

# ***Individual, Family, and School Correlates of Effective Learning of English as a Foreign Language***

✉ **Paulina Marchlik** / Wydział Pedagogiczny, Uniwersytet Warszawski

e-mail: p.marchlik@uw.edu.pl

ORCID: 0000-0002-4609-1900

**Kamila Wichrowska** / Wydział Pedagogiczny, Uniwersytet Warszawski

e-mail: kamila.wichrowska@uw.edu.pl

ORCID: 0000-0003-3559-9706

**Aleksandra Jasińska-Maciążek** / Wydział Pedagogiczny, Uniwersytet Warszawski

e-mail: a.jasinska@uw.edu.pl

ORCID: 0000-0001-9975-4141

**Roman Dolata** / Wydział Pedagogiczny, Uniwersytet Warszawski

e-mail: rdolata@uw.edu.pl

ORCID: 0000-0002-7967-9022

## **Abstract**

**Purpose:** This article examines factors associated with the effectiveness of learning English as a foreign language (EFL) among Polish primary school graduates, using the population of graduates from public primary schools in a medium-sized city as a case study. Based on data from the 2022 eighth-grade examination, a threshold corresponding to A2 proficiency as defined by the Common European Framework of Reference for Languages (CEFR; Polish: ESOKJ) was established (standard setting procedure). This threshold was then used to estimate the proportion of students completing primary school with English proficiency at the A2 level. The estimated proportion was 32.2% in Poland as a whole and 40.3% in the city under study, pointing to a substantial gap in foreign language attainment. **Method:** The analysis drew on data on potential individual, family, and school-related determinants of achievement collected for the entire city population of 8th grade students. A series

---

©Instytut Badań Edukacyjnych – Państwowy Instytut Badawczy



© 2026 Autor(zy). Artykuł opublikowany w otwartym dostępie, rozpowszechniany na warunkach licencji Creative Commons Uznanie autorstwa 4.0 Międzynarodowe ([CC BY 4.0](https://creativecommons.org/licenses/by/4.0/)). / © 2026 Author(s). This is an open access article distributed under the terms of the Creative Commons Attribution 4.0 International License ([CC BY 4.0](https://creativecommons.org/licenses/by/4.0/)).

of logistic regression analyses, culminating in a mixed-effects logistic regression model with multiple imputation and backward elimination, identified several significant correlates of attaining A2 proficiency. **Results:** Higher educational aspirations, intrinsic motivation, learning English outside school, playing computer games in English, and reading books in English were positively associated with the likelihood of reaching the A2 level. Direct parental assistance with homework was negatively associated with this outcome (a probable explanation is reverse causality). The two-level model also revealed significant variation between class groups. **Discussion:** This variation was largely explained by motivational patterns: teaching pedagogies supporting intrinsic motivation appear to enhance language learning effectiveness, whereas school reinforcement of parental strategies oriented towards extrinsic motivation may reduce it.

Keywords: **English as a foreign language, primary education, A2 proficiency, CEFR, learning outcomes, intrinsic motivation, family support, school effectiveness, educational aspirations, Poland**

## ***Czynniki indywidualne, rodzinne i szkolne związane ze skutecznością nauki języka angielskiego jako obcego***

### **Streszczenie**

**Cel:** W niniejszym artykule przeanalizowano czynniki związane ze skutecznością nauki języka angielskiego jako języka obcego wśród polskich absolwentów szkół podstawowych, wykorzystując jako studium przypadku populację absolwentów publicznych szkół podstawowych w średniej wielkości mieście. Na podstawie danych z egzaminu ósmoklasisty z 2022 r. ustalono próg odpowiadający poziomowi biegłości A2 zgodnie z CEFR/ESOKJ (procedura *standard setting*). Próg ten został następnie wykorzystany do oszacowania odsetka uczniów kończących szkołę podstawową z poziomem znajomości języka angielskiego minimum A2. Szacowany odsetek wyniósł 32,2% w całej Polsce i 40,3% w badanym mieście, co wskazuje na znaczną lukę w osiągnięciach w stosunku do programu w zakresie znajomości języków obcych. **Metoda:** Analiza opierała się na danych dotyczących potencjalnych indywidualnych, rodzinnych i szkolnych czynników determinujących osiągnięcia, zebranych dla badanej populacji uczniów klasy VIII. Seria analiz regresji logistycznej, zakończona modelem regresji logistycznej z efektami mieszanymi, z wielokrotną imputacją i eliminacją wsteczną, pozwoliła zidentyfikować kilka istotnych predyktorów osiągnięcia poziomu minimum A2. **Wyniki:** Wyższe aspiracje edukacyjne, motywacja wewnętrzna, nauka języka angielskiego poza szkołą, granie w gry komputerowe w języku angielskim i czytanie książek w języku angielskim były pozytywnie związane z prawdopodobieństwem spełnienia kryterium. Natomiast bezpośrednia pomoc rodziców w odrabianiu zadań domowych była negatywnie związana z osiągnięciem A2 (prawdopodobne wyjaśnienie to odwrócona przyczynowość). Model dwupoziomowy ujawnił również istotne różnice między oddziałami klasowymi. **Dyskusja:** Różnice te można w dużej mierze wyjaśnić wzorcami motywacyjnymi: pedagogie nauczania wspierające motywację wewnętrzną wydają się zwiększać skuteczność nauki języka, podczas gdy wzmacnianie przez szkołę strategii rodzicielskich ukierunkowanych na motywację zewnętrzną może ją zmniejszać.

Słowa kluczowe: **język angielski jako język obcy, edukacja podstawowa, poziom biegłości A2, CEFR, efekty uczenia się, motywacja wewnętrzna, wsparcie rodziny, skuteczność szkoły, aspiracje edukacyjne, Polska**

---

## **1. INTRODUCTION**

In the face of globalization and the growing need for linguistic competence, effective teaching of a foreign language in primary schools is becoming not only an educational priority, but also a social and economic requirement. In almost all European countries, including Poland, the most commonly taught foreign language is English, in both primary and secondary schools (EACEA/Eurydice, 2019). In Poland, since the 2015/2016 school year, children take part in compulsory foreign language education as early as kindergarten (Journal of Laws 2014, item 803), and since 2008/2009 there have been compulsory foreign language classes as early as the first grade of primary school with a minimum of two lessons per week (2 hours in grades 1–3 and 3 hours in grades 4–8) (Journal of Laws 2009, No. 4 item 17).

Despite the significant number of hours ( $n=630$ ) devoted to English language learning in primary schools in Poland over eight years of study, the level of linguistic competence of Polish students is far from desirable. This was visible in the results of an international study conducted in 2011, known as *The European Survey on Language Competence* (ESLC). That survey

involved 53,000 European teenagers from 14 countries, including Belgium, Bulgaria, Croatia, Estonia, France, Greece, Malta, the Netherlands, Portugal, Slovenia, Spain, Sweden, the United Kingdom and Poland (Costa, & Albergaria-Almeida, 2015; European Commission, 2012; Gajewska-Dyszkiewicz et al., 2013; Muszyński, 2016). Polish 15-year-olds (students from the last grade of the then lower secondary schools) achieved some of the lowest results in Europe: 24% below A1, 34% A1, 17% A2, 15% B1 and 10% B2 (levels described in the Common European Framework of Reference (CEFR)). Lower results were found in only three countries, while in the case of Sweden (the leader), the percentages were 1, 6, 11, 25 and 57% respectively.

Although the ESLC took place more than 10 years ago (in 2011), the level of skills of Polish adolescents has not improved significantly, as confirmed by analyses of the results of nationwide external examinations in English (Marchlik, Wichrowska & Jasińska-Maciąg, 2022; Marchlik, Wichrowska, Muszyński et al., 2022). After eight years of foreign language instruction in primary school, less than one in three Polish students can use English at a level of at least A2 (the level expected and required by the curriculum).

Despite extensive research on EFL achievement, little is known about determinants of meeting a curriculum-aligned proficiency threshold (CEFR A2) at the end of primary school using integrated multi-informant data. This study operationalizes students' A2-level proficiency through IRT-based scaling and standard setting applied to the national eighth-grade English examination, and investigates the individual- and family-level determinants of low proficiency as well as its between-class clustering within a local education system.

This issue has become the focus of interest for the local education authority of one medium-sized city in central Poland. As part of the city's collaboration with the research community, a study was carried out to identify the factors that influence success or failure in English language learning. An important aim of the study was also to find out whether the low effectiveness of language teaching is a widespread phenomenon or whether the problem is concentrated in selected schools or classes. This article presents the results of the study. When interpreting the results, it should be noted that the data presented in this article was collected in 2022 and therefore refers to students who spent a considerable part of their education during the COVID-19 pandemic. This indicates that the overall teaching process was conducted differently than usual.

## **1.1 The level of command of English as a foreign language**

Learning a foreign language is a complex process influenced by multiple factors (Araujo & Costa, 2013; Costa & Albergaria-Almeida, 2015; Gajewska-Dyszkiewicz et al., 2015; Lindgren & Muñoz, 2013; Muszyński et al., 2015; Paczuska et al., 2014). In the literature, these have been divided into three main categories:

- 1)** those that lie outside the direct influence of the school environment (e.g. parents' education, their own proficiency in the language),
- 2)** those that can be indirectly influenced by the school environment (e.g. school-parent collaboration, parents' and students' educational aspirations, students' motivation to learn, students' use of the language outside school), and
- 3)** those that are directly related to the school and teachers' actions (such as pedagogical skills and commitment, teaching methods, textbooks and teaching materials used).

Understanding the importance of factors outside the influence of schools and teachers is important to avoid misinterpreting correlations as causal effects.

We discuss the determinants of language skills by dividing them into the following groups of factors: 1) those related to the students' families (some of which are undoubtedly outside the influence of the school, and some of which the school may try to shape), 2) those related to the students' characteristics (most of which the school may try to influence) and 3) those related to the school environment.

## **1.2 Correlates of the effectiveness of learning English**

### **1.2.1 Family factors**

Factors related to the students' families have a significant impact on school learning, including foreign language proficiency (Szabó et al., 2021). The association of students' school achievement with their families' socioeconomic status (SES) is well documented in research (Bulkowski et al., 2021; Butler & Le, 2018; Dolata et al., 2015; Eriksson et al., 2021; Hattie, 2008; Kaźmierczak & Bulkowski, 2023; Konarzewski, 2007; Sitek & Ostrowska, 2019). This is also confirmed by studies on foreign language achievement (Butler & Le, 2018; Enever, 2011; Lindgren & Muñoz, 2013; Nikolov, 2009). According to the cited studies, the child's family's SES explains 15–25 percent of the variation in school achievement, so it should always be included as an important control variable in analyses of other determinants of school achievement. However, it should be borne in mind that school choice may be related to family SES, and the social composition of the school may be linked to academic performance (Burgess et al., 2015; Coleman et al., 1982; Tarkhnishvili et al., 2022). In such a case (often occurring in the absence of school districting), controlling for SES in analyses may lead to an underestimation of the school effect.

A factor related to family SES that affects educational outcomes is parents' educational aspirations for their children's school performance (Kozłowski & Matczak, 2014; Neuenschwander et al., 2007). Parents' attitudes, beliefs, as well as the time and support they devote to learning, have a significant impact on a child's motivation to learn, including learning a foreign language (Butler & Le, 2018; Choi et al., 2019; Gardner, 1985; Hewitt, 2009; Horyśniak, 2019; Ushioda, 2003; Wigfield et al., 2008). Fostering students' intrinsic or extrinsic motivation can be crucial to their academic success (Ryan & Deci, 2000). In contrast, parental attitudes that depreciate the importance of a foreign language can undermine a child's motivation to learn (Butler & Le, 2018).

Research confirms that parental interest in learning a foreign language supports children's language development (Choi et al., 2019). Students' active language work at home, supported by parents, impacts language achievement (Enever, 2011; Muszyński et al., 2015; Wigfield et al., 2006; Xu & Wu, 2013). The Early Language Learning in Europe (ELLiE) study confirmed that the amount of exposure to a foreign language outside school and parents' use of the language at work are significant determinants of children's foreign language performance (Enever, 2011; Lindgren & Muñoz, 2013).

According to research, key factors contributing to improved school performance, including in language learning, are strong parent-child relationships, high parental aspirations for their child's education, active involvement and support in learning, and positive parent-school relationships (Coleman, 1988; He et al., 2015). Both the frequency of communication with the educational institution and the active participation of parents in school life appear to be important for student achievement (Hertel & Jude, 2016). Nevertheless, some studies do not support this effect (cf. Hill & Tyson, 2009; Pomerantz et al., 2007). For example, a Polish study found no relationship between parental school engagement and teaching effectiveness, as measured by educational added value indicators (Dolata et al., 2015).

A particular manifestation of parental involvement in their children's education is the provision of additional learning support, e.g. in the form of extracurricular language classes. In the Polish cultural context, this form of child support is more often chosen by parents who are better educated and have higher educational aspirations for their children, and students participating in such classes achieve higher results (Dolata et al., 2021).

### **1.2.2 Individual factors**

*Gender.* Large-scale educational assessments such as PIRLS and PISA have consistently demonstrated that girls tend to outperform boys in native language reading skills across a majority of countries (Howie et al., 2017; Konarzewski & Bulkowski, 2017; Mullis et al., 2023; Sitek & Ostrowska, 2019; Torppa et al., 2017). It can therefore be hypothesized that gender differences in first language proficiency may influence the process of foreign language acquisition. Empirical studies further indicate that girls generally exhibit greater interest in and more positive attitudes toward foreign language learning compared to boys (Ellis, 1994; Logan & Johnston, 2009). Additionally, teacher expectations appear to play a significant role. Sunderland (2000) found that teachers' perceptions and beliefs often result in girls receiving more encouragement to engage in language learning, which may, in turn, contribute to their performance.

Nevertheless, despite commonly held assumptions regarding gender differences in foreign language achievement, relatively few robust quantitative studies have identified significant disparities in foreign language achievement between male and female learners (Dörnyei et al., 2006). In the Polish context, existing research similarly does not indicate marked gender differences in the process of foreign language acquisition (Lipińska, 2003; Muszyński et al., 2015). Data from the 2019–2024 eighth-grade examination also reveal only a slight advantage for girls, with median scores approximately one-tenth of a standard deviation higher than those of boys. However, this gender disparity becomes more pronounced at the upper end of the performance distribution, where female students are more likely to achieve scores close to the maximum (CKE, 2022a). It is important to note, however, that the extent of gender differences in English language attainment may be underestimated, as the examination in question is a minimum competence test at the A2 level, which is subject to a significant ceiling effect.

*Exposure to language.* Contact with a foreign language at school, limited by the number of language lessons per week, can be enriched by exposure to the language outside of school lessons. This can take place while watching films and series in the original language version, listening to music, reading books, browsing interesting content on the Internet, playing games in the foreign language, or actively participating in social networks (Bailly, 2011; Benson, 2001; Enever, 2011; Muñoz & Cadierno, 2021; Nunan & Richards, 2014). Through such activities, students increase the amount of time they spend interacting with a foreign language. This kind of exposure to English, both verbal and written, supports the process of intentional as well as incidental language learning (Al-Zoubi, 2018; Azzolini et al., 2022; Muñoz & Cadierno, 2021; Schwarz, 2013).

The time students devote to English activities outside school depends on their interests, their choices and their knowledge of the language (feedback). It can also be modified by the family environment, e.g. when the family usually enjoys films and TV series in the original language version, by peers, e.g. when they share content in the foreign language or play games in the language, but also by teachers who can encourage students to explore valuable content in the language they teach. Research has shown that out-of-school language exposure is one of the strongest predictors of increased language proficiency (Azzolini et al., 2022; De Wilde et al., 2020; Lindgren & Muñoz, 2013; Muñoz & Cadierno, 2021; Sundqvist & Wikström, 2015).

*Aspirations.* The value students place on education underpins the educational process. Educational aspirations and expectations are closely related to school performance (OECD, 2017). Research conducted in Poland confirms this relationship

(Kozłowski & Matczak, 2018). As in the case of language exposure, we may be dealing with a feedback loop here: aspirations may be modified depending on observed outcomes. It is worth noting that children's aspirations are shaped by parents but also by the school (Humenny & Majkut, 2015; Kozłowski & Matczak, 2018). Teachers can support pupils and their parents in setting high and at the same time realistic expectations for educational outcomes.

*Motivation to learn.* Motivation plays a key role in the learning process by providing the impetus to start and continue learning (Dörnyei, 2005). It is a dynamic process in which an individual takes action to achieve a desired outcome (Reykowski, 1992; Shoaib & Dörnyei, 2005). Self-determination theory, developed by Deci and Ryan (2000), explains the variety of regulation of an individual's actions from external control to internal control. Intrinsic motivation, which spurs action not for external reward but for one's own satisfaction and interest in the task, is crucial for success in learning.

Students' motivation and engagement are constantly shaped by both internal and external factors, which are closely interrelated and subject to constant change (Larsen-Freeman & Cameron, 2008; Pawlak, 2012). Language learning requires a great deal of effort and perseverance, as the process of memorizing vocabulary or understanding grammar is often tedious and time-consuming (Gajderowicz & Jakubowski, 2021). Therefore, developing students' intrinsic motivation should be a priority in educational practice. The teacher can play an important role in this process (Carreira et al., 2013). Research shows that support for students' needs, such as developing their sense of self-competence and providing them with more autonomy in decision-making, can significantly increase intrinsic motivation and improve educational achievement (Butler, 2015; Muñoz-Restrepo et al., 2020).

### **1.2.3 Factors related to the school environment**

In Poland, according to the core curriculum for primary schools, there are approximately 630 hours of classes devoted to the first foreign language during education in grades 1-8 (Journal of Laws 2024, item 781). However, as Carroll (1963) points out, the key to the effectiveness of learning a foreign language is the actual time devoted by the student to active learning, not the number of hours in the curriculum. The determinant of success, therefore, is a combination of planned learning time and actual student engagement. This, in turn, can depend on a variety of factors, such as the teacher's organization of activities and the student's motivation and cognitive abilities.

Many studies confirm the important influence of the teacher's role on student achievement, especially in the context of English language learning. Aspects such as the teacher's performance (including personality), proficiency in the foreign language, and teaching methods are significant (Rosyada & Ramadhianti, 2017; Sanders & Rivers, 1999). The teacher's authority also plays an important role, manifesting itself in the way he or she communicates and acts to achieve students' individual goals and objectives related to the learning process (Diaz et al., 2016). Teachers who place more emphasis on oral communication in a foreign language and encourage students to actively use the language and repeat its structures, and spend less time explaining grammatical issues, tend to be more effective (Lodhi et al., 2018).

It should be noted that the learning process often involves fatigue, monotony and a tendency to direct attention to stimuli other than learning (Dörnyei & Ushioda, 2011). The task of the foreign language teacher is therefore to stimulate and maintain students' motivation to learn. According to Cheng and Dörnyei (2007), the keen interest in the subject shown by teachers, as well as their level of effort in teaching, can thus inspire students and significantly influence students' motivation.

A teacher's influence is not limited to the classroom. The preparation of thoughtful, purposeful and valuable homework can increase a student's contact with the foreign language. According to Wallinger (2000), daily practice through homework is an important part of success in language learning. However, research indicates that the impact of homework on foreign language achievement is indirect and depends on self-regulated learning strategies and self-efficacy (Rosário, 2011, cited in Parra-González & Olmedo-Moreno, 2019). What is important is not so much the amount of time spent on homework, but the commitment to it. Students who regularly complete foreign language homework assignments and enjoy doing so tend to perform better (Cooper, 1989; Parra-González & Olmedo-Moreno, 2019).

However, research suggests that while homework can positively affect grades, it does not necessarily translate into higher scores on standardized tests (Krashen, 2005). The effectiveness of homework depends on the type of assignments, the students' engagement (Krashen, 2005), and the students' attitude and motivation. When tasks are interesting to students and perceived to be of value, they are more likely to be undertaken (Darling-Hammond & Ifill-Lynch, 2006). It is also important to tailor the amount and level of difficulty of tasks to students' abilities, as excessive or overly difficult tasks can lead to discouragement and lack of completion (Darling-Hammond & Ifill-Lynch, 2006; Khonamri & Pavlikova, 2020).

In addition, for homework to truly foster students' competence development, it should be checked and commented on by the teacher (Paudel, 2012). Research confirms the importance of feedback for the learning process (Hattie, 2008), but the effectiveness of the information provided depends on various factors (Hattie & Timperley, 2007; Kluger & DeNisi, 1996), such as its form, content, quantity, frequency and timing of delivery (Dolata et al., 2015). Above all, what matters is whether the information actually helps the student to reduce the gap between his or her current level of knowledge and expected achievement (Hattie, 2008).

### **1.3 Analysis of inter-school variation in learning outcomes in the context of research into their determinants**

For an educational policy aiming at social cohesion, the inter-school variation in learning outcomes is an important indicator (Dolata, 2010; Therborn, 2006). This indicator refers to the ability to predict a student's educational attainment based on information about the school they attend. The idea of uniform general education implies that belonging to different institutions should not affect students' chances of receiving a good education. Instead, the process of prioritizing schools on the basis of their so-called level of teaching leads to social inequalities.

The analysis of differences in educational outcomes can also be carried out from another point of view. If educational establishments or their class groups differ in their learning outcomes, it is possible to investigate which characteristics of teaching in individual schools/class groups are related to this variation. Such research makes it possible to identify factors influencing better learning outcomes. If these factors are modifiable within schools' operations, they provide important clues for actions to improve the quality of educational institutions.

Recognizing determinants beyond the control of the education system is also important, especially for understanding the causes of variation in outcomes, although it does not necessarily lead to effective change. It is, however, important knowledge. If there is no significant variation in educational outcomes in a given education system, a strategy based on identifying modifiable factors in the performance of schools may lose its relevance. Of course, if the lack of differentiation was associated with a high level of educational performance, this would be a cause for satisfaction. Worse, if this level is far from satisfactory.

### **1.4 Standard setting**

For evaluation studies of school achievement, non-arbitrary standard setting in test measurements is an extremely valuable tool. Large-scale educational surveys such as the OECD's PISA or the IEA's PIRLS and TIMSS have been using standard settings methods to determine the levels of skills measured since the beginning of the 21st century. This can be a very important tool also in studies of foreign language skills. Internationally developed competence standards, such as the Common European Framework of Reference for Languages (CEFR), can be an important foundation for this process.

Various methods of standard setting are used in educational measurement to determine passing thresholds or levels of competence. These usually combine expert and psychometric approaches. The item response theory (IRT) approach opens up interesting possibilities. By locating task difficulty and skill levels on the same measurement scale, scale mapping (transcribing items based on difficulty to scale values) is possible, which facilitates the determination of scale criterion scores (De Ayala, 2022). The standard setting methods usually used (Cizek, 2012) include four: Angoff, Ebel, Nedelsky and Bookmark. The IRT approach uses the Bookmark method (Karantonis & Sireci, 2006). In a first step, the scaling of the IRT method is carried out (taking care to ensure a good fit of the adopted models) and the difficulty parameter  $b$  is determined for each task and, in items modelled with Partial Credit Model (PCM) or Generalized Partial Credit Model (GPCM), the threshold values between the distinguished levels of task performance. The items/levels are then ordered from easiest to most difficult. In the case of minimum competency tests, in the next step the experts place a 'bookmark' at the point that separates the items/levels of performance that a student with the minimum acceptable level of a given skill should answer correctly from those that exceed it.

## **2. THE CURRENT STUDY**

### **2.1 The education and examination system in Poland. Background information**

In Poland, children up to the age of 6 have access to early childhood education and care in nurseries and children's clubs (up to the age of 3) and then in kindergartens (from 3 to 6). Education at this stage (ISCED 0) is optional. Compulsory education begins in the year in which the child turns 6. At that time, he or she undergoes one year of school preparation in what is known as Grade 0 (in kindergarten or school). The next stage of education is the 8-year primary school, which covers ISCED levels 1 and 2. Primary education comprises two stages: grades 1–3 (so-called early childhood education taught by one main teacher) and grades 4–8 (subject-divided teaching; Kolanowska, 2021). At the end of primary school, pupils are required to take national external examinations that test their performance in their mother tongue, mathematics and a foreign language taught at school (in Poland, approximately 98% of pupils choose English (Bojanowicz, 2023; Głós Nauczycielski, 2023; Papiernik, 2024). The results of these examinations are taken into account during recruitment to secondary school (ISCED 3), together with the end-of-school grades.

The E8 assesses students' language knowledge and skills acquired in primary school. These include listening comprehension, reading comprehension, knowledge of language structures (grammar, vocabulary) and the ability to produce written texts. However, the ability to communicate orally (speaking) is not included in this exam. This may affect the overall results of linguistic performance assessment. Following the Regulation of the Minister of Education and Science of 16 December 2020 (Journal of Laws. 2020, Item 2314), in the school years 2020/2021 and 2021/2022, the level of the English language exam corresponded to the CEFR A2 level and did not test speaking skills.

## 2.2 Research problem

A good command of English is nowadays essential in the context of globalization and socio-economic requirements. Nevertheless, in some countries, including Poland, the level of foreign language proficiency of a significant proportion of students remains dramatically low, which creates an urgent need to understand the determinants of successful language learning at the end of primary school. Existing research has identified a broad set of correlates of EFL achievement, yet two gaps remain particularly relevant for educational policy and school practice. First, evidence is often based on grades or continuous test scores, whereas much less is known about the factors associated with meeting a clearly defined, curriculum-aligned proficiency benchmark (CEFR A2). Second, studies rarely combine multi-informant data (school records, parent reports, and student reports/diagnostic measures) and seldom examine whether low proficiency is evenly distributed or concentrated in particular classes/schools within a local education system.

The study described in this article addresses these gaps by analyzing determinants of attaining English proficiency at the A2 level, operationalized through an IRT-based scaling and standard-setting approach applied to the national eighth-grade English examination. We link this proficiency indicator to a broad set of explanatory variables capturing individual and family factors that lie outside the direct influence of schools or may be influenced only indirectly, as well as opportunities to learn English outside school. In addition, we examine between-class variation in A2 attainment to assess whether low performance is dispersed or clustered within the local education system, thereby providing evidence that can inform targeted support and equity-oriented interventions.

## 2.3 Method

### 2.3.1 Study group and procedure

The research was part of the *Ostrołęka Educational Observatory project*<sup>1</sup> carried out by the Faculty of Education of the University of Warsaw in cooperation with the local government of Ostrołęka. It is a city with more than 50,000 inhabitants, in which negative demographic dynamics (5.2%, close to the average for small and medium-sized cities in Poland) was recorded between 2002 and 2021. It is located in north-eastern Mazovia. In terms of salary and education level of the city's adult population (tertiary education 22%), the city ranks slightly above national averages<sup>2</sup>.

Ostrołęka runs 28 educational units, including eight primary schools (among them one special primary school). The study population consisted of eighth-grade students from seven mainstream primary schools. The results of the national examination after the eighth grade indicate that in the surveyed schools the distribution of pupils' achievements in mathematics is very close to the national distribution, and in the field of Polish language it is slightly shifted towards high results<sup>3</sup>.

The survey covered the entire local population (n=698). The analyses excluded 24 records, which were deemed unreliable based on response times and response patterns (e.g., nearly 100% of responses concentrated in a single category). It was conducted in the spring of 2022.

The target population included 698 students, 346 of whom were female (49.6%). A total of 133 students (19.1%) were excluded from participation due to lack of parental consent or absence from school. An additional 24 records (3.4%) were excluded due to data unreliability. The final analytical sample comprised 541 students, including 284 girls (52.5%). The study group represents nearly 78% of the target population, with a slight overrepresentation of girls.

The data were collected in spring 2022 using computerized online questionnaires, which each student completed during school hours in the presence of a trained interviewer. The parents' questionnaire was in paper form and provided by the student. In most cases, the questionnaire was completed by the mother. Written parental consent was obtained prior to the survey. During the survey, after a reminder of the purpose of the survey, pupil consent was sought. The project received a positive opinion from the Research Ethics Committee of the Faculty of Education at the University of Warsaw.

## 2.4 Measures

### 2.4.1 Explained variable: English A2 exam score

It can be considered that the English eighth-grade exam (E8) 2022 was a criterion-referenced test, as it tested the A2 level according to the Common European Framework of Reference for Languages (CEFR), as assumed in the Core Curriculum (with modifications due to COVID-19<sup>4</sup>). The variable explained in the analyses will be a bivariate variable in which a value

---

<sup>1</sup> See: <https://www.pedagog.uw.edu.pl/ostroleka/>

<sup>2</sup> According to the ranking *Poland in Figures*. <https://www.polskawliczbach.pl/>, insight 26.10.2022.

<sup>3</sup> According to data and a report by the Central Examination Commission.

<sup>4</sup> According to the annex to the MEiN regulation of 16 December 2020. "In the school year 2020/2021, the examination requirements for the eighth-grade examination in a modern foreign language correspond to level A2 (on the scale of the Common European Framework of Reference for Languages)".

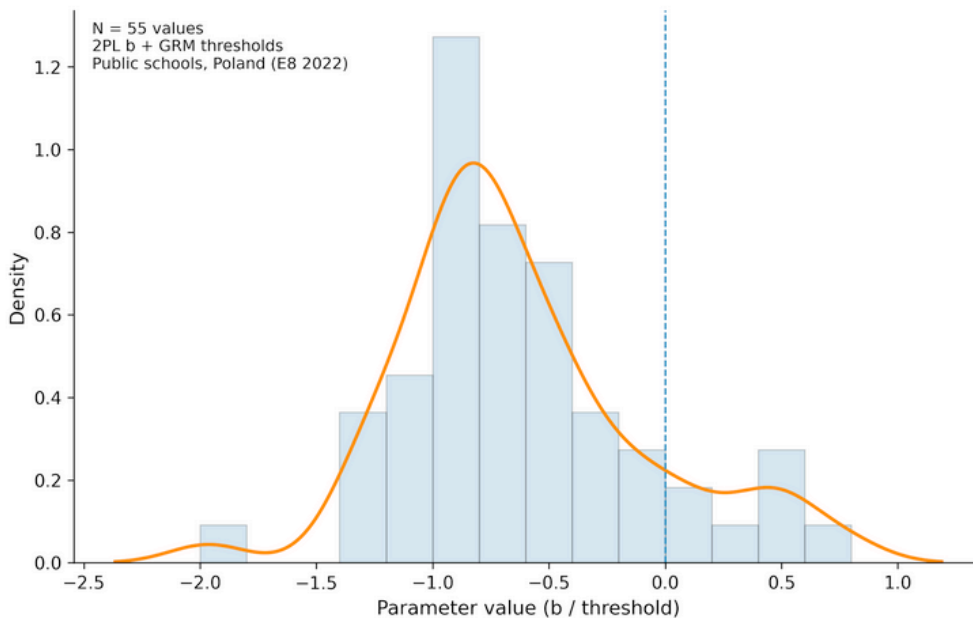
of 1 indicates A2-level English language proficiency. The *bookmark* method (Cizek & Bunch, 2007) was used to determine the benchmark. It is one of the most widely used *standard setting* methods in educational measurement. It combines didactic and psychometric criteria.

In the first step, the items were ranked according to difficulty based on psychometric analyses (in IRT – parameter  $b$ ). Then, experts<sup>5</sup>, based on the interpretation of the tasks in the light of the requirements, identified the task that should be solved correctly by a minimally competent learner. In the case of the IRT (De Ayala, 2022), mapping the theta scale (OECD, 2014) is helpful for making a decision. On this basis, an outcome threshold corresponding to a given level of competence was established. In the case of the IRT approach, this is the skill level (*theta*), equal to the difficulty of the threshold task.

The *virt* command (Kondrtek, 2022) in the Stata 18 package was used to scale the E8 test. For tasks coded 0-1, the 2PL/3PL model was used (with a pseudo-guessing parameter), and for tasks coded on longer scales, the GPCM model was used. The distribution of task/threshold difficulty parameters ( $n=55$ ) is significantly skewed towards low skill levels, which is consistent with the criterion nature of the measurement.

The E8 scaled score was compared with the grades given by the teacher. Grades given in the middle and at the end of the school year were used. Spearman’s rank correlation coefficient was 0.66 and 0.65, respectively. This indicates a significant similarity between school grades and standardized test scores.

Figure 1 *Smoothed histogram of 2PL item difficulty parameters (b) and GRM thresholds in the E8 2022 English examination*



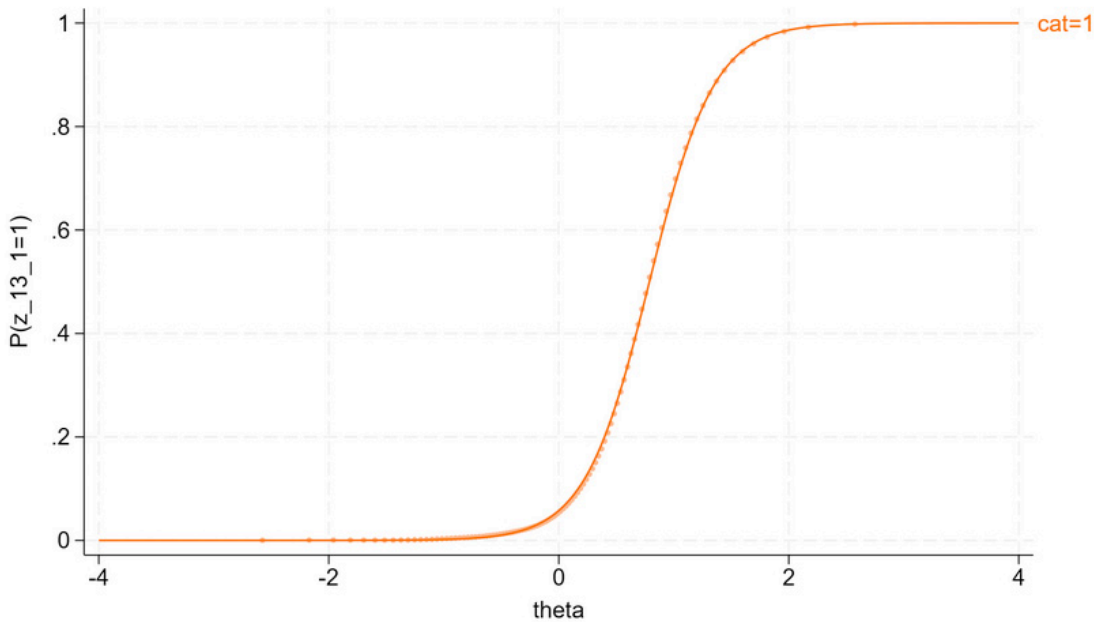
**Note.** The figure presents the frequency distribution of estimated 2PL item difficulty parameters ( $b$ ) and GRM category thresholds for the E8 2022 English examination. The histogram is shown with a smoothed kernel density curve. Estimates were obtained for public schools in Poland.

<sup>5</sup> Two authors of the text are university experts in the methodology of teaching English as a foreign language.

The benchmark for English language proficiency at A2 level was taken as parameter  $b$  of the most difficult task in the test. This was task 13\_1. The pseudo-guessing parameter for this task was statistically insignificant, so the 2PL model was used. The difficulty parameter was estimated to be  $b=0.788$ .

Classic position fit tests, based on  $\chi^2$  statistics, have very high power with large sample sizes and can indicate a significant misfit even for minimal, practically insignificant deviations from the model; therefore, the p-value is not a reliable criterion for assessing fit in this context (Stone, 2003). Consequently, the assessment of position fit was based on graphical diagnostics by comparing empirical and theoretical characteristic position curves (ICC).

Figure 2 ICC 2PL for benchmark task 13\_1



The characteristic curve for this task is shown in the figure above. As you can see, the empirical and theoretical curves coincide perfectly.

The task according to the test plan addressed the requirement: “The student uses a basic range of linguistic means (lexical, grammatical, spelling)”. The content of the task was as follows:

*Using the words given in CAPITAL letters, complete each sentence with a gap so that the meaning of the original sentence is preserved (13.1–13.3). Full spelling and grammatical accuracy of the inserted sentence fragments is required. Attention! Do not change the form of the given words. You may insert a maximum of four words in each gap, including the word already provided<sup>6</sup>.*

13.1. Spiders don't frighten me any more.

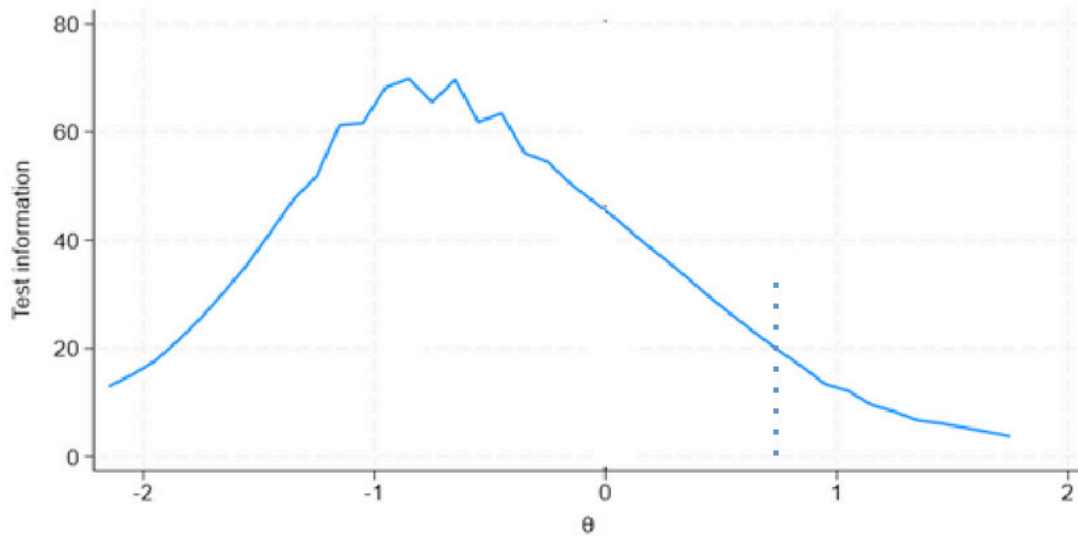
AFRAID

I \_\_\_\_\_ spiders any more. (CKE, 2022a).

It is worth seeing where the selected benchmark task A2 is located in the context of the information curve of the entire E8 test.

<sup>6</sup> Instruction translated by the authors of the text.

Figure 3 Empirical test information function derived from postestimation EAP standard errors for the E8 2022 English examination (public schools in Poland)



**Note.** The figure presents an empirical test information function (TIF) estimated from postestimation expected a posteriori (EAP) standard errors using the relationship  $TIF(\theta) \approx 1/SE(\theta)^2$ . The curve was constructed by grouping examinees into bins on the latent ability scale ( $\theta$ ) and computing bin-level information from the median EAP standard error. Estimates are based on students attending public schools in Poland.

The empirical information function indicates that the test provides the highest measurement precision for ability levels between -1.2 and -0.7, with precision declining at higher levels of ability. The cut-off point A2, determined as the difficulty parameter of the borderline task, is located on the descending section of the information curve, i.e. in the area of lower – rather than maximum measurement precision. This means that classification decisions near the A2 threshold are subject to greater uncertainty than the classification of students with lower skill levels, which justifies the use of a classification rule that takes measurement error into account.

To account for measurement uncertainty around the cut point, classification decisions were supplemented with the standard error (SE) of the EAP estimate. In the present study, we used an uncertainty band based on one standard error ( $k=1$ ). Examinees were classified as confidently above the criterion when  $EAP - SE \geq \theta_c$ . Under a normal approximation, this corresponds to an uncertainty interval of approximately 68% around the EAP estimate.

This approach is consistent with recommended testing practice emphasizing score precision and classification quality in relation to cut scores, including attention to conditional error and decision consistency (American Educational Research Association, American Psychological Association, & National Council on Measurement in Education, 2014). It is also consistent with psychometric evidence showing that the standard error of ability estimates is directly related to classification accuracy and consistency in binary decision contexts (Cheng, 2015).

It should be recalled that, according to the IRT, if the skill level of the solver equals the difficulty of the task (theta scale), then the probability of coping with the task is 0.5. We can therefore see that the criterion adopted is not exorbitant and takes into account the random factor in human behavior and measurement error.

#### 2.4.2 Explanatory variables

The explanatory variables representing determinants of English proficiency at the A2 level were grouped into four categories: (1) individual factors independent of school action, (2) individual factors modifiable by school action, (3) family factors modifiable by school action, and (4) opportunities to learn English outside school, which may partly reflect the school's influence.

The variables were obtained from four complementary sources: school documentation, a paper-based parent survey, a computer-based student survey administered in an auditorium/classroom setting, and computer-based diagnostic measures administered through the Diagnostic Diagnostic System (DDS). Student instruments were self-administered individually on computers during school hours under standardized conditions and under the supervision of trained research staff, whereas parent data were collected through a paper questionnaire distributed via schools.

Individual factors unrelated to school activities were measured using school records and the parent survey. School records provided data on gender and year of birth; in the analyses, gender was coded as a binary variable identifying girls, and year of birth was treated as an indicator of age. The parent survey provided data on the education of the mother/

legal guardian and father/legal guardian, measured with two items and recoded from 10 response categories into years of schooling, as well as on the English language proficiency of each parent/guardian, assessed with one item per person.

Individual factors potentially modifiable through school activities were measured using the DDS and a computerized auditory examination. Educational aspirations were assessed with a single item asking students what level of education they expected to attain. Motivation-related constructs were measured with DDS scales: amotivation (7 items, five-point scale,  $\alpha = .86$ ), intrinsic motivation (7 items, five-point scale,  $\alpha = .77$ ), and extrinsic motivation (6 items, five-point scale,  $\alpha = .92$ ).

Family factors modifiable by school action were assessed using the parent survey. Parents' educational aspirations were measured with a single item asking what level of education they would like their child to achieve. Multi-item five-point scales captured parents' communication with the school (8 items,  $\alpha = .79$ ), parental involvement in school life (9 items,  $\alpha = .79$ ), help with schoolwork (3 items,  $\alpha = .85$ ), controlling homework (3 items,  $\alpha = .76$ ), building extrinsic motivation (6 items,  $\alpha = .57$ ), and building intrinsic motivation (6 items,  $\alpha = .68$ ).

Opportunities to learn English out of school were measured using both the parent and student surveys. Additional English instruction outside school was assessed with one parent-reported item asking whether the child had attended extra English classes in the previous school year, such as a language course or private tutoring. Students also reported, in single-item measures, how much free time they spent watching films, programmes, or series in English without voice-over or Polish subtitles, playing computer games requiring English, and reading websites, articles, or literature in English.

All multi-item scale scores were standardized prior to analysis and are presented on a metric with a mean of 0 and a standard deviation of 1.

The nominal explanatory variables included gender, relative age, duration of additional English learning outside school, and parents' English language skills. Girls represented 49.6% of the sample, and younger students, defined as those who started school at age six rather than seven, accounted for 29.3%. Extracurricular English language learning was reported by 18.2% of students who had been learning the language for two to four years, and by 22.6% of those who had been learning the language for four years or more; the reference group consisted of those students who had been learning the language for less than two years. A good command of English was reported by 8.2% of mothers and 7.9% of fathers, while the reference group comprised those with a lower level of language proficiency. Table 1 below shows correlations for the interval explanatory variables.

Table 1 *Correlation matrix for interval variables. Pearson's r- coefficient*

Independent variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
(1) Student's educational aspirations	1													
(2) Amotivation	<b>-0.26</b>	1												
(3) Extrinsic motivation	<b>0.08</b>	<b>-0.29</b>	1											
(4) Intrinsic motivation	<b>0.25</b>	<b>0.71</b>	<b>0.60</b>	1										
(5) Playing games in English	0.03	<b>0.13</b>	<b>-0.14</b>	<b>-0.11</b>	1									
(6) Reading books in English	<b>0.19</b>	0.00	0.05	<b>0.07</b>	<b>0.28</b>	1								
(7) Watching movies in English	<b>0.23</b>	-0.03	0.05	<b>0.10</b>	<b>0.42</b>	<b>0.45</b>	1							
(8) Parents' education	<b>0.37</b>	<b>-0.09</b>	0.06	<b>0.11</b>	<b>0.12</b>	<b>0.17</b>	<b>0.19</b>	1						
(9) Parents' educational aspirations	<b>0.38</b>	<b>-0.15</b>	0.03	<b>0.10</b>	0.02	<b>0.15</b>	<b>0.15</b>	<b>0.51</b>	1					
(10) Building extrinsic motivation	<b>-0.13</b>	0.06	0.04	-0.06	-0.04	-0.05	-0.07	<b>-0.24</b>	<b>-0.12</b>	1				
(11) Building intrinsic motivation	0.06	-0.05	<b>0.08</b>	0.06	-0.05	<b>0.09</b>	0.03	<b>0.08</b>	<b>0.09</b>	<b>0.21</b>	1			
(12) Controlling homework	<b>-0.27</b>	<b>0.17</b>	0.00	<b>-0.10</b>	<b>0.13</b>	-0.07	-0.07	<b>-0.31</b>	-0.23	<b>0.43</b>	<b>0.13</b>	1		
(13) Help with schoolwork	<b>-0.18</b>	<b>0.11</b>	0.06	-0.03	0.02	-0.03	-0.08	<b>-0.13</b>	<b>-0.18</b>	<b>0.28</b>	<b>0.17</b>	<b>0.41</b>	1	
(14) Involvement of parents in school life	<b>0.09</b>	-0.07	0.07	<b>0.11</b>	-0.01	-0.02	-0.02	<b>0.17</b>	0.05	0.00	<b>0.20</b>	0.03	<b>0.12</b>	1
(15) Parents' communication with the school	-0.05	0.02	0.03	0.02	0.04	-0.05	<b>-0.09</b>	-0.05	<b>-0.09</b>	<b>0.21</b>	<b>0.24</b>	<b>0.26</b>	<b>0.21</b>	<b>0.47</b>

Note. Statistically significant values bolded.

### 2.4.3 Plan for analyzing correlates of A2-level English proficiency

In the first step, the proportion of students who met the A2 English proficiency criterion – defined using the standard-setting procedure – was estimated for (a) the national population of public primary-school graduates and (b) the study sample of students from Ostrołęka.

Given the largely exploratory nature of the study and the large number of potential correlates, the analyses were conducted in two phases. In Phase 1, a series of logistic regression models was estimated within four predefined groups of variables. In Phase 2, all predictors that were statistically significant in Phase 1 were entered into a two-level mixed-effects logistic regression model. Backward elimination was then performed using pooled Wald tests based on Rubin’s rules, applied to paired within-class and between-class components of each decomposed construct. Pairs with pooled p-values greater than .10 were removed from the model (Harrell, 2015; Snijders & Bosker, 2012).

In the final elimination stage, missing values in predictors were handled using multiple imputation by chained equations (MICE) under the missing-at-random (MAR) assumption (StataCorp, 2025). Class membership was incorporated into the imputation models via class fixed effects (*i.kod\_oddz8\_id*). After imputation, predictors designated for decomposition were partitioned into within-class (intra-class) and between-class (inter-class) components.

## 3. RESULTS

### 3.1 Achieving A2-level English language proficiency

Using the results of the standard setting described above, the percentage of pupils in the 2022 cohort in public schools throughout the country and in Ostrołęka who have mastered English at the assumed A2 level was estimated. The results are presented in Table 2 below.

Table 2 Percentage of students above the A2 criterion in public schools in Poland and in Ostrołęka

Group	N	Above A2 (n)	Below A2 (n)	Above A2 (%)	Below A2 (%)
Poland (public schools)	459,938	147,882	312,056	<b>32.2%</b>	67.8%
Ostrołęka (public schools)	677	273	404	<b>40.3%</b>	59.7%
Total	460,615	148,155	312,460	<b>32.2%</b>	67.8%

*Note.* This table reports the share of students classified above the designated A2 criterion in public schools in Poland and in Ostrołęka, based on the EAP plus one standard error decision rule ( $EAP + SE$ ). Percentages are row percentages within a group. The Poland row excludes Ostrołęka.

According to the adopted criterion, the E8 result confirmed achieving A2-level English language proficiency in the case of 32.2% of graduates of public primary schools in Poland (E8 2022). In Ostrołęka, however, this percentage was higher, amounting to 40.3%. This means that the effectiveness of teaching English in a public primary school is very low. The average E8 English score in Ostrołęka is slightly above the national average, so this is not a local problem.

### 3.2 The correlates of English language proficiency at A2 level

We therefore proceed to analyze the correlates of English language proficiency at A2 level. According to the state of the art and database resources, four groups of predictors were distinguished. Given the cross-sectional design, the findings should be interpreted as associations and weak evidence of causal relationships.

#### 3.2.1 Factors independent of the school’s actions

We start the selection of variables with individual factors that are not influenced by the school. The results of the logistic regression analysis are shown in Table 3 below.

Table 3 Correlates of the results of the eighth-grade English exam: factors independent of the school’s actions. Logistic regression. Dependent variable: mastery of A2 based on the eighth-grade exam

Independent variables	B	SE	Wald	df	p	Exp(B)
Girls	.124	.183	.462	1	.497	1.132
Youngers	.022	.201	.012	1	.913	1.022
<b>Parents’ education</b>	<b>.715</b>	<b>.103</b>	<b>48.109</b>	<b>1</b>	<b>&lt;.001</b>	<b>2.043</b>
Good English skills, mother	.311	.336	.857	1	.355	1.365
Good English skills, father	.063	.342	.034	1	.855	1.065
Constant	-.485	.144	11.304	1	<.001	.615

Note. Nagelkerke’s  $R^2= 0.144$ . B – unstandardized regression coefficients; SE – standard error. Statistically significant values bolded.

In this set of predictors, only the parents’ level of education (a combined standardized measure of the number of years of schooling) was statistically significantly associated with a higher likelihood of belonging to the group of students who met the A2 benchmark. The effect is quite strong. From this group, only this factor will be included in the final model of the conditions for meeting criterion A2.

### 3.2.2 Individual factors potentially modifiable through school action

Another set of potential predictors includes individual characteristics that may be amenable to school-based support, although they may also be shaped by experiences outside school (see Table 4 below).

Table 4 Individual correlates of the results of the eighth-grade English exam: factors that may be partly the result of the school’s actions. Logistic regression. Dependent variable: A2-level proficiency based on the eighth-grade exam

Independent variables	B	SE	Wald	df	p	Exp(B)
<b>Student’s educational aspirations</b>	<b>.928</b>	<b>.151</b>	<b>37.578</b>	<b>1</b>	<b>&lt;.001</b>	<b>2.528</b>
Amotivation	.011	.140	.006	1	.937	1.011
<b>Intrinsic motivation</b>	<b>.594</b>	<b>.174</b>	<b>11.604</b>	<b>1</b>	<b>&lt;.001</b>	<b>1.811</b>
Extrinsic motivation	-.248	.127	3.782	1	.052	.781
Constant	-.526	.107	24.023	1	<.001	.591

Note. Nagelkerke’s  $R^2= 0.202$ . B – unstandardized regression coefficients; SE – standard error. Statistically significant values bolded.

In this group, two variables were statistically significantly associated with higher odds of meeting the A2 criterion. These are the students’ educational aspirations and intrinsic motivation for schooling (generally, not just for learning a foreign language).

### 3.2.3 Family factors potentially modifiable through school action

The next group of factors characterizes the student’s family in its relationship with the school (see Table 5).

Table 5 Family correlates of the results of the eighth-grade English exam: factors that may be partly the result of the school's actions. Logistic regression. Dependent variable: mastery of A2 based on the eighth-grade exam

Independent variables	B	SE	Wald	df	p	Exp(B)
<b>Parents' educational aspirations</b>	<b>.631</b>	<b>.116</b>	<b>29.480</b>	<b>1</b>	<b>&lt;.001</b>	<b>1.879</b>
Parents' communication with the school	-.186	.112	2.739	1	.098	.830
<b>Involvement of parents in school life</b>	<b>.241</b>	<b>.108</b>	<b>4.993</b>	<b>1</b>	<b>.025</b>	<b>1.273</b>
<b>Help with schoolwork</b>	<b>-.557</b>	<b>.117</b>	<b>22.524</b>	<b>1</b>	<b>&lt;.001</b>	<b>.573</b>
Controlling homework	-.065	.105	.388	1	.533	.937
<b>Building extrinsic motivation</b>	<b>-.325</b>	<b>.104</b>	<b>9.673</b>	<b>1</b>	<b>.002</b>	<b>.723</b>
<b>Building intrinsic motivation</b>	<b>.252</b>	<b>.100</b>	<b>6.399</b>	<b>1</b>	<b>.011</b>	<b>1.287</b>
Constant	-.498	.101	24.377	1	<.001	.607

Note. Nagelkerke's R<sup>2</sup>= 0.193. B – unstandardized regression coefficients; SE – standard error. Statistically significant values bolded.

Four family variables were statistically significantly associated with meeting the A2 benchmark: higher parental educational aspirations for the child, parental assistance with learning (as opposed to direct homework supervision), and parental practices aimed at fostering students' intrinsic and extrinsic motivation for schooling.

### 3.2.4 Opportunities to learn English outside of school: factors that may be partly the result of the school's actions

The last set of variables captures students' opportunities to learn English outside of school. These opportunities may reflect a combination of formal requirements, students' interests, and parental support (see Table 6).

Table 6 Opportunities to learn English outside of school: factors that may be partly the result of the school's actions. Logistic regression. Dependent variable: mastery of A2 based on the eighth-grade exam

Independent variables	B	SE	Wald	df	p	Exp(B)
Learning English outside of school for up to 2 years <sup>a</sup>	.138	.295	.219	1	.640	1.148
<b>Learning English outside of school for up to 4 years <sup>a</sup></b>	<b>.644</b>	<b>.284</b>	<b>5.151</b>	<b>1</b>	<b>.023</b>	<b>1.904</b>
<b>Learning English outside of school for 5 years or more <sup>a</sup></b>	<b>1.274</b>	<b>.264</b>	<b>23.226</b>	<b>1</b>	<b>&lt;.001</b>	<b>3.574</b>
<b>Watching movies in English</b>	<b>.296</b>	<b>.115</b>	<b>6.696</b>	<b>1</b>	<b>.010</b>	<b>1.345</b>
<b>Playing games in English</b>	<b>.205</b>	<b>.111</b>	<b>3.395</b>	<b>1</b>	<b>.065</b>	<b>1.227</b>
<b>Reading books in English</b>	<b>.536</b>	<b>.115</b>	<b>21.722</b>	<b>1</b>	<b>&lt;.001</b>	<b>1.709</b>
Constant	-.703	.167	17.688	1	<.001	.495

Note. Nagelkerke's R<sup>2</sup>= 0.177. B – unstandardized regression coefficients; SE – standard error.

a – reference group: not learning English outside of school. Statistically significant values bolded.

It was found that variables from this group significantly increase the likelihood of a student belonging to the A2-level group. The exception is the group of students who studied outside of school for up to two years; in this category, the effect is statistically insignificant in relation to the reference group.

### 3.2.5 Final mixed-effects logistic regression model of correlates mastery of English at the level of A2

Before estimating the combined, final model, an empty model was estimated, i.e. one that only took into account the division of pupils into class groups. It showed a statistically significant effect of grouping pupils into class groups. The inter-class variance was 3.123 (0.849), ICC (VPC, latent-variable method) = 0.487.

In the final model, prognostic factors (in the individual-level analyses, the effect was statistically significant at  $p < .05$ ) at the individual level reflect differences between pupils in the same class, while factors at the class level take into account variance between classes.

Estimates are based on multiple imputation under a missing-at-random (MAR) assumption ( $M = 30$ ). A random-intercept mixed-effects logistic regression was estimated with students nested within classes. Model test:  $F = 7.39$ ,  $p < .001$ . Average RVI = 0.0473; largest FMI = 0.0798. Backward elimination used pooled Wald tests for each decomposed construct excluding constructs with  $p > 0.10$ .

Table 7 Final multiple-imputation mixed-effects logistic regression predicting A2 after backward elimination (odds ratios)

Predictor	OR	95% CI	B	SE	p
Individual-level predictor (not decomposed)					
Parents' education	1.298	[0.986, 1.709]	0.261	0.140	.063
Individual-level, within-class effects (student deviation from class mean)					
<b>Help with schoolwork</b>	<b>0.529</b>	<b>[0.412, 0.678]</b>	<b>-0.637</b>	<b>0.127</b>	<b>&lt; .001</b>
Building extrinsic motivation	0.811	[0.655, 1.004]	-0.210	0.109	.055
<b>Student's educational aspirations</b>	<b>1.890</b>	<b>[1.329, 2.689]</b>	<b>0.637</b>	<b>0.180</b>	<b>&lt; .001</b>
<b>Internal motivation</b>	<b>1.533</b>	<b>[1.203, 1.955]</b>	<b>0.428</b>	<b>0.124</b>	<b>.001</b>
<b>Learning English outside of school for up to 4 years<sup>a</sup></b>	<b>1.995</b>	<b>[1.108, 3.593]</b>	<b>0.691</b>	<b>0.300</b>	<b>.021</b>
<b>Learning English outside of school for 5 years or more<sup>a</sup></b>	<b>2.611</b>	<b>[1.479, 4.609]</b>	<b>0.960</b>	<b>0.290</b>	<b>.001</b>
<b>Playing games in English</b>	<b>1.666</b>	<b>[1.305, 2.125]</b>	<b>0.510</b>	<b>0.124</b>	<b>&lt; .001</b>
<b>Reading books in English</b>	<b>1.713</b>	<b>[1.353, 2.168]</b>	<b>0.538</b>	<b>0.120</b>	<b>&lt; .001</b>
Class-level, between-class effects (class means)					
Help with schoolwork	0.320	[0.091, 1.126]	-1.139	0.642	.076
<b>Building extrinsic motivation</b>	<b>0.219</b>	<b>[0.067, 0.717]</b>	<b>-1.518</b>	<b>0.605</b>	<b>.012</b>
Student aspirations	1.544	[0.552, 4.319]	0.435	0.525	.407
<b>Internal motivation</b>	<b>3.291</b>	<b>[1.458, 7.428]</b>	<b>1.191</b>	<b>0.415</b>	<b>.004</b>
Learning English outside of school for up to 4 years <sup>a</sup>	1.159	[0.177, 7.573]	0.147	0.958	.878
Learning English outside of school for 5 years or more <sup>a</sup>	1.575	[0.169, 14.640]	0.454	1.138	.690
Playing games in English	1.900	[0.495, 7.290]	0.642	0.686	.349
Reading books in English	1.715	[0.628, 4.687]	0.539	0.513	.293

Note.  $R_{McF}^2 = 0.357$ . Statistically significant values bolded.

Factors excluded from the model in the backward elimination procedure are: Parents' educational aspirations, Parents' communication with the school, Parents building intrinsic motivation, Watching movies in English.

Before turning to the main findings – namely, the correlates of A2-level English proficiency among public-school graduates in the studied local population – it is important to note a pronounced suppression pattern involving parental education. In the baseline model, parental education was strongly associated with the likelihood of exceeding the A2 threshold ( $B = 0.715$ ;  $OR = 2.043$ ), indicating that a one-standard deviation increase in parental education was associated with roughly a twofold increase in the odds of reaching A2. After introducing the full set of predictors, however, this association attenuated markedly and fell just short of conventional levels of statistical significance ( $B = 0.261$ ;  $p = .063$ ). This suggests that the relationship observed in the more parsimonious model partly reflects variance shared with other student- and class-level mechanisms included in the final specification. In other words, what initially appeared to be a "direct" effect of parental education is, to a substantial extent, accounted for by the covariates in the final model.

This pattern is consistent with a suppression mechanism. Suppression was assessed using a drop-one approach (Conger, 1974): a series of block models – each including parental education plus one set of predictors at the student and class level – was estimated, and the change in the parental-education coefficient was compared with the baseline model. The largest attenuation followed the inclusion of the block capturing learning English outside school ( $\Delta B = -0.143$ ), followed by strategies aimed at strengthening extrinsic motivation ( $\Delta B = -0.088$ ) and engagement in English-language games and reading ( $\Delta B = -0.085$ ). The smallest reduction was observed for the learning-assistance block ( $\Delta B = -0.018$ ). Importantly, this ranking reflects mechanisms considered separately. In the combined model, attenuation is stronger because predictors compete for partially overlapping explanatory variance – an expected feature of suppression. These findings suggest that future research could examine potential mediation pathways linking parental education to foreign-language proficiency through the mechanisms studied here; however, such analyses are beyond the scope of the present article. We therefore proceed to the results from the final model, focusing on significant correlates of English proficiency among public-school graduates in the studied population.

A first key observation concerns the model's explanatory performance at the class level – that is, the extent to which it accounts for between-class differences. The final ICC was 0.263, indicating that the included covariates explain a substantial share of the initial between-class heterogeneity, although meaningful between-class variance remains. This result is noteworthy because the model does not directly measure instructional practices. One plausible interpretation is that the two strongest class-level predictors – average internal motivation in the class (positive association) and parental reinforcement of extrinsic motivation (negative association) – partly capture unobserved pedagogical climates or teaching approaches that vary systematically across classes.

At the same time, the model's overall explanatory power is more modest. The McFadden pseudo- $R^2$  for the full model was 0.357, implying that a considerable portion of outcome variation – particularly at the individual level – remains unexplained. The strongest individual-level correlates include learning English outside of school, students' educational aspirations, and internal motivation for learning at school. Additional positive associations were observed for playing computer games and reading books in English, whereas receiving help with homework was negatively associated with reaching the A2 threshold. The latter pattern is consistent with reverse causality (i.e., lower proficiency increasing the likelihood of needing assistance). For games and reading, bidirectional processes are also plausible, as higher proficiency may both enable and be reinforced by engagement with English-language media.

## 4. DISCUSSION

The present study examined factors associated with A2-level proficiency in English as a foreign language among graduates of public primary schools in the population of a medium-sized city. The findings, based on data from the national school examination, indicate that in 2022 only 40.3% of students in this city attained the expected A2 level of proficiency. This is a matter of concern, but it unfortunately reflects a broader national pattern. Achievement levels were even lower for students in Poland as a whole: only 32.2% of graduates of public primary schools reached A2 level in English. These findings are consistent with earlier national and international studies, such as the European Survey on Language Competences (ESLC), which showed that Polish adolescents performed worse in English than their peers in other EU countries.

According to national examination statistics<sup>7</sup>, the average score in English in 2022 was 67% (CKE, 2022b), exceeding the corresponding results in 2019 (59%) (CKE, 2019) and 2020 (54%) (CKE, 2020), and remaining close to the 2021 level (66%) (CKE, 2021). These results were obtained despite the profound educational disruptions caused by the COVID-19 pandemic, including prolonged periods of remote and hybrid instruction that substantially altered established classroom practices. The particularly low result recorded in 2020 coincided with school closures and the abrupt shift to remote learning, which disrupted regular instruction for many months in 2020–2021 and may have contributed to the decline in examination performance. By 2022, however, average achievement had returned to a level broadly consistent with the pre-pandemic pattern, suggesting a degree of adaptation on the part of both students and schools. Since the present study draws on data collected in 2022, its findings refer to a cohort whose educational experiences were shaped, at least in part, by pandemic-related teaching conditions, and this context should therefore be borne in mind when interpreting the results.

Jakubowski et al. (2025) argue that pandemic-related school closures may have resulted in learning losses equivalent to more than a year of schooling for some cohorts, and that these effects were likely unevenly distributed, placing students with fewer motivational and family resources at a particular disadvantage. This interpretation is broadly consistent with the present findings. In the final model, the strongest individual-level correlates of reaching the A2 threshold included students'

---

<sup>7</sup> However, it should be emphasized that the results of successive cohorts are not psychometrically linked, which means that percentage comparisons provide only a rough approximation of underlying trends. Cross-cohort comparability was further affected by modifications to examination requirements introduced as a political response to the COVID-19 pandemic.

educational aspirations, intrinsic motivation to learn at school, and engagement with English outside school, especially through playing games and reading in English. These factors may have been particularly important under less structured learning conditions, in which students were more dependent on self-regulation, personal interest, and access to language input beyond formal instruction.

This, in turn, directs attention to the role of the class and school context in shaping language learning outcomes. The results also suggest that between-class differences matter. The empty model showed substantial clustering of A2 attainment at the class level, and although the final model explained a considerable share of this variance, meaningful between-class heterogeneity remained. Importantly, the model did not directly include measures of instructional practices. Therefore, the observed class-level associations should be interpreted cautiously, as they may partly reflect broader classroom climates or other unmeasured features of teaching and peer context.

At the individual level, one of the clearest patterns was the positive role of students' own aspirations and intrinsic motivation. Students who expressed higher educational aspirations and stronger internally driven motivation to learn were more likely to reach the A2 benchmark. This finding is consistent with self-determination theory (Ryan & Deci, 2000), which emphasizes the role of autonomous motivation in promoting persistence and achievement. It also suggests that some of the factors associated with foreign-language proficiency may be shaped, at least partly, through pedagogical practices that support students' sense of competence, agency, and meaningful engagement in learning.

Another robust finding concerns students' contact with English outside school. Playing computer games and reading in English were positively associated with A2 attainment in the final model. These associations are consistent with previous research suggesting that informal and interest-driven engagement with the language can support language development (De Wilde et al., 2020; Muñoz & Cadierno, 2021; Sundqvist & Wikström, 2015). At the same time, these results should not be interpreted causally. It is equally plausible that students with higher proficiency are more likely to engage in such activities, or that both are influenced by earlier achievement and access to supportive home resources. Still, the findings point to the potential importance of expanding students' opportunities for meaningful contact with English beyond classroom instruction.

By contrast, receiving help with homework was negatively associated with reaching the A2 threshold. This pattern should not be read as evidence that parental help is harmful. A more plausible explanation is reverse causality: students with lower proficiency may be more likely to need assistance. The result may also reflect variation in the quality, timing, or form of support provided at home. Thus, rather than discouraging parental involvement, the finding suggests the importance of helping parents understand how to provide support in ways that are responsive and educationally effective.

At the class level, a higher average level of parental reinforcement of extrinsic motivation was negatively associated with A2 attainment, whereas a higher average level of intrinsic motivation in the class was positively associated with better outcomes. Although these variables cannot be treated as direct measures of classroom teaching, they may partly capture broader motivational climates that differ systematically across classes. One possible interpretation is that contexts marked by stronger external pressure and performance-oriented control are less conducive to language learning than those in which students are more internally engaged. This interpretation is in line with research suggesting that external pressure may undermine learning by increasing tension and anxiety, whereas intrinsic motivation is more consistently linked to positive educational outcomes (Hanus, 2016; Liu, 2022; Ryan & Deci, 2000).

The role of parental education requires a more cautious interpretation. In earlier models, parental education was strongly associated with the likelihood of reaching A2, but in the final model this relationship was substantially attenuated and no longer reached conventional levels of statistical significance. This suggests that the apparent effect of parental education was partly accounted for by other variables included in the model, especially those related to out-of-school learning and motivation. Rather than indicating a simple direct relationship, the findings point to a more complex pattern in which family educational background may matter partly through the learning opportunities, aspirations, and motivational resources available to students.

Overall, the study highlights that A2-level English proficiency at the end of primary school is associated not only with individual motivation and aspirations, but also with students' opportunities to engage with English beyond school and with class-level motivational contexts. These findings suggest that efforts to improve foreign-language outcomes should not focus narrowly on formal instruction alone. They should also consider how schools can support students' intrinsic motivation, encourage meaningful and interest-driven exposure to English outside the classroom, and create learning environments that reduce excessive external pressure while fostering long-term engagement with the language.

## 5. LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH

Focusing on one medium-sized city, this study has a limited geographical scope, therefore, the findings should be interpreted as evidence about this local education system rather than as representative estimates for Poland. Moreover, given the cross-sectional and correlational design, the reported relationships do not allow strong causal inference and should

be interpreted as associations. Several results may be cases of reverse causality (e.g., more direct homework help may reflect prior learning difficulties) and unobserved confounding factors such as prior English proficiency, home resources, or differences in instructional quality.

In addition, some explanatory variables relied on student and parent self-reports, which may be affected by recall bias and social desirability. Finally, because the data were collected in 2022, they refer to a cohort whose schooling was partly shaped by COVID-19-related disruptions, which may limit the comparability of the observed patterns to cohorts educated under typical conditions.

Future research would benefit from using longitudinal designs that track the development of proficiency over time, and from incorporating richer measures at the school and classroom levels (e.g., teaching practices, classroom climate, and teacher characteristics) to better account for variation between classes. These analyses could be complemented with qualitative studies that would examine the forms and quality of parental engagement, including both potentially supportive and counterproductive strategies. Furthermore, greater attention to classroom processes and peer dynamics could help explain how collective motivational patterns emerge and how schools can facilitate the creation of more effective language learning environments.

## 6. EDUCATIONAL IMPLICATIONS

Classroom strategies can improve intrinsic motivation and performance of students by offering autonomy, realistic tasks, and positive feedback. Teaching methods should also encourage curiosity, independence, and meaningful communication in English. It is not surprising that factors such as exposure to English through activities such as reading books, or playing games in English, correlated with higher proficiency, even if they were not direct causes. This finding is consistent with international studies showing that incidental language learning through engaging activities is one of the strongest predictors of linguistic competence (De Wilde et al., 2020; Muñoz & Cadierno, 2021; Sundqvist & Wikström, 2015). Such engagement may be directly associated with intrinsic motivation – students motivated by their own interests and enjoyment who use the language for purposes beyond school performance are more likely to perform well in formal assessments (Oletić & Ilić, 2014). At the same time, in cross-sectional data the direction of this association remains ambiguous (e.g., higher proficiency may facilitate more frequent engagement with English media, and both may be influenced by unobserved factors such as prior achievement or access to resources). By encouraging voluntary, interest-driven contact with the language the teachers can extend learning time outside of the class which will lead to deepening the language competence. Providing high-quality training for teachers and working on their reflective practice can therefore have a systemic impact on improving the quality of teaching, which will positively affect exam results.

To sum up, the results of the following study suggest the need to strengthen students' internal motivation, increase access to contact with the language outside school, and make parents aware of how important it is to support their children with their attitude and ambitious yet realistic educational aspirations. However, certain restrictions must be acknowledged. The present study was based on data from students in a single city, which limits the possibility to generalize its conclusions.

**Funding:** The research on which this article is based was carried out as part of the "Ostrołęka Educational Observatory" project, implemented in cooperation between the Faculty of Education of the University of Warsaw and the City of Ostrołęka.

**Conflict of Interest:** The authors declare no conflict of interest.

**Acknowledgements:** The authors would like to thank the schools, students, and their parents for their participation in the study.

**Data Availability Statement:** The data used in this study are available upon reasonable request from the first author.

## REFERENCES

- Ahmetović, E., Bećirović, S., & Dubravac, V. (2020). Motivation, anxiety, and students' performance. *European Journal of Contemporary Education*, 9(2), 271-289. <https://doi.org/10.13187/ejced.2020.2.271>
- Alismail, H. A., & McGuire, P. (2015). 21st century standards and curriculum: Current research and practice. *Journal of Education and Practice*, 6(6), 150-154.
- Al-Zoubi, S. A. (2018). The impact of exposure to English language on language acquisition. *Journal of Applied Linguistics and Language Research*, 5(4), 151-162.

American Educational Research Association, American Psychological Association, & National Council on Measurement in Education. (2014). *Standards for educational and psychological testing*. American Educational Research Association.

Amiryousefi, M. (2016). Homework: Voices from EFL teachers and learners. *Iranian Journal of Language Teaching Research*, 4(2), 35–54. <https://doi.org/10.30466/IJLTR.2016.20364>

Araujo, L. & Costa, P. (2013). *The European Survey on Language Competences: school-internal and external factors in language learning*. Publications Office of the European Union.

Azzolini, D., Campregher, S., & Madia, J. E. (2022). Formal instruction vs informal exposure: What matters more for teenagers' acquisition of English as a second language? *Research Papers in Education*, 37(2), 153–181. <https://doi.org/10.1080/02671522.2020.1789718>

Benson, P. (2001). *Teaching and researching autonomy in language learning*. Pearson Education.

Bojanowicz, R. (2023, July 3). *CKE podała wyniki egzaminów ósmoklasistów. Znamy średnią punktację z wszystkich przedmiotów*. Forsal.pl <https://forsal.pl/lifestyle/edukacja/artykuly/8745438,cke-podala-wyniki-egzaminow-osmoklasistow-znamy-srednia-punktacje-z-w.html>

Bulkowski, K., Dobosz-Leszczyńska, W., & Kaźmierczak, J. (2021). *Status społeczno-ekonomiczny a wyniki uczniów w badaniu PISA 2018*. Instytut Badań Edukacyjnych.

Burgess, S., Greaves, E., Vignoles, A., & Wilson, D. (2015). What parents want: School preferences and school choice. *The Economic Journal*, 125(587), 1262–1289. <https://doi.org/10.1111/ecoj.12153>

Butler, Y. G. (2015). Parental factors in children's motivation for learning English: A case in China. *Research Papers in Education*, 30(2), 164–191. <https://doi.org/10.1080/02671522.2014.891643>

Butler, Y. G., & Le, V-N. (2018). A longitudinal investigation of parental social-economic status (SES) and young students' learning of English as a foreign language. *System*, 73, 4–15. <https://doi.org/10.1016/j.system.2017.07.005>

Carreira, J. M., Ozaki, K., & Maeda, T. (2013). Motivational model of English learning among elementary school students in Japan. *System*, 41, 706–719. <https://doi.org/10.1016/j.system.2013.07.017>

Carroll, J. B. (1963). A model of school learning. *Teachers College Record*, 64, 723–733. <https://doi.org/10.1177/016146816306400801>

Centralna Komisja Egzaminacyjna. (2019). *Osiągnięcia uczniów kończących VIII klasę szkoły podstawowej. Sprawozdanie za rok 2019*. Centralna Komisja Egzaminacyjna. [http://cke.gov.pl/images/\\_EGZAMIN\\_OSMOKLASISTY/Informacje\\_o\\_wynikach/2019/sprawozdania/egzamin%20osmoklasisty\\_jezyki%20obce\\_sprawozdanie\\_2019.pdf](http://cke.gov.pl/images/_EGZAMIN_OSMOKLASISTY/Informacje_o_wynikach/2019/sprawozdania/egzamin%20osmoklasisty_jezyki%20obce_sprawozdanie_2019.pdf)

Centralna Komisja Egzaminacyjna. (2020). *Rozkłady wyników i parametry statystyczne*. Centralna Komisja Egzaminacyjna. [https://cke.gov.pl/images/\\_EGZAMIN\\_OSMOKLASISTY/Informacje\\_o\\_wynikach/2020/20200729\\_rozklady\\_E8.pdf](https://cke.gov.pl/images/_EGZAMIN_OSMOKLASISTY/Informacje_o_wynikach/2020/20200729_rozklady_E8.pdf)

Centralna Komisja Egzaminacyjna. (2021). *Rozkłady wyników i parametry statystyczne*. Centralna Komisja Egzaminacyjna. [https://cke.gov.pl/images/\\_EGZAMIN\\_OSMOKLASISTY/Informacje\\_o\\_wynikach/2021/20210701\\_rozklady\\_E8.pdf](https://cke.gov.pl/images/_EGZAMIN_OSMOKLASISTY/Informacje_o_wynikach/2021/20210701_rozklady_E8.pdf)

Centralna Komisja Egzaminacyjna. (2022a). *Egzamin ósmoklasisty 2022. Język angielski*. Centralna Komisja Egzaminacyjna. [https://cke.gov.pl/images/\\_EGZAMIN\\_OSMOKLASISTY/Arkusze-egzaminacyjne/2022/jezyk\\_angielski/OJAP-100-2205.pdf](https://cke.gov.pl/images/_EGZAMIN_OSMOKLASISTY/Arkusze-egzaminacyjne/2022/jezyk_angielski/OJAP-100-2205.pdf)

Centralna Komisja Egzaminacyjna. (2022b). *Rozkłady wyników i parametry statystyczne*. Centralna Komisja Egzaminacyjna. [https://cke.gov.pl/images/\\_EGZAMIN\\_OSMOKLASISTY/Informacje\\_o\\_wynikach/2022/20220701%20Informacja%20wst%C4%99pna%20E8\\_22FIN%20ROZK%C5%81ADY.pdf](https://cke.gov.pl/images/_EGZAMIN_OSMOKLASISTY/Informacje_o_wynikach/2022/20220701%20Informacja%20wst%C4%99pna%20E8_22FIN%20ROZK%C5%81ADY.pdf)

- Cheng, H., & D rnyei, Z. (2007). The use of motivational strategies in language instruction: the case of EFL teaching in Taiwan. *Innovation in Language Learning and Teaching*, 1(1), 153-174. <https://doi.org/10.2167/illt048.0>
- Cheng, Y., Liu, C., & Behrens, J. (2015). Standard error of ability estimates and the classification accuracy and consistency of binary decisions. *Psychometrika*, 80(3), 645-664. <https://doi.org/10.1007/s11336-014-9407-z>
- Choi, N., Kang, S., Cho, H. J., & Sheo, J. (2019). Promoting young children's interest in learning English in EFL context: The role of mothers. *Education Sciences*, 9(1), 46. <https://doi.org/10.3390/educsci9010046>
- Cizek, G. J. (2012). The forms and functions of evaluations in the standard setting process. In G. J. Cizek (Ed.), *Setting performance standards* (pp. 165-178). Routledge.
- Cizek, G. J., & Bunch, M. B. (2007). *Standard setting: A guide to establishing and evaluating performance standards on tests*. Sage Publications Ltd.
- Coleman, J. S. (1988). Social capital in the creation of human capital. *The American Journal of Sociology*, 94, 95-120.
- Coleman, J., Hoffer, T., & Kilgore, S. (1982). Cognitive outcomes in public and private schools. *Sociology of Education*, 55(2), 65-76. <https://doi.org/10.2307/2112288>
- Conger, A. J. (1974). A revised definition for suppressor variables: A guide to their identification and interpretation. *Educational and Psychological Measurement*, 34(1), 35-46.
- Cooper, H. (1989). Synthesis of research on homework. *Educational Leadership*, 47, 85-91.
- Csikszentmihaly, M., & Nakamura, J. (2014). The dynamics of intrinsic motivation: A study of adolescents. In M. Csikszentmihalyi (Ed.), *Flow and the foundations of positive psychology: The collected works of Mihaly Csikszentmihalyi* (pp. 175-197). Springer.
- Darling-Hammond, L., & Ifill-Lynch, O. (2006). If they'd only do their work! *Educational Leadership*, 63(5), 8-13.
- de Ayala, R. J. (2022). *The theory and practice of item response theory* (2nd ed.). Guilford Press.
- 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>
- Diaz, A. Cochran, K., & Karlin, N. (2016). The influence of teacher power on English language learners' self-perceptions of learner empowerment. *College Teaching*, 64(4), 158-167. <https://doi.org/10.1080/87567555.2015.1126801>
- Dolata, R. (2010). Międzyszkolne zróżnicowanie wyników nauczania w szkołach podstawowych i gimnazjach. In J. Łukasik, I. Nowosad, & M. J. Szymański (Eds.), *Edukacja. Równość czy jakość?* (pp. 52-66). Wydawnictwo Adam Marszałek.
- Dolata, R., Hawrot, A., Hummeny, G., Jasińska, A., Koniewski, M., Majkut, P., & Żółtak, T. (2013). *Trafność metody edukacyjnej wartości dodanej dla gimnazjów*. Instytut Badań Edukacyjnych.
- Dolata, R., Grygiel, P., Jankowska, D.M., Jarnutowska, E., Jasińska-Maciażek, A., Karwowski, M., Modzelewski, M., & Pisarek, J. (2015). *Szkolne pytania. Wyniki badań nad efektywnością nauczania w klasach IV-VI*. Instytut Badań Edukacyjnych.
- Dolata, R., Jasińska-Maciażek, A., Smulczyk, M., & Stelmach, J. (2021). *Ostrołęckie obserwatorium oświatowe - badania wspierające politykę lokalną*. Wydawnictwa Uniwersytetu Warszawskiego.
- Dolata, R., & Smulczyk, M. (2022). *Równość szans edukacyjnych - jak się do niej zbliżyć, czyli analiza zjawiska academic resilience w ostrołęckich szkołach podstawowych. Ostrołęckie obserwatorium oświatowe 2021/22*. Wydział Pedagogiczny Uniwersytetu Warszawskiego.

- Dörnyei, Z. (2005). *The psychology of the language learner: Individual differences in second language acquisition*. Lawrence Erlbaum.
- Dörnyei, Z., Csizér, K., & Németh, N. (2006). *Motivation, language attitudes and globalisation: A Hungarian perspective*. Multilingual Matters.
- Dörnyei, Z., & Ushioda, E. (2011). *Teaching and researching motivation*. Pearson Longman.
- Ellis, R. (1994). *The study of second language acquisition*. Oxford University Press.
- Enever, J. (2011). *ELLiE: Early Language Learning in Europe: [evidence from the ELLiE study]*. British Council.
- Eriksson, K., Lindvall, J., Helenius, O., & Ryve, A. (2021, November). Socioeconomic status as a multidimensional predictor of student achievement in 77 societies. *Frontiers in Education*, 6, 731634. <https://doi.org/10.3389/educ.2021.731634>
- European Commission. (2012). *First European survey on language competences*. Publications Office of the European Union.
- European Education and Culture Executive Agency (EACEA), Eurydice, Baïdak, N., Motiejunaite, A., & Balcon, M. (2017). *Key data on teaching languages at school in Europe: 2017 edition*. Publications Office of the European Union. <http://dx.doi.org/10.2797/62028>
- Gajderowicz, T., & Jakubowski, M. (2021). Motywacja, ocenianie i nauka języków obcych – popularne przekonania a dowody z badań naukowych. *Języki Obce w Szkole*, 4, 125–128.
- Gajewska-Dyszkiewicz, A., Marczak, M., Paczuska, K., Pitura, J., & Kutylowska, K. (2015). *Efekty nauczania języka angielskiego na III etapie edukacyjnym*. Instytut Badań Edukacyjnych.
- Gass, S. M. (2017). *Input, interaction, and the second language learner*. Routledge.
- Głos Nauczycielski (2023, July 3). *CKE opublikowała wyniki z egzaminu ósmoklasisty 2023*. <https://glos.pl/cke-opublikowala-wyniki-z-egzaminu-osmoklasisty-2023>
- Hanus, K. (2016). Factors that influence learning by English language learners (ELLs). *BU Journal of Graduate Studies in Education*, 8(2), 19–22.
- Harrell, F. E., Jr. (2015). *Regression modeling strategies: With applications to linear models, logistic regression, and survival analysis* (2nd ed.). Springer.
- Hattie, J. (2008). *Visible learning. A synthesis of over 800 meta-analyses relating to achievement*. Routledge.
- Hattie, J., & Timperley, H. (2007). The power of feedback. *Review of Educational Research*, 77(1), 81–112.
- He, T., Gou, W. J., & Chang, S. (2015). Parental involvement and elementary school students' goals, maladaptive behaviors, and achievement in learning English as a foreign language. *Learning and Individual Differences*, 39, 205–210. <https://doi.org/10.1016/j.lindif.2015.03.011>
- Hertel, S., & Jude, N. (2016). Parental support and involvement in school. In S. Kuger, E. Klieme, N. Jude, & D. Kaplan (Eds.) *Assessing contexts of learning. Methodology of educational measurement and assessment* (pp. 209–225). Springer.
- Hewitt, E. (2009). Are parents an effective resource for learning English as a foreign language? An empirical study with complete beginner children. In M. Navarro Coy (Ed.), *Practical approaches to foreign language teaching and learning* (pp. 91–112). Peter Lang.
- Hill, N., & Tyson, D. (2009). Parental involvement in middle school: A meta-analytic assessment of the strategies that promote achievement. *Developmental Psychology*, 45(3), 740–763. <https://doi.org/10.1037/a0015362>

Horyśniak, M. (2019). Wpływ wybranych czynników na jakość procesu uczenia się języka obcego w opinii uczących się. In D. Gabryś-Barker & R. Kalamarz (Eds.), *Jakość w kształceniu językowym: rozważania teoretyczne i praktyczne rozwiązania* (pp. 101-122). Wydawnictwo Uniwersytetu Śląskiego.

Howie, S. J., Combrinck, C., Roux, K., Tshela, M., Mokoena, G., & McLeod Palane, N. (2017). *PIRLS literacy 2016: South African highlights report (Grade 4)*. Centre for Evaluation and Assessment.

Humenny, G., & Majkut, P. (2015). Efektywność nauczania a zmiana aspiracji edukacyjnych rodziców względem uczniów. In R. Dolata, A. Hawrot, G. Humenny, A. Jasińska-Maciążek, M. Koniewski, P. Majkut, M. Blukacz, P. Grygiel, & T. Żółtak. *(Ko)warianty efektywności nauczania. Wyniki badania w klasach IV-VI* (pp. 139-153). Instytut Badań Edukacyjnych.

Iwaniec, J. (2020). The effects of parental education level and school location on language learning motivation. *The Language Learning Journal*, 48(4), 427-441. <https://doi.org/10.1080/09571736.2017.1422137>

Jakubowski, M., Gajderowicz, T., & Patrinos, H. A. (2025). COVID-19, school closures, and student learning outcomes. New global evidence from PISA. *npj Science of Learning*, 10(1), 5. <https://doi.org/10.1038/s41539-025-00297-3>

Janukowicz, M. (2016). Determinanty efektywności pracy domowej ucznia. *Pedagogika*, 25(2), 221-231. <http://dx.doi.org/10.16926/p.2016.25.70>

Karantonis, A., & Sireci, S. G. (2006). The bookmark standard setting method: A literature review. *Educational measurement: Issues and practice*, 25(1), 4-12. <https://doi.org/10.1111/j.1745-3992.2006.00047.x>

Kazmierczak, K. S. (1994). *Current wisdom on homework and the effectiveness of a homework checking system* (Unpublished manuscript). Indiana University at South Bend.

Każmierczak, J., & Bulkowski, K. (Eds.). (2023). *Przeczytać i zrozumieć. Wyniki międzynarodowego badania osiągnięć czwartoklasistów w czytaniu PIRLS 2021*. Instytut Badań Edukacyjnych.

Khonamri, F., & Pavlikova, M. (2020). Exploring teachers' and learners' attitude towards homework: The case of English versus non-English-major teachers' homework practices. *Education and Self Development*, 15, 32-49. <https://doi.org/10.26907/esd15.4.07>

Kirmizi, Ö., & Kömeç, F. (2019). The impact of the flipped classroom on receptive and productive vocabulary learning. *Journal of Language and Linguistic Studies*, 15(2), 437-449. <https://doi.org/10.17263/jlls.586096>

Kluger, A. N., & DeNisi, A. (1996). The effects of feedback interventions on performance: A historical review, a meta-analysis, and a preliminary feedback intervention theory. *Psychological Bulletin*, 119(2), 254-284. <https://doi.org/10.1037/0033-2909.119.2.254>

Kodzis, A. (2021). Egzaminy z języka obcego nowożytnego jako przedmiotu obowiązkowego w 2021 r. na przykładzie egzaminów z języka angielskiego. *Języki Obce w Szkole*, 3, 43-54.

Konarzewski, K. (2007). *PIRLS 2006. Jak czytają dzieci w Polsce i na świecie*. Centralna Komisja Egzaminacyjna.

Konarzewski, K., & Bulkowski, K. (2017). *PIRLS 2016. Wyniki międzynarodowego badania osiągnięć czwartoklasistów w czytaniu*. Instytut Badań Edukacyjnych.

Kondratek, B. (2022). uirt: A command for unidimensional IRT modeling. *The Stata Journal*, 22(4), 977-1005. <https://doi.org/10.1177/1536867X221106368>

Kozłowski, W., & Matczak, E. (2014). Aspiracje edukacyjne rodziców w stosunku do własnych dzieci. *Edukacja*, 126(1), 66-78.

Kozłowski, W., & Matczak, E. (2018). Aspiracje edukacyjne rodziców i dzieci a osiągnięcia szkolne. *Studia Edukacyjne*, 47, 313-328. <https://doi.org/10.14746/se.2018.47.19>

- Krashen, S. (1985). *The input hypothesis: Issues and implications*. Longman.
- Krashen, S. (2005). The hard work hypothesis: Is doing your homework enough to overcome the effects of poverty? *Multicultural Education*, 12(4), 16-19.
- 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>
- Lipińska, E. (2003). *Język ojczysty, język obcy, język drugi: wstęp do badań dwujęzyczności*. Wydawnictwo Uniwersytetu Jagiellońskiego.
- Liu, S. (2022). Extrinsic motivation factors of primary school students in English learning. In *Proceedings of the 2022 International Conference on Science Education and Art Appreciation (SEAA 2022)* (pp. 442-448).
- Lodhi, M. A., Zafar, Z., Akhtar, N., Sikander, S., & Farrukh, S. (2019). Impact of English teachers' behavior on English proficiency skills of ESL learners at secondary level. *International Journal of English Linguistics*, 9(1), 277-292.
- Logan, S., & Johnston, R. (2009). Gender differences in reading ability and attitudes: Examining where these differences lie. *Journal of Research in Reading*, 32(2), 199-214.
- Long, M. H. (1996). The role of the linguistic environment in second language acquisition. In W. C. Ritchie & T. K. Bhatia (Eds.), *Handbook of Language Acquisition*, Vol. 2 (pp. 413-468). Academic Press
- Marchlik, P., Wichrowska, K., & Jasińska-Maciążek, A. (2022). *Umiejętności z języka angielskiego absolwentów ostrołęckich szkół podstawowych w świetle egzaminu ósmoklasisty 2021*. Wydział Pedagogiczny Uniwersytetu Warszawskiego.
- Marchlik, P., Wichrowska, K., Muszyński, M., & Jasińska-Maciążek, A. (2022). *Umiejętności z języka angielskiego absolwentów ostrołęckich szkół podstawowych w świetle egzaminu ósmoklasisty 2022*. Wydział Pedagogiczny Uniwersytetu Warszawskiego.
- Ministerstwo Edukacji Narodowej. (2009). *Rozporządzenie Ministra Edukacji Narodowej z dnia 23 grudnia 2008 r. w sprawie podstawy programowej wychowania przedszkolnego oraz kształcenia ogólnego w poszczególnych typach szkół* (Journal of Laws 2009 no. 4, item 17).
- Ministerstwo Edukacji Narodowej. (2014). *Rozporządzenie Ministra Edukacji Narodowej z dnia 30 maja 2014 r. zmieniające rozporządzenie w sprawie podstawy programowej wychowania przedszkolnego oraz kształcenia ogólnego w poszczególnych typach szkół* (Journal of Laws 2014 item 803).
- Ministerstwo Edukacji i Nauki. (2020). *Rozporządzenie Ministra Edukacji i Nauki z dnia 16 grudnia 2020 r. zmieniające rozporządzenie w sprawie szczególnych rozwiązań w okresie czasowego ograniczenia funkcjonowania jednostek systemu oświaty w związku z zapobieganiem, przeciwdziałaniem i zwalczaniem COVID-19* (Journal of Laws 2020 item 2314).
- Ministerstwo Edukacji. (2024). *Rozporządzenie Ministra Edukacji z dnia 20 maja 2024 r. w sprawie ramowych planów nauczania dla publicznych szkół* (Journal of Laws 2024 item 781).
- Mullis, I. V. S., von Davier, M., Foy, P., Fishbein, B., Reynolds, K. A., & Wry, E. (2023). *PIRLS 2021 International Results in Reading*. Boston College, TIMSS & PIRLS International Study Center. <https://doi.org/10.6017/lse.tpisc.tr2103.kb5342>
- 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>
- Muñoz-Restrepo, A., Ramirez, M., & Gaviria, S. (2020). Strategies to enhance or maintain motivation in learning a foreign language. *Profile Issues in Teachers Professional Development*, 22(1), 175-188.  
<https://doi.org/10.15446/profile.v22n1.73733>

- Muszyński, M., Campfield, E. D., & Szpotowicz, M. (2015). *Język angielski w szkole podstawowej – proces i efekty nauczania. Wyniki podłużnego badania efektywności nauczania języka angielskiego (2011–2014)*. Instytut Badań Edukacyjnych.
- Neuenschwander, M. P., Vida, M., Garrett, J. L., & Eccles, J. S. (2007). Parents' expectations and students' achievement in two western nations. *International Journal of Behavioral Development, 31*(6), 594–602. <https://doi.org/10.1177/0165025407080589>
- Nikolov, M. (Ed.). (2009). *Early learning of modern foreign languages: Processes and outcomes*. Multilingual Matters.
- Nunan, D., & Richards, J. C. (Eds.) (2014). *Language learning beyond the classroom*. Routledge.
- OECD. (2017). *Students' expectations of further education. PISA 2015 Results (Volume III): Students' well-being*. OECD Publishing. <https://doi.org/10.1787/9789264273856-10-en>
- Oletić, A., & Ilić, N. (2014). Intrinsic and extrinsic motivation for learning English as a foreign language. *ELTA Journal, 2*(2), 23–38. <https://doi.org/10.20319/pijss.2018.43.224237>
- Paczuska, K., Kutylowska, K., Gajewska-Dyszkiewicz, A., Ellis, M., & Szpotowicz, M. (2014). *Język angielski w gimnazjum. Raport cząstkowy z I etapu badania uczenia się i nauczania języków obcych w gimnazjum*. Instytut Badań Edukacyjnych.
- Papiernik, O. (2024, May 16). *Egzamin ósmoklasisty 2024. Dziś język obcy*. Infor.pl <https://www.infor.pl/6608129,egzamin-osmoklasisty-2024-dzis-jezyk-obcy.html>
- Parra-González, M. E., & Olmedo Moreno, E. M. (2019). English learning and its relationship with homework in primary education. *Porta Linguarum, 32*, 135–149. <https://doi.org/10.30827/portalin.vi32.13704>
- Paudel, J. (2012). Dealing with homework in English language teaching: A case of Dadeldhura district. *Journal of NELTA, 17*(1–2), 50–60. <https://doi.org/10.3126/nelta.v17i1-2.8092>
- Pawlak, M. (2012). The dynamic nature of motivation in language learning: A classroom perspective. *Studies in Second Language Learning and Teaching, 2*(2), 249–278. <https://doi.org/10.14746/ssllt.2012.2.2.7>
- Pomerantz, E. M., Moorman, E. A., & Litwack, S. D. (2007). The how, whom, and why of parents' involvement in children's academic lives: More is not always better. *Review of Educational Research, 77*(3), 373–410. <https://doi.org/10.3102/003465430305567>
- Reykowski, J. (1992). Procesy emocjonalne. Motywacja. Osobowość. In T. Tomaszewski (Ed.), *Psychologia ogólna (1910–2000)*. Wydawnictwo Naukowe PWN.
- Rosário, P., & Mourão, R., Trigo, L., Suárez, N. Fernández, E., Tuero-Herrero, E. (2011). Uso de diarios de tareas para casa en el inglés como lengua extranjera: evaluación de pros y contras en el aprendizaje autorregulado y rendimiento. *Psicothema, 23*(4), 681–687.
- Rosyada, A., & Ramadhianti, A. (2017). The influence of teachers' performance in promoting effective English teaching classroom at state junior high school. *UICELL Conference Proceedings, 1–9*.
- Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist, 55*(1), 68–78. <https://doi.org/10.1037/0003-066X.55.1.68>
- Saeed, S., & Zyngier, D. (2012). How motivation influences student engagement: A qualitative case study. *Journal of Education and Learning, 2*(1), 252–267. <http://dx.doi.org/10.5539/jel.v1n2p252>
- Sanders, W. L., & Rivers, J. C. (1999). *Cumulative and residual effects of teachers on future student academic achievement*. University of Tennessee.

- Shoaib, A., & Dörnyei, Z. (2005). Affect in life-long learning: Exploring L2 motivation as a dynamic process. In P. Benson & D. Nunan (Eds.), *Learners' stories: Difference and diversity in language learning* (pp. 22–41). Cambridge University Press.
- Sitek, M., & Ostrowska, B. (Eds.) (2019). *PISA 2018. Czytanie, rozumienie, rozumowanie*. Instytut Badań Edukacyjnych.
- Szabó, F., Albert, Á., & Csizér, K. (2021). The effects of family background on the processes of foreign language learning in Hungary. *Central European Journal of Educational Research*, 3(2), 87–97. <https://doi.org/10.37441/cej/2021/3/2/937>
- Therborn, G. (2006). Meaning, mechanisms, patterns, and forces: An introduction. In G. Therborn (Ed.), *Inequalities of the world. New theoretical frameworks, multiple empirical approaches*. Verso.
- Schwarz, M. (2013). Learning with Lady GaGa & CO: Incidental EFL vocabulary acquisition from pop songs. *VIEWWS*, 22, 17–48.
- Snijders, T. A. B., & Bosker, R. J. (2012). *Multilevel analysis: An introduction to basic and advanced multilevel modeling* (2nd ed.). Sage.
- Sobańska-Jędrych, J., Karpeta-Peć, B., & Torenc, M. (2013). *Rozwijanie zdolności językowych na lekcji języka obcego*. Ośrodek Rozwoju Edukacji.
- StataCorp. (2025). *Stata 19 multiple-imputation reference manual*. Stata Press.
- Stone, C. A. (2003). Assessing goodness of fit of item response theory models: A comparison of traditional and alternative procedures. *Journal of Educational Measurement*, 40(4), 331–352. <https://doi.org/10.1111/j.1745-3984.2003.tb01150.x>
- Sundqvist, P., & Wikström, P. (2015). Out-of-school digital gameplay and in-school L2 English vocabulary outcomes. *System*, 51, 65–76. <https://doi.org/10.1016/j.system.2015.04.001>
- Śpiewak, G. (2015). Języki (wciąż...) obce. *Języki Obce w Szkole*, 3, 116–119.
- Tarkhnishvili, A., Tarkhnishvili, L., & Strielkowski, W. (2022). Factors influencing the choice of private or public schools: Evidence from Georgia. *Frontiers in Education*, 7, 910593. <https://doi.org/10.3389/educ.2022.910593>
- Torppa, M., Eklund, K., Sulkunen, S., Niemi, P., & Ahonen, T. (2017). Why do boys and girls perform differently on PISA Reading in Finland? The effects of reading fluency, achievement behaviour, leisure reading and homework activity. *Journal of Research in Reading*, 41(1), 122–139. <https://doi.org/10.1111/1467-9817.12103>
- Ushioda, E. (2003). Motivation as a socially mediated process. In D. Little, J., Ridley, and E. Ushioda (Eds.). *Learner autonomy in the foreign language classroom: Teacher, learner, curriculum and assessment* (pp. 90–102). Authentik.
- Wallinger, L. M. (2000). The role of homework in foreign language learning. *Foreign Language Annals*, 33(5), 483–496. <https://doi.org/10.1111/j.1944-9720.2000.tb01993.x>
- Wigfield, A., Essoles, J. S., Schiefele, U., Roeser, R. W., & Davis-Kean, P. (2006). Development of achievement motivation. In N. Eisenberg, W. Damon, & R. M. Lerner (Eds.), *Handbook of child psychology: Social, emotional, and personality development* (pp. 933–1002). John Wiley & Sons, Inc.
- Xu, J. Z., Wu, & H. Y. (2013). Self-regulation of homework behavior: Homework management at the secondary school level. *Journal of Educational Research*, 106, 1–13. <https://doi.org/10.1080/00220671.2012.658457>