Emily C. Blair,[1] **Marjolijn H. Verspoor**
University of Pannonia, Hungary
Vanessa De Wilde
Ghent University, Belgium

Linking Extramural Exposure and Oral Proficiency

ABSTRACT
In an increasingly digital world, many young learners are exposed to English without ever taking a class. Researchers have shown various benefits from extramural exposure to English (De Wilde et al., 2020; Kusyk et al., 2025). However, it is not clear to what extent extramural exposure can compare to formal learning in terms of general proficiency, including sentence complexity, vocabulary and accuracy.
The data in the current study comes from two groups of Hungarian learners. One group of learners studies English in a Bilingual English program with explicit instruction, and the other group, who study German and have learned English implicitly through extramural exposure. On average, the Bilingual English students achieved higher proficiency as indicated by scores on the Cambridge Young Learners Exam.
For this study, we focused on the 4 top-scoring participants (all at A2 level) from both groups and compared them in an oral picture storytelling task. Speech samples were analyzed on linguistic features that show stages of proficiency development (cf. Verspoor et al., 2012): mean length of utterance, use of tenses, use of low-frequency words, and general accuracy. The English students scored similarly in mean length of utterance, with both groups' average being 9.1 words per utterance. The German students scored higher in the use of past tense (74% compared to 31%) and in accuracy (82% compared to 46%). The two groups display similar vocabularies and use of Low-frequency words.
These results show that oral skills can develop through implicit learning, specifically demonstrating the ability to implicitly learn grammatical structures and vocabulary. The findings support previous research (Peters, 2018; Rousse-Malpat, 2019). These results help understand language learning and may influence and improve teachers' methods.

Keywords: *implicit learning, extramural exposure, speaking, proficiency*

Introduction

English teachers cannot ignore the growing role that extramural exposure to the English language plays in students' language learning journey. More and more children have access to smartphones and tablets, and the widespread use of English as the lingua franca means that children no longer need to attend English classes in order to have a significant source of input. As Sundqvist (2024) said, extramural exposure has "replaced classroom activities as the starting point and foundation for learning English". This represents a shift in how children learn languages and is an opportunity for research

[1] Corresponding author: Emily C. Blair, emilycilliler@gmail.com

into how implicit learning affects proficiency gains.

Extramural exposure includes streaming platforms, online gaming, social media, podcasts, TV and films, and online/offline communication These spaces offer authentic language input that is rich, varied, and tailored to each learner's interests. Importantly, EE is usually voluntary, meaning learners may be more engaged with the content as compared to a traditional classroom (Ebadi et al., 2023; Zhang & Liu, 2024). This difference between teacher-controlled input and learner-controlled input is likely to impact how children's language skills develop (Sundqvist, 2009).

Much of the existing research into extramural exposure has been conducted in high-exposure contexts or contexts where the L1 is linguistically similar to English (De Wilde et al, 2020; Puimège &Peters, 2019). This means that the participants in these studies may be able to learn English more easily due to the high level of exposure or cognates in their native language. The Hungarian context lends an interesting backdrop due to the linguistic distance from Hungarian to English. Typologically and syntactically, Hungarian is quite different from English. This means that Hungarian learners cannot rely on a wealth of shared cognates or structural similarities to aid in English acquisition. Consequently, learning English may require more input or time to reach the same level of proficiency as found in other contexts. This makes Hungary an ideal place to examine whether EE alone can support language development.

Hungary is also interesting as it adds to the breadth of research into low-exposure contexts. In Hungary, many of the TV shows and movies are dubbed, which leads to less English exposure from the media. Additionally, in Southwestern Hungary, there is less tourism than in bigger cities where English may be present in daily life. Older generations of Hungarians were forced to study Russian in school, so there is sometimes a lack of English knowledge among this portion of the population as well. Although the rise of social media and streaming services has made English more accessible than ever, Hungary still qualifies as a low-exposure context compared to many other countries (Molnár, 2013).

So, despite the challenges of linguistic distance and low-exposure context, to what extent does extramural exposure affect young learners and how does this compare to more traditional methods of language learning? The present study seeks to answer that question by focusing on the language of eight focus learners from two unique groups: those who have had explicit instruction in a Bilingual English program and those who have never studied English formally and instead study German in school and thus learned English in an informal learning context. The following study compares in detail the language produced by four focus students at the A2 level (in CEFR) who had explicit instruction and four who did not. The research question for this study was: How does speaking proficiency compare in A2 learners from formal and informal learning backgrounds?

Literature Review

Many theories exist as to how these different forms of learning work. Krashen's Input Hypothesis contends that comprehensible input is sufficient for acquisition (Krashen, 1982) and Schmidt's Noticing Hypothesis (Schmidt, 1980) argues that attention to linguistic form is necessary for durable learning. Usage-based models (Rousse-Malpat, 2019) contend that knowledge of a language emerges from repeated exposure to constructions in authentic contexts. These theories provide the foundation for research on extramural exposure.

Extramural English (EE) was defined by Sundqvist (2009) as "English that learners come in contact with outside the walls of a classroom". This means that language learning from extramural exposure represents a form of implicit learning, which occurs when learners acquire language patterns, typically through meaningful exposure (Reber, 1967). On the other hand, explicit learning involves conscious rule learning, metalinguistic explanations, and corrective feedback (N. Ellis, 2005).

The role of EE in young learners' proficiency has been widely researched. For example, research has supported the role of extramural exposure in developing vocabulary (De Wilde et al., 2020; Puimège &Peters, 2019; Olsson and Sylvén, 2015), as well as implicit grammar knowledge (Schurz, 2025). De Wilde et al. (2020) conducted research on children between the ages of 10-12 in Flanders, Belgium. These students had never had formal English instruction, but 14% of the children were able to reach an A2 level of speaking proficiency through extramural exposure alone. Furthermore, studies have investigated specific skills that can be developed from Extramural English. EE has been shown to increase children's confidence when speaking (Stenlund, 2019), which highlights how receptive input can boost productive skills.

Another important aspect of the way EE impacts L2 English learning is the linguistic distance to the L1. Learners whose native language is linguistically similar to English may benefit from shared cognates or grammatical structures that make input more comprehensible. In fact, relatedness of L1 to the target language has been linked to proficiency in speaking and writing (Muñoz and Cadierno, 2021). Muñoz and Cadierno (2021) described the "joint effect" that exposure and linguistic distance can have, which boosts learners' language acquisition. Additionally, research shows that cognate linguistic distance was the strongest predictor of both listening and reading scores (Lindgren & Muñoz, 2013). Interestingly, Lindgren and Muñoz (2013) found that exposure to English was the second strongest predictor, which underscores the effect of EE on English proficiency.

In order to quantify proficiency, one must group learners based on characteristics that they display or their ability to navigate certain tasks in the target language. Verspoor et al. (2012) studied the development of proficiency in L2 writing in young Dutch learners of English. They first grouped

learners into five levels that were aligned with the CEFR. Level 1 represented A1.1, 3 represented A2, and 5 represented B1.2. They then examined 64 variables that might predict differences between the levels and found that several broad measures distinguished significantly between the levels. These were among others: the relative use of simple sentences, the relative use of the present tense, the relative use of frequent words, and the relative occurrence of errors. In other words, at each stage, there were fewer simple sentences, fewer verbs in the present tense, and fewer errors.

Supporting these findings, Potratz et al. (2022) concluded that the mean length of utterance is a valid measurement of children's grammatical development in spoken language. Other research supports the concept that the past tense is a sign of higher proficiency and grammatically complex language (Yang & Pongpairoj, 2024). On the other hand, the use of low-frequency words in spoken language has not been as clearly defined as a marker of proficiency. Research with young learners has shown that more proficient learners often use more high-frequency words, while lower proficiency speakers use less frequent words. (De Wilde et al., 2020). This stems from the fact that the lower proficiency speakers may have learned a less frequent word by translating from their L1, rather than from frequent exposure to the target language. Additionally, Abe et al. (2024) found that lexical sophistication was not correlated with the length of learning in low-proficiency learners. These findings do not support earlier research about L2 writing that showed more proficient writers use more low-frequency words (Laufer & Nation, 1995). The present study investigates this issue further.

This study will thus focus on young Hungarian learners of English and fills two gaps: First of all, it is conducted in a context where the L1 is linguistically not similar to English. Secondly, it will compare the effect of formal versus informal exposure in terms of sentences, the tenses, the use of frequent words and errors.

Methodology

Two groups of learners are compared in terms of their general level of proficiency and amount of extramural exposure: 21 learners who had explicit instruction (BE) and 29 students who had no explicit instruction (GFL). Then, from each group 4 focus learners are selected based on their general proficiency level (A2) and compared on the language they produced during an oral storytelling task to see if there are differences in sentences, the tenses, the use of frequent words and the use of errors.

Participants

The participants in the larger study were 50 Hungarian young learners between the ages of 10-12 years old. These participants were tested on their speaking proficiency. The participants belong to two

groups: those who study in a Bilingual English (BE) program and have explicit instruction and those who study German as a foreign language (GFL) and who have no formal instruction in English.

The BE group attends a public elementary school that offers an English curriculum that includes systematically increasing levels of exposure to English, as well as the opportunity to take classes with a native English-speaking teacher. From 1st through 3rd grade, students have 4 English lessons with explicit instruction as well as 3 Physical Education lessons, 2 art classes, and 1 crafts class, all taught in English. In the following year, students have 5 English classes and 3 Physical Education classes, 1 art class, and 1 crafts class taught in English. In 5th grade, they also add two new classes, World History and Civilization, which are both taught in English. The participants in this study were in 5th grade, which means they had substantial formal exposure to English through a variety of subjects.

In contrast, the GFL group were students who had never studied English formally, meaning that all their English knowledge came from extramural exposure. As mentioned before, their families had opted for these students to study German, so English represents something that they learned due to their own interests. Their German exposure varied greatly from school to school, with some participants studying German from 1st grade, while others started in 3rd or 4th

Focus Learners

From the larger groups, 8 students were selected from those who had scored an A2 level for speaking. These participants had the top four scores for the BE and GFL groups. In the larger sample, 6 BE learners had reached an A2 level, but 2 of these learners' scores were lower than the rest of the A2-level students, so the researcher decided to use the top 4 scoring BE participants so that the average scores of the two groups would be more similar. Thus, these 8 students represent the sample population for this study, and consisted of 5 boys and 3 girls, all aged 10-12. All the students were in 5th grade in public elementary schools in Southwest Hungary.

Permission

Before beginning the research, approval was obtained from both the regional education office (Tankerulet) and the headmaster of each school. Parents and students were given a consent form, which explained the process and how data would be handled. These forms were given in Hungarian to ensure that all participants understood what they were agreeing to. Additionally, all students were informed that they could opt out of participation at any time. After the data was collected and processed, numbers were assigned to protect the identity of the participants.

Instruments

Participants were given questionnaires to learn more about their extramural exposure and habits (See Appendix A). This questionnaire was previously used in De Wilde et al. (2020). The questionnaire was translated into Hungarian to ensure participants could fill it out easily and was piloted by the researcher. This questionnaire asked about their habits in both English and Hungarian and included a chart to write how much exposure to each language they had daily.

For English, the participants were asked about how often they: watch tv/movies, listen to music, game, use social media, read books, and speak the language. The chart gave categories for exposure amounts, ranging from "I don't do this" to "I do this for more than 2 hours a day". The questionnaires also asked questions about what websites, apps, and games they usually engage with. For the sake of this study, only the quantitative results will be reported.

After gathering the quantitative data, the average group exposure was calculated. First, a number was assigned to each category "0" for "I don't do this" up to "5" for "I do this more than 2 hours". Based on the participants' responses, numbers were assigned for each category. Then, these numbers were averaged to show group totals and averages for each type of exposure. Finally, the numbers were converted back to the original measure for reporting. Thus, if the group scored a "5" on average, then the average was "more than 2 hours" of exposure for that category.

To obtain the oral samples, the researcher administered the Cambridge Young Learners Flyers Exam. This test was piloted during an earlier study and found to be reliable. This exam tests students up to an A2 level. The test has 3 parts- reading, speaking, and writing and reading. The speaking test itself contains 4 activities, including picture differences, information exchange, a picture story, and a short interview. In order to get the longest chunk of interrupted speech, the researcher chose to use the picture story task (See Appendix B) to examine their language.

Procedure

For the larger study, participants were asked to do the following things: a parental consent form and survey, student survey, Cambridge Flyers Exam (reading and writing, listening, and speaking sections), and the Peabody Picture Vocabulary Test-4. For the current study, the data from the speaking section of the Cambridge Flyers Exam was used. As mentioned before, this section of the test features 4 parts and the data from the picture story was selected for this analysis.

When administering the picture story task, the researcher starts the story and then encourages the student to finish telling what happened by looking at the pictures and narrating the events. The directions were given in English and Hungarian as some students had a very low level of English

proficiency. The students were also directed that they should try to use English as much as possible, but that it was acceptable to use Hungarian whenever they were stuck. Students were recorded while completing the speaking task.

Scoring

After collecting the data, the speaking tests were scored by the researcher using the rubric provided by Cambridge for this test. The researcher is a native English speaker and an English teacher who is experienced with using the Cambridge Young Learners Exam scoring rubric. The speaking tests are scored based on four criteria: vocabulary, grammar, pronunciation and interactive communication. The highest possible score is 20, with each category counting for 5 points. A score of 16/20 or higher is considered an A2 level of proficiency. After scoring the speaking tests, the students who had reached an A2 level as indicated by their score were selected for this study. The data was transcribed and checked for errors by the researcher.

Coding method used for focus learners

Speech samples were analyzed on linguistic features that show stages of proficiency development in writing (cf. Verspoor et al., 2012). Because the language was spoken rather than written, the criteria (Table 1) selected were adjusted to include sentences, the tenses, the use of frequent words, and the use of errors.

For sentences, we calculated the mean length of utterance, which has been found to be a measure of syntactic development in children (Potratz et al., 2022). An utterance was defined as the number of words present in each major thought and between pauses in the students' speech. For the use of tenses, each tense was coded as present simple, present continuous, and past simple. If a student used a mixed tense, for example, "They is put", it was classified as the present tense.

For the use of less frequent words (LFW), we checked for words that were outside of the range of the K1, meaning either on the K2 list or higher (Nation & Webb, 2011). We classified LFW as words that are not among the 1000 most frequent words in English. In order to determine this, we entered the transcribed data into LexTutor (Cobb, 2025) to analyze the texts using the Vocab Profile Compleat tool, which looks at BNC-COCA word families.

For accuracy, we counted the number of clauses that contained no mistakes or errors. Averages were based on the total number of clauses. Clauses were defined as utterance parts with their own subject and verb.

Table 1.

Categories used for analysis.

Label	**Definition**	**Example**
Mean Length of Utterance	Uninterrupted chain of spoken language	*And the TV is go home with a car*. (9 words)
Percentage of Past Tense	Use of past simple tense	They *got it out* of the car.
Percentage of Clauses with Low-Frequency Words	Clause (portion of sentence containing noun and verb) containing a word from the K2 list or higher	But suddenly, the TV fell down and *cracked*.
Percentage of Correct Clauses	Clause (portion of sentence containing noun and verb) with no verb form, use, or semantic errors	*Tom bought the TV.*

Results

Extramural English

Examining the results from the larger group's questionnaires, we see that the BE group was exposed to video games, music, and YouTube and Social media for around 30 minutes- 1 hour per day. They also reported speaking English, watching TV/Films, and reading in English for less than 30 minutes each day. The GFL group was exposed to EE for less than 30 minutes each day, and on average did not report speaking English, watching TV/Films or reading in English. Table 2 illustrates these results.

Table 2.

Whole Group Exposure Time (n=50)

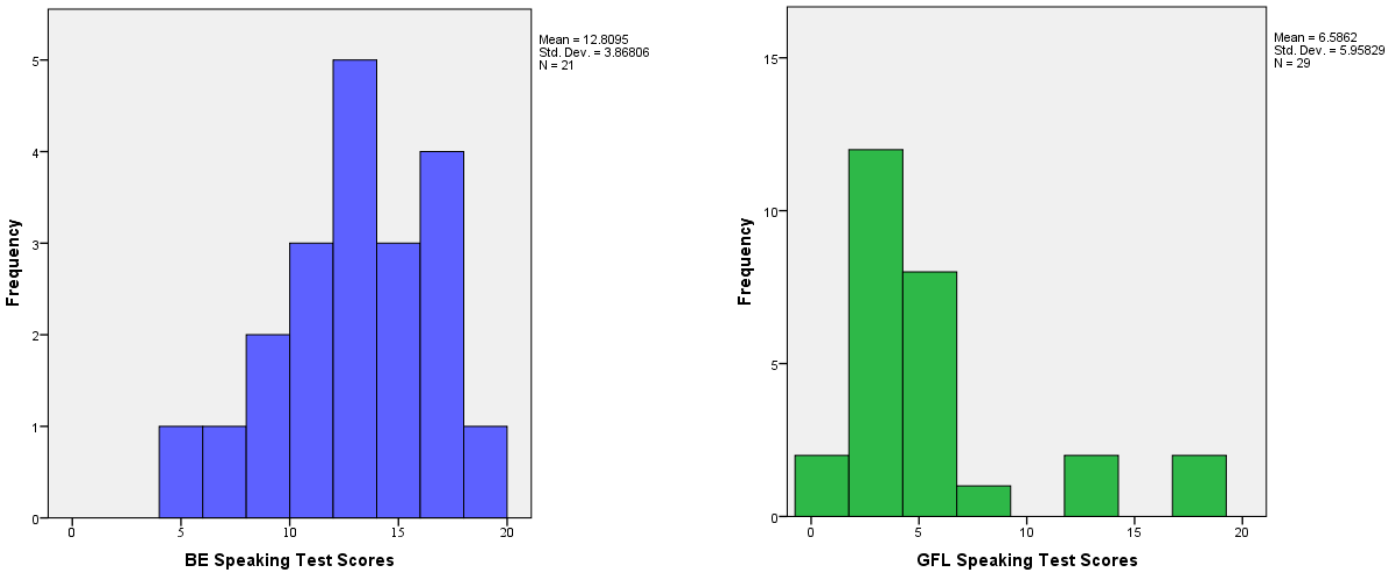
Type of Exposure	BE	GFL
Video Games	30 min-1hr	<30 min
Music	30 min- 1hr	<30 min
YouTube/Social Media	30 min- 1hr	<30 min

Speaking English	<30 min	none
TV/Films (L1, L2, or no subs)	<30 min	none
Books/Magazine	<30 min	none

Looking at speaking proficiency scores, the BE group outperformed the GFL group. In fact, 29% of the students in the larger BE sample group obtained an A2 level of proficiency, while only 13% of the GFL reached the same level. Figure 1. shows the score on the speaking test for the larger sample group.

Figure 1.

Whole Group Speaking Test Scores (n=50)



Results-Focus Learners

Looking first at the questionnaire results, focus learners reported daily exposure to English. Table 4. shows the breakdown of exposure for the focus learners. On average, the BE focus learners were exposed to gaming for 1-1.5 hours, music for 30 minutes-1 hour, YouTube and Social media for 1-1.5 hours, speaking English for 30 minutes-1 hour, TV and films for less than 30 minutes, and did not report reading books or magazines. The GFL focus learners were exposed to gaming for 1.5-2 hours, music for 1-1.5 hours, YouTube and Social media for 1.5-2 hours, speaking English for 1.5-2 hours, TV and films for 30 minutes-1 hour, and reading books for 30 minutes-1 hour.

Table 4.

Focus Learners' Exposure Time

Type of Exposure	BE Focus Learners (n=4)	GFL Focus Learners (n=4)
Video Games	1-1.5hrs	1.5- 2hrs
Music	30 min- 1hr	1-1.5hrs
YouTube/Social Media	1-1.5hrs	1.5- 2hrs
Speaking English	30 min- 1hr	1.5- 2hrs
TV/Films (L1, L2, or no subs)	<30 min	30 min- 1hr
Books/Magazine	<30 min	30 min- 1hr

As far as their linguistic data was concerned, only descriptive statistics were calculated because of the sample size. Table 5. shows an overview of the type, number, and examples of errors for each of the focus learners

In the first category of mean length of utterance, the GFL and BE groups had the same mean length of utterance. Both groups had a 9.1 average length of utterance. Among the BE group, the individual learners had 5.5, 10, 11, and 10 words per utterance, respectively. Among the GFL, it was 10.8, 10, 9, and 6.4. In this category, the BE group had both the highest and lowest scoring students.

As far as the use of past tense is concerned, the German students scored higher (74% compared to 31%), meaning the GFL used past tense in 25 out of 34 clauses. The BE group used past tense in 8 out of 26 clauses.

As far as the use of low-frequency words is concerned, the two groups showed very similar vocabularies, with only 2 LFW used in the GFL group and 1 in the BE group.

In terms of accuracy, the GFL had an 82% error-free clause rate, meaning that across the 4 learners 28 out of 34 total clauses were error free. In the BE group, the average was 46%, as 12 out of the 26 clauses were error free. Some of the most common mistakes were the mixing of verb tenses.

For example, "*He is put the TV in the car."* Across learners, mixing of verb forms was seen in 13 clauses in the BE group with each focus learner showing at least one case of mixing. In the GFL group, only one learner used a mixed tense, one time. Notably, there were several errors with the word "*broke*." Several of the mixing errors included the word "*broke"* being used with the verb "*to be*", which may be due to confusion over the adjective form of the word, rather than a mixing of tenses. If we remove the cases where the word "*broke*" was involved, then the BE focus learners had 6 total verb mixing errors between 3 of the learners. With these cases removes, the GFL learners would have no mixed tense errors.

Table 5.

Data from Focus Learners

	GL1	GL2	GL3	GL4	BE1	BE2	BE3	BE4
MLU (number of words)	10.8	10	9	6.4	5.5	10	11	10
Past tense	7/9	14/15	3/5	1/5	1/6	4/4	2/10	1/6
Errors								
verb *The TV fall out*	1	1	0	1	3	2	3	1
meaning *It [the TV]was safe*	1	0	1	0	0	0	1	0
pronoun *Them is dropped the..*	0	0	0	0	0	2	0	1
Low-frequency words *cracked, injured, stairs*	0	0	2	0	0	1	0	0

Discussion

Exploring the data gathered from questionnaires and the results of the speaking test, we see interesting trends emerge. Looking at the larger sample, the BE group outperforms the GFL group in the percentage of A2 level speaking proficiency. On average, they also have higher levels of exposure to English. However, it is notable that 13% of the GFL students have obtained an A2 level of English-speaking proficiency, which is very similar to the 14% that De Wilde et al. (2020) found in Dutch-speaking young learners of English through exposure, and suggest that significant proficiency gains through extramural exposure are possible, even with an L1 that is quite linguistically distant from English.

Summary of Focus Learners

To summarize the findings of the questionnaires given to the focus learners, the results show that all of the participants engage with English on a daily basis, and that the exposure is through a variety of inputs. Comparing the two groups, the GFL group had more daily informal exposure to English than

the BE group. It is important to note that the questionnaire did not account for simultaneous exposure, for example, listening to music while scrolling on social media. Also, it has been shown that not all exposure types are equally beneficial for language learning (De Wilde et al., 2020; Kuppens, 2009). For instance, engaging in online gaming where you must listen to English and write or speak in English in order to progress in the game surely offers more benefit to language learning than passively listening to music in English while working on math homework. Among the focus learners, the GFL group was found to game 1.5-2 hours per day, while the BE group reported only 1-1.5 hours per day.

Looking at the linguistic analysis within this small sample, the groups were quite similar in terms of sentence complexity with the same mean length of utterance. Despite the similarity in the averages, there were large individual differences observed within the groups. In the BE group, both the lowest and highest mean length of utterances were recorded- 5.5 and 11. The GFL group also has wide gaps between the lowest and highest scores with a 6.4 being the lowest and a 10.8 being the highest. This may be due to individual speaking styles, which may be present even in the L1 and can reflect differences in individual factors, such as temperament Hadley et al., 2014).

In terms of more advanced tense use, the GFL students used past tense in 74% of their clauses, while BE students used past tense in only 31%. We noticed also that the BE students seemed to mix their tenses more frequently, and may have been attempting to use past tense, but used it incorrectly. This is typical of instructed learners at an A2 level as found in Verspoor et al., (2012). However, it is also possible that the BE students were attempting to use present continuous tense after hearing this tense used in the prompt at the beginning of the story. Throughout the storytelling, both groups demonstrated some understanding of both regular and irregular simple past tense using verbs such as “made”, “saw”, “dropped”, and “drove” accurately. These findings support previous research that shows extramural English can boost implicit knowledge of grammar (Schurz, 2025).

The K2 words that were used were *upstairs, cracked, and injured.* It was notable that both groups developed similar vocabularies despite differences in their learning contexts. This supports the idea that extramural exposure can develop vocabulary (De Wilde et al., 2020; Puimège & Peters, 2019). With a larger sample size, it will be interesting to see if this trend continues.

In terms of accuracy, we focused on the accurate use of verb tenses, words and pronouns. The students in this study are at approximately level 3 according to the grouping in Verspoor et al. (2012). These findings support the idea that there is a spike in verb use errors at around an A2 level when students are experimenting with new tenses and making mistakes (Verspoor et al., 2012). Interestingly, the GFL group displayed a lower frequency of errors, and this may be because BE students have had explicit instruction on grammar rules, which may exacerbate the mixing as they attempt to formulate

verbs correctly following the rules or as some form of hyper correction. In fact, in the case of mixing tenses, when the cases involving misuse of the word "*broke"* were removed, we see that the GFL focus learners did not mix tenses at all. Thus, the GFL group may speak with less concern for "rules" since they have never been explicitly instructed on how to form these verbs. This supports previous research that implicit learners are as accurate as explicit learners (Rousse-Malpat, 2019). This suggests that the natural acquisition of English may somehow mitigate the confusion in these students.

Due to the small sample size, we cannot generalize based on these results. However, it is clear that exposure to English has supported the GFL students in learning English and has allowed them to reach an A2 level of proficiency. Their speech has developed with more complexity in some of the chosen parameters than their peers who have studied in a Bilingual English class.

Conclusion

In this paper, we showed that Hungarian young learners can learn quite a bit of English without formal exposure. This research has implications for educational practices, especially in multilingual classrooms where the L1 may be linguistically distant from English. Some educators may incorrectly assume that extramural exposure to English is not enough to build proficiency in students. It underscores the value of using authentic materials and just how much students can learn when they are engaged with the task at hand. Since extramural exposure generally comes through personal choice, it is likely that students are able to select materials that interest them, and that this reinforces their learning.

Of course, there are limitations. First, the small sample size means that these students could simply be outliers. More samples are currently being collected, and the hope is to expand on this research in the future. Additionally, convenience sampling was utilized, and the researcher sampled schools that were geographically quite close to each other. In order to make generalizations about Hungarian young learners, a more representative sample that included other parts of the country would be necessary. Another limitation stems from the fact that the researcher used reported data from children. It is possible that the children may not be aware of how often they engage with English and may over- or underestimate their exposure.

Future research should include a more detailed examination of the quality of extramural exposure, not only the quantity. This would help to answer questions about which types of exposure offer the most benefit. Additionally, it would be interesting to expand this study to include a longitudinal focus on these students to see how their speaking skills develop over time.

Declaration of interest statement

I declare that by conducting this research and publishing it, there are no conflicts of interest for the researcher.

References

Abe, M., Kobayashi, Y., & Kondo, Y. (2024). Capturing chronological variation in L2 speech through lexical measurements and regression analysis. Applied Corpus Linguistics, 4(3), 100105. https://doi.org/10.1016/j.acorp.2024.100105

Cobb, T. (2025). *VOCABPROFILE English* [Computer program]. In *Compleat Lexical Tutor*. Retrieved December 1, 2025, from https://www.lextutor.ca/vp/eng/ (lextutor.ca)

Chodija, I. T., Nurweni, A., & Suparman, U. (2017). Teaching the Simple Past Tense through Explicit Instruction and Implicit Instruction. U-Jet.

De Wilde, V., Brysbaert, M., & Eyckmans, J. (2020). 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

Ebadi, S., Amini, Z. & Gheisari, N. On the relationship between mobile-based extramural activities and vocabulary development of EFL learners: a mixed-method study. Smart Learn. Environ. 10, 33 (2023). https://doi.org/10.1186/s40561-023-00252-y

Ellis, N. C. (2005). At the interface: Dynamic interactions of explicit and implicit language knowledge. Studies in Second Language Acquisition, 27(2), 305–352.

Hadley, P. A., Rispoli, M., Holt, J. K., Fitzgerald, C., & Bahnsen, A. (2014). Growth trajectories of mean length of utterance in children with typical development. Journal of Speech, Language, and Hearing Research, 57(3), 898–909. https://doi.org/10.1044/2014_JSLHR-L-13-0054

Kuppens, A. H. (2009). Incidental foreign language acquisition from media exposure. Learning, Media & Technology, 35(1), 65–85. https://doi.org/10.1080/17439880903561876

Kusyk, M., Arndt, H. L., Schwarz, M., Yibokou, K. S., Dressman, M., Sockett, G., & Toffoli, D. (2025). A scoping review of studies in informal second language learning: Trends in research published between 2000 and 2020. System, 130, 103541. https://doi.org/10.1016/j.system.2024.103541

Krashen, S. D. (1982). Principles and practice in second language acquisition. Pergamon Press.

Laufer, B., & Ravenhorst-Kalovski, G. C. (2010). Lexical threshold revisited: Lexical text

coverage, learners' vocabulary size and reading comprehension. Reading in a foreign language, 22(1), 15–30.

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, 101, 102–119. DOI: 10.1016/j.system.2021.102421

Mohammed, A., Rampinini, A., Balboni, I., Berthele, R., Golestani, N., & Kepinska, O. (2025). Multilingualism and working memory: The role of formal vs. informal language learning [Preprint]. Vienna Cognitive Science Hub. https://doi.org/10.31219/osf.io/u7s43_v1

Molnár, M. (2013) English Proficiency and English Exposure in the Media. A comparative study between countries with high and low English exposure (Doctoral dissertation).

Muñoz, C., Cadierno, T., & Casas, I. (2018). Different starting points for English language learning: A comparative study of Danish and Spanish young learners. Language Learning, 68(1), 1–28. https://doi.org/10.1111/lang.12309

Muñoz, C., & Cadierno, T. (2021). How do differences in exposure affect English language learning? A comparison of teenagers in two learning environments. Studies in Second Language Learning and Teaching, 11(2), 185–212. https://doi.org/10.14746/ssllt.2021.11.2.2

Nation, I. S. P., & Webb, S. (2011). Research and analysis of the BNC/COCA wordlists. Victoria University of Wellington.

Olsson, E., & Sylvén, L. K. (2015). Extramural English and academic vocabulary. A longitudinal study of CLIL and non-CLIL students in Sweden. Apples – Journal of Applied Language Studies, 9(2), 77–103.

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.

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

Potratz, J. R., Gildersleeve-Neumann, C., & Redford, M. A. (2022). Measurement properties of mean length of utterance in school-age children. *Language, Speech, and Hearing Services in Schools*, *53*(4), 1088-1100.

Reber, A. S. (1967). Implicit learning of artificial grammars. Journal of Verbal Learning and Verbal Behavior, 6, 317-327.

Rousse-Malpat, A. (2019). Effectiveness of explicit vs. implicit L2 instruction: A longitudinal

classroom study on oral and written skills. [Thesis fully internal (DIV), University of Groningen]. Rijksuniversiteit Groningen.

Schmidt, R. W. (1990). The role of consciousness in second language learning. Applied Linguistics, 11(2), 129–158.

Schurz, Alexandra. (2025). Exploring the Potential of Extramural English in the Development of Implicit, Automatized, and Explicit Knowledge of Grammar. Language Learning. n/a-n/a. 10.1111/lang.70008.

Stenlund, T. (2019). Extramural English and Swedish students' English language proficiency (Bachelor's thesis, Luleå University of Technology).

https://ltu.diva-portal.org/smash/get/diva2:1332249/FULLTEXT01.pdf

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).

Sundqvist, P. (2024). Extramural English as an individual difference variable in L2 research: Methodology matters. Annual Review of Applied Linguistics, Advance online publication, 1–13. https://doi.org/10.1017/S0267190524000072

Verspoor, M., Schmid, M. S., & Xu, X. (2012). A dynamic usage based perspective on L2 writing. Journal of Second Language Writing, 21(3), 239-263.

Yang, T., & Pongpairoj, N. . (2024). The Acquisition of English Irregular Past Tense Morphology by L1 Chinese Learners. Journal of Modern Learning Development, 9(5), 141–152. retrieved from https://so06.tci-thaijo.org/index.php/jomld/article/view/267496

Zhang, Y., & Liu, G. (2024). Revisiting informal digital learning of English (IDLE): a structural equation modeling approach in a university EFL context. Computer Assisted Language Learning, 37(7), 1904–1936. https://doi.org/10.1080/09588221.2022.2134424

Appendices

Appendix A

Children's questionnaire

School: _____

Class : _____

Name : _____

Date of birth : _____

I am _____ years old

How much contact do you have with the English language?

1. Tick the box. How many hours/minutes do you do the activities in the list **per day**:

In **ENGLISH**	I don't do this.	Less than 30 minutes	30 minutes– 1 hour	1 hour – 1 hour 30 minutes	1 hour 30 minutes – 2 hours	More than 2 hours
Watch TV without subtitles						
Watch TV with English subtitles						
Watch TV with subtitles in the home language						
Listen to English music						
Read English books, magazine,comics						
Gaming in English						
Youtube, use of social media in English						
Speak English						

-Which games do you play? How often do you play these games? -

-Youtube/social media: what do you watch? Which social media do you use (e.g. Snapchat, Instagram,…)?

In the **HOME LANGUAGE**	I don't do this.	Less than 30 minutes	30 minutes– 1 hour	1 hour – 1 hour 30 minutes	1 hour 30 minutes – 2 hours	More than 2 hours
Watch TV						
Listen to music						
Read books, magazines, comics						
Gaming						
Youtube, use of social media						

2. Do you have any contact with people who speak English? Yes / No

If yes, where, when, with whom?

a. On holiday? Yes / No How often? _____

b. At home? Yes / No How often? _____

c. In other situations? Yes / No How often? _____

3. Do you sometimes speak English? Yes / No

If yes, where, when, with whom? _____

4. Do you think English is a fun language? Yes / No

5. Do you sometimes look for opportunities to speak English? Yes / No

If yes, where, when, with whom? If no, why not?

6. What language do you study in school? Why did you choose it?

General information:

1. Which language do you usually speak with your mother? _____

Which language do you usually speak with your father? _____

Which language do you usually speak with your brothers/sisters?_____

Which language do you usually speak with your friends? _____

2. I am a

☐ boy.

☐ girl.

3. I have ____ brothers and ____ sisters. They are _____ years old.

Appendix B