the A-stream and TSO students. As mentioned in the section "Data collection instruments", the questionnaire for the group of elementary school pupils, did not measure motivation or anxiety, nor the teacher's use of English out-of-school activities. For the third research question, the total results on the listening and reading comprehension tests at levels A1 to B2 were converted to percentages.

3.3. Results

3.3.1. RQ 1: How do primary school, A-stream and TSO pupils score on an English listening and reading test?

3.3.1.1. Listening comprehension test

This section will present the scores on the listening comprehension test. As can be seen in Table 2, the group of TSO students achieved the highest average score on the listening comprehension test at levels A1 to B1, followed by the group of A-stream students and primary education pupils. At level B2, TSO students also had higher scores than A-stream students.

With regard to listening comprehension, of the 36 primary school pupils, it appeared that:

- 7 pupils had achieved full mastery at level B1;
- 21 pupils had achieved full mastery at level A2;
- 4 pupils had achieved full mastery at level A1;
- 4 pupils had achieved moderate mastery at level A1.

Of the 39 A-stream pupils, it appeared that:

- 1 pupil had achieved full mastery at level B2;
- 12 pupils had achieved full mastery at level B1;
- 19 pupils had achieved full mastery at level A2;
- 4 pupils had achieved full mastery at level A1;
- 1 pupil had achieved moderate mastery at level A1;
- 2 pupils had obtained a score of less than 50% at level A2, which would count as no mastery.

Concerning the 33 TSO participants, it appeared that:

- 10 pupils had achieved full mastery at level B2;
- 11 pupils had achieved full mastery at level B1;
- 9 pupils had achieved full mastery at level A2;
- 1 pupil had achieved full mastery at level A1;
- 2 pupils had achieved moderate mastery at level A1.

In total, 19 participants obtained the maximum mark on test levels A1 to B1: 2 primary school pupils, 4 of the A-stream students, and 13 of the TSO students.

3.3.1.2. Reading comprehension test

As is evident in table 3, the TSO students obtained the highest average score on the reading comprehension test at levels A1 to B1, followed by the A-stream students and primary school pupils. Again, at level B2, TSO students obtained higher average scores than the group of A-stream students.

With regard to reading comprehension, of the 36 primary school pupils, it appeared that:

- 7 pupils had achieved full mastery at level B1;
- 7 pupils had achieved full mastery at level A2;
- 10 pupils had achieved full mastery at level A1;
- 10 pupils had achieved moderate mastery at level A1;
- 2 pupils had obtained a score of less than 50% at level A1, which would count as no mastery.

Of the 39 A-stream pupils, it appeared that:

- 2 pupils had achieved full mastery at level B2;
- 5 pupils had achieved full mastery at level B1;
- 5 pupils had achieved full mastery at level A2;
- 19 pupils had achieved full mastery at level A1;
- 4 pupils had achieved moderate mastery at level A1;
- 4 pupils would not have achieved mastery at level A1.

With regard to the 33 TSO pupils, it appeared that:

- 7 pupils had achieved full mastery at level B2;
- 9 pupils had achieved full mastery at level B1;
- 4 pupils had achieved full mastery at level A2;
- 7 pupils had achieved full mastery at level A1;
- 5 pupils had achieved moderate mastery at level A1;
- 1 pupil would not have achieved mastery at level A1.

In total, 9 participants obtained the maximum mark on test levels A1 to B1: 2 primary school pupils, 0 A-stream students, and 7 the TSO students.

Table 2
Descriptive statistics listening comprehension

	A1 (Max=4)			A2 (Max=5)			B1 (Max=6)			B2 (Max=6)		
	Mean (Std. Dev)	Median	Min-Max	Mean (Std. Dev)	Median	Min-Max	Mean (Std. Dev)	Median	Min-Max	Mean (Std. Dev)	Median	Min-Max
Primary education (N=36)	3.31 (0.67)	3	2-4	4.06 (0.95)	4	1-5	3.53 (1.40)	3.5	1-6			
A stream (N=39)	3.59 (0.79)	4	1-4	4.41 (0.85)	5	2-5	3.69 (1.52)	4	1-6	2.08 (1.31)	2	0-5
TSO (N=33)	3.73 (0.57)	4	2-4	4.52 (0.87)	5	1-5	4.88 (1.22)	5	2-6	3.03 (1.96)	3	0-6

Table 3
Descriptive statistics reading comprehension

	A1 (Max=4)			A2 (Max=5)			B1 (Max=5)			B2 (Max=6)		
	Mean (Std. Dev)	Median	Min-Max	Mean (Std. Dev)	Median	Min-Max	Mean (Std. Dev)	Median	Min-Max	Mean (Std. Dev)	Median	Min-Max
Primary education (N=36)	2.81 (0.82)	3	1-4	2.81 (1.58)	2.5	0-5	1.94 (1.62)	2	0-5			
A stream (N=39)	2.97 (0.90)	3	1-4	2.92 (1.11)	3	1-5	2.21 (1.30)	2	0-5	2.31 (1.45)	2	0-6
TSO (N=33)	3.72 (0.84)	3	1-4	3.79 (1.24)	4	2-5	3.15 (1.79)	3	0-5	3.06 (1.64)	3	0-6

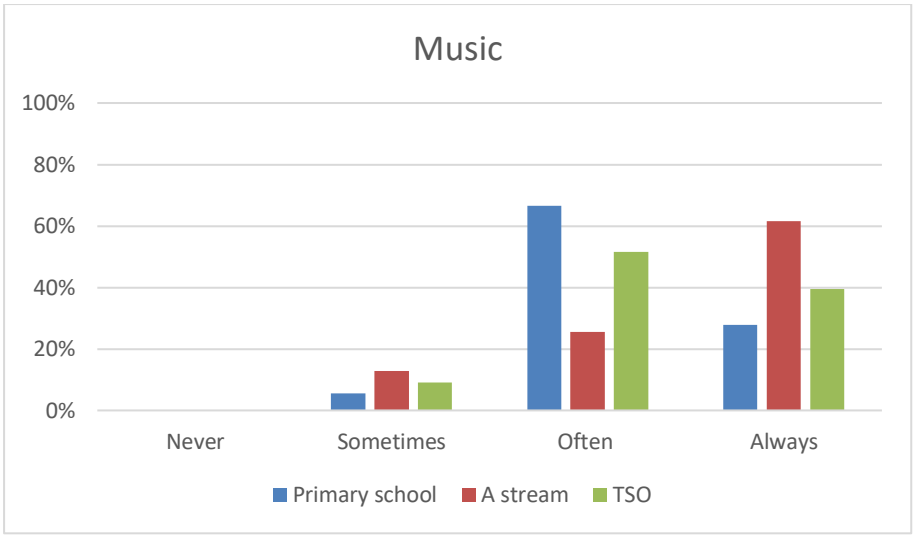
3.3.2. RQ2: Is there a relationship between out-of-school exposure and listening and reading comprehension?

3.3.2.1. Questionnaire regarding out-of-school exposure

The results of the questionnaire confirm that Flemish primary school, A-stream and TSO pupils are regularly exposed to English outside of the classroom.

Figure 4

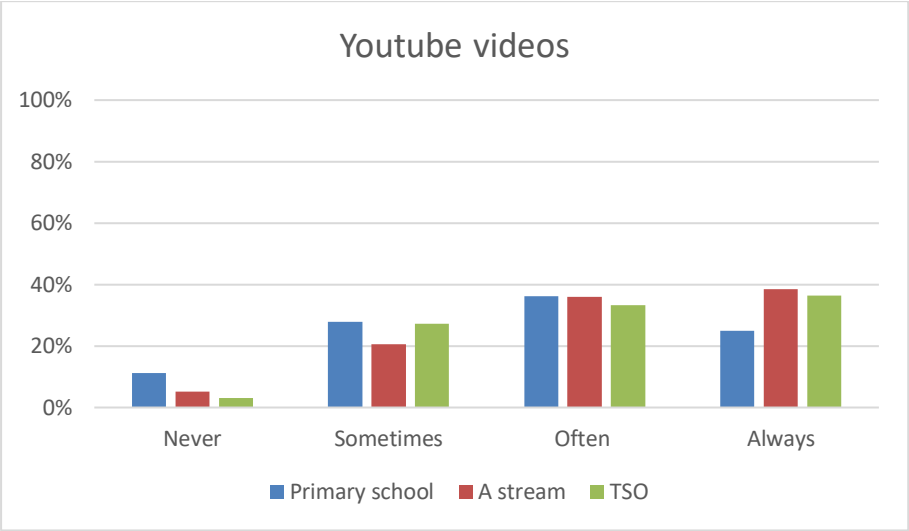
Music



It appeared that listening to English music was by far the most popular out-of-school activity of all three groups: 94% of the primary school pupils, 87% of the A-stream students, and 91% of the TSO students reported to listen to English music *often* or *always* (see Figure 4).

Figure 5

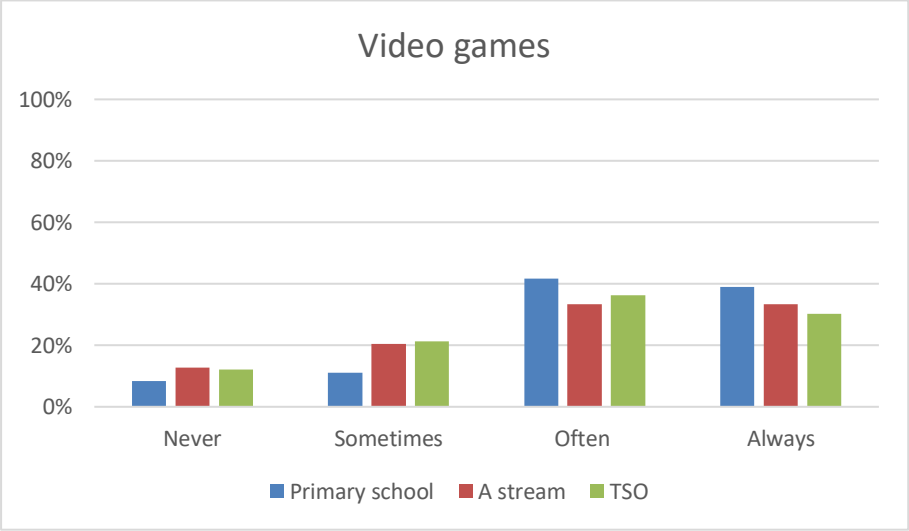
Youtube videos



A second popular activity was watching Youtube videos (see Figure 5), since 74% of the A-stream and 70% of the TSO students appeared to stream videos *often* or *always*. However, among primary school pupils, watching Youtube videos was less popular. Of this group, 61% reported to stream Youtube videos *often* or *always*.

Figure 6

Video games



Instead, the group of primary school pupils seemed to engage in playing English video games more often than the two other groups (see Figure 6). 81% of the 11- to 12-year-old pupils indicated that they played English video games *often* or *always*. Of both the A-stream and TSO students, this was only 67%.

Figure 7

TV programmes without subtitles

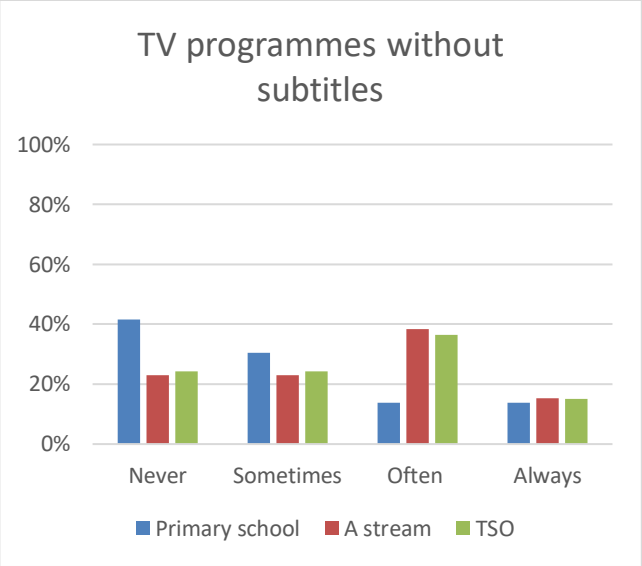


Figure 8

TV programmes with Dutch subtitles

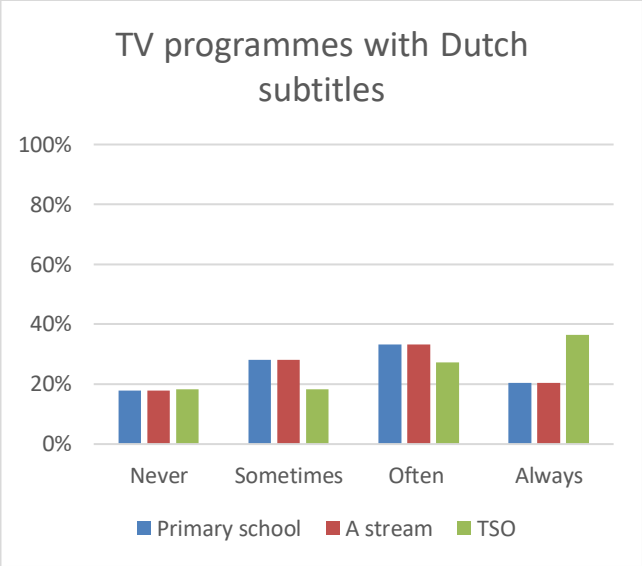


Figure 9

TV programmes with English subtitles

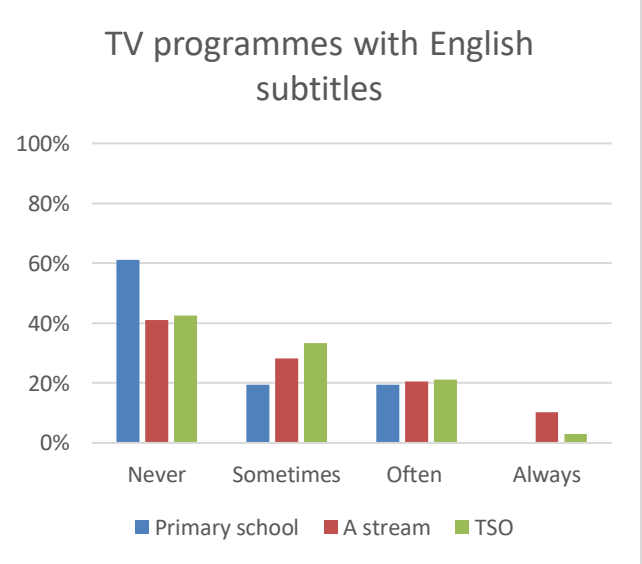
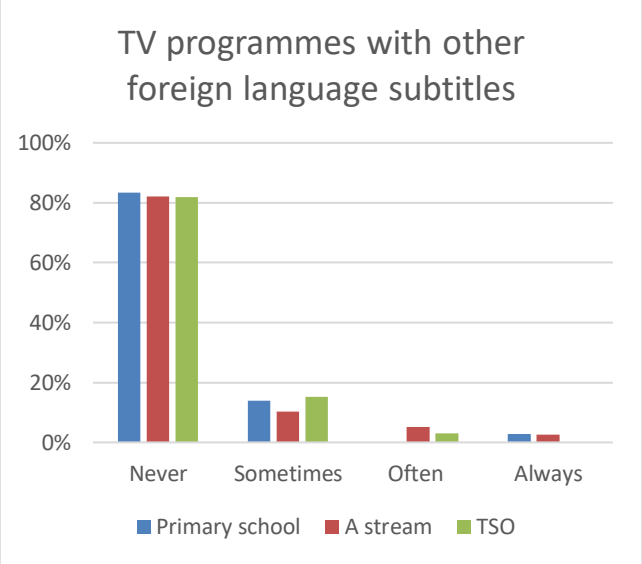


Figure 10

TV programmes with other foreign language subtitles



With regard to watching English TV, a distinction was made between viewing TV programmes/films/documentaries without subtitles (see Figure 7), with Dutch subtitles (see Figure 8), with English subtitles (see Figure 9), and with subtitles in another foreign language (see Figure 10). Of these different types, watching TV programmes with Dutch subtitles appeared to be the most popular. More than half of the participants of each group indicated that they watched English TV programmes with Dutch subtitles *often* or *always* (54% of the primary school pupils, 54% of the A-stream students, and 64% of the TSO students).

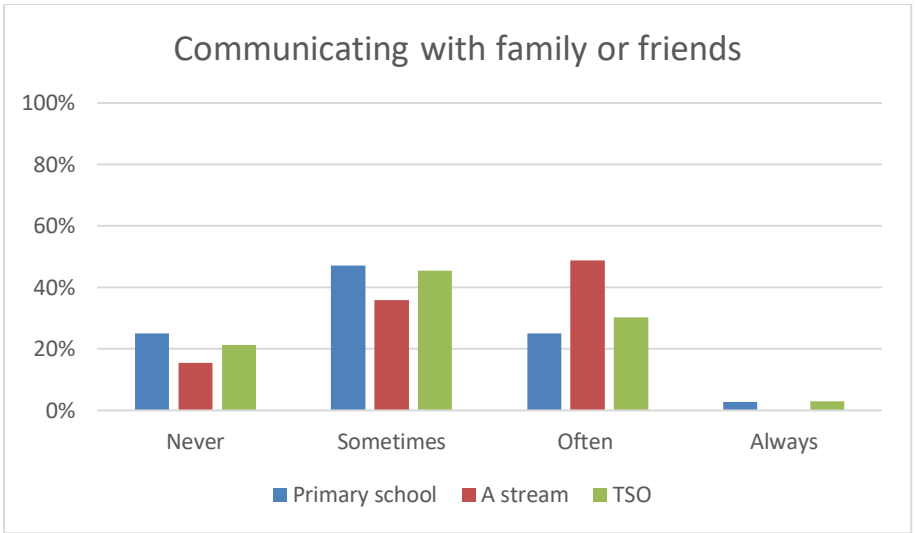
Furthermore, watching TV programmes without subtitles was more popular for the groups of A-stream and TSO students than for the group of primary school pupils. 42% of the primary school children reported to engage *never* engage in this out-of-school activity. Contrarily, 23% of the A-stream participants and 24% of the TSO participants indicated to *never* watch TV without subtitles.

Watching English TV programmes with English subtitles was vastly less popular: 61% of the primary school pupils, 41% of the A-stream students, and 42% of the TSO students appeared to never do this.

Finally, watching English TV programmes with subtitles in another foreign language (not Dutch, nor English), was suggested to be the least popular. Of each group, more than 80% of the participants indicated that they *never* do this (83% of the primary school pupils, 82% of the A-stream students, and 82% of the TSO students).

Figure 11

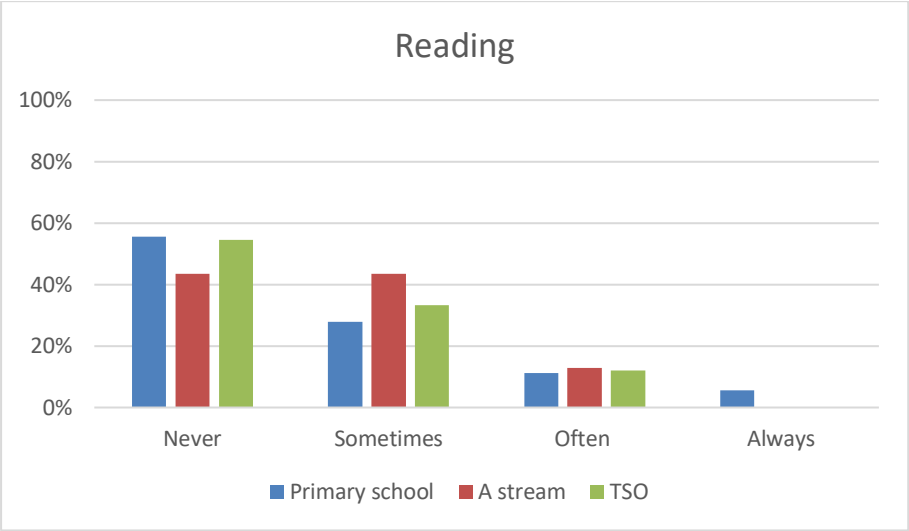
Communicating with family or friends



A great deal of participants reported that they, at least sometimes, engaged in the out-of-school activity *communicating with family or friends* (see Figure 11). More specifically, 75% of the primary school pupils, 85% of the A-stream students, and 78% of TSO students indicated that they engaged in this activity *sometimes, often* or *always*.

Figure 12

Reading



For all groups, out-of-school reading was vastly less popular: 56% of the primary school pupils, 44% of the A-stream students, and 55% of the TSO students reported that they *never* read English texts (see Figure 12).

3.3.2.2. Correlations

All participants

Spearman's rank correlations were computed to examine the relationship between the different types of out-of-school exposure to English and the listening and reading comprehension scores of all participants (see Table 4).

With regard to the whole group of participants, analyses revealed a positive correlation between:

- Exposure to English language television programmes, films, cartoon films, documentaries, … without subtitles (TV no subtitles) and both listening and reading comprehension
- Exposure to English language television programmes, films, cartoon films, documentaries, … with English subtitles (TV English subtitles) and both listening and reading comprehension
- Playing English language video games and reading comprehension
- Listening to English music and listening comprehension
- Exposure to English Youtube videos and both listening and reading comprehension
- Communicating in English with family or friends and both listening and reading comprehension
- Reading in English and both listening and reading comprehension.

Following Plonsky's (2015) general benchmarks for interpreting correlations in L2 research, the only medium correlations were between watching English language television without subtitles and listening

and reading comprehension (0.25 is small, 0.40 is medium, and 0.60 is large). The other positive correlations were small (Plonsky, 2015).

Furthermore, a significant negative correlation was found between watching English language television programmes, films, cartoon films, documentaries, … with Dutch subtitles (TV Dutch subtitles) and learners listening comprehension. This correlation was small (Plonsky, 2015).

Table 4
Summary of correlations (Spearman's rank) between types of out-of-school exposure and listening and reading comprehension of all participants. (n = 108)

	Listening	Reading
	r_s (p)	r_s (p)
TV no subtitles	.44** (.000)	.40* (.000)
TV Dutch subtitles	-.23* (.02)	-.18 (.06)
TV English subtitles	.24* (.01)	.24* (.01)
TV subtitles in other language	-.02 (.86)	.03 (.75)
Video games	.16 (.11)	.22* (.02)
Music	.19* (.05)	.04 (.72)
Youtube videos	.32** (.001)	.21* (.03)
Communicating with family or friends	.35** (.000)	.25** (.008)
Reading (books, cartoons, newspapers, internet, …)	.31** (.001)	.22* (.02)

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Primary school pupils

Furthermore, separate correlations were computed for the group of primary school, A-stream and TSO pupils.

As can be seen in Table 5, concerning the group of primary school pupils, analyses revealed a positive correlation between:

- Exposure to English language television programmes, films, cartoon films, documentaries, … without subtitles (TV no subtitles) and both listening and reading comprehension
- Playing English language video games and both listening and reading comprehension
- Exposure to English Youtube videos and listening comprehension
- Reading in English and listening comprehension

All of these correlations can be considered medium, except for the correlation between playing English language video games and listening comprehension, which was small (Plonsky, 2015).

Table 5

Summary of correlations (Spearman's rank) between types of out-of-school exposure and listening and reading comprehension for the group of primary school pupils. (n = 36)

	Listening	Reading
	r_s (p)	r_s (p)
TV no subtitles	.50** (.002)	.47** (.004)
TV Dutch subtitles	-.13 (.46)	-.22 (.19)
TV English subtitles	.26 (.13)	.09 (.59)
TV subtitles in other language	.13 (.46)	.10 (.56)
Video games	.36* (.03)	.43** (.008)
Music	.13 (.44)	-.13 (.46)
Youtube videos	.44** (.007)	.26 (.13)
Communicating with family or friends	.31 (.07)	.10 (.57)
Reading (books, cartoons, newspapers, internet, …)	.45** (.006)	.24 (.17)

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

A-stream pupils

For the group of A-stream pupils, only two significant correlations were found (see Table 6). These correlations were between:

- Exposure to English language television programmes, films, cartoon films, documentaries, … without subtitles (TV no subtitles) and listening comprehension
- Communicating in English with family or friends and listening comprehension

According to Plonsky's (2015) benchmarks for interpreting correlation coefficients in L2 research, both of these positive correlations can be considered medium.

Table 6
Summary of correlations (Spearman's rank) between types of out-of-school exposure and listening and reading comprehension for the group of A-stream pupils. (n = 39)

	Listening	Reading
	r_s (p)	r_s (p)
TV no subtitles	.43** (.006)	.10 (.53)
TV Dutch subtitles	-.24 (.14)	-.02 (.92)
TV English subtitles	.17 (.31)	.31 (.06)
TV subtitles in other language	-.09 (.57)	.02 (.91)
Video games	-.10 (.57)	-.05 (.77)
Music	.20 (.22)	.11 (.49)
Youtube videos	.15 (.36)	.13 (.44)
Communicating with family or friends	.49** (.002)	.31 (.06)
Reading (books, cartoons, newspapers, internet, …)	.29 (.07)	.24 (.14)

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

TSO pupils

Finally, with regard to the group of TSO pupils, analyses revealed a positive correlation between (see Table 7):

- Exposure to English language television programmes, films, cartoon films, documentaries, … without subtitles (TV no subtitles) and reading comprehension
- Playing English language video games and both listening and reading comprehension
- Communicating in English with family or friends, and reading comprehension

Following Plonsky's (2015) benchmarks, all these correlations can be considered medium, except for the correlation between playing video games and listening comprehension, which was small.

Furthermore, a significant negative correlation was found between watching English language television programmes, films, cartoon films, documentaries, … with Dutch subtitles (TV Dutch subtitles) and the TSO pupils' listening comprehension. The correlation coefficient was medium (Plonsky, 2015).

Table 7

Summary of correlations (Spearman's rank) between types of out-of-school exposure and listening and reading comprehension for the group of TSO pupils. (n = 33)

	Listening	Reading
	r_s (p)	r_s (p)
TV no subtitles	.32 (.07)	.54** (.001)
TV Dutch subtitles	-.42* (.01)	-.34 (.05)
TV English subtitles	.30 (.09)	.24 (.17)
TV subtitles in other language	-.16 (.38)	-.09 (.61)
Video games	.37* (.03)	.41* (.02)
Music	.25 (.16)	.09 (.63)
Youtube videos	.23 (.21)	.21 (.25)
Communicating with family or friends	.26 (.14)	.41* (.02)
Reading (books, cartoons, newspapers, internet, …)	.27 (.13)	.30 (.10)

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

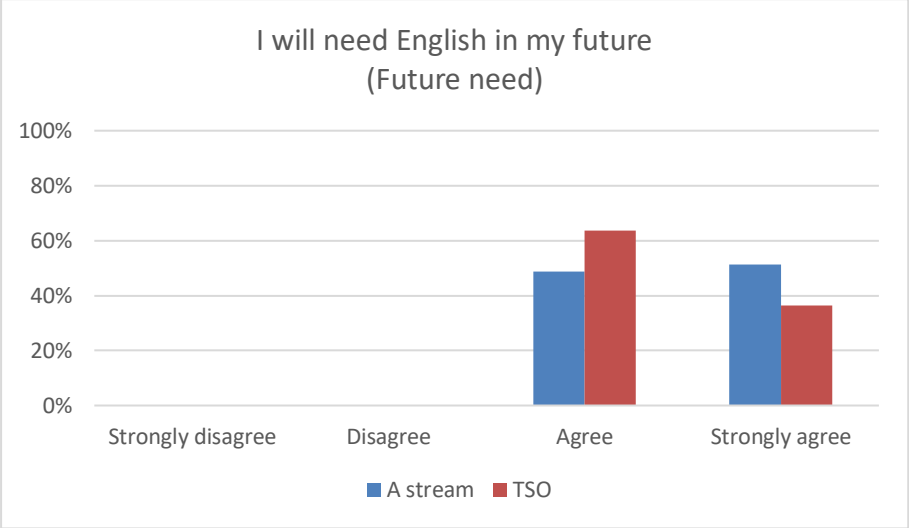
3.3.3. RQ3: Are motivation, anxiety, and perceived teachers' use of typical out-of-school English language activities related to listening and reading comprehension?

3.3.3.1. Questionnaire regarding motivation, anxiety, and perceived teachers' use of typical out-of-school English language activities

This section will give an overview of the results of the questionnaire concerning motivation (Ideal L2 self and Ought-to L2 self), in-class and out-of-class anxiety, and the perceived teachers' use of typical out-of-school activities.

Figure 13

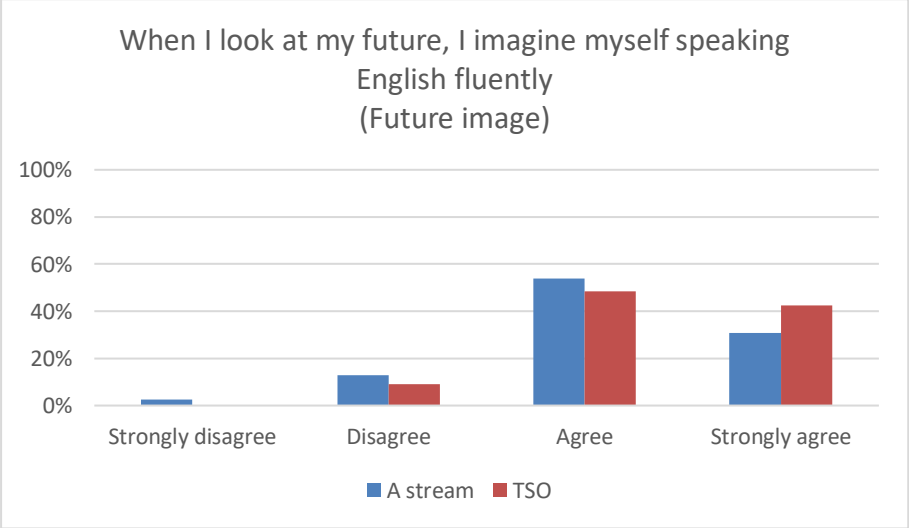
"I will need English in my future." (Future need; Ideal L2 Self)



As can be seen in Figure 13, all participants believed that they would need English in their future. However, more A-stream pupils than TSO students seemed to *strongly agree* to the statement "I need English for my future life".

Figure 14

"When I look at my future, I imagine myself speaking English fluently." (Future image; Ideal L2 Self)



As can be seen in Figure 14, the results regarding Future image seem to be more varied, as 16% of the A-stream pupils and 9% of the TSO students indicated that they *disagreed* or *strongly disagreed* with the statement "When I look at my future, I imagine myself speaking English fluently".

Figure 15

"My parents think English is an important language." (Ought-to L2 Self)

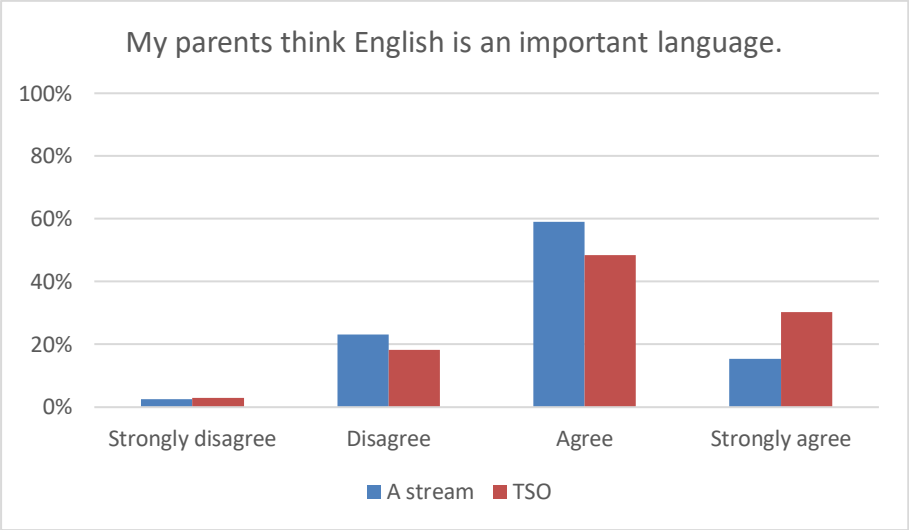
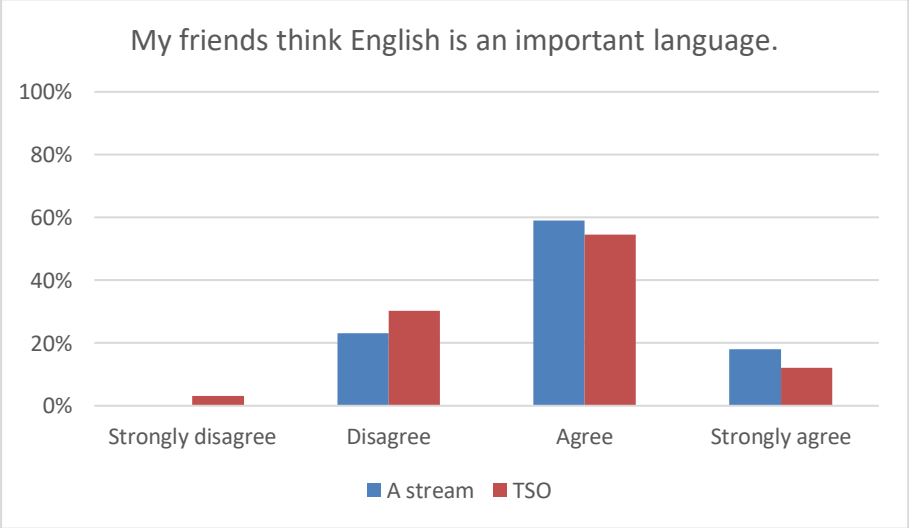


Figure 16

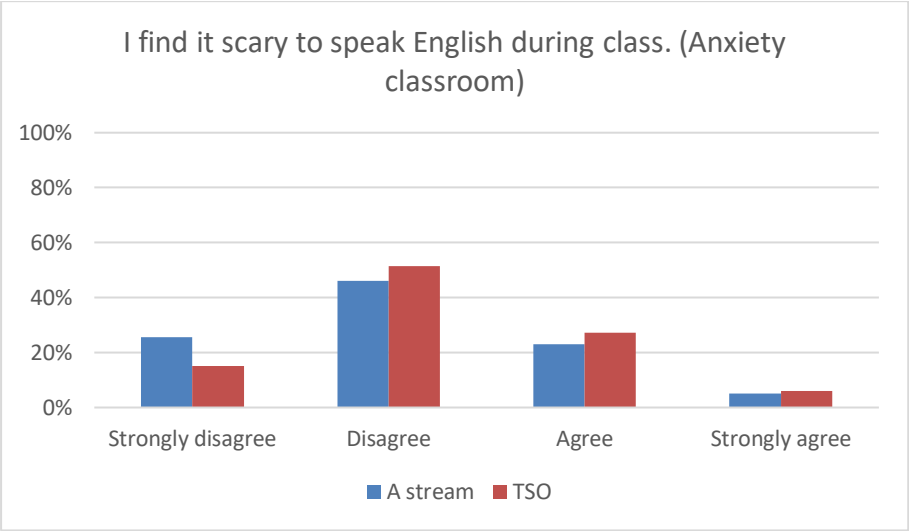
"My friends think English is an important language." (Ought-to L2 Self)



As can be seen in Figure 15 and Figure 16, the majority of the participants believe that their friends or parents think that English is an important language. It should be noted however that a great number of pupils disagreed with the statements "My parents think English is an important language" and "My friends think English is an important language". More specifically, 36% of the A-stream pupils and 21% of the TSO students indicated that they *disagreed* or *strongly disagreed* with the statement regarding parents' attitude. Furthermore, 23% of the A-stream pupils and 33% of the TSO students claimed that they *disagreed* or *strongly disagreed* that their friends believed that English is an important language.

Figure 17

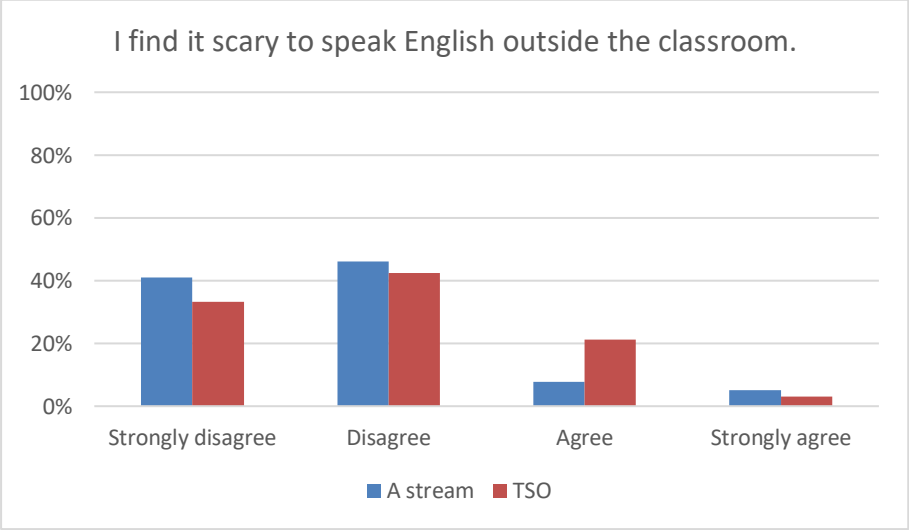
"I find it scary to speak English during class." (Anxiety classroom; L2 speaking anxiety)



As can be seen in Figure 17, the majority of the pupils indicated that they did not find it scary to speak English during class. However, about one third of both the A-stream and TSO pupils *agreed/strongly agreed* with the statement "I find it scary to speak English during class" (28% of the A-stream pupils and 33% of the TSO students).

Figure 18

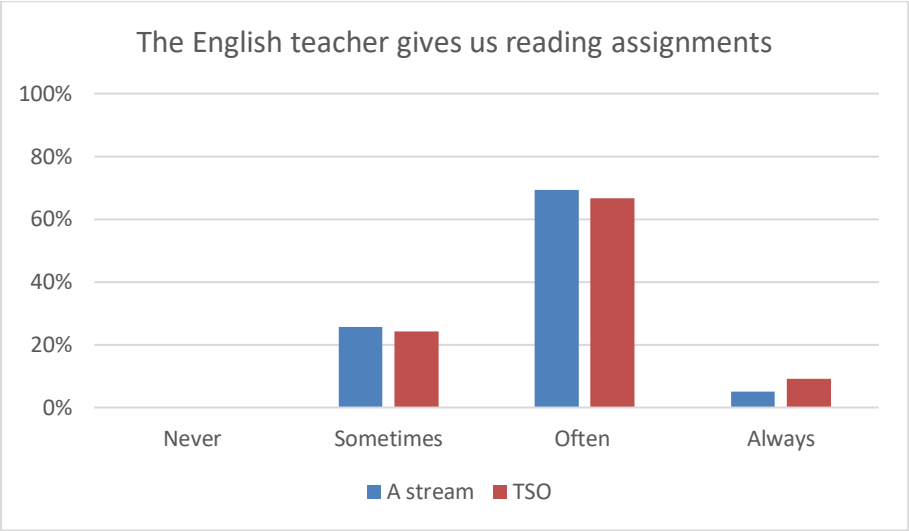
"I find it scary to speak English outside the classroom." (Anxiety use; L2 speaking anxiety)



On the other hand, fewer pupils indicated that they found it scary to speak English outside of the classroom (see Figure 18). More specifically, 13% of the A-stream pupils and 24% of the TSO pupils claimed that they *agreed* or *strongly agreed* with the statement "I find it scary to speak English outside the classroom".

Figure 19

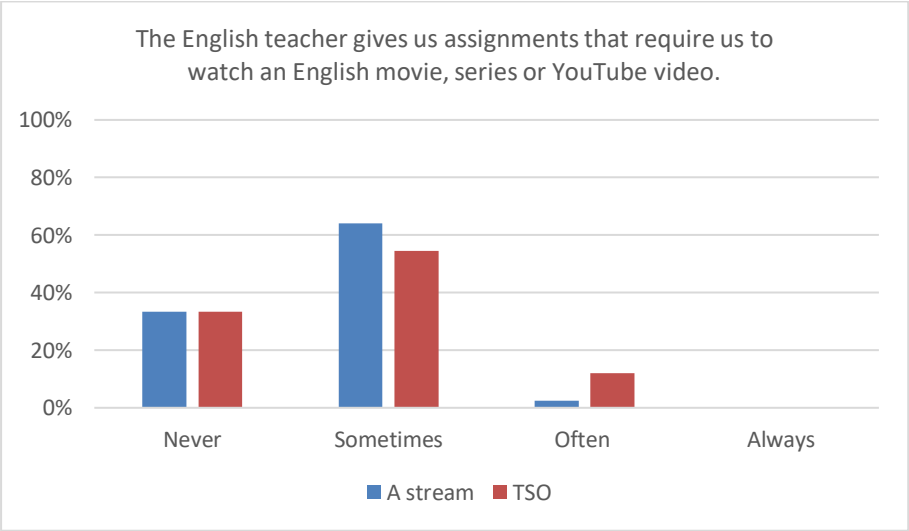
"The English teacher gives us reading assignments."



With regard to perceived teachers' use of out-of-school activities, none of the participants indicated that the teacher *never* gave them reading tasks (see Figure 19). The great majority of both the A-stream and TSO pupils indicated that they *often* had to do reading assignments (69% of the A-stream pupils and 67% of the TSO students).

Figure 20

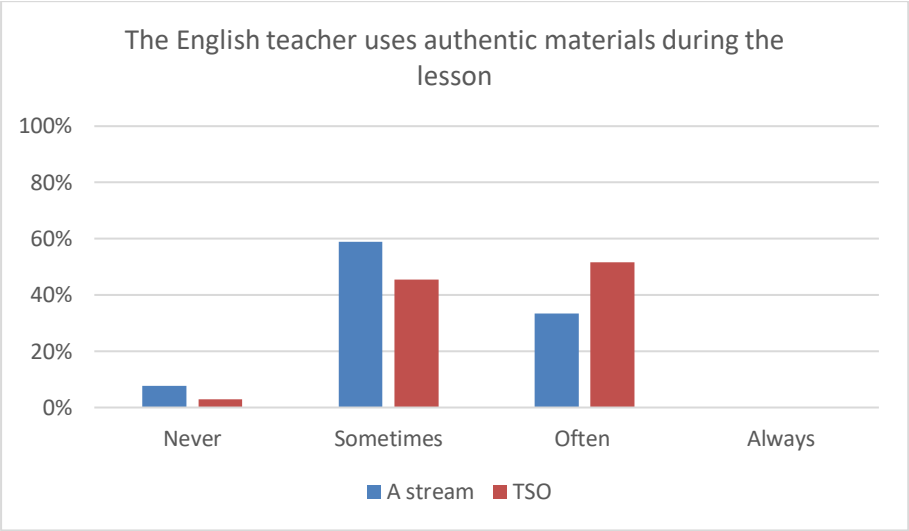
"The English teacher gives us assignments that require us to watch an English movie, series or YouTube video."



Secondly, none of the participants indicated that they *always* had to do assignments for which they needed to watch a film, a series or a Youtube video (see Figure 20). Most of the participants, 64% of the A-stream pupils and 55% of the TSO students, claimed that their English teacher handed out these types of assignments *sometimes*.

Figure 21

"The English teacher uses authentic materials during the lesson."



Finally, with regard to the perceived teachers' use of authentic English materials during their lessons (e.g., a Youtube video, music, series or movie, game ... in English), none of the participants claimed that their teacher did this *always* (see Figure 21). Whereas the majority of the A-stream pupils (59%) indicated the option *sometimes,* about half of the TSO students (52%) indicated that their teacher *often* incorporates these types of activities in their lesson programme.

3.3.3.2. Correlations

Spearman's rank correlations were calculated to investigate the relationship between anxiety, motivation and the perceived teachers' use of typical out-of-school English language activities (see Table 8).

The analyses revealed that one particular aspect of Ideal L2 self, i.e., the degree to which pupils imagined themselves speaking English in the future (Future image), correlated significantly and positively with listening and reading comprehension. These correlations are considered small (Plonsky, 2015). In contrast, the results did not yield a significant correlation between the degree to which pupils thought they would need English in the future (Future need) and their listening or reading skills.

Another positive and significant correlation was found between L2 speaking anxiety outside of the classroom (Anxiety use) and listening comprehension, on the one hand, and L2 speaking anxiety outside of the classroom and reading comprehension on the other hand. Again, those correlations can be regarded as small (Plonsky, 2015). Nevertheless, anxiety related to speaking English in the classroom (Anxiety classroom) did not correlate significantly with listening, nor reading comprehension.

Furthermore, the two variables related to ought-to L2 self did not correlate with listening nor reading comprehension and no meaningful correlations were found between the perceived teacher's use of typical out-of-school activities and the pupils' receptive skills.

Table 8

Summary of correlations (Spearman's rank) between motivation, anxiety and perceived teacher's use out-of-school activities and listening and reading comprehension. (n = 72)

		Listening	Reading
		r_s (p)	r_s (p)
Ideal L2 self	Future need	.21 (.08)	.12 (.30)
	Future image	.35** (.003)	.23* (.05)
Ought-to L2 self	Parents	.06 (.62)	.08 (.50)
	Friends	.06 (.59)	.02 (.87)
Anxiety	Anxiety classroom	-.13 (.28)	-.11 (.35)
	Anxiety use	-.33** (.005)	-.37** (.001)
Perceived role of the teacher	Assignments (reading)	-.21 (.07)	.01 (.94)
	Assignments (video)	-.14 (.26)	-.08 (.52)
	Authentic L1 material	.03 (.80)	-.05 (.68)

*. Correlation is significant at the 0.05 level (2-tailed).
**. Correlation is significant at the 0.01 level (2-tailed).

3.4. Discussion and limitations

3.4.1. English learners' listening and reading comprehension

An expected finding of this study is that length of instruction seemed to be positively related listening and reading comprehension. The group of TSO students, having received approximately 2 hours of English classes per week for 2 years and 5 months, obtained higher scores that the A-stream students, who had received only about 2 hours of English classes per week over a period of 5 months. The latter, in turn, achieved higher average scores than the sixth-year elementary school pupils, who had not yet had formal English instruction.

It is clear from this study that on average the participants scored higher on the listening comprehension test than on the reading comprehension test, which corroborates De Wilde and Eyckmans (2017) finding. Nevertheless, it should be noted that in their study reading and writing skills were measured together and that the participants in their study were 11-year-old children who had not received any formal English instruction. The discrepancy in listening and reading test scores might be explained by the fact that Flemish pupils are more often exposed to spoken English than to written English input (Peters, 2018; De Wilde & Eyckmans, 2017).

Moreover, this study suggests that, prior to formal English instruction, a great number of primary school pupils had already achieved level A2 for listening. In the present study, 28 of the 36 primary school pupils appeared to have reached full mastery of English at level A2 for listening, 7 of which seemed to be fully proficient at the B1 level. Similarly, De Wilde and Eyckmans' (2017) reported that many primary school pupils can already perform listening at the A2 level. In their study "40% of the children had already reached the required competence level for listening comprehension at the end of the second year of secondary education when they were in the final year of primary school" (p. 685).

However, the number of elementary school pupils that could perform reading tasks at the level A2 appeared to be much lower: 14 of the 36 pupils seemed to have obtained full mastery of English at the A2 level, 7 of which appeared to be fully proficient at the B1 level.

Finally, it appeared useful to have included task level B2 for the A-stream and TSO students, since 2 A-stream and 7 TSO pupils were found to have already reached full mastery of English at the B2 level. This finding is in accord with Peters et al. (2020), who found that many pupils in the second year of secondary education had already reached level B1 for listening proficiency.

However, a note of caution is due regarding these results. The number of items per task level was relatively limited (4 to 6 task items). Additionally, the test scores were not corrected for guessing.

3.4.2. Out-of-school exposure and learners' receptive skills

3.4.2.1. Questionnaire

The results of the questionnaire enquiring about participants' out-of-school activities indicate that primary school, A-stream and TSO pupils are frequently exposed to the English language. More specifically, all participants seemed to engage in listening to English language songs most frequently, while reading appeared to be vastly less popular. These findings are in line with multiple studies conducted in a Flemish context (Kuppens, 2010; Peters, 2018; De Wilde et al., 2021; Bollansée et al., 2021). Watching Youtube videos and playing video games in English appeared to be popular out-of-school activities as well. However, the results suggest that playing video games in English was more popular among the primary school pupils than among the A-stream and TSO pupils. Furthermore, watching English language TV with foreign language subtitles (not Dutch, nor English) and with English subtitles appeared to be less popular than watching TV with Dutch subtitles and without subtitles. Finally, it was found that the primary school pupils engaged less frequently in watching English TV with English subtitles or without subtitles than the A-stream and TSO students.

3.4.2.2. Correlations

The second question can be answered affirmatively: the analyses suggest that there were positive and significant correlations between different types of out-of-school exposure and learners' listening and reading comprehension.

For the whole group of participants, regarding listening comprehension, the largest positive correlation was found for (1) watching English language television programmes, films, cartoon films and documentaries without subtitles, followed by (2) communicating with family or friends, (3) watching Youtube videos, (4) reading, and finally, (5) watching TV, films, cartoon films and documentaries with English subtitles. The positive effect of listening to English songs was negligible. Watching English language TV with Dutch subtitles, appeared to be negatively related to listening comprehension.

Concerning the reading comprehension of the whole group participants, the largest positive relationship was again found for (1) watching English language TV without subtitles, followed by (2) communicating with family or friends, (3) watching TV with English subtitles, (4) reading, (5) playing video games and (6) watching Youtube videos.

For the group of primary school pupils and TSO pupils separately, more correlations were found than for the group of A-stream pupils. For the primary school pupils, four out-of-school activities appeared to be related to listening or reading comprehension. The largest positive correlations were found between watching English TV/films/documentaries and both the young learners' reading and listening comprehension. Furthermore, reading and watching Youtube videos appeared to correlate with listening

comprehension. Finally, playing English video games appeared to be related to both listening and reading comprehension.

With regard to the A-stream pupils, only two correlations were found. The largest positive correlation appeared to be between communicating with family or friends, and the pupils' listening comprehension. Moreover, watching English TV/films/documentaries without subtitles seemed to correlate with listening comprehension.

For the group of TSO students, four out-of-school activities were found to correlate with the learners' reading or listening comprehension. The strongest positive correlation was found for watching English TV/films/documentaries without subtitles and the pupils' reading comprehension. Furthermore, communicating with family or friends in English correlated with reading comprehension, and playing English video games correlated with both listening and reading comprehension. Finally, a negative relation was found between watching English TV/films/documentaries with Dutch subtitles and listening comprehension.

The findings of present study provide support to the positive effect of watching non-subtitled English TV on learners' L2 proficiency (Bollansée et al., 2021; Peters, 2018). Watching TV with subtitles in the L1, however, appeared to be negatively correlated with the listening proficiency of the oldest learners (TSO pupils). Similarly, Bollansée et al. (2021) found a negative correlation between young learners' exposure to Dutch-subtitled TV programmes and their vocabulary knowledge, prior to formal English instruction. As suggested by Bollansée et al. (2021), a possible explanation for this negative relationship could be "that L1 subtitles might distract attention away from the spoken words because learners are more focused on reading the L1 subtitles" (p. 211).

Furthermore, watching Youtube videos seemed beneficial to the listening comprehension of primary school pupils. This corroborates Puimège and Peters's (2019) findings of a positive relationship between streaming video and vocabulary knowledge.

In general, this study thus suggests that watching English language audio-visual input without subtitles could a positive impact on learners' reading or listening comprehension. Since watching TV or Youtube videos is a passive but entertaining activity, "it offers great potential for language learning in the long run" (Peters & Webb, 2018, p. 574).

Additionally, regarding written and spoken communication with family or friends a positive relationship was found for the listening comprehension of A-stream pupils and the reading comprehension of TSO pupils. This is not an unexpected result as De Wilde et al. (2019) previously suggested that social media use and speaking English may be beneficial for learners' overall language proficiency. However, the participants in De Wilde et al.'s (2019) study were solely primary school pupils without formal education.

The results of the present study also suggest that reading English texts might be beneficial to both listening comprehension of primary school pupils. Surprisingly, no correlation was found with regard to reading comprehension. In a similar vein, a positive relationship between reading and the language proficiency of secondary school pupils and university students was reported by the correlational study of Peters (2018). In contrast with Peters (2018), the present study did not differentiate between reading books, magazines or texts on the internet.

In line with Sylvén and Sundqvist (2012), positive correlations were found between playing digital games and listening and reading. However, these relationships were not found with regard to A-stream pupils. This finding supports previous research, at least partly, that playing video games may have a positive impact on second language acquisition (Bollansée et al., 2021; Hannibal Jensen, 2017; Kuppens, 2010; Puimège & Peters, 2019).

3.4.3. Motivation, anxiety, perceived teacher's use of out-of-school activities, and learners' receptive skills

3.4.3.1. Questionnaire

The survey data regarding motivation indicated that all A-stream and TSO students believed that they would need English in their future life. Moreover, the great majority of participants could imagine themselves speaking English fluently in the future. This suggests that the participants in this study possess a strong ideal L2 self (Dörnyei, 2005). However, the participants in both groups displayed a weaker ought-to L2 self, since more students disagreed that their family or friends thought that English is an important language (Dörnyei, 2005).

With regard to language anxiety, it appeared that, on average, participants were more anxious to speak English during class than outside of the classroom. However, the responses of the A-stream and TSO students concerning out-of-class anxiety seemed to differ. A higher percentage of TSO students indicated that they were afraid of speaking English in out-of-school settings.

In the final part of the questionnaire, respondents were asked how often their teacher made use of typical out-of-school activities. All pupils reported that their English teacher gave them reading assignments at least sometimes. Contrarily, the respondents indicated that, in general, their teacher gave them way fewer tasks that required them to watch an English movie, series or YouTube video. Finally, the participants were asked to indicate how often their teacher used authentic English materials during the lesson (e.g., a Youtube video, music, series or movie, game ... in English).

3.4.3.2. Correlations

For the research question concerning the effects of motivation, anxiety, and the perceived teacher's use of typical out-of-school activities in the lesson programme, only partial support was found.

With regard to motivation, only one of four parameters appeared to correlate with learners' receptive language skills: the degree to which students imagined themselves speaking English in the future (Future image). The degree to which students thought they needed English in the future (Future need), did not appear to be related to their receptive language skills. Moreover, perceived parents' and friends' attitudes towards English (Ought-to L2 self) did not seem to be connected with listening, nor reading comprehension. These results reflect those of Al-Hoorie (2018) who found that the ideal L2 self is a stronger predictor of language achievement than the ought-to L2 self.

Concerning L2 anxiety, only anxiety related to speaking English outside of the classroom (Anxiety use) appeared to have be negatively related with the learners' receptive skills. Anxiety related to speaking English during class did not seem to have a relation with the learners' receptive skills. These findings are not completely in agreement with previous research on the relationship between anxiety and L2 achievement (Bernaus & Gardner, 2008; Brunfaut & Révész, 2014). However, the studies mentioned before did not compute separate correlations for anxiety in and outside the classroom. The present study might therefore suggest that future research differentiate between in-class and out-of-class speaking anxiety. Moreover, the relation between speaking anxiety and L2 proficiency, should be further examined.

Another unexpected finding was that the teachers' role of bringing authentic L1 material to the classroom did not appear to influence the learners' receptive skills. Nevertheless, a note of caution is due here since in the present study all A-stream students were taught English by the same teacher, and all TSO students by another teacher. Consequently, the data is based on the perceived use of typical out-of-school activities of only two teachers.

4. Conclusion

The purpose of this study was to investigate whether out-of-school exposure, motivation, and anxiety are related to the English listening and reading comprehension of Flemish primary and secondary (A stream and TSO) school pupils. Furthermore, this study investigated the role of the secondary school teacher in incorporating out-of-school English language activities in the lesson programme. To obtain the necessary data, 108 pupils from three different groups (36 6th year primary school pupils, 39 2nd year A-stream students, and 33 4th year TSO students) were administered a questionnaire and a listening and reading comprehension test.

The results indicated that a great number of the primary school pupils could already perform listening tasks at the A2 level of the Common European Framework of Reference for Languages (CEFR) prior to formal English instruction. In addition, the three groups of participants seemed to be better at listening than reading in English.

It appeared that the three groups were frequently exposed to English language media. The most popular out-of-school activity was listening to English music. Furthermore, the correlation analyses revealed that a variety of types of out-of-school exposure were positively related to English listening or reading proficiency. For all groups, a correlation was found between watching English TV without subtitles and either listening or reading comprehension. The perceived teacher's use out-of-school activities was not found to be related to the secondary school pupils' listening or reading comprehension.

Overall, it seemed that the A-stream and TSO students were more motivated by their own objectives (Ideal L2 Self) than by their environment (Ought-to L2 Self) (Dörnyei, 2005). Moreover, the degree to which students could imagine themselves speaking English in the future was found to be positively related to their proficiency. With regard to other variables measuring motivation (the degree to which students thought they needed English in the future and perceived parents' and friends' attitudes towards English), no relationship was found.

In general, the in-class speaking anxiety of A-stream and secondary school pupils appeared to be higher than their out-of-class anxiety. Furthermore, anxiety related to speaking English outside of the classroom appeared to be negatively correlated with both listening and reading comprehension. On the other hand, anxiety related to speaking English in class did not seem to correlate with the pupils' proficiency.

5. References

https://owl.purdue.edu/owl/research_and_citation/apa_style/apa_formatting_and_style_guide/general_format.html

- Abu-Rabia, S. (2004). Teachers' Role, Learners' Gender Differences, and FL Anxiety Among Seventh-Grade Students Studying English as a FL. *Educational Psychology, 24*(5), 711–721. https://doi.org/10.1080/0144341042000263006
- Al-Hoorie, A. H. (2018). The L2 motivational self system: A meta-analysis. *Studies in Second Language Learning and Teaching, 8*(4), 721–754. https://doi.org/10.14746/ssllt.2018.8.4.2
- Badara, A., Hanafi, H., Kamaluddin, K., Nurlaela, N., & Sari, I. M. (2019). The Relationship between Anxiety Level and Foreign Language Learners' Reading Comprehension. *Proceedings of the International Symposium on Social Sciences, Education, and Humanities (ISSEH 2018)*, 49–53. https://doi.org/10.2991/isseh-18.2019.12
- Bennett, E. (2012). A Four-Part Model of Informal Learning: Extending Schugurensky's Conceptual Model. *Adult Education Research Conference* https://newprairiepress.org/aerc/2012/papers/3/
- Benson, P. (2011). Language learning and teaching beyond the classroom: An introduction to the field. In Benson, P. & Reinders, H. (Eds.). *Beyond the language classroom* (pp. 7–17). Palgrave Macmillan. https://doi.org/10.1057/9780230306790
- Bernaus, M., & Gardner, R. C. (2008). Teacher motivation strategies, student perceptions, student motivation, and English achievement. *The Modern Language Journal, 92*(3), 387-401. https://doi.org/10.1111/j.1540-4781.2008.00753.x
- Bollansée, L., Puimège, E., Peters, E. (2021). "Watch out! Behind you is the enemy!" An exploratory study into the relationship between extramural English and productive vocabulary knowledge. In Werner, V., & Tegge, F. (Eds.). *Pop Culture in Language Education: Theory, Research, Practice.* (pp. 199-214). Routledge. https://doi.org/10.4324/9780367808334
- Brunfaut, T., & Révész, A. (2014). The Role of Task and Listener Characteristics in Second Language Listening. *TESOL Quarterly, 49*(1), 141–168. https://doi.org/10.1002/tesq.168
- Burman, D. D., Bitan, T., & Booth, J. R. (2008). Sex differences in neural processing of language among children. *Neuropsychologia, 46*(5), 1349–1362. https://doi.org/10.1016/j.neuropsychologia.2007.12.021
- Cheng, Y. S. (2004). A measure of second language writing anxiety: Scale development and preliminary validation. *Journal of Second Language Writing, 13*(4), 313–335. https://doi.org/10.1016/j.jslw.2004.07.001
- Council of Europe (2000): European Language Portfolio (ELP): Principles and Guidelines. With added explanation notes. Strasbourg: Council of Europe. (DGIV/EDU/LANG (2000) 33 rev.1) https://rm.coe.int/16804586ba
- Csizér, K., & Dörnyei, Z. (2005). The internal structure of language learning motivation and its relationship with language choice and learning effort. *The modern language journal, 89*(1), 19-36. https://doi.org/10.1111/j.0026-7902.2005.00263.x
- De Wilde, V., & Eyckmans, J. (2017). Game on! Young learners' incidental language learning of English prior to instruction. *Studies in Second Language Learning and Teaching, 7*(4), 673–694. https://doi.org/10.14746/ssllt.2017.7.4.6
- De Wilde, V., Brysbaert, M., & Eyckmans, J. (2019). Learning English through out-of-school exposure. Which levels of language proficiency are attained and which types of input are important? *Bilingualism: Language and Cognition, 23*(1), 171-185. https://doi.org/10.1017/S1366728918001062
- Dörnyei, Z. (2005). *The psychology of the language learner: Individual differences in second language acquisition*. Routledge. https://doi.org/10.4324/9781410613349

- Dörnyei, Z. (2009). The L2 motivational self system. In Dörnyei, Z., & Ushioda, E. (Eds.). *Motivation, language identity and the L2 self* (pp. 9-42). Multilingual Matters. https://doi.org/10.21832/9781847691293
- Dörnyei, Z., & Ushioda, E. (2011). *Teaching and Researching Motivation* (2nd ed.). Longman. https://doi.org/10.4324/9781315833750
- Dressman, M. (2020). Introduction. In Dressman, M., & Sadler, R. W. (Eds.). *The Handbook of Informal Language Learning* (1st ed., pp. 1-12). Wiley. https://doi.org/10.1002/9781119472384
- Elkhafaifi, H. (2005). Listening comprehension and anxiety in the Arabic language classroom. *Modern Language Journal, 89*, 206–220. https://doi.org/10.1111/j.1540-4781.2005.00275.x
- European Commission. (2012a). *First European survey on language competences: final report.* Publications Office of the European Union. https://doi.org/10.2766/34160
- European Commission. (2012b). *First European survey on language competences: technical report.* https://ec.europa.eu/assets/eac/languages/policy/strategic-framework/documents/language-survey-technical-report_en.pdf
- Gardner, R. C. (2004). *Attitude/Motivation Test Battery: International AMTB Research Project*. The University of Western Ontario http://hyxy.nankai.edu.cn/jingpinke/buchongyuedu/Motivation%20measurement-AMTB.pdf
- Gass, S. M., & Selinker, L. (2008). *Second Language Acquisition* (3rd ed.). Taylor & Francis. https://doi.org/10.4324/9780203932841
- GO! onderwijs van de Vlaamse Gemeenschap. Raad van het GO! (2014). Leerplan secundair onderwijs, AV Engels, Basisvorming KSO-TSO 3de graad. https://pro.g-o.be/blog/documents/2014-019.pdf
- González Fernández, B., & Schmitt, N. (2015). How much collocation knowledge do L2 learners have? *ITL - International Journal of Applied Linguistics, 166*(1), 94–126. https://doi.org/10.1075/itl.166.1.03fer
- Hannibal Jensen, S. (2017). Gaming as an English language learning resource among young children in Denmark. *CALICO Journal, 34*(1), 1–19. https://doi.org/10.1558/cj.29519
- Hatami, S. (2015*). Second Language Incidental Vocabulary Acquisition through Reading and Listening* [Doctoral dissertation, University of Alberta]. https://doi.org/10.7939/R31R6NF4N
- Hemmati, F., & Ghaderi, E. (2014). The effect of four formats of multiple-choice questions on the listening comprehension of EFL learners. *Procedia-Social and Behavioral Sciences, 98*, 637-644. https://doi.org/10.1016/j.sbspro.2014.03.462
- Horwitz, E. K., Horwitz, M. B., & Cope, J. (1986). Foreign Language Classroom Anxiety. *The Modern Language Journal, 70*(2), 125–132. https://doi.org/10.1111/j.1540-4781.1986.tb05256.x
- Hulstijn, J. H. (2013). Incidental learning in second language acquisition. In C. A. Chapelle (Ed.), *The encyclopedia of applied linguistics.* Wiley-Blackwell. https://doi.org/10.1002/9781405198431.wbeal0530
- Islam, M., Lamb, M., & Chambers, G. (2013). The L2 motivational self system and national interest: A Pakistani perspective. *System, 41*(2), 231-244. https://doi.org/10.1016/j.system.2013.01.025
- Krashen, S. D. (1981). *Second language acquisition and second language learning*. University of Southern California. http://ndl.ethernet.edu.et/handle/123456789/58723
- Kukulska-Hulme, A., & Lee, H (2020). Mobile Collaboration for Language Learning and Cultural Learning. In Dressman, M., & Sadler, R. W. (Eds.). *The Handbook of Informal Language Learning* (1st ed., pp. 169-180). Wiley.
- Kuppens, A. H. (2010). Incidental foreign language acquisition from media exposure. *Learning, Media and Technology, 35*(1), 65-85. https://doi.org/10.1080/17439880903561876
- Larson-Hall, J. (2015). *A Guide to Doing Statistics in Second Language Research Using SPSS and R* (2nd ed.). Routledge. https://doi.org/10.4324/9781315775661

- Lee, D. (2009). Maturational effects on L2 acquisition. In P. Li (Author) & C. Lee, G. Simpson, & Y. Kim (Eds.), The Handbook of East Asian Psycholinguistics (pp. 276-285). Cambridge University Press. https://doi.org/10.1017/CBO9780511596865.022
- Lennenberg, E. (1967). *Biological foundations of language*. John Wiley
- Leona, N. L., van Koert, M. J. H., van der Molen, M. W., Rispens, J. E., Tijms, J., & Snellings, P. (2021). Explaining individual differences in young English language learners' vocabulary knowledge: The role of Extramural English Exposure and motivation. *System, 96*, 1–13. https://doi.org/10.1016/j.system.2020.102402
- Lindgren, E., & Muñoz, C. (2013). The influence of exposure, parents, and linguistic distance on young European learners' foreign language comprehension. *International Journal of Multilingualism, 10*(1), 105–129. https://doi.org/10.1080/14790718.2012.679275
- Liu, J. (2004). Effects of Comic Strips on L2 Learners' Reading Comprehension*. TESOL Quarterly, 38*(2), 225. https://doi.org/10.2307/3588379
- López Rúa, P. (2006). The sex variable in foreign language learning: an integrative approach. *Porta Linguarum, 6*, 99–114. https://doi.org/10.30827/digibug.30663
- Meisel, J. M. (2011). Neural maturation and age: Opening and closing windows of opportunities. In *First and Second Language Acquisition* (pp. 202–239). Cambridge University Press. https://doi.org/10.1017/cbo9780511862694.007
- Montero Perez, M., Van Den Noortgate, W., & Desmet, P. (2013). Captioned video for L2 listening and vocabulary learning: A meta-analysis. *System, 41*(3), 720–739. https://doi.org/10.1016/j.system.2013.07.013
- Noack, R., & Gamio, L. (2015, April 23). *The world's languages, in 7 maps and charts.* Washington Post. https://www.washingtonpost.com/news/worldviews/wp/2015/04/23/the-worlds-languages-in-7-maps-and-charts/
- Nusche, D., Miron, G., Santiago, P., & Teese, R. (2015). School education in the Flemish Community of Belgium. In *OECD Reviews of School Resources: Flemish Community of Belgium 2015* (pp. 29–48). OECD Publishing. https://doi.org/10.1787/9789264247598-5-en
- Papp, S. (2018). Assessment of young English language learners. In S. Garton & F. Copland (Eds.), *The Routledge Handbook of Teaching English to Young Learners* (pp. 398–407). Routledge. https://doi.org/10.4324/9781315623672
- Peters, E. (2018). The effect of out-of-class exposure to English language media on learners' vocabulary knowledge. *ITL-International Journal of Applied Linguistics*, 169(1), 142-168. https://doi.org/10.1075/itl.00010.pet
- Peters, E. (2019). The Effect of Imagery and On-Screen Text on Foreign Language Vocabulary Learning From Audiovisual Input. *TESOL Quarterly, 53*(4), 1008-1032. https://doi.org/10.1002/tesq.531
- Peters, E., & Webb, S. (2018). Incidental vocabulary acquisition through viewing L2 television and factors that affect learning. *Studies in Second Language Acquisition, 40*, 551–577. https://doi.org/10.1017/S0272263117000407
- Peters, E., Noreillie, A. S., & Puimège, E. (2020). Frans eerste vreemde taal en Engels tweede vreemde taal? Of toch niet? In W. Coudenys (Ed.), *Taal en de wereld* (1st ed., pp. 53–70). Universitaire Pers Leuven. https://doi.org/10.11116/9789461663344
- Peters, E., Noreillie, A., Heylen, K., Bulté, B., & Desmet, P. (2019). The Impact of Instruction and Out-of-School Exposure to Foreign Language Input on Learners' Vocabulary Knowledge in Two Languages. *Language Learning, 69*(3), 747–782. https://doi.org/10.1111/lang.12351
- Plonsky, L. (2015). Statistical power, p values, descriptive statistics, and effect sizes. A "back-to-basics" approach to advancing quantitative methods in L2 research. In L. Plonsky (Ed.), *Advancing quantitative methods in second language research* (pp. 23–45). Routledge. https://doi.org/10.4324/9781315870908-3

- Puimège, E., & Peters, E. (2019). Learners' English Vocabulary Knowledge Prior to Formal Instruction: The Role of Learner-Related and Word-Related Variables. *Language Learning, 69*(4), 943–977. https://doi.org/10.1111/lang.12364
- Rama, P. S., Black, R. W., Van Es, E., & Warschauer, M. (2012). Affordances for second language learning in World of Warcraft. *ReCALL, 24*(3), 322. https://doi.org/10.1017/S0958344012000171
- Reinders, H., & Wattana, S. (2014). Affect and willingness to communicate in digital game-based learning. *ReCALL*, 27(1), 38–57. https://doi.org/10.1017/s0958344014000226
- Rodgers, M. P. (2018). The images in television programs and the potential for learning unknown words: The relationship between on-screen imagery and vocabulary. *ITL-International Journal of Applied Linguistics, 169*(1), 191-211. https://doi.org/10.1075/itl.00012.rod
- Saito, Y., Horwitz, E., & Garza, T. (1999). Foreign Language Reading Anxiety. *The Modern Language Journal, 83*(2), 202-218. https://doi.org/10.1111/0026-7902.00016
- Schugurensky, D. (2000). *The forms of informal learning: Towards a Conceptualization of the field*. Centre for the Study of Education and Work http://hdl.handle.net/1807/2733
- Selvamuthu, D., & Das, D. (2018). *Introduction to Statistical Methods, Design of Experiments and Statistical Quality Control* (1st ed.). Springer. https://doi.org/10.1007/978-981-13-1736-1
- Smith, M. (2015, January 7). *30-day-challenge – extramural engelska i fokus*. Mias Klassrum. https://miasklassrum.wordpress.com/2015/01/07/30-day-challenge-extramural-engelska-i-fokus/
- Sundqvist, P. (2009). *Extramural English matters. Out-of-school English and its impact on Swedish ninth graders' oral proficiency and vocabulary* [Doctoral dissertation, Karlstad University]. DiVA portal. http://www.diva-portal.org/smash/get/diva2:275141/FULLTEXT03.pdf
- Sundqvist, P., & Sylvén, L. K. (2016). *Extramural English in Teaching and Learning.* Palgrave Macmillan. https://doi.org/10.1057/978-1-137-46048-6
- Sylvén, L. K., & Sundqvist, P. (2012). Gaming as extramural English L2 learning and L2 proficiency among young learners. *ReCALL, 24*(3), 302-321. https://doi.org/10.1017/S095834401200016X
- Teimouri, Y., Goetze, J., & Plonsky, L. (2019). Second language anxiety and achievement: A meta-analysis. *Studies in Second Language Acquisition, 41*(2), 363-387. https://doi.org/10.1017/S0272263118000311
- Thompson, A. S., & Vásquez, C. (2015). Exploring motivational profiles through language learning narratives. *The Modern Language Journal, 99*(1), 158-174. https://doi.org/10.1111/modl.12187
- Toffoli, D., & Sockett, G. (2010). How non-specialist students of English practice informal learning using web 2.0 tools. *ASp, 58*, 125–144. https://doi.org/10.4000/asp.1851
- Tsai, Y.-C., & Li, Y.-C. (2012). Test Anxiety and Foreign Language Reading Anxiety in a Reading-Proficiency Test. *Journal of Social Sciences, 8*(1), 95–103. https://doi.org/10.3844/jssp.2012.95.103
- van der Slik, F. W. P., van Hout, R. W. N. M., & Schepens, J. J. (2015). The Gender Gap in Second Language Acquisition: Gender Differences in the Acquisition of Dutch among Immigrants from 88 Countries with 49 Mother Tongues. *PLOS ONE, 10*(11), 1–22. https://doi.org/10.1371/journal.pone.0142056
- van Wyk, J., & Mostert, M. L. (2016). The influence of mother tongue and gender on the acquisition of English (L2). The case of Afrikaans in Windhoek schools, Namibia. *Cogent Education, 3*(1), 1–12. https://doi.org/10.1080/2331186x.2016.1210997
- Vlaamse overheid. (2012, May 15). *Voltijds secundair onderwijs*. Vlaanderen. https://www.vlaanderen.be/voltijds-secundair-onderwijs

- Vulchanova, M., Aurstad, L. M., Kvitnes, I. E., & Eshuis, H. (2015). As naturalistic as it gets: subtitles in the English classroom in Norway. *Frontiers in psychology*, 5, 1510. https://doi.org/10.3389/fpsyg.2014.01510
- Webb, S., & Chang, A, C-S. (2015). Second language vocabulary learning through extensive reading: How does frequency and distribution of occurrence affect learning? *Language Teaching Research, 19*(6), 667-686. https://doi.org/10.1177/1362168814559800
- Yule, G. (2020). *The Study of Language* (7th ed.). Cambridge University Press. https://doi.org/10.1017/9781108582889

6. Appendices

Appendix A

Questionnaire for secondary school pupils (Original)
(For primary school pupils, sections [C] and [D] were eliminated)

Naam: _____Geslacht: jongen / meisje

Geboortedatum: _____ Klas: _____

Thuis spreek ik meestal _____ (Nederlands, Frans, Engels, Turks, Italiaans, ….)

Beantwoord de vragen zo eerlijk mogelijk!
[A] Hoe vaak…

1. Hoe vaak kijk je naar **Engelstalige** TV programma's, films, tekenfilmpjes, documentaires (op TV, tablet, computer, GSM…)?	nooit	weinig	vaak	altijd
Zonder ondertitels	□	□	□	□
Met ondertitels in het **Nederlands**	□	□	□	□
Met ondertitels in het **Engels**	□	□	□	□
Met ondertitels in een **andere taal**	□	□	□	□
Welke programma's/filmpjes bekijk je het liefst/vaakst?				

2. Hoe vaak speel je computerspelletjes in het **Engels** (op computer, tablet, Playstation, Xbox, gsm/telefoon…)?	nooit	weinig	vaak	altijd
	□	□	□	□
Welke spelletjes speel je het liefst?				

3. Hoe vaak luister je naar **Engelstalige** liedjes?	nooit	weinig	vaak	altijd
	□	□	□	□

4. Hoe vaak kijk je of luister je naar YouTube clips/video's in het **Engels**?	nooit	weinig	vaak	altijd
	□	□	□	□
Welke clips of video's bekijk je dan het liefst/het vaakst?				

5. Hoe vaak spreek of schrijf je in het **Engels** met familie, vrienden of online (om te chatten, sociale media, via websites…)?	nooit	weinig	vaak	altijd
	□	□	□	□

6. Hoe vaak lees je in het **Engels** (boeken, strips, e-boeken, kranten, tijdschriften, internet…)?	nooit	weinig	vaak	altijd
	□	□	□	□
Wat lees je vooral?				

Kom je nog op andere manieren met het **Engels** in contact (bv. taalkamp, internet (*Twitch*)…)?

Ja / Nee Indien ja, wat is dat dan? _____

[B] Wanneer je een Engels woord hoort of ziet dat je niet begrijpt, hoe vaak doe je dan het volgende …

	nooit	weinig	vaak	altijd
Ik doe niets als ik een Engels woord tegenkom dat ik niet begrijp	□	□	□	□
Ik probeer zelf de betekenis van het Engelse woord te bedenken	□	□	□	□
Ik zoek het Engelse woord op in een woordenboek of op internet	□	□	□	□
Ik vraag aan iemand anders om het Engelse woord uit te leggen	□	□	□	□

Is er nog iets anders dat je doet wanneer je een Engels woord hoort of ziet dat je niet begrijpt? Ja / Nee
Indien ja, wat is dat dan? _____

[C] Kruis aan in welke mate je het eens of oneens bent met de volgende stellingen.

	sterk mee oneens	oneens	eens	sterk mee eens
Ik heb Engels nodig voor mijn toekomst.	□	□	□	□
Als ik naar mijn toekomst kijk, dan stel ik me voor dat ik goed Engels spreek.	□	□	□	□
Ik vind het eng om Engels te spreken tijdens de les.	□	□	□	□
Ik vind het eng om Engels te spreken buiten de les.	□	□	□	□
Mijn ouders vinden Engels een belangrijke taal.	□	□	□	□
Mijn vrienden vinden Engels een belangrijke taal.	□	□	□	□

[D] Kruis aan in welke mate de leerkracht contact met het Engels aanmoedigt.

	nooit	weinig	vaak	altijd
De leerkracht Engels geeft ons taken waarvoor we Engels moeten lezen.	□	□	□	□
De leerkracht Engels geeft ons taken waarvoor we een Engelse film, serie of een YouTube-filmpje moeten bekijken.	□	□	□	□
De leerkracht Engels gebruikt authentiek materiaal tijdens de les. (bv. een Youtube-filmpje, muziek, serie of film, game … in het Engels)	□	□	□	□

Dank je wel voor je deelname! 

Appendix B

Questionnaire for secondary school pupils (Translation)
(For primary school pupils, sections [C] and [D] were eliminated)

Name: _____ Sex: boy / girl

Date of birth: _____ Class: _____

At home, I usually speak _____(Dutch, French, English, Turkish, Italian, ….)

Answer the questions as honestly as possible!
[A] How often…

1. How often do you watch **English-language** television programmes, films, cartoon films, documentaries (on TV, tablet, computer, mobile phone…)?	never	sometimes	often	always
Without subtitles	□	□	□	□
With **Dutch** subtitles	□	□	□	□
With **English** subtitles	□	□	□	□
With **other foreign-language** subtitles	□	□	□	□
Which programmes/films do prefer/do you watch most?				

2. How often do you play video games in **English** (at computer, tablet, PlayStation, Xbox, mobile phone, …)?	never	sometimes	often	always
	□	□	□	□
Which video games do you prefer?				

3. How often do you listen to **English** songs?	never	sometimes	often	always
	□	□	□	□

4. How often do you watch or listen to **English-language** YouTube clips/videos?	never	sometimes	often	always
	□	□	□	□
Which clips/videos do you prefer/do you watch most?				

5. How often do you speak or write in **English** with family, friends or online (to chat, on social media, on websites...)?	never	sometimes	often	always
	□	□	□	□

6. How often do you read in **English** (books, strips, e-books, newspapers, magazines, internet…)?	never	sometimes	often	always
	☐	☐	☐	☐
What do you read most?				

Are there some other ways in which you come in contact with **English**? (e.g. language holiday, internet (*Twitch)*…)? Yes / No
If yes, in what way? _____

[B] When you encounter an English word that you do not understand, how often do you do the following ...

	never	sometimes	often	always
I do nothing if I come across an English word I do not understand	☐	☐	☐	☐
I try to think of the meaning of the English word myself	☐	☐	☐	☐
I look up the English word in a dictionary or on the Internet	☐	☐	☐	☐
I ask someone else to explain the English word	☐	☐	☐	☐

Is there anything else you do when you hear or see an English word you do not understand?
Yes / No If yes, what do you do? _____
_____

[C] Please indicate to what extent you agree or disagree with the following statements.

	strongly disagree	disagree	agree	strongly agree
I need English for my future life	☐	☐	☐	☐
I could imagine myself speaking English fluently in the future.	☐	☐	☐	☐
I find it scary to speak English during class.	☐	☐	☐	☐
I find it scary to speak English outside the classroom.	☐	☐	☐	☐
My parents think English is an important language.	☐	☐	☐	☐
My friends think English is an important language.	☐	☐	☐	☐

[D] Please indicate to what extent the teacher encourages contact with English.

	never	sometimes	often	always
The English teacher gives us reading assignments	☐	☐	☐	☐
The English teacher gives us assignments that require us to watch an English movie, series or YouTube video.	☐	☐	☐	☐
The English teacher uses authentic materials during the lesson (e.g. a Youtube video, music, series or movie, game ... in English)	☐	☐	☐	☐

Thank you for your participation!